Kaseya® Automating IT

Virtual System Administrator

User Guide

Kaseya 2008

July 4, 2008

About Kaseya

Kaseya is a global provider of IT automation software for IT Solution Providers and Public and Private Sector IT organizations. Kaseya's IT Automation Framework allows IT Professionals to proactively monitor, manage and maintain distributed IT infrastructure remotely, easily and efficiently with one integrated Web based platform. Kaseya's technology is licensed on over three million machines worldwide.

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Chapter 1

Configuration

In This Chapter

Configuring the Server

The server is the heart of the system. Administrators access all functions through this server's web interface. The agents, on all managed machines, connect to this server to get any instructions/tasking orders.

Your server must be accessible to both administrators and agents.

Administrators and agents need to be able to connect back to the server from anywhere on the internet. Verify your server meets the following requirements:

1. Public server name/IP address - Define a public IP address for your server. If your server is behind a gateway on a private network, your VSA may be using the private IP address. Long term it is better to use a name instead of an IP address. Using a name lets you change the IP address without having to re-configure any agents. Set the name/IP address of the VSA using System > Configure *(page 524)*.
2. Open required ports at the firewall - Administrators access the VSA through the web interface (typically port 80). Agents connect to the server on a separate port (default port 5721). Both these port must be opened at your firewall for TCP/IP traffic. The agent port (5721) must be open for both inbound and outbound.
3. Verify localhost access for the web server - Several VSA services depend on localhost access. Typically localhost access can be enabled by:
    a. Opening the IIS Enterprise Manager.
    b. Right clicking the Default Web Site and selecting Properties.
    c. Clicking the Web Site tab.
    d. Verifying the IP Address field is set to `(All Unassigned)`.
4. Specify the alert email sender address - The VSA sends alerts via email. Emails are sent from your server using the built-in SMTP service. You can set the address these emails come from to any valid email address using System > Configure. The default email address is vsa@kaseya.com.

> Note: For the latest instructions on migrating an existing KServer to a new machine see the article How do I move my Kaseya Server to a new computer? (270436) in the Kaseya Support Knowledge Base Portal.

Agents

The VSA manages machines by installing a software client called an agent on a managed machine. The agent is a system service that does not require the user to be logged in for it to function and it does not require a reboot for it to be installed. The agent is configurable and can be totally invisible to the user. The sole purpose of the agent is to carry out the tasks requested by the IT administrator. Once installed:

- A K icon displays in the icon tray of the remote machine. This can be a custom image or removed altogether.
- Each installed agent is assigned a unique VSA machine ID / group ID *(page 606)*. Machine IDs can be created automatically at agent install time or individually prior to agent installation.
- Each installed agent uses up one of the available licenses purchased by the service provider.

> Agents are typically installed using packages created using Agent > Deploy Agents *(page 445)* inside the VSA.

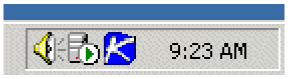
Agent Icons

Once installed on a machine, the agent displays an icon in the computer's system tray. This icon is the user's interface to the agent. The icon may be disabled at the discretion of the administrator using the Agent > Agent Menu *(page 483)* page.

> Note: You can fully customize agents icon using System > Customize. See Creating Custom Agent Icons *(page 539)*. This includes unique icons for Macintosh machines.

Agent Icon Background is Blue

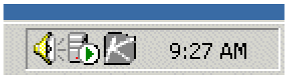
When the agent is running and successfully checking into the VSA, the agent icon's background is blue.



> Note: Double clicking the agent icon displays the User Access Welcome Page *(page 613)*.

Agent Icon Background is Grey

A running agent that can not check into the VSA displays a gray icon. This indicates that either the network connection is down or the agent is pointed at the wrong address for the VSA.

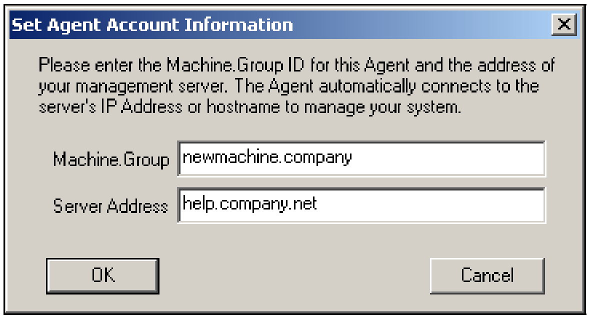


If the agent icon is gray check the following:

1. Verify this machine has internet access.
2. Check to see if there is a firewall blocking the outbound port used by the agent to connect to the VSA. The default is port 5721.
3. Verify this machine account's Check-in Control *(page 485)* settings are

correct.

4. Manually set the VSA address in the agent by right clicking the agent menu, selecting Set Account..., and filling in the form with the correct address.



Set Agent Account Information

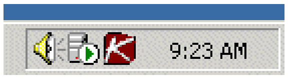
Please enter the Machine.Group ID for this Agent and the address of your management server. The Agent automatically connects to the server's IP Address or hostname to manage your system.

Machine.Group: newmachine.company

Server Address: help.company.net

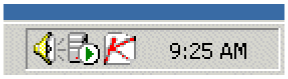
Agent Icon Background is Red

The agent icon turns red when a user manually disables remote control. Users prevent anyone from remote controlling their machine by selecting Disable Remote Control when they right click the agent menu.



Agent Icon Background Flashes between White and Blue

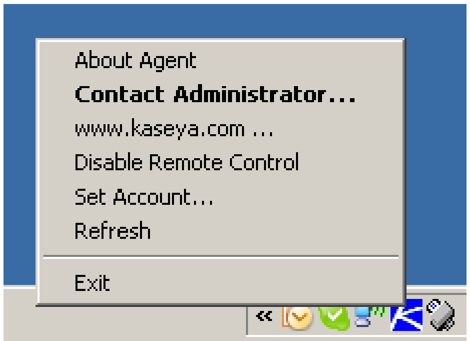
The agent icon flashes between a white background and its normal background when a *message is waiting* to be read. Clicking the icon displays the message.



Note: See Remote Cntl > Send Message *(page 337)* for an explanation of how to set up the sending of messages.

Agent Menu Options

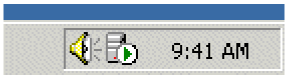
Right clicking the agent icon pops up a menu of options available to the user.



Note: See Agent > Agent Menu *(page 483)* for a description of how to turn these options on or off.

Disabling the Agent Menu

Administrators may completely disable the agent menu *(page 483)* and remove the icon from the machine's desktop.



System Security

We designed the system with comprehensive security throughout. Our design team brings over 50 years of experience designing secure systems for government and commercial applications. We applied this experience to uniquely combine ease of use with high security.

The platform’s architecture is central to providing maximum security. The agent initiates all communications back to the server. Since the agent will *not* accept any inbound connections, it is virtually impossible for a third party application to attack the agent from the network. *The system does not need any input ports opened* on the managed machines. This lets the agent do its job in virtually any network configuration without introducing any susceptibility to inbound port probes or new network attacks.

The VSA protects against man-in-the-middle attacks by encrypting all communications between the agent and server with 256-bit RC4 using a key that rolls every time the server tasks the agent. Typically at least once per day. Since there are no plain-text data packets passing over the network, there is nothing available for an attacker to exploit.

Administrators access the VSA through a web interface after a secure logon process. The system never sends passwords over the network and never stores them in the database. Only each administrator knows his or her password. The client side combines the password with a random challenge, issued by the VSA server for each session, and hashes it with SHA-1. The server side tests this result to grant access or not. The unique random challenge protects against a man-in-the-middle attack sniffing the network, capturing the random bits, and using them later to access the VSA.

The web site itself is protected by running the Hotfix Checker tool on the VSA server every day. The VSA sends alerts to the master administrator when new IIS patches are available. This helps you keep the VSA web server up to the latest patch level with a minimum of effort. Finally, for maximum web security, the VSA web pages fully support operating as an SSL web site.

Minimum System Requirements

Up to date minimum system requirements are always available on our web site at http://www.kaseya.com/support/system-requirements.php

Chapter 2

Getting Started

In This Chapter

Logon and Browser Settings

To logon to Virtual System Administrator

1. Use your browser to display the logon page of your VSA server.
2. Enter your administrator name and password.

   > Note: For initial logon, use the master administrator account name and password entered during installation.

3. Check the Remember my username and domain (if any) on this computer checkbox to save the username and domain name to a cookie on the local computer so you don't have to re-enter each time you log in. The password is not stored.
4. Click the logon icon ➡.

> Note: To prevent unauthorized access after making configuration changes, log off or close the session by terminating the browser application.

Enabling Browser Cookies and JavaScript

Internet Explorer 5.0 or greater must have cookies and JavaScript enabled in order to proceed.

To Enable Cookies in Internet Explorer 5

Cookies are enabled by default in Internet Explorer. However, if cookies are turned off, you may need to enable them.

1. Click on the Tools menu.
2. Select Internet Options.
3. Switch to the Security tab.
4. Click on Internet in the Select a Web content zone.
5. Press the Custom Level button.
6. Scroll down to the Cookies section.
7. In Allow cookies that are stored on your computer, select the Enable radio button.
8. In Allow per-session cookies, select the Enable radio button.
9. Press OK.

To Enable Cookies in Internet Explorer 6

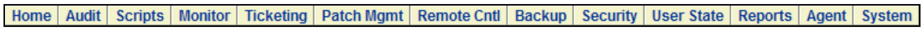
1. Click on the Tools menu.
2. Select Internet Options.
3. Switch to the Privacy tab.

4. Select a privacy setting no greater than Medium High (i.e. the setting must not be High nor Block All Cookies).
5. Press OK.

To Enable JavaScript in Internet Explorer

1. Click on the Tools menu.
2. Select Internet Options.
3. Switch to the Security tab.
4. Click on Internet in the Select a Web content zone.
5. Press the Custom Level button.
6. Scroll down to the Scripting section.
7. In Scripting of Java applets, enable the Custom, High safety, Low safety, or Medium safety radio button, depending on the security requirements of the machine running the script.
8. Press OK.

VSA Tabs



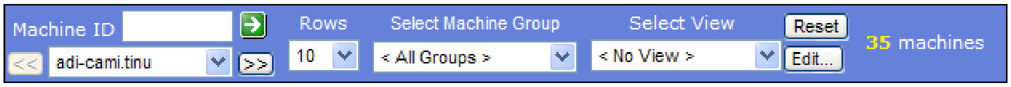
All VSA functions can be accessed through tabs located at the top of the console window. Within each tab are the core functions that allow administrators to perform a variety of tasks on remote managed machines and the server.

Machine ID / Group ID Filter

Machine ID / Group ID Filter

Each agent *(page 600)* installed on a managed machine is assigned a unique machine ID/group ID name. All machine IDs are associated with a group ID and optionally a subgroup ID. Typically a group ID represents a single customer account. Subgroup IDs typically represent a location or network within a group ID. For example, the full identifier for an agent installed on a managed machine could be defined as `jsmith.acme.chicago`. In this case `chicago` is a subgroup ID defined within the group ID called `acme`. Only a master administrator, or administrators authorized by a master administrator *(page 599)*, can create group IDs. Any administrator can create subgroup IDs. Group IDs and subgroup IDs are created using the System > Machine Groups > Create/Delete *(page 504)* page.

Filtering Views



adi-cami.tinu

Rows 10

Select Machine Group < All Groups >

Select View < No View >

35 machines

The Machine ID / Group ID filter is available on all tabs and functions. It allows you to limit the machines displayed on *all* function pages. The View

Definitions window lets you further refine a Machine ID / Group ID filter based on attributes contained on each machine—for example, the operating system type. Once filter parameters are specified, click the green arrow icon ➡ to apply filter settings to *all* function pages. By default, the Machine ID / Group ID filter displays all machine IDs in `<All Groups>` managed by the currently logged in administrator.

> Note: Even if an administrator selects `<All Groups>`, only groups the administrator is granted access to using System > Group Access *(page 512)* are displayed.

Machine ID

Limits the display of data on *all* function pages by machine ID string. Include an asterisk (*) wildcard with the text you enter to match multiple records. For example, entering the string `ABC*` limits the display of machine IDs on all function pages to machine IDs that start with the letters ABC.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Rows

Select the number of machines IDs displayed on each page.

Select Machine Group

Limits the display of data on all function pages by group ID.

Select View

Change views by selecting a different view definition. The View Definitions window lets you further refine a Machine ID / Group ID filter based on attributes contained on each machine—for example, the operating system type.

Edit...

Click the Edit... button to display the View Definitions *(page 19)* page.

Machine Count

Shows the machine count, based on filter settings.

View Definitions

Machine ID / Group ID Filter > Edit...

The View Definitions window lets you further refine a Machine ID / Group ID filter based on attributes contained on each machine—for example, the operating system type. You can create and name multiple views. View filtering is applied to *all* function pages by selecting a Select View drop down list on the Machine ID / Group ID Filter *(page 17)* panel and clicking the green arrow ➡ icon.

Share...

You can share a view with selected administrators and administrator roles or make the view public for all administrators and administrator roles.

To Create or Edit a New View

1. Click the Edit... button to the right of the Select View drop down list to open the View Definitions editor.
2. Enter a name for the view in the Edit Title area.
3. Enter the desired filter specifications.
4. Click the Save or Save As button.

View by Machine ID

- Set machine ID - Checking this box overrides any value set for the Machine ID field on the Machine ID / Group ID filter panel with the value entered here. The Machine ID field on the Machine ID / Group ID filter panel is disabled to prevent inadvertent changes while displaying a view with Set machine ID selected.
- Set group ID - Checking this box overrides the Group ID filter on the Machine ID / Group ID filter panel with the value entered here. The Group ID field on the Machine ID / Group ID filter panel is disabled to prevent inadvertent changes while displaying a view with Set group ID selected.
- Only show selected machine IDs - Save a view first before selecting machines IDs using this option. Once the view is saved, a <N> machines selected link displays to the right of this option. Click this link to display a Define Collection window, which allows you to create a view using an arbitrary collection of machine IDs.

View by Network Status and Address

- Show machines that have / have not / never been online in the last N Days - Check this box to only list machines whose agents have checked into server, or not, within the specified period of time. Use the never option to filter machine ID template *(page 607)* accounts, because these accounts never check in.
- Connection gateway filter - Check to only list machines that have a connection gateway *(page 42)* matching the specified filter. Include an asterisk (*) wildcard with the text you enter to match multiple records. For example `66.221.11.*` matches all connection gateway addresses from `66.221.11.1` through `66.221.11.254`.

- IP address filter - Check to only list machines that have an IP address matching the specified filter. Include an asterisk (*) wildcard with the text you enter to match multiple records. For example `66.221.11.*` matches all IP addresses from `66.221.11.1` through `66.221.11.254`.

View by Operating System

- OS Type - Check to only list machines that match the selected operating system as reported using the Audit > Name/OS Info *(page 41)*.
- OS Version - Check to only list machines that match the OS version string as reported using Audit > Name/OS Info *(page 41)*. Use this filter to identify machines by service pack.

View Machines Based on Script History/Status

- With script scheduled/not scheduled - Check to only list machines that have the specified script either scheduled to run or not.

  Note: Click the select script link to specify the script by name.

- Last execution status success/failed - Check to only list machines that have already executed the selected script. Select the appropriate radio button to list machines that successfully executed the script or failed to execute the script.
- Script has/has not executed in the last N days - Check to only list machines that have or have not executed the script in the specified period of time.

View Machines by Application

- Contains/Missing application - Check to only list machines that have, or don't have, an application installed using the specified filter. Include an asterisk (*) wildcard with the text you enter to match multiple records.
- Version string is > < = N - Check to further refine the application filter with a version number greater than, less than or equal to a specified value.

View Machines by Patch Update

- Show/Hide members of patch policy - Checking this box works together with the machine ID and group ID filters to only list specific machines belonging (Show) or not belonging (Hide) to a specific patch policy *(page 609)*.
- Machines missing greater than or equal to N patches - Check to list machines *missing* a specified number of Microsoft patches.
- Use Patch Policy - Check to list machines missing a specified number of *approved missing* Microsoft patches.
- Patch scan schedule / not schedule - Check to only list machines with either a patch scheduled or not scheduled.
- Last execution status for patch scan success / failed - Check to only list machines whose patch scan succeeded or failed.
- Patch scan has / has not executed in the last <N> <periods> - Check to only list machines whose patch scan has or has not executed within a specified time period.

View Machines by Agent Data

- Advanced Agent Data Filter - Check and click the Define Filter... button to further refine the view using the Filter Aggregate Table *(page 21)*.

> Warning: You must enter a space character to separate the operator from the data in a filter entry. For example, the filter entry `>= 500` includes a space character just after the equal sign.

Filter Aggregate Table

Machine ID / Group ID Filter > Edit... > Define Filter...

The Filter Aggregate Table lists over 75 agent and managed machine attributes that can be used to further refine a view definition *(page 19)*.

> Warning: You must enter a space character to separate the operator from the data in a filter entry. For example, the filter entry `>= 500` includes a space character just after the equal sign.

Advanced filtering lets you design complex searches to isolate data to just those values you want. Enter filter strings into the same edit fields you enter filter text. Advanced filtering supports the following operations:

White Space

To search for white space in a string, enclose the string in double quotes.

For example: `"Microsoft Office*"` OR `*Adobe*`

Nested operators

All equations are processed from left to right. Use parenthesis to override these defaults.

For example: `(("* adobe " OR *a*) AND *c*) OR NOT *d* AND < m`

NOT

Search for a string not containing the match data.

For example: `NOT *Microsoft*` returns all non-Microsoft applications.

AND

Use the logical AND operator to search for data that must contain multiple values but can appear in different places in the string.

For example: `Microsoft* AND *Office*` returns all items that contain both Microsoft and Office in any order.

OR

Use the logical OR operator to search for data that may contain multiple values but must contain at least one.

For example: `*Microsoft* OR *MS*` returns all items that contain either Microsoft and MS in any order.

<, <= (Less than or less than or equal to)

Returns all data whose value is numerically less than, if a number. If this is alphabetic data then it returns all strings appearing earlier in the alphabet.

For example: `< G*` returns all applications starting with a letter less than "G".

For example: `<` 3 returns all values numerically less than "3".

> Note: Ensure a *space* exists between the < operator and the value being compared.
>
> Note: Dates may also be tested for but must be in the following format: `YYYYMMDD HH:MM:SS` where `YYYY` is a four digit year, `MM` is a two digit month (01 to 12), `DD` is a two digit day (01 - 31), `HH` is a two digit hour (00 - 23), `MM` is a two digit minute (00 - 59), and `SS` is a two digit second (00 - 59). `HH:MM:SS` is optional. Date and time are separated with a space. Remember that all white space must be enclosed in double quotes.
>
> For example: `< "20040607 07:00:00"` returns all dates earlier than 7:00 on 7 June 2004.

>, >= (Greater than or greater than or equal to)

Returns all data whose value is numerically greater than, if a number. If this is alphabetic data then it returns all strings appearing after it in the alphabet.

For example: `> G*` returns all applications starting with a letter greater than "G".

For example: `>` 3 returns all values numerically greater than "3".

Machine Summary

Audit > Machine Summary

Similar information is provided using Reports > Machine Summary *(page 406)*.

The Machine Summary page for any machine ID can be displayed immediately by clicking the check-in status icon next to any machine ID.

UP Agent has checked in

OK Agent has checked in and user is logged in. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ Agent has been disabled

✋ Agent has been suspended

Alternatively, you can navigate to the Audit > Machine Summary page, which lists all machine IDs currently matching the Machine ID / Group ID filter *(page 17)*, and click any machine ID to display the Machine Summary page.

Displaying the Machine Summary Page Using a URL

The following URL displays the Machine Summary *(page 23)* web page for a specific machine ID:

```
http//....?machName=<MachineID>
```

For example:

```
http://demo.kaseya.com?machName=jconners.acme
```

Machine Summary

The Machine Summary page allows administrators to perform tasks and functions solely for one managed machine. A tabbed property sheet provides access to various categories of information about the managed machine. The administrator can customize the layout of the Installed Applications and System Info tabs.

> Note: Administrator access to the tabs of the Machine Summary page is determined using System > Function Access *(page 514)*.

The following elements are displayed in the Machine Summary:

- Machine Info - Current User, Domain/Workgroup, IP Address, Computer Name, Subnet Mask, OS, Version and Build, Default Gateway, Connection Gateway, RAM, MAC Address, CPU, DHCP Server, DNS Server, and Primary and Secondary WINS Servers, Last Checkin, Last Reboot, First Time Checkin.
- Installed Applications - Lists all the applications installed on the managed machine. Provides the same functionality as Audit > Installed Apps *(page 39)*. Clicking the Filter... button enables you to filter the applications displayed by application attribute.

- System Info - Lists system hardware attributes and related information.
    - Click the Show More button to add or subtract system information attributes from the default list provided.
    - Click the automatic assignment icon next to an system information attribute to manually edit the value. Click the manual edit icon to display the Edit Manual Input Value Only dialog box. Use this dialog box to manually change the value of the attribute for this machine or for all machines using the current machine ID / group ID filter.
    - Click the System Serial Number link to display a machine manufacturer's support site, for the following manufacturers: Dell, IBM, Lenovo, HP, Compaq, Gateway, and Sony.
- Disk Volumes - Drive letter, Type, Format, Free Space, Used Space, Total Size, and Label.
- PCI & Disk Hardware - Type, Vendor, and Product name. Provides the same functionality as Audit > PCI & Disk H/W *(page 46)*.
- Printers - Lists the printers and ports a machine can direct print jobs to.
- Pending Scripts - Displays and schedules pending scripts for a machine and the script history for that machine. Includes the execution date/time and administrator who scheduled the script.
    - To add a script to the pending script schedule, click the Click to schedule new script link to display the Search for Script window and select a script. The name of the selected script displays at the top of the Pending Scripts window. Enter scheduling parameters, then click the Schedule button.
    - To remove a pending script from the pending script schedule, click the checkbox next to the pending script and click the Cancel button.
- Agent Logs - Displays the event logs available for a machine: Agent Log, Configuration Log, Network Statistics, Event Log, Script Log, Remote Control Log, Log Monitoring.
- Alerts - Defines alerts for a machine: Agent Status, Application Status, Get File Changes, Hardware Changes, Low Disk Space, Event Log, LAN Watch, Script Execution Failure, Protection Violations, Patch Alert, Backup Alert.
- Patch Status - Displays `Missing` and `Pending` Microsoft patches and schedules missing patches. If a machine belongs to a patch policy *(page 609)*, missing patches may be further identified as `Denied (Pending Approval)`. The user can manually override the denied patch policy by scheduling the patch.
    - To schedule a missing patch, check the box next to the patch, enter scheduling parameters and click the Schedule button.
    - To cancel a pending patch, check the box next to the patch and click the Cancel button.
    - To display the history of patches installed on a machine, click the Show History link.
- Remote Control - Displays and configures remote control settings for a machine.
- Agent Settings - Displays information about the agent on the managed machine: Agent version, Last check-in, Last reboot, First time check-in,

Patch Policy Membership, Temp Directory, Check-In Control, Edit Profile, Set Days to Keep Log Entries, Capture Event Logging.

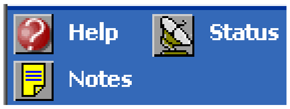
- New Ticket - Click this link to create a new ticket assigned to this machine ID using the Ticket > View Ticket *(page 236)* page.

Customizing the New Ticket Link

To customize the New Ticket link on the Machine Summary page fill out the `externalLink.xml` file as described in the comments section of the XML below. To activate the new ticket link, place the `externalLink.xml` file in the `\WebPages\install\` directory of your KServer.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<externalLinks>
  <!--
  URL STRING SUBSTITUTIONS: The URL string displayed is associated
  with a particular machine ID. The string is searched for the
following
  case sensitive values and substituted for the values below.
  machineNameVal - the machine name for the active machine is
substituted
                   in the URL string.
  groupNameVal - the group name for the active group.
  -->
  <ticketLink displayName="Ext Ticket"
url="http://192.168.212.52/?mname=machineNameVal&amp;gname=groupNameVal
"/>
</externalLinks>
```

Toolbox



The Toolbox provides the administrator with a common area to access frequently used commands and functions. The Toolbox is accessible from any tab, giving administrators convenient access to frequently used features of the VSA.

Notes

Click the Notes icon to display the Administrator Notes *(page 26)* window. Administrator Notes provides a place to record and retrieve what previous administrator actions were performed on each machine.

Status

Click the Status icon to display the Status Monitor *(page 26)* window. Status Monitor continuously monitors selected machines, notifying you when they go online or offline.

Help

Click the Help icon to display context-sensitive help for the currently selected function page.

Status Monitor

Toolbox > Status

The status monitor continuously monitors selected machines, notifying you when they go online or offline. If someone is currently logged onto the machine, Status Monitor displays their user name in bold along with the IP address of the machine. Master administrators can also display the list of logged on administrators.

Turn off sound

A unique audible tone sounds each time a machine goes online, machine goes offline, an administrator logs in, or an administrator logs out. Turn these sounds off by checking this box.

Refresh Rate

Refreshes the browser every 30 sec, 1, 2, or 5 minutes. Each browser refresh gets the latest status from Virtual System Administrator. To get an immediate update, click the Refresh link.

List logged on administrators

Uncheck this box to hide the list of administrators.

> Note: This option is available to master administrators only.

Sort By

List machines in any of the following order:

- Connection Gateway - Numerically, left to right, by IP address. Best for grouping machines by how they are connected on the network.
- Group ID - Alphabetically by group ID.
- Machine ID - Alphabetically by machine ID.

Hide offline machines

Uncheck this box to list all machines. Offline machines have a grayed out icon.

Administrator Notes

Administrator Notes allows you to log what you did to a machine or group of machines into the system database. The next time you have a problem with any machine, check the notes and see what other administrators have done on that machine. The system time-stamps each administrator note and associates the note with an administrator name.

Open the notes editor by clicking the Notes icon in the Toolbox *(page 25)*.

> Note: You can print Administrator Notes using Reports > Logs *(page 422)* and selecting `Admin Notes` in the Choose a log to display field.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*. Check the box in front of the machines you wish to apply the note to.

Time

Displays the time-stamp when the note was first entered. The time-stamp can be edited by clicking the edit icon 📝 next to the specific note whose time-stamp you wish to change.

Admin

Logon name of the administrator that entered the note. If a different administrator edits the note, this field is updated with the new administrator's name.

Delete the note

Delete the note by clicking the delete icon ✗ next to it. If more than one machine has the same note entered by the same administrator and has the same time-stamp, the system asks if you want to delete all occurrences of the note.

Edit the note

Change a note by clicking the edit icon 📝 next to it. Click the Apply button to commit the changes. Click Cancel to restore the original text. If more than one machine has the same note entered by the same administrator and has the same time-stamp, the system asks if you want to modify all occurrences of the note.

Note

Displays the administrator entered note for the selected machine.

Notes per Page

Number of notes to display at a time. Choices are 10, 30, and 100.

Logoff

Click the Log Off link to prevent unauthorized access to the server and return to the logon page. The Log Off link is located in the upper right-hand corner of the window and is accessible from any tab and function.

Note: For increased security, it is recommended that administrators log off and terminate all browser sessions when not administering the server.

Chapter 3

Home

In This Chapter

Home Tab

Home

The Home tab contains a summary display of the entire system called the dashboard and a summary display of the alarm status of all machines being monitored call the console. The results displayed by the dashboard and console depend on the Machine ID / Group ID filter *(page 606)*.

- The Home tab provides a quick start guide to the main features of the VSA.
- You can view VSA demos at http://www.kaseya.com/resources/demo.php
- You can completely customize the menu options displayed on the Home tab using System > Customize *(page 535)*.

Functions	Description
View Dashboard *(page 30)*	Displays system summary information at a glance.
Layout Dashboard *(page 31)*	Specify which items appear in the dashboard and the order the items appear.
Dashboard LIst *(page 99)*	Multiple monitoring views display a summary of monitoring status.
Settings *(page 108)*	Use this page to customize the Dashboard List page.

View Dashboard

Home > View Dashboard

The View Dashboard page gives you a quick view of the total system's status, highlighting the machine IDs and tasks you need to work on first. The results displayed by the dashboard depend on the Machine ID / Group ID filter *(page 606)*. You can manage tasks and send messages to other administrators using the dashboard. Customize the dashboard display using Home > Layout Dashboard *(page 31)*.

Alerts

Displays all alerts relating to all machine IDs matching the current machine ID / group ID filter *(page 17)*. The display lists the most recent alerts first. By default, alerts generated within the last 24 hours are highlighted in red. Alerts generated within the last week are highlighted in yellow. The color coding lets you quickly distinguish alerts you may not have examined yet.

Agent Status

Summarizes the online status of all machine IDs matching the current machine ID / group ID filter. Gives you an at-a-glance count of how many machines are online, have users logged into them, have been offline for less than 30 days and offline for over 30 days and the total number of agents matching the current machine ID / group ID filter.

Patch Status

Uses a pie chart to highlight machines missing patches and matching the current ID / group ID filter. The chart displays with or without applying a patch policy.

- Click the Use Policy button to apply the Patch Policy *(page 609)* when generating the pie chart.

> Note: The Patch Policy incurs a significant performance penalty. If you have a lot of machine IDs this pie chart takes a long time to generate when using the patch policy.

- Click the Hide Policy button to generate the pie chart without the patch policy. This shows all missing patches including those denied by patch policy.
- Clicking on any pie segment opens a sub window listing all machine IDs that make up that pie segment.

Operating Systems

Uses a pie chart to shows the mix of operating systems in use, for machines matching the current machine ID / group ID filter. Clicking any pie segment opens a sub window listing all machine IDs that make up that pie segment.

Tickets

Lists recent tickets issued against the machine IDs matching the current machine ID / group ID filter.

Tasks

Use this section to create, edit, and monitor tasks you or other administrators need to perform. A pop up window alerts you when new tasks created for you have been added to your task list. Additional pop ups occur when the task becomes past due. You can have the system remind you of a past due task again, by clicking the Snooze button when the task reminder dialog box displays. You can clear all outstanding task notification messages by clicking the Clear Snooze button on the System > Preferences *(page 501)* page.

Layout Dashboard

Home > Layout

The Layout Dashboard page displays/hides each item and sets the order they appear, from top to bottom. Each dashboard *(page 30)* pane appears as a vertical section. To display an item, simply check the box next to the item.

Two items have additional customization control: Tickets, and Messages. Both display time dependent data. To make it easy to quickly distinguish new item from old items, you can specify different highlight colors from data rows depending on how recently the data item was generated.

Recommendation

- Highlight the most recent tickets and messages in red. All tickets and messages created in the last N days are highlighted in red.
- Highlight the next most recent tickets and messages in yellow. All alerts, tickets and messages that are older than the red highlight date but more recent than the number entered are highlighted in yellow.
- Disable highlighting by setting the number of days to zero.

Chapter 4

Audit

In This Chapter

Audit Tab

Audit

Agents *(page 600)* can be scheduled to automatically audit the hardware and software configurations of their managed machines on a recurring basis. Agents report the information back to the KServer so you can access it using the VSA even when managed machines are powered down. Audits enable you to examine configurations before they develop into serious problems. The system maintains three types of audits for each machine ID:

- Baseline audit - The configuration of the system in its original state. Typically a baseline audit is performed when a system is first set up.
- Latest audit - The configuration of the system as of the last audit. Once per day is recommended.
- System Info - All DMI / SMBIOS data of the system as of the last system info audit. This data seldom changes and typically only needs to be run once.

The VSA detects changes in a machines's configuration by comparing the latest audit to the baseline audit. The latest audit record is stored for as many days as you specify.

Most of the agent and managed machine data displayed by function pages and Reports *(page 394)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 113)* types specifically address changes between a baseline audit and the latest audit: Application Changes and Hardware Changes. Collected audit information includes:

- All hardware, including CPUs, RAM, PCI cards *(page 46)*, and disk drives.
- All installed software, including licenses, version numbers, full path, and description.
- System Information from DMI and SMBIOS including PC make, model, serial number, mother board type, and over 40 other pieces of information describing the PC and its configuration.
- OS info with version number and service pack build.
- Current network settings including local IP address, gateway IP address, DNS, WINS, DHCP, and MAC address.

Note: You can view Audit demos at http://www.kaseya.com/resources/demo.php

Functions	Description
Run Audit *(page 35)*	The Run Audit function used in conjunction with the Reports tab can be used to generate reports about usage trends and managed machine configurations, which can be helpful in isolating faults and other software or hardware-related problems.
System Info *(page 38)*	Shows DMI / SMBIOS data collected.
Insalled Apps *(page 39)*	Shows a list of executable (.exe) files on selected managed machines.
Add/Remove *(page 40)*	Shows the Add or Remove Programs list from a managed machine.

SW Licenses *(page 40)*	Shows a list of vendor license codes found on selected managed machines.
Name/OS Info *(page 41)*	Shows the Windows Networking computer name, operating system, and operating system version in use on the managed machines.
IP Info *(page 42)*	Shows the Machine.Group ID, IP address, subnet mask, default gateway, and connection gateway in use on the managed machines.
DNS/DHCP *(page 43)*	Shows the Machine.Group ID, DNS Server, DHCP server, and primary and secondary WINS servers in use on the managed machine(s).
Disk Volumes *(page 44)*	Shows the Machine.Group ID, types of drives with corresponding drive letters, and free space, used space and total space on physical and logical drives in use on the managed machines.
PCI & Disk H/W *(page 46)*	Shows information about PCI, disk drives, and disk controller cards installed on managed machines.
CPU/RAM *(page 47)*	Shows the Machine.Group ID, CPU, quantity and speed of CPUs, and RAM as reported in use on the managed machines.
Printers *(page 48)*	Lists all printers available to a managed machine.
Documents *(page 49)*	Stores files associated with a managed machine.
Machine Summary *(page 23)*	Displays detailed information about a single managed machine.
File Access *(page 52)*	Prevents unauthorized access to files on managed machines by rogue applications or users.
Network Access *(page 54)*	Lets you approve or deny network access on a per application basis.
Application Blocker *(page 57)*	Application blocker prevents any application from running on a managed machine.

Run Audit

Audit > Run Audit

Agents *(page 600)* can be scheduled to automatically audit the hardware and software configurations of their managed machines on a recurring basis. Agents report the information back to the KServer so you can access it using the VSA even when managed machines are powered down. Audits enable you to examine configurations before they develop into serious problems. The system maintains three types of audits for each machine ID:

- Baseline audit - The configuration of the system in its original state. Typically a baseline audit is performed when a system is first set up.
- Latest audit - The configuration of the system as of the last audit. Once per day is recommended.
- System Info - All DMI / SMBIOS data of the system as of the last system info audit. This data seldom changes and typically only needs to be run once.

The VSA detects changes in a machines's configuration by comparing the latest audit to the baseline audit. The latest audit record is stored for as many days as you specify.

Most of the agent and managed machine data displayed by function pages and Reports *(page 394)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 113)* types specifically address changes between a baseline audit and the latest audit: Application Changes and Hardware Changes.

Latest Audit

Runs the Latest Audit of all selected machine IDs when Schedule is clicked. Captures the state of machines on a frequent basis, such as daily.

Baseline Audit

Runs a Baseline Audit of all selected machine IDs when Schedule is clicked. Run a baseline audit to capture the state of machines in a known working state.

System Info

Collects System Info of all selected machines IDs when Schedule is clicked. System Info *(page 38)* displays all DMI / SMBIOS data collected for each managed machine. This data virtually never changes and typically only needs to be run once.

Schedule

Click Schedule to schedule this task on selected machine IDs using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Run Now

Click Run Now to run this task on selected machine IDs immediately.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Run recurring every <N> <periods>

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Remind me when accounts need audit scheduled

If checked, displays a pop up warning message if audits have not been scheduled for one or more machine IDs. The warning displays each time you select Run Audit.

PCI & Disk Audit

Enables/disables the hardware audit driver for an agent. Only disable the driver if you suspect a driver conflict on the managed machine. The agent can not audit PCI hardware cards if this driver is disabled.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID/System Info

The top line shows the machine ID. The bottom line displays the last time a System Info audit was performed. If a System Info audit is pending, the time displays as red text with yellow highlight.

Latest Audit/Baseline Audit

The top line displays when the Latest Audit data was performed. The bottom line displays the last time a Baseline Audit was performed. If the baseline audit is pending, the time displays as red text with yellow highlight.

Next Audit/Recurring Interval

Displays the time of the next scheduled Latest Audit. The bottom line displays the recurring interval for latest audits. If the latest audit is pending, the time displays as red text with yellow highlight.

System Info

Audit > System Info

Similar information is provided using Reports > Inventory *(page 413)*.

The System Info page displays all DMI / SMBIOS data collected by the system info audit *(page 602)* for a selected machine ID. Data items displayed can include:

- System Information
  - Manufacturer - system manufacturer
  - Product Name - system product name
  - System Version - product version number
  - System Serial Number - system serial number
  - Chassis Serial Number - serial number on the enclosure
  - Chassis Asset Tag - asset tag number on the enclosure
  - External Bus Speed - motherboard bus speed
  - Max Memory Size - maximum memory size the motherboard can hold
  - Max Memory Slots - total number of memory module slots available
  - Chassis Manufacturer - manufacturer of the enclosure
  - Chassis Type - enclosure type
  - Chassis Version - enclosure version number
  - Motherboard Manufacturer - motherboard manufacturer
  - Motherboard Product - motherboard product ID
  - Motherboard Version - motherboard version number
  - Motherboard Serial Num - motherboard serial number
  - Processor Family - processor type installed
  - Processor Manufacturer - processor manufacturer
  - Processor Version - processor version ID
  - CPU Max Speed - max processor speed supported
  - CPU Current Speed - speed processor is currently running at
- On Board Devices - table of motherboard based devices (like video or ethernet)
- Port Connectors - table of all the connections available on the chassis

- Memory Devices - table of memory modules installed on the motherboard
- System Slots - table indicating status of each available card slot

Show More...

Click the Show More button to display the Select System Information to Display popup window. This window enables you to add or subtract DMI / SMBIOS data items to display in the System Info page.

Automatic Collection

The automatic collection icon indicates the data item is automatically collected and updated each time collection runs. Click this icon to toggle to Manual Collection mode.

Manual Collection

The manual collection icon indicates the data item is manually input by the administrator. These items are *not* updated each time collection runs. Click this icon to toggle to Automatic Collection mode.

Edit Value

Edit any System Info data item by clicking the edit value icon . The edit value icon displays for data items set to Manual Collection.

Installed Apps

Audit > Installed Apps

Similar information is provided using Reports > Software *(page 415)*.

The Installed Apps page lists all applications found during the latest audit *(page 602)* for a selected machine ID. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. The following information is displayed by default:

- Application - The filename of the application.
- Version - The version number of the application.
- Product Name - The product name of the application.
- Description - A brief description of the application as reported in the Properties dialog box of the executable file.
- Directory Path - The absolute directory path where the application file is located.
- File Size - The size, in kilobytes, of the application file.
- Last Modified - The modification date of the application file.

You can adjust the display of data using the following controls:

Rows/page

Select the number of rows displayed per page. Selecting `All` may take a long time to display.

Show page starting with...

When more rows of data are selected than can be displayed on a single page, click the Back and Next buttons to display the previous and next page. The drop down list alphabetically lists the first record on each page of data.

Filter...

Click the Filter... button to display the Filter List of Displayed Applications popup window. This window enables you to select and order the columns of information displayed. You can also narrow your search by entering filter criteria. Include an asterisk (*) wildcard with the text you enter to match multiple records. By default, the (*) wildcard is used, which lists all files. For example, enter the letter A* in the Application field, then click Save to display all application names beginning with the letter A. Use Advanced Filtering *(page 405)* options to specify additional criteria.

Full column width

Column data is limited to to the width allotted for each column. Hovering over shortened data displays the full data as a tool tip. To display data in full width columns check this box.

Add/Remove

Audit > Add/Remove

Similar information is provided using Reports > Software *(page 415)*.

Alerts can be defined using Monitor > Alerts > Application Changes *(page 120)*.

Click a machine ID on the Add/Remove page to show the Add or Remove Programs list from a managed machine. Information shown on this page is collected when a Latest Audit *(page 35)* is performed. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*.

SW Licenses

Audit > SW Licenses

Similar information is provided using Reports > Software *(page 415)*.

The SW Licences page displays all software licenses found for a selected machine ID. The list of machine IDs displayed depends on the Machine ID / Group ID filter *(page 17)* and machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Information shown on this page is collected when a Latest Audit *(page 35)* is performed. Each vendor stores an application's license key differently so all application software licenses may not be collected.

Duplicate License Keys

Duplicate license keys found on more than one machine display in red text. Clicking the number link next to the title of a duplicate license lists the machine IDs using the duplicate license.

Publisher

The software publisher of the application (e.g. Microsoft).

Title

The name of the application.

Product Key

The product key used to activate the application during installation.

License

The license code associated with the application.

Version

The version of the application.

Date

The version release date.

Name/OS Info

Audit > Name/OS Info

Similar information is provided using Reports > Software *(page 415)*.

Name/OS Info displays the Microsoft Windows Networking computer name, operating system, and version information for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Computer Name

Lists the name of the computer as reported and used by Windows Networking.

Operating System

Lists the operating system name used by the managed machine.

Version

Lists the version number of the operating system in use by the managed machine.

IP Info

Audit > IP Info

IP Info displays IP address, subnet mask, default gateway (internal) and connection gateway (external) information for machine IDs matching the current Machine ID / Group ID filter *(page 17)*. Information shown in this function is collected when a Latest Audit *(page 35)* is performed.

> Note: The connection gateway is the public IP address the outside world sees when a machine connects from a private LAN behind a NAT gateway. Typically that IP address is the address on the WAN side of the NAT gateway.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

IP Address

Lists the IP address assigned to the managed machine.

Subnet Mask

Lists the subnet mask that the IP address belongs to.

Default Gateway/Connection Gateway

Lists the default and connection gateway in use by the managed machine.

MAC Address

Lists the Media Access Control (MAC) address of the machine listed, which uniquely identifies each node on a network.

DNS/DHCP

Audit > DNS/DHCP

DNS/DHCP displays DNS servers, DHCP server, Primary and Secondary WINS server information for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed. If a function is not used on a managed machine, `not available` is shown. For example, Secondary WINS servers are often not used.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

DNS Server

Displays the DNS servers in use by the managed machine.

DHCP Server

Displays the DHCP servers in use by the managed machine.

Primary/Secondary WINS

Displays the primary and, if used, the secondary WINS servers in use by the managed machine.

Disk Volumes

Audit > Disk Volumes

Similar information is provided using Reports > Disk Utilization *(page 418)*.

The Disk Volumes page displays drive letter, label, drive type (fixed, removable, CD-ROM or network), format, free space, used space and total size of drive information for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- Agent has checked in
- Agent has checked in and user is logged on. Tool tip lists the logon name.
- Agent has not recently checked in
- Agent has never checked in
- Online but waiting for first audit to complete
- The agent is online but remote control is disabled
- The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Drive

Lists the drive letter in use by the managed machine for the selected drive.

Label

Lists the name given to the volume. In Windows, this value can be set and viewed by right-clicking the volume in any Explorer window and selecting Properties.

Type

Lists the type of drive in use by the managed machine. The different types are:

- Removable - Examples include a ZIP drive, tape drive, optical drive, etc.
- Fixed - Standard non-removable hard drives.
- CD-ROM - CD-ROM, CD- RW and DVD-ROM drives, all reported as CD-ROM drives.
- Network - Mapped network drives accessible from the managed machine.

Format

Lists the formatting applied to the volume. Formats that can be read by the system are: `NTFS`, `FAT32`, `FAT`, and `CDFS`.

Free Space

Lists the available free space, in megabytes, as reported from removable and network drives.

User Space

Lists the used space, in megabytes, as reported from removable and network drives.

Total Size

Lists the total storage capacity, in megabytes, of the removable or network drive.

PCI & Disk H/W

Audit > PCI & Disk H/W

Similar information is provided using Reports > Inventory *(page 413)*.

The PCI & Disk H/W page displays information about network cards, controller cards, multimedia cards, hard disk controllers and other devices installed for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed.

The different types of devices reported by the system are:

- Network cards
- Graphics cards
- Multimedia (sound) cards
- Hard disk controller cards
- CD-ROM and hard disk vendor information

Disabling PCI & Disk H/W Audit

The agent uses a driver to query the PCI bus during an audit. Only disable this driver if you suspect a driver conflict on the managed machine. The agent can not audit PCI hardware cards if this driver is disabled.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Type

Lists the type of device installed on the managed machine. This can include network interface cards, graphics cards, sounds cards, hard disks, and CD-ROM drives.

Vendor

Lists the manufacturer of the device installed on the managed machine.

Product

Lists the device installed in the managed machine.

Notes

Click the Notes icon to maintain notes about this record.

CPU/RAM

Audit > CPU/RAM

The CPU/RAM page displays the CPU type, number of CPUs, CPU speed, and total physical RAM for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed. The amount of RAM reported may be slightly different than the actual physical RAM in the machine. This is the RAM information as reported by the operating system and is normal.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

CPU

Lists the manufacturer and model of the CPU as reported by the managed machine. If a managed machine has more than one CPU, the manufacturer and model is displayed for each one.

Quantity (Qty.)

Lists the number of CPUs used in the managed machine.

Speed

Lists the clock speed, in megahertz, of the managed machine. If a managed machine has more than one CPU, the speed is displayed for each one.

> Note: Due to rounding, the listed speed of the processor may not match the speed specified by its manufacturer.

RAM

Lists the amount of physical random access memory available, in megabytes, as reported by the managed machine. The amount of RAM reported may be slightly different than the actual physical RAM in the machine. This is the RAM information as reported by the operating system and is normal.

Printers

Audit > Printers

The Printers page lists all printers mounted for the currently logged on user at the time the last audit ran, for all machine IDs currently matching the Machine ID / Group ID filter. Information shown in this function is collected when a Latest Audit *(page 35)* is performed.

Full column width

Column data is limited to to the width allotted for each column. Hovering over shortened data displays the full data as a tool tip. To display data in full width columns check this box.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

- ● Agent has never checked in
- OK Online but waiting for first audit to complete
- ● The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Printers

Lists the name of each printer found during the latest audit.

> Note: Printers are mounted on a per user basis. Therefore, the printers listed are those of the user who is logged on at the time of the audit. If no user is logged on, the printers of the Administrator account are reported.

Port

Name of the port this printer is connected to.

Model

Lists the model name reported by the manufacturer of each printer found.

Documents

Audit > Documents

The Documents page stores files associated with a machine ID. For example, you can upload scanned copies of purchase receipts, contract information, and configuration notes specific to a machine ID.

To Store a Document

1. Click a machine ID.group ID link. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. Documents previously stored on the KServer for this machine ID display.
2. Click Browse to locate a file on your local computer or LAN.
3. Click Upload to upload the file to the Kserver.

   The added Filename displays, along with its file Size and the date/time of the Last Upload.

Edit

You can click a Filename link or edit icon to display a file or run the file, depending on the application the filename extension is associated with on your local machine.

Delete

Click the delete icon to delete a stored document from the KServer.

Machine Summary

Audit > Machine Summary

Similar information is provided using Reports > Machine Summary *(page 406)*.

The Machine Summary page for any machine ID can be displayed immediately by clicking the check-in status icon next to any machine ID.

- Agent has checked in
- Agent has checked in and user is logged in. Tool tip lists the logon name.
- Agent has not recently checked in
- Agent has never checked in
- Online but waiting for first audit to complete
- Agent has been disabled
- Agent has been suspended

Alternatively, you can navigate to the Audit > Machine Summary page, which lists all machine IDs currently matching the Machine ID / Group ID filter *(page 17)*, and click any machine ID to display the Machine Summary page.

Displaying the Machine Summary Page Using a URL

The following URL displays the Machine Summary *(page 23)* web page for a specific machine ID:

```
http//....?machName=<MachineID>
```

For example:

```
http://demo.kaseya.com?machName=jconners.acme
```

Machine Summary

The Machine Summary page allows administrators to perform tasks and functions solely for one managed machine. A tabbed property sheet provides access to various categories of information about the managed machine. The administrator can customize the layout of the Installed Applications and System Info tabs.

> Note: Administrator access to the tabs of the Machine Summary page is determined using System > Function Access *(page 514)*.

The following elements are displayed in the Machine Summary:

- Machine Info - Current User, Domain/Workgroup, IP Address, Computer Name, Subnet Mask, OS, Version and Build, Default Gateway, Connection Gateway, RAM, MAC Address, CPU, DHCP Server, DNS Server, and Primary and Secondary WINS Servers, Last Checkin, Last Reboot, First Time Checkin.
- Installed Applications - Lists all the applications installed on the managed machine. Provides the same functionality as Audit > Installed Apps *(page 39)*. Clicking the Filter... button enables you to filter the applications displayed by application attribute.
- System Info - Lists system hardware attributes and related information.
  - ➢ Click the Show More button to add or subtract system information attributes from the default list provided.
  - ➢ Click the automatic assignment icon next to an system information attribute to manually edit the value. Click the manual edit icon to display the Edit Manual Input Value Only dialog box. Use this dialog box to manually change the value of the attribute for this machine or for all machines using the current machine ID / group ID filter.
  - ➢ Click the System Serial Number link to display a machine manufacturer's support site, for the following manufacturers: Dell, IBM, Lenovo, HP, Compaq, Gateway, and Sony.
- Disk Volumes - Drive letter, Type, Format, Free Space, Used Space, Total Size, and Label.
- PCI & Disk Hardware - Type, Vendor, and Product name. Provides the same functionality as Audit > PCI & Disk H/W *(page 46)*.
- Printers - Lists the printers and ports a machine can direct print jobs to.
- Pending Scripts - Displays and schedules pending scripts for a machine and the script history for that machine. Includes the execution date/time and administrator who scheduled the script.
  - ➢ To add a script to the pending script schedule, click the Click to schedule new script link to display the Search for Script window and select a script. The name of the selected script displays at the top of the Pending Scripts window. Enter scheduling parameters, then click the Schedule button.
  - ➢ To remove a pending script from the pending script schedule, click the checkbox next to the pending script and click the Cancel button.
- Agent Logs - Displays the event logs available for a machine: Agent Log, Configuration Log, Network Statistics, Event Log, Script Log, Remote Control Log, Log Monitoring.
- Alerts - Defines alerts for a machine: Agent Status, Application Status, Get File Changes, Hardware Changes, Low Disk Space, Event Log, LAN Watch, Script Execution Failure, Protection Violations, Patch Alert, Backup Alert.
- Patch Status - Displays `Missing` and `Pending` Microsoft patches and schedules missing patches. If a machine belongs to a patch policy *(page 609)*, missing patches may be further identified as `Denied (Pending Approval)`. The user can manually override the denied patch policy by scheduling the patch.

    - To schedule a missing patch, check the box next to the patch, enter scheduling parameters and click the Schedule button.
    - To cancel a pending patch, check the box next to the patch and click the Cancel button.
    - To display the history of patches installed on a machine, click the Show History link.
- Remote Control - Displays and configures remote control settings for a machine.
- Agent Settings - Displays information about the agent on the managed machine: Agent version, Last check-in, Last reboot, First time check-in, Patch Policy Membership, Temp Directory, Check-In Control, Edit Profile, Set Days to Keep Log Entries, Capture Event Logging.
- New Ticket - Click this link to create a new ticket assigned to this machine ID using the Ticket > View Ticket *(page 236)* page.

Customizing the New Ticket Link

To customize the New Ticket link on the Machine Summary page fill out the `externalLink.xml` file as described in the comments section of the XML below. To activate the new ticket link, place the `externalLink.xml` file in the `\WebPages\install\` directory of your KServer.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<externalLinks>
  <!--
  URL STRING SUBSTITUTIONS: The URL string displayed is associated
  with a particular machine ID. The string is searched for the
following
  case sensitive values and substituted for the values below.
  machineNameVal - the machine name for the active machine is
substituted
                   in the URL string.
  groupNameVal - the group name for the active group.
  -->
  <ticketLink displayName="Ext Ticket"
url="http://192.168.212.52/?mname=machineNameVal&amp;gname=groupNameVal
"/>
</externalLinks>
```

File Access

Audit > File Access

The File Access page prevents unauthorized access to files on managed machines by rogue applications or users. Any application can be approved or denied access to the file.

> Note: You may also block operating system access to the protected file by blocking access to `explorer.exe` and/or `cmd.exe`. This prevents the file from being renamed, moved, or deleted therefore completely locking down the file from tampering.

Block

To protect a file from access by rogue applications, enter the filename and click the Block button. This displays the File Access popup window.

The dialog presents the user with one of the following options:

- Filename to access control - Enter the file name and/or a portion of the full path. For example, adding a file named `protectme.doc` to the list, protects occurrences of `protectme.doc` in any directory on any drive. Adding `myfolder\protectme.doc` protects all occurrences of the file in any directory named `myfolder`.
- New - Add in a new application to the access list. You can manually enter the application or use the Search... button to select an application name.
- Remove - Removes an application from the approved access list
- Search - Select a machine ID to search the list of applications installed on that machine ID and select an application name. This list is based on the latest audit performed on that machine ID. You are not actually browsing the managed machine.
- Ask user to approve unlisted - Lets users approve/deny access to the file on a per application basis each time a new application tries to access that file. Use this feature to build up an access control list based on normal usage.
- Deny all unlisted - Blocks an application from accessing the file. Select this option if you are already sure of which files need access and which do not.

Unblock

Remove an application from the protection list by clicking the Unblock button. This opens a new dialog box listing all protected files for the selected machine IDs. You can remove files from just the selected machine or from all machines containing that file path.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Filename

Filename of the file to be blocked. Click the edit icon ✎ next to any filename to change file access permissions for that filename.

Approved Apps

Lists applications approved to access the file on the machine ID.

Ask User Approval

If checked, the user of a machine ID is asked to approve file access if an unapproved application attempts to access the file.

Network Access

Audit > Network Access

The Network Access page lets you approve or deny TCP/IP-protocol-based network access on a per application basis. Users can also be notified when an unlisted application accesses the network, permitting or denying that application network access. Typically this function is used to control access to internal and external *internet* sites, but can include internal LAN traffic that also uses the TCP/IP protocol.

Driver

This function requires the driver be *enabled* to block network access and monitor network bandwidth statistics. *The driver is disabled by default*. This driver inserts itself into the TCP/IP stack to measure TCP/IP-protocol-based network traffic by application.

Note: To determine which applications should be approved or denied network access, use the Network Statistics *(page 419)* report to view network bandwidth utilization versus time. Drill down and identify peak bandwidth consumers by clicking on the graph's data points. See which application and which machine use bandwidth at any point in time.

Warning: Applications that do not use the Windows TCP/IP stack in the standard way may conflict with the driver used to collect information and block access, especially older legacy applications.

To approve or deny network access to one or more applications

1. Check the checkbox next to one or more machine IDs in the Machine.Group ID column.
2. Click the link of *any* machine ID in the Machine.Group ID column. It does not have to be the machine ID you checked. This displays the Application List popup window, listing all applications installed on that machine ID. The list is based on the latest audit that was performed for that machine ID.
3. Since the list in the Application List window may be large, you can control the applications displayed by clicking Filter to filter the list.
4. Check the checkboxes next to the application name you wish to approve or deny network access to.
5. You can also enter application names in the Add applications not found by audit here edit field, to identify applications not listed.
6. Click the Select button to confirm your selections and close the Application List window.
7. Click Approve Apps or Deny Apps. The applications selected in the Application List window are added from the Approved Apps/Denied Apps column.

To remove approve and deny settings for one or more machine IDs

1. Check the checkbox next to one or more machine IDs in the Machine.Group ID column.
2. Click the Remove Apps button.

Notify user when app blocked

Click Enable to notify the user when a blocked application attempts to access the network. Use this function to build up the access list based on normal usage. This lets you see which applications on your system are accessing the network and when.

The user has four responses that they can enter for the given application:

- Always - Allows the application access to the network indefinitely. Users will not be prompted again.
- Yes - Allows the application access to the network for the duration of the session. Users will be prompted again.
- No - Denies the application access to the network for the duration of the session. Users will be prompted again.
- Never - Denies the application access to the network indefinitely. Users will not be prompted again.

Enable/Disable driver at next reboot

Enable/Disable the network access protection driver for an agent. Applications that do not use the Windows TCP/IP stack in the standard way may conflict with this driver, especially older legacy applications.

The agent can not monitor network statistics or block network access if this driver is disabled.

Apply Unlisted Action

An unlisted application is one that has not been explicitly approved or denied access to the network. Select the action to take when an unlisted application attempts to access the network.

- Ask user to approve unlisted - A confirmation dialog box displays if an unlisted application attempts to access the network.
- Approve all unlisted - The unlisted application is granted access to the network.
- Deny all unlisted - The unlisted application is denied access to the network and the application is closed on the managed machine.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Notify User

A green checkmark ✓ in the Notify User column indicates that the managed machine user is notified when an application attempts to access the network that has been denied network access.

To notify the user when a application has been denied:

1. Select machine IDs.
2. Click the Enable button for Notify user when app is blocked.

To remove this notification:

1. Select machine IDs that display a green checkmark ✓ in the Notify column.
2. Click the Disable button for Notify user when app is blocked.

Enable Driver

Identifies on a per machine ID basis, which machines have the network protection driver enabled or not.

Unlisted Action

Displays the Unlisted Action to take when an unlisted application attempts to access the network. See Apply Unlisted Action above.

Approved Apps / Denies Apps

- Approved applications are listed in the first row.
- Denied applications are listed in the second row.
- If the Approve all unlisted radio option is selected and applied to a machine ID, then the approved application list is replaced by the phrase `Approve All Unlisted`.
- If Deny all unlisted radio option is selected and applied to a machine ID, then the denied application list is replaced by the phrase `Deny All Unlisted`.

Application Blocker

Audit > Application Blocker

The Application Blocker page prevents any application from running on a machine ID. Blocked applications cannot be renamed, moved, or deleted from the system.

Block

To block an application from running on a machine:

1. Select one or more machine IDs. Only machine IDs currently matching the Machine ID / Group ID filter *(page 17)* are displayed.
2. Enter the application's filename in the edit box.

   The application can be referenced by file name and/or a portion of the full path. For example, adding an application named `blockme.exe` to the list, prevents all occurrences of `blockme.exe`, on any directory or on any drive, from running. Adding `myfolder\blockme.exe` prevents occurrences of the application in any directory named `myfolder` from running.

3. Click the Block button.
4. The blocked application displays in the Application column beside the selected machine IDs.

Unblock

To unblock an application from the blocked list:

1. Select one or more machine IDs that show blocked applications in the Application column.
2. Click the Unblock button. This opens a File Access popup window listing all blocked applications for the selected machine IDs.
3. Click one or more blocked applications.
4. Click the Unblock button. The window closes.
5. The blocked application no longer displays in the Application column beside the selected machine IDs.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Application

Filename of the application being blocked.

Chapter 5

Scripts

In This Chapter

Scripts Tab

Scripts

Use the Scripts Tab to create and schedule automated tasks on managed machines.

Note: You can view Script demos at http://www.kaseya.com/resources/demo.php

Installations

You can schedule the installation of Microsoft and non-Microsoft applications and patches using Patch Deploy *(page 61)* and Application Deploy *(page 63)*.

Note: See Patch Management *(page 258)* to install Microsoft patches on managed machines.

When a pre-defined install solution cannot be used, use Packager *(page 66)* to create a self-extracting file ready for automated distribution. Transfer files to and from managed machines using Get File *(page 67)* and Distribute File *(page 68)*.

Script Analysis

You can view the status of all scripts run on a managed machine using Scripts Status *(page 69)*. You can also spread out the impact scripts have on network traffic and server loading using Distribute *(page 70)*.

Customized Scripts

You can also create user-defined scripts to modify files and/or the registry on managed machines.

- See Script Browser and Script Toolbar *(page 72)* for an introduction to managing scripts.
- See Script Editor *(page 76)* for an introduction to creating and editing scripts.
- See IF-THEN-ELSE *(page 81)* for a list of script commands available to you.

Windows vs. Macintosh

Customized scripts include the ability of specifying what type of operating system they should be run on, including managed machines running the Macintosh OS.

Functions	Description
Patch Deploy *(page 61)*	Use this wizard tool to create scripts to deploy patches to managed machines.
Application Deploy *(page 63)*	Use this wizard tool to create scripts to deploy third party install packages (setup.exe) to managed machines.
Packager *(page 66)*	An external application that allows administrators to create customized installation packages deployable on administered managed machines.
Get File *(page 67)*	View and manage files uploaded to the KServer from managed

	machines by a Get File script command.
Distribute File *(page 68)*	Write files to all selected managed machines and maintain them.
Scripts Status *(page 69)*	Shows the status of scripts executed on managed machines: machine.group ID, time of the last executed script, results of the executed script, and the number of times the script has been executed.
Distribution *(page 70)*	Minimize network traffic and server loading by executing scripts evenly throughout the day

Patch Deploy

Scripts > Patch Deploy

The Patch Deploy wizard is a tool that creates a script to distribute and apply Microsoft patches. The wizard walks you through a step by step process resulting in a script you can schedule to deploy a patch to any managed machine. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

Microsoft releases many hot fixes as patches for very specific issues that are not included in the Microsoft Update Catalog or in the Office Detection Tool, the two patch data sources the Patch Management module uses to manage patch updates. Patch Deploy enables customers to create a patch installation script for these hot fixes, via this wizard, that can be used to schedule the installation on any desired machine.

Step 1: Enter 6-digit knowledge base article number.

Microsoft Publishes a vast assortment of information about its operating system in the Microsoft Knowledge Base. Each article in the Knowledge Base is identified with a 6-digit Q number (e.g. Q324096.) All Microsoft patches have an associated knowledge base article number.

> Note: Entering the article number is optional. Leave it blank if you do not know it.

Step 2: Select the operating system type.

Sometimes patches are specific to a certain operating system. If the patch you are trying to deploy applies to a specific OS only, then select the appropriate operating system from the drop down control. When the wizard creates the patch deploy script, it restricts execution of the script to only those machines with the selected OS. This prevents inadvertent application of operating system patches to the wrong OS.

Step 3: Download the patch.

This step is just a reminder to fetch the patch from Microsoft. Typically there is a link to the patch on the knowledge base article describing the patch.

Step 4: How do you want to deploy the patch?

The Patch Deploy wizard asks you in step 4 if you want to Send the patch from the VSA server to the remote machine and execute it locally or Execute the patch from a file share on the same LAN as the remote machine. Pushing the patch down to each machine from the VSA may be bandwidth intensive. If you are patching multiple machines on a LAN no internet bandwidth is used to push out the patch. Each machine on the LAN can execute the patch file directly from a common file share.

Step 5: Select the patch file or Specify the UNC path to the patch stored on the same LAN as the remote machine.

If Send the patch from the VSA server to the remote machine and execute it locally was selected, then the patch must be on the VSA server. Select the file from the drop down list.

> Note:If the patch file does not appear in the list then it is not on the VSA server. Click the Back button and upload the file to the VSA by clicking the first here link.

If Execute the patch from a file share on the same LAN as the remote machine was selected, then the patch must be on the remote file share prior to running the patch deploy script. The specified path to the file must be in UNC format such as `\\computername\dir\`.

> Note: If the file is not already on the remote file share, you can put it their via FTP. Click the Back button and then the second here link which takes you to FTP.

Step 6: Specify the command line parameters needed to execute this patch silently.

To deploy a patch silently you need to add the appropriate command line switches used when executing the patch. Each knowledge base article lists the parameters for silent install *(page 610)*. Typical switch settings are `/q /m /z`.

> Note:Command line parameters are optional. Leave it blank if you do not know it.

Step 7: Name the script.

The new script appears under the Install Tab. Master administrators can specify a shared script or private script. Standard Administrators can only create private scripts.

Step 8: Reboot the machine after applying the patch.

Check this box to automatically reboot the managed machine after applying the patch. The default setting is to *not* reboot.

Application Deploy

Scripts > Application Deploy

The Application Deploy page is a wizard tool that creates a script to distribute vendor installation packages, typically `setup.exe`. The wizard walks you through a step by step process resulting in a script you can schedule to deploy an application to any managed machine.

Deploying Software Vendor's Install Packages

Most vendors provide either a single file when downloaded from the web or set of files when distributed on a CD. Executing the installer file, typically named `setup.exe` or `abc.msi`, installs the vendor's application on any operating system.

The Application Deploy wizard takes you though an interview process to determine the type of installer and automatically generates a script to deploy install vendor packages.

The VSA provides a small utility to automatically identify all supported installer types. Download and run `kInstId.exe` to automatically identifies the installer type.

Step 1: How do you want to deploy the application?

The wizard generated script tells the managed machine where to get the application installation file to execute. The Application Deploy wizard asks you in step 1 if you want to Send the installer from the VSA server to the remote machine and execute it locally or Execute the installer from a file share on the same LAN as the remote machine.

Pushing the application installation file to each machine from the VSA may be bandwidth intensive. If you are installing to multiple machines on a LAN no internet bandwidth is used to push out the application installation file. Each machine on the LAN can execute the application installation file directly from a common file share.

Step 2: Select the application install file or Specify the UNC path to the installer stored on the same LAN as the remote machine.

If Send the installer from the VSA server to the remote machine and execute it locally was selected, then the installer file must be on the VSA server. Select the file from the drop down list.

> Note: *If the installer file does not appear in the list then it is not on the VSA server. Click the* here *link to upload the file to the server.*

If Execute the installer from a file share on the same LAN as the remote machine was selected, then the installer file must be on the remote file share prior to running the application deploy script. The specified path to the file must be in UNC format such as `\\computername\dir\`.

> Note: If the file is not already on the remote file share, you can put it their via FTP. Click the here link to start FTP.

Step 3: What kind of installer is this?

The wizard need to know what kind of installer was used by your software vendor to create the install package. The VSA provides a small utility to automatically identify all supported installer types. Download and run `kInstId.exe` to automatically identify the installer type. Supported installer types are:

- Windows Installer (MSI files)
- Wise Installer
- Installshield - Package For The Web
- Installshield - Multiple Files
- Other

Step 4: Name the script.

The new script appears under the Install Tab. Master administrators can specify a shared script or private script. Standard Administrators can only create private scripts.

Step 5: Reboot the machine after installing the application.

Check this box to automatically reboot the managed machine after running the install. The default setting is to *not* reboot.

Creating Silent Installs

Most vendors provide either a single file, when downloaded from the web, or set of files, when distributed on a CD. Executing the installer file, typically named `setup.exe`, installs the vendor's application on any operating system. Vendors typically use one of three applications to create install packages: InstallShield, Windows Installer, or Wise Installer. Each of these applications provides a method for creating silent installs *(page 610)*.

Silent Installs with InstallShield

InstallShield has a record mode that captures answers to all dialog boxes in the installation script. InstallShield requires the recorded response `iis` file to be on the managed machine during the installation. To deploy, the script must use WriteFile commands to send both the `setup.exe` and `record.iis` files from VSA server to the managed machine and then use ExecuteFile to run `setup.exe` with the options `/s /f"<path>\record.iis"`. Refer to your InstallShield help guide for more information regarding the silent installation capability with a recorded response file.

Create a custom install package by following these steps:

1. Verify the install package was made with InstallShield.
    a. Launch the install package.
    b. Confirm `InstallShield Wizard` displays at the end of the window title bar.
2. Launch the install package in record mode from a command prompt.
    a. If the install package is a single file - Run `setup.exe /a /r /f1c:\temp\record.iss.`
       `Setup.exe` is the name of the install package.
       `c:\temp\record.iss` is the full path filename to save the recorded output.
    b. If the Install package is a set of files - Run `setup.exe /r /f1c:\temp\record.iss.`
       `Setup.exe` is the name of the install package.
       `c:\temp\record.iss` is the full path filename to save the recorded output.
3. Deploy the install package with the recorded dialog box responses. Use the `Write File` script command to copy both the vendor's install package and `record.iss` file to each managed machine or to a file server accessible by each managed machine.
4. Execute the install package with silent mode command line parameters using the `Execute File` script command.
    a. If the install package is a single file - Run `setup.exe /s /a /s /f1c:\temp\record.iss.`
       `Setup.exe` is the name of the install package.
       `c:\temp\record.iss` is the full path filename location of the recorded settings.
    b. If the Install package is a set of files - Run `setup.exe /s /f1c:\temp\record.iss.`
       `Setup.exe` is the name of the install package.
       `c:\temp\record.iss` is the full path filename location of the recorded settings.

Silent Installs with Windows Installer

Windows Installer does not have a record mode. As such it can only silently install the Typical install configuration. To silently install a Windows Installer package write a script to perform the following:

1. Use the `Write File` script command to copy the vendor's install package to each managed machine or to a file server accessible by each managed machine.
2. Run the install package with the `/q` parameter using the `Execute File` script function.

Silent Installs with Wise Installer

Wise Installer does not have a record mode. As such it can only silently install the Typical install configuration. To silently install a Wise Installer package write a script to perform the following:

1. Use the `Write File` script command to copy the vendor's install package to each managed machine or to a file server accessible by each managed machine.
2. Run the install package with the `/s` parameter using the `Execute File` script function.

Packager

Scripts > Packager

The Packager is a wizard tool used to create a package when a pre-defined install solution cannot be used. Packager evaluates the state of a source machine before and after an installation and/or resource change. The Packager compiles the differences into a single executable file—the package—that can be distributed via scripts to any managed machine. Distribute a package any way you choose. You can email it, or store it on a server where a custom script *(page 72)* can perform a silent installation on any managed machine.

Step 1: Download the Packager application to the machine you plan to build your install package on.

For best results, we recommend you create a package on a representative machine; that is, a machine that closely resembles the managed machines on which the package will be deployed.

Each Package is OS dependent. To deploy to multiple operating systems, you need to build a package for each OS. During installation, Packager checks the target machine's operating system and does not continue if the package is being deployed on an OS different than the source OS.

Step 2: Execute `Packager.exe` and follow the on-screen instructions to create a distribution package.

The following tasks are performed:

1. Packager takes a snapshot of the source system.
2. Install any application and/or resource on the source system.
3. Execute Packager again. Packager records the changes in the source system and creates a package.

Packager picks up everything you do to a machine between the time you take the first snapshot and create the package. Be careful what additional tasks you perform on the source machine as any system changes will be rolled into the package. Close all applications before running Packager. This prevents open applications from modifying the system during package creation.

Step 3: Distribute the package via a script.

Packages can only be executed on machines with agents installed. If the package fails to install, Packager has complete rollback capability. The rollback executable and associated restore files are located in the agent directory on the target machine in the directory `C:\Program Files\Kaseya\KPackage`.

Get File

Scripts > Get File

The Get File page accesses files previously uploaded from a managed machine. Files can be uploaded to the KServer manually using Manage Files Stored on Server *(page 78)* or by a script using the `Get File` or `Get File In Directory Path` commands. The KServer stores uploaded files in a unique directory for each machine ID. Clicking the machine ID displays *all* uploaded files for that machine ID.

> Note: This set of files is machine-specific. Use Manage Files Stored on Server *(page 78)* to access files stored on the KServer that are not machine-specific.

- Each file is displayed as a link. Click any filename to access that file.
- Remove uploaded files from the VSA by clicking the delete icon ✖ next to the file.

Example 1: Checking Large Number of Managed Machines Simultaneously

Get File is designed to support automated checks on a large number of managed machines simultaneously.

> Note: If all you want to do is get a file from a managed machine as a one-time event then Remote Cntl > FTP *(page 331)* is the simplest way.

Use Get File in conjunction with a script to perform some automated task on a set of managed machines. For example, if you have a utility that reads out some information unique to your client computers you can write a script to do the following:

1. Send the utility to the managed machine using either the Write File script command or the Distribute File page.
2. Execute the utility using either the script command Execute DOS Command or Execute File command and pipe the output to a text file, such as `results.txt`.
3. Upload the file to the KServer using the Get File command.

Example 2: Comparing Versions of a File

As an option in the Get File script command, existing copies of uploaded files can be renamed with a `.bak` extension prior to the next upload of the file. This allows you to examine both the latest version of the file and the previous version. For example, use the IF-THEN-ELSE Script Editor to create a simple Get File script. The complete script displays in text format as follows when you click the Export Script... link on the script editor *(page 76)* page:

```
Get File
  Parameter 1 : c:\temp\info.txt
  Parameter 2 : news\info.txt
  Parameter 3 : 2
      OS Type : 0
```

`Parameter 3 : 2` causes the following to occur if the file changes: save existing version, get file, and send alert. The first time the above script statement executes on a managed machine the agent sends `c:\temp\info.txt` to the KServer and the KServer stores it. The second time the above statement executes, the KServer renames the original copy of `news\info.txt` to `news\info.txt.bak` then uploads a fresh copy and saves it as `news\info.txt`.

Also as an option, an email alert can be sent when a change in the uploaded file has been detected, compared to the last time the same file was uploaded. The Get File command must have either the Overwrite existing file and send alert if file changed setting or the Save existing version, get file, and send alert if file changed setting selected.

Example 3: Get File Changes Alerts

To perform continuous health checks on managed machines, run the script on a recurring schedule and activate a Get File Changes alert using Monitor > Alerts *(page 113)*. The VSA instantly notifies you of any changes to the results.

Distribute File

Scripts > Distribute File

The Distribute File function sends files stored on your VSA server to managed machines. It is ideal for mass distribution of configuration files, such as virus foot prints, or maintaining the latest version of executables on all machines. The VSA checks the integrity of the file every full check-in *(page 603)*. If the file is ever deleted, corrupted, or an updated version is available on the VSA, the VSA sends down a new copy prior to any script execution. Use it in conjunction with recurring scripts to run batch commands on managed machines.

Note: The script command `Write File` performs the same action as Distribute File. Each time a script executes the `Write File` command, the agent checks to see if the file is already there or not. If not, the file is written. `Write File` is better than Distribute File for sending executable files you plan to run on managed machines using scripts.

Select server file

Select a file to distribute to managed machines. These are same set of files managed by clicking the Managed Files... link.

Note: The only files listed are your own private managed files or shared managed files. If another administrator chooses to distribute a private file you can not see it.

Specify full path and filename to store file on remote machine

Enter the path and filename to store this file on selected machine IDs.

Manage Files...

Click the Manage Files... *(page 76)* link to open the Manage Files Stored on Server popup window. Use this window to add, update, or remove files stored on the KServer. This same window displays when you select Managed Files... using the Script Editor *(page 76)*. Private files are listed with `(Priv)` in front of the filename. Master administrators see all file distributions. Instead of the `(Priv)` prefix, `(admin name)` is listed.

Distribute

Click the Distribute button to start distribution management of the file selected in Select server file and write it to the location specified in Specify full path and filename to store file on remote machine. This effects all checked machine IDs.

Clear

Click the Clear button to remove the distribution of the file selected in Select server file from all checked machine IDs.

> Warning: Cancel and Cancel All do *not* delete the file from either managed machines or the KServer. These functions simply stop the integrity check and update process from occurring at each full check-in.

Clear All

Cancel All removes all file distributions from all checked managed machines.

Agent File Location

To the left of each target file location for a specific machine ID are two icons. Click ✗ to cancel that file distribution for that machine ID. Click 📝 to edit the destination path for that machine ID.

Scripts Status

Scripts > Scripts Status

The Scripts Status function page allows administrators to display the status of scripts for a selected machine ID. The list of machine IDs you can select is based on the Machine ID / Group ID filter *(page 17)*. Administrators can, at a glance, find out what time a script was executed and whether it was successfully executed. See Using Scripts *(page 72)* for more information about scripts.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Time

Displays the date and time the script was last executed.

Status

Displays the results of the executed script. Pending or recurring scripts are displayed as red text with yellow highlight.

Admin

Displays the administrator who scheduled the script.

Distribution

Scripts > Distribution

The Distribution page spreads network traffic and server loading by executing scripts evenly throughout the day or a specific block of time in a day. Applies to scripts currently scheduled to run on a recurring basis only. See Scheduling Scripts *(page 72)* for more information.

> Note: Recurring scripts listed here include function-specific scripts that are not visible in your Script Browser *(page 72)*, such as scripts created using a Patch Management wizard.

Scripts can cause excessive network loading by pushing large files between the KServer and agent. Performing these operations with hundreds of agents simultaneously may cause unacceptable network loading levels.

Script Histograms

The system plots a histogram for each script currently scheduled to run on a recurring basis. Setting the histogram period to match the recurring interval of the script counts how many machines execute the script in a specific time interval. Peaks in the histogram visually highlight areas where a lot of machines are trying to execute the script at the same time. *Click a peak to display a popup window listing all machine IDs contributing to that peak load.* Use the controls, described below, to reschedule the script such that the network loading is spread evenly over time. Only machine IDs currently matching Machine ID / Group ID filter are counted in the histogram.

Reschedule selected script evenly through the histogram period

Pick this radio control to reschedule selected scripts running on all machines IDs currently matching the Machine ID / Group ID filter *(page 17)*. Script execution start times are staggered evenly across the entire histogram period.

Reschedule selected script evenly between <start time> and <end time>

Pick this radio control to reschedule selected scripts running on all machines IDs currently matching the Machine ID / Group ID filter. Script execution start times are staggered evenly, beginning with the start time and ending with the end time.

Run recurring every <N> <periods>

This task is always performed as a recurring task. Enter the number of times to run this task each time period.

Skip if machine offline

Check this box to only allow the script to run at the scheduled time of day, within a 15 minute window. If the machine is offline at the scheduled time, then the script does not execute at all. If recurring is set, then the script is rescheduled to run at the next appointed time.

Distribute

Click the Distribute button to schedule selected scripts, using the schedule parameters you've defined.

> Note: The script recurring interval is replaced with the histogram period.

Select Histogram Period

Selects the schedule time period for the histograms.

Histogram Plots

Each recurring script displays a histogram of all the machine IDs that are scheduled to run that script within the selected histogram period. Only machine IDs currently matching Machine ID / Group ID filter are counted in the histogram.

Above the histogram is a:

- Script name - name of the script. Check the box next to the script name to select this script for distribution.
- Peak - the greatest number of machines executing the script at the same time.
- Total - total number of machines executing the script.

Script Browser and Script Toolbar

Scripts > Script Browser

All *user-defined* scripts are displayed and selected using the Script Browser. Sample scripts can be loaded using the System > Configure *(page 524)* page. Within the script browser:

- Clicking a folder displays the Script Manager *(page 73)*.
- Clicking a script displays the Script Scheduler *(page 74)*.

Scripts that can be used by all administrators are listed under Public Scripts. New scripts are created initially as private scripts and listed under My Scripts. Private scripts can be shared with individual administrators or with administrator roles or made public using the Script Editor.

> Note: Function specific scripts, such as the scripts defined using the Patch Deploy *(page 61)* wizard, are not displayed in the Script Browser and cannot be changed using the Script Editor *(page 76)*.

Script Toolbar

The Script Toolbar displays at the top of the Script Browser and provides the following:

Open/expand all folders

Close/collapse all folders

Search tool used to locate a script

Import a new script

Create a new script and open the Script Editor *(page 76)*.

> Note: New scripts are always created initially as private scripts. Private scripts can be shared or made public using the Script Editor.

Displays the Manage Files Stored on Server *(page 78)* popup window.

Script Manager

Scripts >
Script Browser >
script folder

Click any script *folder* in the Script Browser *(page 72)* to open the Script Manager. With Script Manager you can:

- Take ownership of any public script or public folder.
- Rename, delete or edit any script you have ownership of.
- Re-order, or move any script or folder contained in the selected script folder.
- Create new folders.
- Import and export folders.

In addition Script Manager includes a set of toolbar buttons:

Open/expand all folders

Close/collapse all folders

Sort all scripts and folders in the current folder alphabetically

Search tool used to locate a script

Create a new script and open the Script Editor *(page 76)*.

> Note: New scripts are always created initially as private scripts. Private scripts can be shared or made public using the Script Editor.

Sort

Click the up/down arrows to move a script or folder up or down in the list.

Edit

Click the Edit button to edit a script.

> Note: You can't edit a public script you don't own. Use Script Editor to save the script under a different name or accept ownership to edit the original script.

Take Ownership...

This link displays if you don't own a public script. Click the Take Ownership link to display the Rename... and Delete... buttons.

Rename...

Click the Rename... button to a script or folder. The new name must be less than 64 characters in length.

Delete...

Click the Delete... button to delete a script or folder.

New Public... / New Folder...

Click the New Public... button to create a new public folder or the New Folder... button to create a new private folder.

Move

Select a new destination folder from the `<Select New Folder>` drop down list to move a script or folder.

> Note: *Public* scripts and folders cannot be moved into *private* folders. *Private* scripts and folders cannot be moved into *public* folders.

Import and Export Folders

Script folders can be imported or exported as XML formatted files. Click the Export Folder link to export any folder. Click Public Scripts or My Scripts to access the Import Folder link.

> Note: *Scripts* are imported and exported using the Script Editor *(page 76)* or by using the Import Script toolbar button at the top of the Script Browser.

Script Scheduler

Scripts > Script Browser

Click a script in the Script Browser *(page 72)* or from a Script Manager *(page 73)* page to display the Script Scheduler page.

The Script Scheduler page schedules or immediately runs an existing script. If necessary, click the Edit *(page 76)* button to edit the script.

1. Set scheduling options for the script.
2. Select machine IDs. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)* and machine groups the administrator is authorized to see using System > Group Access *(page 512)*.
3. Press either the Schedule or Run Now button.

Edit

Click Edit to edit the script using Script Editor *(page 76)*.

Schedule

Click Schedule to schedule this task on selected machine IDs using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Run Now

Click Run Now to run this task on selected machine IDs immediately.

Run recurring every <N> <period>

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Last Execution Time/Last Execution Status

If a previous script was performed, the date of the last script and its status is displayed.

Next Scheduled Run/Recurring Interval

Shows the time of the next scheduled script and its execution frequency.

Auto Refresh

Selecting this checkbox automatically updates the paging area every five seconds.

Script Editor

Scripts > Script Browser > toolbar button
Scripts > Script Manager > Edit
Scripts > Script Scheduler > Edit

The Script Editor creates and maintains customizable scripts that perform specialized tasks on managed machines. A number of pre-defined scripts are distributed with the VSA. Additional pre-defined scripts can be downloaded from the Kaseya user forum. These scripts can be used as is or customized by administrators. Scripts can be maintained using the Script Editor or imported and exported as text files and edited in any text editor.

Scripts are organized by three main statements:

1. Each script begins with an IF statement.
2. If the statement is true, the THEN statement is executed.
3. If the statement is false, the ELSE statement is executed.

Drop down lists provide the set of IF-THEN-ELSE parameters *(page 81)* appropriate for each statement.

Operating System Detect

When writing a THEN-ELSE statement, you can select the operating system the script will execute on. This parameter is useful when you want to write one script that can be executed on different operating systems. For example, directory paths in Windows and Macintosh can require different directory path syntax in order to work correctly. Creating two separate script steps within the same script for `All Windows Operating Systems` and a `Mac OS X` operating system, avoids having to create an extra script for a separate operating system.

Guidelines

Use the following guidelines when constructing a script:

- Multiple steps can be defined under either the THEN statement or ELSE statement.
- If no conditional statement is required, set the IF statement to `True` and define one or more steps underneath the THEN statement and *no* steps underneath the ELSE statement.
- Each script can have only one IF statement. Nest IF statements by adding a step underneath the THEN or ELSE statement and use the Execute Script command. There is no limit to the number of nested scripts allowed.
- When nesting scripts, only the top level script has to be scheduled to run.
- Launch scripts written in other scripting languages by using the Execute File or Execute Shell Command.

Using Variables

Use variables to store values that can be referenced in multiple script steps. Variables are passed automatically to nested scripts.

- Variables are created using two methods:
  - Script Variables - Use the Get Variable command within a script to create a new variable name without any special characters.

Example: `VariableName`. In subsequent steps, including steps in nested scripts, reference the variable by bracketing the variable name with the # character. Example: `#VariableName#`. Scripts variables cannot be referenced outside of the script or nested scripts that use them.

  - Managed Variables - Use the Variable Manager *(page 79)* to define variables that can be used repeatedly in different scripts. You can maintain multiple values for each managed variable, with each value applied to one or more group IDs. Managed variables cannot be re-assigned new values within a script. Within a script, reference a managed variable by bracketing the variable name with the < and > character. Example: `<VariableName>`.

- Reserved Characters - Because the <, > and # characters are used to identify variable names, these characters must be entered *twice* as regular text in a command line. For example the following command `c:\dir >> filelist.txt` is interpreted at script runtime as `c:\dir > filelist.txt`.
- Automatic SQL View Data Variables - SQL view parameters are available as automatically declared script variables. Use the format `#SqlViewName.ColumnName#` or `#SqlViewName/ColumnName/Machine.GroupID#` in a script to return the value of a dbo.SqlView.Column. If the optional machine ID is omitted, then the value for the agent executing the script is retrieved. Automatic variables enable you to skip using the GetVariable command with the SQL View Data option.
- GetVariable SQL View Data Command - Use the GetVariable command with the SQL View Data option to create a new script variable and set it to the value of a dbo.SqlView.Column value. Use the format `SqlViewName/ColumnName/mach.groupID` or `SqlViewName/ColumnName`. See System > Database Views *(page 542)* for a list of the SQL views and columns that are available.

Import Script...

Click the Import Script... link to display the Import Script popup window. Click Browse... to select the text file to be imported. Click Import to load the script into the Script Editor.

> Note: Importing new scripts are always imported as private scripts. They can be shared or made public afterwards.

Export Script...

Click the Export Script... link to display the script in text format in the Export Script popup window. You can copy it to the clipboard or download it to a text file.

Manage Files...

Click the Manage Files... link to display the Manage Files Stored on Server *(page 78)* popup window.

Manage Variables...

Click the Manage Variables... link to display the Variable Manager *(page 79)* popup window.

Take Ownership...

You can't edit a public script you don't own. Click the Take Ownership link to display the Save, Rename... and Delete... buttons. Otherwise you can make a copy of the current script using the Save As... button.

Share...

You can share scripts you own with other individual administrators *(page 516)*, administrator roles *(page 510)*, or make the script public to all administrators.

> Note: A master administrator can take ownership of a script and change share rights.

Save As...

Select Save As... to save a script under a different name. The script name must be less than 64 characters in length.

Save

Select Save to save changes to a script.

Rename

Select Rename to rename a script.

Delete

Select Delete to delete a script.

Script Notes

Enter any notes about the script.

Manage Files Stored on Server

Scripts >
Script Browser >
Toolbar Button
... Script Editor >
Manage Files

Only files stored on the KServer can be distributed to managed machines. Scripts distribute files stored on the KServer to managed machines using the Write File or Write File in Directory Path commands.

> Note: This set of files is not machine specific. Use Get File *(page 67)* to access machine-specific files stored on the server.

Use the Manage Files Stored on Server popup window to upload a file and store it on the KServer. You can also list, display and delete files already stored on the KServer.

To upload a file:

- Click Private files or Shared files to select the folder used to store uploaded files. Files stored in the Private files folder are not visible to other administrators.
- Click Browse... to locate files to upload. Then click Upload to upload the file to the KServer.

To delete a file stored on the KServer:

- Click Private files or Shared files to select the folder used to store uploaded files.
- Click the delete icon ✗ next to a file name to remove the file from the KServer.

> Note: An alternate method of uploading files is to copy them directly to the managed files directory on the IIS server. This directory is normally located in the directory `[drive]:\Inetpub\wwwroot\ManagedFiles\`. In that directory are several sub-directories. Put private files into the directory named for that administrator. Put shared files into the `VSASharedFiles` directory. Any files located in this directory will automatically update what is available in the scripting user interface at the next administrator logon.

Variable Manager

Use the Variable Manager to define variables that can be used repeatedly in different scripts. You can maintain multiple values for each managed variable, with each value applied to one or more group IDs. Managed variables cannot be re-assigned new values within a script. Within a script, reference a managed variable by bracketing the variable name with the < and > character. Example: `<VariableName>`.

Using managed variables, managed machines can run scripts that access *locally available resources* based on the group ID or subgroup ID.

> Note: Using System > Naming Policy *(page 506)*, this benefit can be applied automatically by IP address even to a highly mobile workforce that travels routinely between different enterprise locations.

Using Variables

Use variables to store values that can be referenced in multiple script steps. Variables are passed automatically to nested scripts.

- Variables are created using two methods:
    - ➢ Script Variables - Use the Get Variable command within a script to create a new variable name without any special characters. Example: `VariableName`. In subsequent steps, including steps in nested scripts, reference the variable by bracketing the variable

name with the # character. Example: `#VariableName#`. Scripts variables cannot be referenced outside of the script or nested scripts that use them.

- ➢ Managed Variables - Use the Variable Manager *(page 79)* to define variables that can be used repeatedly in different scripts. You can maintain multiple values for each managed variable, with each value applied to one or more group IDs. Managed variables cannot be re-assigned new values within a script. Within a script, reference a managed variable by bracketing the variable name with the < and > character. Example: `<VariableName>`.

- Reserved Characters - Because the <, > and # characters are used to identify variable names, these characters must be entered *twice* as regular text in a command line. For example the following command `c:\dir >> filelist.txt` is interpreted at script runtime as `c:\dir > filelist.txt`.
- Automatic SQL View Data Variables - SQL view parameters are available as automatically declared script variables. Use the format `#SqlViewName.ColumnName#` or `#SqlViewName/ColumnName/Machine.GroupID#` in a script to return the value of a dbo.SqlView.Column. If the optional machine ID is omitted, then the value for the agent executing the script is retrieved. Automatic variables enable you to skip using the GetVariable command with the SQL View Data option.
- GetVariable SQL View Data Command - Use the GetVariable command with the SQL View Data option to create a new script variable and set it to the value of a dbo.SqlView.Column value. Use the format `SqlViewName/ColumnName/mach.groupID` or `SqlViewName/ColumnName`. See System > Database Views *(page 542)* for a list of the SQL views and columns that are available.

Select Variable

Select a variable name from the drop-down list or select `<New Variable>` to create a new variable. Variable names are case sensitive.

Rename/Create Variable

Enter a new name for the new variable you are creating or for an existing variable you are renaming.

Public

Selecting the Public radio button allows the variable to be used by all administrators. However, only master administrators can create and edit shared variables.

Private

Selecting the Private radio button allows the variable to be used only by the administrator who created it.

Set Variable Value

Enter the initial value for a variable. Then select one or more Group IDs and click Apply. Empty values are not allowed.

Delete

Select one or more group IDs, then click Delete to remove the variable from the group IDs it is assigned to.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Group ID

Displays all group IDs the logged in user is authorized to administer.

Value

Lists the value of the variable applied to the group ID.

IF-THEN-ELSE Commands

The following is a summary of IF-THEN-ELSE parameters used in VSA scripts.

IF Definitions	
Application is Running	Test to see if the specified application is running.
Check Registry Value	Evaluate the given registry value.
Check Variable	Evaluate the given agent variable.
Evaluate Expression	Compares a variable with a supplied value.
Service is Running	Determines if a service is running on the managed machine.
Test File	Test for the existence of a file.
Test File in Directory Path	Test for the existence of a file in the current directory path.
Test Registry Key	Test for the existence of the given registry key.
True	Always returns `True`, executing THEN branch.
User Is Logged In	Tests whether a specific user, or any user, is logged in or not.
User Response is Yes	Presents a Yes/No dialog box to the user.

THEN/ELSE Definitions	
Close Application	Close a running application.

Delete File	Delete a file from the managed machine.
Delete File in Directory Path	Delete file in directory returned by Get Directory Path From Registry.
Delete Registry Key	Delete the key from the registry.
Delete Registry Value	Delete the value from the registry.
Execute File	Execute any file as if it was run from the Run item in the Windows Start menu.
Execute File in Directory Path	Same as execute file. File location is relative to the directory returned by Get Directory Path From Registry.
Execute Script	Start another VSA script.
Execute Shell Command	Run any command from a command shell.
Get Directory Path From Registry	Returns the directory path stored in the registry at the specified location.
Get File	Get a file from the managed machine and save it to the KServer.
Get File in Directory Path	Get a file from the managed machine located relative to the directory returned by Get Directory Path From Registry and save it to the KServer.
Get Variable	Get a value from the agent on the managed machine and assign it to a variable
Impersonate User	Use the specified user account to execute a file or shell when Execute as user is specified.
Pause Script	Pause the script for N seconds.
Reboot	Reboot the managed machine.
Rename Locked File	Renames a file that is currently in use.
Rename Locked File in Directory Path	Renames a file in directory returned by Get Directory Path From Registry that is currently in use.
Schedule Script	Schedules a script to be run.
Send Email	Sends an email to one or more recipients.
Send Message	Displays a message in a dialog box on the managed machine.
Send URL	Open a browser to the specified URL on the managed machine.
Set Registry Value	Set the registry value to a specific value.
Use Credential	Use the user logon credentials set for the machine ID in Set Credential to execute a file or shell when Execute as user is specified.
Write Directory	Writes a directory from the server to the managed machine.
Write File	Write a file stored on the KServer to the managed machine.
Write File in Directory Path	Write a file stored on the KServer to the managed machine using the directory returned by Get Directory Path From Registry.
Write Script Log Entry	Write a string to the Script Log.

IF Parameters

Application is Running

Checks to see if a specified application is currently running on the managed machine. If the application is running, the THEN statement is executed; otherwise, the ELSE statement is executed. When this option is selected from the drop-down list, the Enter the application name field appears.

Check Registry Value

After entering the registry path, the value contained in the key is returned. A check can be made for existence, absence, equality, or size differences. For example, `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\AppPaths\AgentMon.exe\path` contains the directory path identifying where the agent is installed on the target machine. The test determines if the value stored for this key exists, thereby verifying the agent is installed.

A backslash character \ at the end of the key returns the default value of that key. `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\App Paths\WORDPAD.EXE\` returns a default value, such as `%ProgramFiles%\Windows NT\Accessories\WORDPAD.EXE`

The available tests are:

- `Exists` : true if the registry key exists in the hive.
- `Absent` : true if the registry key does *not* exist in the hive.
- `=` : true if value of the registry key equals the test value.
- `Not =` : true if value of the registry key does *not* equal the test value.
- `>` : true if value of the registry key is greater than the test value (value must be a number).
- `>=` : true if value of the registry key is greater than or equal to the test value (value must be a number).
- `<` : true if value of the registry key is less than the test value (value must be a number).
- `<=` : true if value of the registry key is less than or equal to the test value (value must be a number).
- `Contains` : true if the test value is a sub string of the registry key value (value must be a string).
- `Not Contains` : true if the test value is *not* a sub string of the registry key value (value must be a string).

Check Variable

Enter a variable name, in the form `#var_name#`, in the space provided. Check Variable evaluates the current values assigned `#var_name#` and compares it with the supplied value. The supplied value may also be another variable name in the form of #var_name2#. If the check is true, THEN steps are executed. If the check is false, ELSE steps are executed.The available tests are:

- Exists : true if the variable exists.
- Absent : true if the variable does *not* exist.
- = : true if value of the variable equals the test value.
- Not = : true if value of the variable does *not* equal the test value.
- > : true if value of the variable is greater than the test value.
- >= : true if value of the variable is greater than or equal to the test value.
- < : true if value of the variable is less than the test value.
- <= : true if value of the variable is less than or equal to the test value.
- Contains : true if the test value is a sub string of the variable (variable must be a string).
- Not Contains : true if the test value is *not* a sub string of the variable (variable must be a string).

For the tests =, Not =, >, >=, <, and <= the variables compared may be a string, a number, a date in the format of yyyy/mm/dd or yyyy/mm/dd hh:mm or yyyy/mm/dd hh:mm:ss, or a version number containing dots or commas such as 1.2.3 or 4,5,6,7. If a date format is specified, it may be offset using + dd:hh:mm:ss or - dd:hh:mm:ss. Only dd days are required; hh hours, mm minutes, and ss seconds may be omitted and are assumed to be zero when absent. CURRENT_TIMESTAMP may be specified to indicate that the current time be substituted in the comparison at the time the script is executed. e.g. CURRENT_TIMESTAMP - 7:12:00:00 will be evaluated as 7 days and 12 hours subtracted from the time that the script is executed.

Evaluate Expression

Enter an expression containing one or more variable names, in the form #var_name#, in the space provided. Evaluate Expression uses the current value assigned to each #var_name#, evaluates the mathematical expression, and compares it with the supplied value. The supplied value may also be another expression. The mathematical expression may contain +, -, *, /, (, and). e.g. (3.7 + (200 * #countA#)) / (#countB# - #countC#). If the check is true, THEN steps are executed. If the check is false, ELSE steps are executed. The available tests are:

- = : true if value of the variable equals the test value.
- Not = : true if value of the variable does not equal the test value.
- > : true if value of the variable is greater than the test value.
- >= : true if value of the variable is greater than or equal to the test value.
- < : true if value of the variable is less than the test value.

- <= : true if value of the variable is less than or equal to the test value.

> Note: Cannot be used with `Exists`, `Absent`, `Contains`, or `Not Contains` operators.

Service is Running

Determines if a service is running on the managed machine.

- True if the service is running.
- False if the service stopped or does not exist.

Test File

Determines if a file exists on a managed machine. Enter the full path and filename. For example, entering `c:\windows\notepad.exe` returns `True` if `Notepad.exe` exists, `False` if it does not.

> Note: Environment variables such as `%windir%\notepad.exe` are acceptable.

Test File in Directory Path

Enter the name of a file to see if it exists on the managed machine. Because a THEN or ELSE step must be executed prior to this IF test, Test File in Directory Path is only useful for scripts called by the THEN or ELSE step of a parent script.

Test Registry Key

Tests for the existence of a registry key. Test Registry Key differs from Check Registry Value since it can check for a directory level registry entry that only contains more registry keys (no values). Test Registry Key detects if an entire registry branch exists.

True

Selecting `True` directs the THEN steps to execute. Use True to directly execute a series of steps that do not require any decision points, such as determining whether a file exists using Test File.

User Is Logged In

Tests to see if a specific user or any user is logged in on the managed machine. Enter the user's logon name or leave the field blank to check for any user logged in. The THEN steps are executed if a user is logged in. The ELSE steps are executed if the user is not logged in.

User Response is Yes

Displays a dialog box on the managed machine with Yes and No buttons. Also carries out the ELSE statement if an administrator-configured specified amount of time has timed out. If Yes is selected by the user, the THEN statement is executed. If the selection times out or the user selects No, the ELSE statement is executed. This function requests the user's permission to proceed with the script. This query is useful for scripts that require a reboot of the managed machine before completion.

Script variables, for example `#varName#`, may be used inside User Response is Yes fields to dynamically generate messages based on script data.

THEN-ELSE Parameters

Operating System Detect

When writing a THEN-ELSE statement, you can select the operating system the script will execute on. This parameter is useful when you want to write one script that can be executed on different operating systems. For example, directory paths in Windows and Macintosh can require different directory path syntax in order to work correctly. Creating two separate script steps within the same script for `All Windows Operating Systems` and a `Mac OS X` operating system, avoids having to create an extra script for a separate operating system.

Close Application

If the specified application is running on the managed machine, then that application is closed down.

Delete File

Deletes a file on a managed machine. Enter the full path and filename.

> Note: Environment variables are acceptable if they are set on a user's machine. For example, using a path `%windir%\notepad.exe` would be similar to `C:\windows\notepad.exe`.

Delete File in Directory Path

Deletes the specified file located at the path returned using the Get Directory Path From Registry parameter.

Delete Registry Key

Delete the specified registry key and all its sub-keys.

Delete Registry Value

Delete the value stored at the specified registry key.

Execute File

Executes the specified file on the managed machine. This function replicates launching an application using the Run... command located in the Microsoft Windows Start menu. This function takes three parameters:

- Full path filename to the `.exe` file.
- Argument list to pass to the `.exe` file
- Flag indicating whether the script should wait until the `.exe` completes or not. (1 to wait, 0 to have the script continue without waiting).

> Note: Environment variables are acceptable, if they are set on a user's machine. For example, using a path `%windir%\notepad.exe`, would be similar to `C:\windows\notepad.exe`.

Execute File in Directory Path

Same as Execute File except the location of the .exe file is located at the path returned from a Get Directory Path From Registry parameter.

> Note: Environment variables are acceptable if they are set on a user's machine. For example, using a path `%windir%\notepad.exe` would be similar to `C:\windows\notepad.exe`.

Execute Script

Causes another named script to execute. Use this capability to string multiple IF-THEN-ELSE clauses together. If the script no longer exists on the KServer, an error message displays next to the script drop-down list.

Execute Shell Command

Allows the script to pass commands to the command interpreter on the managed machine. When this command is selected, the field Enter the command to execute in a command prompt is displayed. Enter a command in the field. The command must be syntactically correct and executable with the OS version on the managed machine. Commands and parameters containing spaces should be surrounded by quotes. Since the command is executed relative to the agent directory, absolute paths should be used when entering commands.

> Note: Execute Shell Command opens a command prompt window on the managed machine to execute in. If you do not want a window opening on the managed machine, because it might confuse users, put all the commands into a batch file. Send that file to the managed machine using the Write File command. Then run the batch file with the Execute File command. Execute File does not open a window on the managed machine.

Get Directory Path From Registry

Returns a file path stored in the specified registry key. Use this command to fetch the file location. For instance, use this command to find the directory where an application has been installed.

Get File

Upload the file at the specified path from the managed machine. Be sure to enter a full path filename that you want to upload. The file is stored on the KServer in a private directory for each managed machine. Access the uploaded file using Scripts > Get File *(page 67)*.

- Optionally, existing copies of uploaded files are renamed with a `.bak` extension prior to the next upload of the file. This allows you to examine both the latest version of the file and the previous version.
- Optionally send an email alert if the uploaded file *differs* from the file that was uploaded previously.
- Optionally send an email alert if the uploaded file is the *same* as the file that was uploaded previously.

Get File in Directory Path

Just like the Get File command but it adds the path returned from the Get Directory Path From Registry command to the beginning of the remote file path. Access the uploaded file using Scripts > Get File *(page 67)* function.

Get URL

Returns the URL of a website page and stores it in a file.

Get Variable

Defines a new agent variable. When the script step executes, the system defines a new variable and assigns it a value based on data fetched from the managed machine's agent. You can refer to this value in an subsequent script line or nested script by adding # around the variable name. Example: `#var_name#.`

Note: Only variables created using the Get Variable command within a script are referenced in subsequent steps by bracketing the variable name with the # character. Variables created using the Variable Manager *(page 79)* are referenced in scripts by bracketing the variable name using the < and > characters.

- Registry Value - Data from the specified registry value on the managed machine.
- File Content - Data from a specified file on the managed machine.
- Constant Value - Specified constant as typed in the script editor.
- Expression Value - Specify an expression that consists of script variables and six mathematical operators `+`, `-`, `*`, `/`, `(`, and `)` that are evaluated and assigned to a new script variable. For example,

((#variable1# + #variable2#) + 17.4) / (#variable3# * 4). The script variables must contain numeric values.

- Agent Install Directory Path - Directory in which the agent is installed on the managed machine.
- Agent Install Drive - Drive in which the agent is installed on the managed machine, such as c:\.
- Agent Temp Directory Path - Temporary directory on the managed machine as specified on the Temp Directory function on the agent tab.
- User Temp Directory Path - The temporary directory for the user currently logged in on the managed machine. This path is the expansion of the %TEMP% environment variable for the currently logged in user. If no user is logged in, it is the default Windows temporary directory.
- Machine.Group ID - Machine ID of the agent executing the script.
- File Version Number - Version number from the property of the specified file on the managed machine.
- File Size - Size in bytes of the specified file on the managed machine.
- File Last Modified Date - Date of the specified file on the managed machine in the format of yyyy/mm/dd hh:mm:ss.
- SQL View Data - The value of a dbo.SqlView.Column value. Use the format SqlViewName/ColumnName/mach.groupID or SqlViewName/ColumnName. If the optional machine ID is omitted, then the value for the agent executing the script is retrieved. If ColumnName contains a space, surround it with square brackets. Example: vSystemInfo/[Product Name]. See System > Database Views *(page 542)* for a list of the SQL views and columns that are available.
- WMI Property - A WMI namespace, class, and property. The format of the specified WMI property is NameSpace:Class.Property. For example, root\cimv2:Win32_OperatingSystem.FreePhysicalMemory.

Impersonate User

Enter a username, password, and domain for the agent to log in with, when Execute as user... is specified using Execute File, Execute File in Directory Path or Execute Shell Command. Leave the domain blank to log into an account on the local machine.

Pause Script

Pause the script for N seconds. Use this command to give Windows time to complete an asynchronous task, like starting or stopping a service.

Reboot

Unconditionally reboots the managed machine. To warn the user first, preface this command with a User Response is Yes message. A User Response is Yes message prompts the user before rebooting their machine.

Rename Locked File

Renames a file that is currently in use. The file is renamed the next time the system is rebooted. The specified filename is a complete file path name. Rename locked file can also be used to delete a file that is currently in use if the destination is empty. The file is deleted when the system is rebooted.

Rename Locked File in Directory Path

Renames a file that is currently in use. The file is renamed the next time the system is rebooted. The specified file name is appended to the directory path. Rename locked file in directory path can also be used to delete a file that is currently in use if the destination is empty. The file is deleted when the system is rebooted.

Schedule Script

Schedules a script to be run. Optionally specifies the time to wait after executing this step before running the script and the specific machine ID to run the script on.

Send Email

Sends an email to one or more recipients. Specifies the subject and body text of the email.

Send Message

Sends the entered message to a managed machine. Selecting Immediately displays a message dialog box immediately. Selecting After user clicks the flashing system tray icon flashes the agent system tray icon when a message is received. The message is displayed when the user clicks the icon.

Send URL

Sends the entered URL to a managed machine. Selecting Immediately launches the default web browser and the specified URL is displayed. Selecting After user clicks the flashing system tray icon flashes the agent system tray icon when a message is received. The URL is displayed in the default web browser when the user clicks the icon.

Set Registry Value

Writes data to the specified registry key. This function takes three parameters:

- Registry key path
- Data to write to the registry key
- Data type of the registry key
  - `REG_SZ` - String value.
  - `REG_BINARY` - Binary data displayed in hexadecimal format.
  - `DWORD` - Binary data limited to 32 bits. Can be entered in hexadecimal or decimal format.
  - `REG_EXPAND_SZ` - An "expandable" string value holding a variable. Example: `%SystemRoot%`.
  - `REG_MULTI_SZ` - A multiple string array. Used for entering more than one value, each one separated by a `\0` string. Use `\\0` to include `\0` within a string array value.

Use Credential

Use the credentials set for the machine ID in Set Credential *(page 495)* to execute a file or shell when Execute as user... is specified using Execute File, Execute File in Directory Path or Execute Shell Command. The `Use Credential` script command behaves the same as the `Impersonate User` command except a unique credential can be used to access each machine instead of using a fixed credential in a script.

> Note: *A script execution error is logged if a* Set Credential *script command encounters an empty username.*

Write Directory

Writes a selected directory, including subdirectories and files, from Manage Files Stored on Server *(page 78)* to the full path directory name specified on the managed machine.

Write File

Writes a file selected from a drop down list from Manage Files Stored on Server *(page 78)* to the full path filename specified on the managed machine. Enter a new filename if you want the file to be renamed.

Each time a script executes the Write File command, the agent checks to see if the file is already there or not by hashing the file to verify integrity. If not, the file is written. If the file is already there, the script moves to the next step. You can repeatedly run a script with Write File that sends a large file to a managed machine and know that the VSA only downloads that file once.

> Note: Environment variables are acceptable if they are set on a user's machine. For example, using the path `%windir%\notepad.exe` would be equivalent to `C:\windows\notepad.exe`.

Write File in Directory Path

Writes the specified filename to the path returned from a Get Directory Path From Registry command.

Write Script Log Entry

Writes the supplied string to the script log for the agent executing this script.

Chapter 6

Monitor

In This Chapter

Monitor Tab

Monitor

The Monitoring tab in Virtual System Administrator provides five methods of monitoring machines and log files:

- Alerts - Monitors events on *agent-installed* machines.
- Monitor Sets - Monitors the performance state on *agent-installed* machines.
- SNMP Sets - Monitors the performance state on *non-agent-installed devices*.
- System Check - Monitors events on *non-agent-installed* machines.
- Log Monitoring - Monitors events in *log files*.

You can monitor the health in real time of managed machines and SNMP devices and be notified immediately if any problems arise. When programmable alarms are triggered, Monitor executes email notifications, scripts and job ticketing, for such problems and state changes as:

- When any critical server or desktop computer goes off-line.
- When a user disables remote control.
- When any software application is added or removed.
- When the hardware configuration changes.
- When the computer is running low on disk space.
- When a specific event or any event log entry is generated.
- When any protection policy violation occurs.
- When any script fails execution.
- When an unapproved application attempts to access the network.
- When an unapproved application attempts to access a protected file.
- When a new device appears on the local area network.
- When an external log records a specific log entry

In addition to generating alert notifications when event log entries are generated, event log entries collected from your managed machines are stored on the VSA. The event log data is always available, even if the managed machine goes offline or suffers a hard failure. Event log data is presented in a familiar and concise form using the Agent > Agent Logs *(page 440)* page, as well as the Logs *(page 422)* reports.

Note: You can view Monitor demos at http://www.kaseya.com/resources/demo.php

Note: You can download a Configuring Log Parsers Step-by-Step PDF from the first topic of online help.

Note: Kaseya's IT Monitor Assist service extends monitoring past nine-to-five. By out-tasking systems management and monitoring during off-hours, MSPs can offer customers 24/7/365 "Always-On" monitoring.

Function	Description
Dashboard List *(page 99)*	Provides multiple monitoring views.
Settings *(page 108)*	Administrators can customize the Dashboard List page.
Alarm Summary *(page 108)*	List of alarms for monitored machines.
Suspend Alarms *(page 110)*	Suspend alarm notifications for specific machine IDs.
Live Connect *(page 112)*	Real time view of monitor counter objects.
Monitor Lists *(page 160)*	Configure the monitor list objects for monitoring.
Update Lists By Scan *(page 163)*	Scan machines for monitor counters and services.
Monitor Sets *(page 164)*	Configure monitor sets.
SNMP Sets *(page 186)*	Configure SNMP monitor sets.
Add SNMP Object *(page 192)*	Manage SNMP MIB objects.
Alerts *(page 113)*	Configure monitor alerts for machines.
Assign Monitoring *(page 172)*	Assign, remove and manage alarms of monitor sets on machines.
Monitor Log *(page 179)*	View monitor log data in chart and table format.
System Check *(page 181)*	Assign, remove and manage alarms for system checks on machines.
LAN Watch *(page 194)*	Scan network range for specifice SNMP enabled devices.
Assign SNMP *(page 198)*	Assign, remove and manage alarms of SNMP monitor sets on devices.
SNMP Log *(page 208)*	View SNMP log data in chart and table format.
Set SNMP Values *(page 210)*	Set SNMP values on the specified device.
SNMP Type *(page 211)*	Assign SNMP types to SNMP devices.
Parser Summary *(page 213)*	Define alerts for parser sets and copy parser set assignments to multiple machine IDs.
Log Parser *(page 217)*	Define log parsers and assign them to machine IDs.
Assign Parser Sets *(page 223)*	Create and assign parsers sets to machine IDs and create alerts on parser set assignments.

Alarms

The same alarm management concepts and guidelines apply to all methods of monitoring.

Alarm Conditions

An alarm condition exists when a machine's performance succeeds or fails to meet a pre-defined criteria.

Alarms

In graphical displays throughout the VSA, when an alarm condition *(page 601)* exists, the VSA displays, by default, a red traffic light 🔴 icon. If no alarm condition exists, a green traffic light icon 🟢 displays. These icons can be customized.

Alarms, and other types of responses *(page 602)*, are enabled using the following pages:

- Monitor > Alerts *(page 113)*
- Monitor > Assign Monitoring *(page 172)*
- Monitor > Assign SNMP *(page 198)*
- Monitor > System Checks *(page 181)*
- Monitor > Parser Summary *(page 213)*
- Monitor > Assign Parser Sets *(page 223)*
- Patch Mgmt > Patch Alerts *(page 298)*
- Remote Cntl > Offsite Alerts *(page 369)*
- Backup > Backup Alerts *(page 383)*
- Security > Apply Alarm Sets
- Agent > LAN Watch *(page 465)*

Five Methods of Monitoring

Each of the five methods of monitoring in Virtual System Administrator is either event-based or state-based.

- Event-based
  - Alerts - monitors events on *agent-installed* machines
  - System Check - monitors events on *non-agent-installed* machines
  - Log Monitoring - monitors events in *log files*
- State-based
  - Monitor Sets - monitors the performance state on *agent-installed* machines
  - SNMP Sets - monitors the performance state on *non-agent-installed devices*

Event-Based Alarms

Alerts *(page 113)*, System Check *(page 181)* and Log Monitoring *(page 217)* represent event-based alarms that occur perhaps once. For example a backup may fail. There is no transition out of the condition, it just happens. Since there is no state, the red alarm in a dashlet never transitions back to green until you close the alarm in the alarm log. Typically event-based alarms are easier to configure, since the possibilities are reduced to whether one or more of the events happened or did not happen with a specified time period.

State-Based Alarms

Monitor set *(page 164)* counters, services, and processes and SNMP set *(page 186)* objects are either currently within their expected state range or outside of it and display as red or green alarm icons *dynamically*. These are known as state-based alarms.

- *If an alarm state currently exists, monitor dashlets (page 99) show red alarms.*
- *If an alarm state does not currently exist, monitor dashlets show green alarms.*

For monitor sets and SNMP sets, the criteria for an alarm condition can be tailored using Auto Learn *(page 178)* and Individualized *(page 172)* sets. Alarms for monitor sets and SNMP sets can be be *dismissed* using the Network Status *(page 104)* dashlet. Typically state-based alarms require more thought to configure then event-based alarms, because the intent is to measure the level of performance rather than outright failure.

Reviewing Created Alarms

All alarm conditions that have the Create Alarm checkbox checked–both state-based alarms and event-based alarms—are recorded in the alarm log. An alarm listed in the alarm log does not represent the *current state* of a machine or device, rather it is a *record* of an alarm that has occurred *in the past*. An alarm log record remains `Open` until you close it. Alarms can also be deleted from the alarm log. Note that a state-based alarm, like a monitor set or SNMP set, can trigger an alarm state that changes to red and then changes back to green. This same state-based alarm, if the Create Alarm checkbox is checked, can also generate an alarm *record* that remains `Open` until you close it.

Created alarms can be, reviewed, `Closed` or Deleted... using:

- Monitor > Alarm Summary *(page 108)*
- Monitor > Dashboard List > any Alarm Summary Window *(page 102)* within a dashlet

Created alarms can also be reviewed using:

- Monitor > Dashboard List > Alarm Summary *(page 101)* dashlet
- Monitor > Dashboard List > Alarm Network Status *(page 101)*
- Monitor > Dashboard List > Alarm Rotator *(page 103)*
- Monitor > Dashboard List > Alarm Ticker *(page 103)*
- Monitor > Dashboard List > Group Alarm Status *(page 103)*
- Monitor > Dashboard List > Monitor Set Status *(page 105)*
- Monitor > Dashboard List > Monitor Status *(page 107)*
- Monitor > Dashboard List > Top N - Monitor Alarm Count *(page 107)*

- Monitor > Dashboard List > KES Status *(page 107)*
- Monitor > Dashboard List > KES Threats *(page 108)*
- Reports > Logs *(page 422)* > Alarm Log
- Reports > Monitor *(page 428)* > Monitor Action Log

Reviewing Alarm Conditions without Creating Alarms

A user can assign monitor sets, SNMP sets, alerts, system checks or log monitoring to machine IDs *without checking the Create Alarm checkbox* and an Monitor Action Log entry will still be created. These logs enable a user to review alarm conditions that have occurred without being specifically notified by the creation of an alarm, email or ticket. You can generate a report using Reports > Monitor *(page 428)* > Monitor Action Log.

Reviewing Performance with or without Creating Alarms

You can review monitor sets and SNMP set performance results, *with or without creating alarms*, using:

- Monitor > Live Connect *(page 112)*
- Monitor > Monitor Log *(page 179)*
- Monitor > SNMP Log *(page 208)*
- Monitor > Dashboard > Network Status *(page 104)*
- Monitor > Dashboard > Group Alarm Status *(page 104)*
- Monitor > Dashboard > Monitoring Set Status *(page 105)*
- Reports > Monitor *(page 428)* > Monitor Set Report

Reviewing Performance Data using Quick Sets

A Quick Status feature enables you to select *any* monitor set counter, service or process from *any* machine ID and add it to the same single display window. Using Quick Status, you can quickly compare the performance of the same counter, service or process on different machines, or display selected counters, services and processes from different monitor sets all within a single view. SNMP sets provide a similar Quick Status view for selected SNMP objects. Any Quick Status view you create exists only for the current session. The Quick Status window is accessed using Monitor > Dashboard > Monitoring Set Status *(page 105)*, then clicking the Quick Status link or the Quick Status icon .

Reviewing Performance Data using Machine Status or Device Status

A Machine Status feature enables you to select any monitor set counter, service or process *for a single machine ID* and add it to the same single display window. Unlike the Quick Status window, a Machine Status view persists from one session to the next. SNMP sets display a similar window called the Device Status window for selected SNMP objects. The Machine Status window and Device Status window are accessed using Monitor > Dashboard > Monitoring Set Status *(page 105)*, then clicking the machine/device status icon .

Suspending Alarms

The triggering of alarms can be suspended. The Suspend Alarms page suppresses alarms *(page 600)* for specified time periods, including recurring time periods. This allows upgrade and maintenance activity to take place without generating alarms. When alarms are suspended for a machine ID, *the agent still collects data, but does not generate corresponding alarms.*

Group Alarms

Alert, system check, and log monitoring alarms are automatically assigned to a group alarm category. If an alert alarm is triggered, the group alarm it belongs to is triggered as well. The group alarm categories for monitor sets and SNMP sets are manually assigned when the sets are defined. Group alarms display in the Group Alarm Status *(page 104)* dashlet of the Monitor > Dashboard List page. You can create new groups using the Group Alarm Column Names tab in Monitor > Monitor Lists *(page 160)*.

Dashboard List

Home > Dashboard List
Monitor > Dashboard List

Similar information is provided using Monitor > Alarm Summary *(page 108)* and Reports > Monitor *(page 428)*.

The Dashboard List page is the VSA's primary method of visually displaying monitoring data, including triggered alarm conditions. The Dashboard List page maintains configurable monitoring windows called Dashboard Views. Each dashboard contains one or more panes of monitoring data called Dashlets. Each administrator can create their own customized dashboards.

Adding Dashboard Views and Dashlets

To add a new dashboard:

1. Click to create a new Dashboard View. The new dashboard displays in a popup window.
2. Enter a Title and Description for your new dashboard.
3. Click the Add Dashlets tab. A side panel displays a list of dashlets. These choices include:
    - Alarm Summary *(page 101)*
    - Alarm Network Status *(page 101)*
    - Alarm Rotator *(page 103)*
    - Alarm Ticker *(page 103)*
    - Network Status *(page 104)*
    - Group Alarm Status *(page 104)*
    - Monitoring Set Status *(page 105)*
    - Monitor Status *(page 107)*
    - Machines Online *(page 107)*
    - Top N - Monitor Alarm Chart *(page 107)*
    - KES Status *(page 107)*
    - KES Threats *(page 108)*
4. Check as many checkboxes as you like, then click the Add button. The side panel closes and the Dashlets display in the Dashboard View.

5. Move and resize the Dashlets within the Dashboard View.
6. Click the Delete tab to delete dashlets already displayed in the Dashboard View.
7. Click 💾 to save the Dashboard View. Click 💾 to save the Dashboard View using a different title and description.
8. Click Share to share this Dashboard View with other administrators, administrator roles or to make it public for all administrators to use and edit.

Configuring Dashlet Options

You can size and position each dashlet within the Dashboard View. You can also access additional configuration options for each dashlet by clicking the configure icon ✎ located in the upper left hand corner of the dashlet. Common configuration options include:

- Show Title Bar - If checked, displays the dashlet with a title bar.
- Title - Specifies the title of the dashlet.
- Refresh Rate - Specifies how often the data in the dashlet is refreshed.
- Machine - Filters the dashlet by machine ID. Include an asterisk (*) wildcard with the text you enter to match multiple records.
- Machine Group - Filters the dashlets by group ID. Select `<All Groups>` to see all groups you are authorized to see.

> Note: Dashlets are unaffected by the *main* machine ID/group ID filter at the top of VSA web page.

Add Dashboard

Click ⊕ to create a new dashboard. The new dashboard displays in a popup window.

Title

Enter a title for your dashboard and click the filter icon ➔ to filter the list of dashboards listed in the paging area. Include an asterisk (*) wildcard with the text you enter to match multiple records. Enter a different title to rename the dashboard.

My Dashboards

If checked, only the dashboard you created are checked.

View

Displays the view icons available for each dashboard.

□ - Click to view this dashboard.

✎ - Click to configure this dashboard.

⊗ - Click to delete this dashboard.

Owner

The administrator who last modified the dashboard.

> Note: You must take ownership of a dashboard before you can modify it.

Title

The name of the dashboard.

Description

The description of the dashboard.

Load on Startup

If checked, this dashboard displays when the administrator logs in. Choices apply only to the currently logged in administrator.

Alarm Summary

Dashboard List > Alarm Summary

The Alarm Summary dashlet displays all alarms for all machine IDs matching the dashlet's machine/group ID filter.The display lists the most recent alarms first. By default, alarms generated within the last 24 hours are highlighted in red. Alarms generated within the last week are highlighted in yellow. The color coding lets you quickly distinguish alarms you may not have examined yet. The color coding is customizable using Settings *(page 108)*.

Each alarm contains a link to create or display a Ticket associated with the alarm.

> Note: The Alarm Summary dashlet should be distinguished from the Alarm Summary Window *(page 102)* and Alarm Summary *(page 108)* page.

Alarm Network Status

Dashboard List > Alarm Network Status

Initially the Alarm Network Status dashlet displays each machine group as an icon. You can click any group icon to display the machines within that group. If a machine has even a single `Open` alarm, then the icon for that machine displays a red exclamation point. Click any machine icon to display an Alarm Summary Window *(page 102)* of `Open` alarms for that machine.

Alarm Summary Window

Dashboard List > Alarm Network Status
Dashboard List > Group Alarm Status
Dashboard List > Monitor Set Status

The Alarm Summary window displays a filtered list of alarm log records. The filtering depending on how you accessed the window. An alarm listed in the alarm log does not represent the *current state* of a machine or device, rather it is a *record* of an alarm that has occurred *in the past*. An alarm log record remains `Open` until you close it.

> Note: Within a dashlet, the Alarm Summary window displays *only* `Open` *alarm log records*. If you attempt to filter alarms using the `Closed` status within a dashlet, the dashlet will reset your selection to `Open`. Closing an alarm makes it disappear from this dashlet's alarm summary list. You can review both `Open` and `Closed` alarms using the Alarm Summary *(page 108)* page.

Filtering Alarms

Select or enter values in one or more of the following Alarm Filter fields. The filtering takes effect as soon as you select or enter a value.

- Alarm ID - A specific alarm ID.
- Monitor Type - `Counter`, `Process`, `Service`, `SNMP`, `Alert`, `System Check`, `Security` or `Log Monitoring`.
- Alarm State - `Open` or `Closed`. You can only select the `Open` status for an alarm listed in a dashlet Alarm Summary Window.
- Alarm Type - `Alarm` or `Trending`.
- Alarm Text - Text contained in the alarm.
- Filter Alarm Count - The number of alarms displayed using the current filter criteria.

Closing Alarms

You can close alarm log records in one of two ways:

- Click the `Open` link in the State column of the Alarm Summary window.

Or:

1. Set the Alarm State drop-down list to `Closed`.
2. Select one or more alarms listed in the paging area.
3. Click the Update button.

Deleting Alarms

1. Select one or more alarms listed in the paging area.
2. Click the Delete... button.

Adding Notes

1. Enter a note in the Notes field.
2. Select one or more alarms listed in the paging area.
3. Click the Update button.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Alarm ID

Lists a system-generated and unique ID for each alarm. The expand icon ⊞ can be clicked to display specific alarm information.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*. Each dashlet displays all machine groups and machine IDs matching the *dashlet's* individual machine/group ID filter.

Alarm Date

The date and time the alarm was created.

Type

The type of monitor object: `Counter`, `Process`, `Service`, `SNMP`, `Alert`, `System Check`, `Security` and `Log Monitoring`.

Ticket

If a ticket has been generated for an alarm a Ticket ID link displays. Clicking this link displays the ticket in the Ticketing > View Ticket *(page 236)* page. If no ticket has been generated for an alarm a New Ticket... link displays. Click this link to create a ticket for this alarm.

Name

The name of the monitoring object.

Alarm Rotator

Dashboard List > Alarm Rotator

The Alarm Rotator dashlet displays current alarms that have occurred within the last 10 minutes. Each alarm displays one at a time, in a rotating fashion, for 10 seconds. Applies to all machine IDs matching the dashlet's machine/group ID filter.

Alarm Ticker

Dashboard List > Alarm Ticker

The Alarm Ticker dashlet displays current alarms that have occurred within a specified period. Each alarm displays one at a time, in a "ticker-tape" fashion, for 10 seconds. Applies to all machine IDs matching the dashlet's machine/group ID filter.

Network Status

Dashboard List > Network Status

The Network Status dashlet is specific for machines assigned *monitor sets* or devices assigned *SNMP sets*. This dashlet displays all machine groups and machine IDs matching the *dashlet's* individual machine/group ID filter.

The value of this dashlet is that you can see the *current state* of monitor sets on machines or SNMP sets on devices *dynamically*.

Initially the Network Status dashlet displays each machine group as an icon. You can click any group icon to display the machines and SNMP devices within that group. If even a single monitor set or SNMP set is in an alarm state, then the icon for that machine or device displays a red exclamation point. Click any machine icon or device icon to display a list of monitor set alarms or SNMP set alarms that are *currently* outside their alarm thresholds. Alarms in this list are automatically removed as soon as the monitor set or SNMP set returns to a "no alarm" state.

Dismissed

You can manually force an alarm to return to a "no alarm" state by clicking the Dismiss link for that alarm. The "alarm" state will reappear again if the monitor set or SNMP set crosses its alarm threshold again. The timing of the reappearance depends on the alarm interval criteria defined for that monitor set or SNMP set.

> Note: Dismissing an alarm *state* should not be confused with the `Open` or `Closed` status of an alarm *record* entered in the alarm log, which is displayed, for example, using the Alarm Summary Window *(page 102)*. Alarm log entries can remain `Open` indefinitely, long after the alarm state has returned to "no alarm".

Group Alarm Status

Dashboard List > Group Alarm Status

The Group Alarm Status dashlet summarizes the alarm status of all group IDs matching the dashlet's machine/group ID filter.

- Click the Group ID link to display the alarm status of all machine IDs and SNMP device IDs included in that group ID.
- Click the Machine ID/SNMP Device ID link to display a Monitor Set Status *(page 105)* window for the machine ID and any SNMP devices linked to it.
- Click any red icon 🔴 in the table to display the Alarm Summary Window *(page 102)* for that group or machine ID.
- Alarm count for last <N periods> - Alarm status is based on alarms activated within this time period.

> Note: User defined group alarm column names are maintained using the Monitor Lists *(page 160)* page. Group alarm column names are assigned to monitor sets using Define Monitor Set *(page 165)*.

Monitoring Set Status

Dashboard List > Monitoring Set Status

You can also display a Monitoring Set Status dashlet using the Group Alarm Status dashlet of the Dashboard List page, by clicking a group ID link, then a machine ID.group ID link.

The Monitoring Set Status dashlet displays all alarms assigned to a machine ID, whether created by a monitor set *(page 607)*, alert *(page 601)*, system check *(page 612)*, SNMP set *(page 186)*, or Log Monitoring *(page 606)*. Applies to all machine IDs matching the dashlet's machine/group ID filter.

Alarm count for last <N periods>

Alarm status is based on alarms activated within this time period.

Display only alarmed monitor objects

If checked, only alarmed monitor objects are displayed in the list.

Display only alarmed machines

If checked, only alarmed machines are displayed in the list.

First Row of Information

The first row of information displays:

- The check-in status (on page 603) icon - Click to display the Machine Summary *(page 23)* popup window.
- The machine status icon - Click to display the Machine Status *(page 107)* popup window. This window enables you to set up a permanent display of charts or tables of monitor set objects for a specific machine ID. Applies to monitor set objects only—not alerts, system-checks or SNMP sets.
- The expand icon ⊡ - Click to display all alarms assigned to a machine ID.
- The collapse icon ▣ - Click to display only the header description of each alarm assigned to a machine ID.
- The machine ID.group ID *(page 606)*.

Monitor Sets

If a monitoring set is assigned to a machine ID, the following displays below the name of the monitor set:

- The triggered alarm 🔴 or no-alarm 🟢 status of the monitoring set.
- The expand icon ⊞ - Click to display collection and threshold information.
- The Quick Status link or the quick chart icon - Click to display a Quick Status Monitor popup window. This window provides a quick chart of the monitor set object you click. Clicking a *different* quick chart icon within the same monitor set adds that monitor set object to the Quick Status Monitor window. Quick chart selections are not permanently saved between sessions. Use the Machine Status *(page 107)* icon to permanently save chart display selections.
- The monitoring log icon - Click to display the monitoring log *(page 179)* for this single alarm counter in a popup window.

- The Live Connect *(page 112)* icon - Click to display current, ongoing counter log information in a popup window.
- The monitor set object name.
- For triggered alarms, the Alarm hyperlink displays. Click to display the Alarm Summary Window *(page 102)*. The Alarm Summary Window is restricted to just `Open` alarms for the selected monitor set object and machine ID.

Alerts

If an alert is assigned to a machine ID, the following displays with each alert:

- The triggered alarm 🔴 or no-alarm 🟢 status of the alert.
- The alert type.
- For triggered alarms, the Alarm hyperlink displays. Click to display the Alarm Summary Window *(page 102)*. The Alarm Summary Window is restricted to just `Open` alerts for the selected machine ID.

System Checks

If a system check is assigned to a machine ID, the following displays with each system check:

- The triggered alarm 🔴 or no-alarm 🟢 status of the system check.
- The system check type.
- For triggered alarms, the Alarm hyperlink displays. Click to display the Alarm Summary Window *(page 102)*. The Alarm Summary Window is restricted to just `Open` system checks for the selected machine ID.

SNMP Devices

If a SNMP set is assigned to a SNMP device, the following displays with each SNMP set object:

- The device status icon - Click to set up a permanent display of charts or tables of monitor set objects for a specific SNMP device. Displays the Device Status *(page 107)* popup window.
- The IP address of the SNMP device.
- The name of the SNMP device.
- The name of the SNMP set assigned to the SNMP device. The following displays with each SNMP set:
  - The triggered 🔴 or no-alarm 🟢 status of the SNMP set.
  - The expand icon ⊞ - Click to display collection and threshold information.
  - The monitoring log icon - Click to display the monitoring log *(page 179)* for this single alarm counter in a popup window.
  - The SNMP set object name.
  - For triggered alarms, the Alarm hyperlink displays. Click to display the Alarm Summary Window *(page 102)*. The Alarm Summary Window is restricted is restricted to just `Open` alarms for the selected SNMP set object and SNMP device.

Machine Status

Dashboard List > Monitor Set Status > Machine Status icon

The Machine Status popup window selects and displays charts or tables for monitor set *(page 607)* objects. The setup is specific for each machine ID and can be saved permanently. Applies to monitor set objects only. Monitor sets must be assigned to a machine ID before using this window.

- Click the Setup... button to select monitoring objects to display and to set the chart or table format.
- Click the Save Position button to save the selection and format of monitoring objects on the Monitor Set Status popup window.

Device Status

Dashboard List > Monitor Set Status > Machine Status icon

The Device Status popup window selects and displays charts or tables for SNMP devices *(page 611)*. The setup is specific for each SNMP device and can be saved permanently.

- Click the Setup... button to select monitoring objects to display and to set the chart or table format.
- Click the Save Position button to save the selection and format of monitoring objects on the Monitor Set Status popup window.

Monitor Status

Dashboard List > Monitor Status

The Monitor Status dashlet displays a bar chart showing the number of alarms created for the selected time interval. Applies to all machine IDs matching the dashlet's machine/group ID filter. This dashlet can be customized using Monitor > Settings *(page 108)*.

Machines Online

Dashboard List > Machines Online

The Machines Online chart shows the percentage of servers and workstations online. Applies to all machine IDs matching the dashlet's machine/group ID filter. This dashlet can be customized using Monitor > Settings *(page 108)*.

Top N - Monitor Alarm Chart

Dashboard List > Top N - Monitor Alarm Chart

The Top N - Monitor Alarm Chart dashlet displays a bar chart showing which machines have the *most* alarms for the selected time interval. Applies to all machine IDs matching the dashlet's machine/group ID filter. The chart shows up to 10 machines. This dashlet can be customized using Monitor > Settings *(page 108)*.

KES Status

Dashboard List > KES Status

The KES Status dashlet displays different views of the security status of machine IDs using Kaseya Endpoint Security protection. Applies to all machine IDs matching the dashlet's machine/group ID filter. The three views of security status are:

- Machine Configuration
- Scan Details
- Profile Chart

Note: This dashlet does not display unless the Kaseya Endpoint Security addon module is enabled for the VSA.

KES Threats

Dashboard List > KES Threats

The KES Threats dashlet displays different views of the security threats reported for machine IDs using Kaseya Endpoint Security protection. Applies to all machine IDs matching the dashlet's machine/group ID filter. The three views of security threats are:

- Most Recent
- Most Common
- Profile Chart

Note: This dashlet does not display unless the Kaseya Endpoint Security addon module is enabled for the VSA.

Settings

Home > Settings

Monitor > Settings

The Settings page enables you to customize controls for dashlets.

- Alarm sounds can be turned on for Monitor Set Status and Alarm Summary.
- The Chart Total Monitor Alarms and Chart Top N Monitor Alarms background and title colors are customizable. Each chart parameter is customizable, this includes the chart time interval and the number of machines referenced by the Chart Top N Monitor Alarms.
- The Customize machines online chart zone specifies two percentages to create three zones of machines online:
  - The percentage of machines online, below which represents an alarm condition.
  - The additional percentage of machines online, below which represents a warning condition.
- Custom Dashboard Skin - Select the border and titlebar style you want dashlets to display.

Alarm Summary

Monitor > Alarm Summary

Similar information is provided using Monitor > Dashboard Lists *(page 99)* and Reports > Monitor *(page 428)*.

The Alarm Summary page displays alarms *(page 600)* for all machine IDs that match the current machine ID / group ID filter *(page 17)*. You can include additional filtering for listed alarms using fields in the Alarm Filters panel. You can also close alarms or re-open them and add notes to alarms.

Filtering Alarms

Select or enter values in one or more of the following Alarm Filter fields. The filtering takes effect as soon as you select or enter a value.

- Alarm ID - A specific alarm ID.

- Monitor Type - `Counter`, `Process`, `Service`, `SNMP`, `Alert`, `System Check`, `Security` or `Log Monitoring`.
- Alarm State - `Open` or `Closed`. You can only select the `Open` status for an alarm listed in a dashlet Alarm Summary Window.
- Alarm Type - `Alarm` or `Trending`.
- Alarm Text - Text contained in the alarm.
- Filter Alarm Count - The number of alarms displayed using the current filter criteria.

Closing Alarms

You can close alarm log records in one of two ways:

- Click the `Open` link in the State column of the Alarm Summary window.

Or:

1. Set the Alarm State drop-down list to `Closed`.
2. Select one or more alarms listed in the paging area.
3. Click the Update button.

Deleting Alarms

1. Select one or more alarms listed in the paging area.
2. Click the Delete... button.

Adding Notes

1. Enter a note in the Notes field.
2. Select one or more alarms listed in the paging area.
3. Click the Update button.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Alarm ID

Lists a system-generated and unique ID for each alarm. The expand icon ⊞ can be clicked to display specific alarm information.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*. Each dashlet displays all machine groups and machine IDs matching the *dashlet's* individual machine/group ID filter.

Alarm Date

The date and time the alarm was created.

Type

The type of monitor object: `Counter`, `Process`, `Service`, `SNMP`, `Alert`, `System Check`, `Security` and `Log Monitoring`.

Ticket

If a ticket has been generated for an alarm a Ticket ID link displays. Clicking this link displays the ticket in the Ticketing > View Ticket *(page 236)* page. If no ticket has been generated for an alarm a New Ticket... link displays. Click this link to create a ticket for this alarm.

Name

The name of the monitoring object.

Suspend Alarms

Monitor > Suspend Alarms

The Suspend Alarms page suppresses alarms *(page 600)* for specified time periods, including recurring time periods. This allows upgrade and maintenance activity to take place without generating alarms. When alarms are suspended for a machine ID, *the agent still collects data, but does not generate corresponding alarms.* The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*.

Clear All

Clears all time periods scheduled for suspending alarms for all selected machine IDs.

Add / Replace

Click Add to add a schedule time period when alarms will be suspended for selected machine IDs. Click Replace to remove suspend alarm time periods currently assigned to selected machine IDs and assign them a new single time period to suspend alarms.

Schedule

Click Schedule to schedule this task on selected machine IDs using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Clears a time period matching the date/time parameters for suspending alarms on selected machine IDs.

Run recurring

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Suspend alarms

Select the duration of time during which alarms will be suspended.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Next Suspend

Lists the start times when machine ID alarms are scheduled to be suspended.

Duration

Lists the duration of the time periods alarms are scheduled to be suspended.

Recur

If recurring, displays the interval for the scheduled task to recur.

Live Connect

Monitor > Live Connect

The Live Connect page displays live performance counter data for a selected machine ID. Only machines IDs assigned one or more monitor sets using Assign Monitoring *(page 172)* are listed on this page. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*.

Each specific live connect displays in a new window. Each window displays a bar chart with 75 data points containing the value of the counter object for the Refresh Rate specified. The chart refresh rate can be set between 3 and 60 seconds. The new data displays on the far right of the chart and the data moves from right to left as it ages.

Each bar within the chart displays in a specific color, which is determined by the alarm and warning thresholds of the monitor set counter object.

- Red - if alarming
- Yellow - if within warning threshold
- Green - if not alarming or not in warning threshold

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine ID.Group ID

Lists the Machine.Group IDs *(page 606)* currently matching the Machine ID / Group ID filter *(page 17)* and that has been assigned one or more monitor sets. Click a machine ID to select a monitor set, refresh rate and one or more counters.

Select Monitor Set

Select a monitor set.

Refresh Rate

Enter a value from 3 to 60. This is the interval live connect uses to gather data.

Select Counter

Lists the counters included in a selected monitor set. Click a counter link to display a live connect window for that counter.

Alerts

Monitor > Alerts

The Alerts page enables you to quickly define alerts for typical alarm conditions *(page 601)* found in an IT environment. For example, low disk space is frequently a problem on managed machines. Selecting the `Low Disk` type of alarm displays a single additional field that lets you define the `% free space` threshold. Once defined, you can apply this alarm immediately to any machine ID displayed on the Alerts page and specify the response to the alarm.

> Note: Monitor Sets *(page 607)* represent a more complex method for monitoring alarm conditions. Typical alarm conditions should be defined using the Alerts page.

Select Alert Function

Select an alert type using the Select Alert Function drop-down list.

- Summary *(page 114)*
- Agent Status *(page 117)*
- Application Changes *(page 120)*
- Get Files *(page 123)*
- Hardware Changes *(page 126)*
- Low Disk *(page 129)*
- Event Logs *(page 132)*
- LAN Watch *(page 140)*
- Script Failure *(page 142)*
- Protection Violation *(page 145)*
- New Agent Installed *(page 148)*
- Patch Alert *(page 150)*
- Backup Alert *(page 154)*
- System *(page 158)*

Group Alarms

Alert, system check, and log monitoring alarms are automatically assigned to a group alarm category. If an alert alarm is triggered, the group alarm it belongs to is triggered as well. The group alarm categories for monitor sets and SNMP sets are manually assigned when the sets are defined. Group alarms display in the Group Alarm Status *(page 104)* dashlet of the Monitor > Dashboard List page. You can create new groups using the Group Alarm Column Names tab in Monitor > Monitor Lists *(page 160)*.

Machine Summary Alerts Tab

The Machine Summary page provides, in summary fashion, all the information available for a single machine. Typically you display this page by clicking the check-in status icon—for example, the OK icon—next to any machine ID. One of the tabs provided is the Alerts tab. You can use this tab to quickly review, enable, or disable all the alerts applied to a single machine.

To Create An Alert

The same general procedure applies to all alert types.

1. Select an alert function from the Select Alert Function drop down list.
2. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
3. Set additional email parameters.
4. Set additional alert-specific parameters. These differ based on the alert function selected.
5. Check the paging rows to apply the alert to.
6. Click the Apply button.

To Cancel an Alert

1. Select one or more paging rows.
2. Click the Clear button.

   The alert information listed next to the paging row is removed.

Alerts - Summary

Monitor >
Alerts *(page 113)*

Select Summary from the Select Alert Function drop-down list

The Alerts - Summary page shows what alerts are enabled for each machine. You can apply or clear settings or copy enabled alerts settings. Specifically you can:

- Apply or clear settings for alarm, ticket and email notification *for all enabled alert types at one time* on selected machines.
- Copy enabled alert settings from a selected machine ID or machine ID template and apply them to multiple machine IDs.

> Note: You can only modify or clear alerts initially enabled using the Copy option or else by *using the other alerts pages*.

Although you can not assign or scripts using this page, script assignments are displayed in the paging area.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from System > Preferences *(page 501)*.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added to selected machine IDs without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned to machine IDs.
- If Removed is clicked, all email addresses are removed from selected machine IDs without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Copy

Only active when Summary is selected. Copy takes all the alert type settings for a single machine ID, selected by clicking Copy alert settings from <machine_ID> to all selected machine IDs, and applies these same settings to all other checked machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Alert Type

Lists all alert types you can assign to a machine ID using the Monitor > Alerts *(page 113)* page. Displays any script assignments assigned to this machine ID.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent. The word `disabled` displays here if no alerts of this alert type are assigned to this machine ID.

Alerts - Agent Status

Monitor >
Alerts *(page 113)*

Select Agent Status from the Select Alert Function drop-down list

The Alerts - Agent Status page triggers an alert if an agent is offline, first goes online, or someone has disabled remote control on the selected machine.

> Note: When ever the KServer service stops, the system suspends all agent online/offline alerts. If the KServer stops for more than 30 seconds, then agent online/offline alerts are suspended for one hour after the KServer starts up again. Rather than continuously try to connect to the KServer when the KServer is down, agents go to sleep for one hour after first trying to connect a couple times. The one hour alert suspension prevents false agent offline alerts when the KServer starts back up.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Alert when single agent goes off-line
- Alert when multiple agents in the same group go off-line
- Alert when agent first goes online
- Alert when users disable remote control

> Note: Changing this email alarm format changes the format for all Agent Status alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<mc>	#mc#	number of machines going offline
<ml>	#ml#	list of multiple machines going offline
<qt>	#qt#	last check-in time
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Agent has not checked in for <N> <periods>

If checked, an alert is triggered if the agent has not checked in for the specified number of periods.

Alert when agent goes online

If checked, an alert is triggered if the agent goes online

Alert when user disables remote control

If checked, an alert is triggered if the user disables remote control

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Time Offline

Displays the number of days if an alert is sent when a machine ID is offline for the specified number of days.

Agent Goes Online

Displays a checkmark ✓ if an alert is sent when an agent does online.

RC Disabled

Displays a checkmark ✓ if an alert is sent when the user disables remote control.

Alerts - Application Changes

Monitor >
Alerts *(page 113)*

Select Application Changes from the Select Alert Function drop-down list.

Similar information is provided using Audit > Add/Remove *(page 40)* and Reports > Software *(page 415)*.

The Application Changes page triggers an alert when a new application is installed or removed on selected machines. This alert is based on the latest audit *(page 602)*.

You can specify the directories to exclude from triggering an alert. The exclude path may contain the wildcard asterisk (*) character. Excluding a folder excludes all subfolders. For example, if you exclude `*\windows\*`, c:\Windows and all subfolders are excluded. You can add to the current list of applications, replace the current application list or remove the existing application list.

Passing Alert Information to Emails and Scripts

The following type of monitoring alert emails can be sent and formatted:

- Alert when application list change

> Note: Changing this email alarm format changes the format for all Application Changes alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID

<il>	#il#	list of newly installed applications
<rl>	#rl#	list of newly removed applications
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script after alert

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.

- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Alert when audit detects New application installed

If checked, an alert is triggered when a new application is installed.

Alert when audit detects Existing application deleted

If checked, an alert is triggered when a new application is removed.

Exclude directories

You can specify the directories to exclude from triggering an alert. The exclude path may contain the wildcard asterisk (*) character. Excluding a folder excludes all subfolders. For example, if you exclude `*\windows\*`, c:\Windows and all subfolders are excluded. You can add to the current list of applications, replace the current application list or remove the existing application list.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Edit Icon

Click a row's edit icon 📝 to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Installed Apps

Displays a checkmark ✓ if an alert is sent when an application is installed.

Removed Apps

Displays a checkmark ✓ if an alert is sent when an application is removed.

Exclude

Lists directories excluded from sending an alert when an application is installed or removed.

Alerts - Get Files

Monitor >
Alerts *(page 113)*

Select `Get Files` from the Select Alert Function drop-down list

The Alerts - Get File page triggers an alert when a script's Get File or Get File in Directory Path command executes, uploads the file, and the file is now different from the copy previously stored on the server. If there was not a previous copy on the server, the alert is also triggered.

> Note: The VSA issues the alert only if the send alert if file changed option has been selected in the script.

Passing Alert Information to Emails and Scripts

The following type of monitoring alert emails can be sent and formatted:

- Alert when file fetched with Get File changes from the last fetch
- Alert when file fetched with Get File is unchanged from last fetch

Note: Changing this email alarm format changes the format for all `Get Files` alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<fn>	#fn#	filename
<gr>	#gr#	group ID
<id>	#id#	machine ID
<sn>	#sn#	script name the fetched the file
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script after alert

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - Hardware Changes

Monitor > Alerts *(page 113)*

Select Hardware Changes from the Select Alert Function drop-down list

The Alerts - Hardware Changes page triggers an alert when a hardware configuration changes on the selected machines. Detected hardware changes include the addition or removal of RAM, PCI devices, and disk drives. This alert is based on the latest audit *(page 602)*.

Passing Alert Information to Emails and Scripts

The following type of monitoring alert emails can be sent and formatted:

- Alert when disk or PCI card is added or removed
- Alert when the amount of installed RAM changes

> Note: Changing this email alarm format changes the format for all Hardware Changes alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<ha>	#ha#	list of hardware additions
<hr>	#hr#	list of hardware removals

<id>	#id#	machine ID
<m>	#m#	new RAM size
<ro>	#ro#	old RAM size
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.

- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Edit Icon

Click a row's edit icon ✎ to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket

- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - Low Disk

Monitor >
Alerts *(page 113)*

Select Low Disk from the Select Alert Function drop-down list

The Low Disk page triggers an alert when available disk space falls below a specified percentage of free disk space. A subsequent low disk alert is not created unless the target machine's low disk space is corrected, or unless the alert is cleared, then re-applied. This alert is based on the latest audit *(page 602)*.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Alert when disk drive free space drops below a set percent

> Note: Changing this email alarm format changes the format for all Low Disk alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<df>	#df#	free disk space
<dl>	#dl#	drive letter
<dt>	#dt#	total disk space
<gr>	#gr#	group ID
<id>	#id#	machine ID
<pf>	#pf#	percent free space
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Send alert when selected machines have less than <N> % free space on any fixed disk partition

An alert is triggered if a machine's free disk space is less than the specified percentage.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - Event Logs

Monitor >
Alerts *(page 113)*

Select Event Logs from the Select Alert Function drop-down list

The Alerts - Event Logs page triggers an alert when an event log entry for a selected machine matches a specified criteria. After selecting the event log type, you can filter the alerts triggered by event set and by event category.

> Note: You can display event logs directly. On a Windows machine click Start, then click Control Panel, then click Administrative Tools, then click Event Viewer. Click Application, Security or System to display the events in each log.

Prerequisite

Event logging must be enabled for a particular machine using Agent > Event Log Settings *(page 443)*.

Windows Event Logs

An event log service runs on Windows operating systems (Not available with Win9x). The event log service enables event log messages to be issued by Window based programs and components. These events are stored in event logs located on each machine. The event logs of managed machines can be stored in the KServer database, serve as the basis of alerts and reports, and be archived.

Depending on the operating system, the event logs types available include but are not limited to:

- Application log
- Security log
- System log
- Directory service log
- File Replication service log
- DNS server log

The list of event types available to select can be updated using Monitoring > Update Lists by Scan *(page 163)*.

Windows events are further classified by the following event log categories:

- Error
- Warning
- Information
- Success Audit
- Failure Audit
- Critical - Applies only to Vista.
- Verbose - Applies only to Vista.

Event logs are used or referenced by the following VSA pages:

- Monitor > Agent Logs *(page 440)*
- Monitor > Alerts > Event Logs *(page 132)*
- Monitor > Alerts > Edit Event Sets *(page 138)*
- Monitor > Update Lists by Scan *(page 163)*
- Agent > Log History *(page 441)*

- Agent > Event Log Settings *(page 443)*
- Agent > Agent Logs *(page 440)*
- Reports > Logs *(page 606)*

System > Database Views > vNtEventLog *(page 563)*

Event Sets

Because the number of events in Windows based events logs is enormous the VSA uses a record type called an event set to filter the triggering of alerts.

Event sets contain one or more conditions. Each condition contains filters for different fields in an event log entry. The fields are source, category, event ID, user, and description. An event log *(page 604)* entry has to match all the field filters of a condition to be considered a match. A field with an asterisk character (*) means any string, including a zero string, is considered a match. A match of any *one* of the conditions in an event set triggers an alert on any machine that event set is applied to.

For details on how to configure event sets, see Monitor > Alerts > Event Logs > Edit Event Sets *(page 138)*.

Sample Event Sets

The VSA provides a growing list of sample event sets. The names of sample event sets begin with ZC. They can be updated using System > Configure *(page 524)*. You can modify sample event sets, but its better practice to copy a sample event set and customize the copy. Sample event sets are subject to being overwritten every time the sample sets are updated. An Excel document called `Standard Monitoring Library.xls` provides a description of each sample event set. It can be downloaded from the Kaseya Support Forum.

Creating an Event Log Alert

1. On the Monitor > Alerts page select the event log type using the drop-down list.
2. Select the Event Set *(page 138)* filter used to filter the events that trigger alerts. By default `<All Events>` is selected.
3. Check the box next to any of the following event category:
   - Error
   - Warning
   - Information
   - Success Audit
   - Failure Audit
   - Critical - Applies only to Vista.
   - Verbose - Applies only to Vista.

> Note: Red letters indicate logging disabled. Event logs may be disabled by the VSA for a particular machine, based on settings defined using Agent > Event Log Settings *(page 443)*. A particular event category may be not be available for certain machines, such as the Critical and Verbose event categories for non-Vista machines. To prevent overwhelming the database, when 10000 or more event log entries of a particular type get backed up in the database, that type of event for that specific event log gets disabled.

4. Specify the *frequency* of the alarm condition required to trigger an alert:
   - ➢ Alert when this event occurs once.
   - ➢ Alert when this event occurs <N> times within <N> <periods>.
   - ➢ Alert when this event doesn't occur within <N> <periods>.
   - ➢ Ignore additional alarms for <N> <periods>.
5. Click the Add or Replace radio options, then click Apply to assign selected event type alerts to selected machine IDs.
6. Click Remove to remove all event based alerts from selected machine IDs.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Single event log alert. Same template applied to all event log types.
- Multiple event log alerts. Same template applied to all event log types.
- Missing event log alert. Same template applied to all event log types.

> Note: Changing this email alarm format changes the format for all Event Logs alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<cg>	#cg#	Event category
<cn>	#cn#	computer name
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<ed>	#ed#	event description
<ei>	#ei#	event id
<es>	#es#	event source
<esn>	#esn#	event source name
<et>	#et#	event time

<eu>	#eu#	event user
<ev>	#ev#	event set name
<gr>	#gr#	group ID
<id>	#id#	1. machine ID
<lt>	#lt#	log type (Application, Security, System)
<tp>	#tp#	event type - (Error, Warning, Informational, Success Audit, or Failure Audit)
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.

- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Edit Icon

Click a row's edit icon ✎ to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Log Type

The type of event log being monitored.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

EWISFCV

The event category being monitored.

Email Address

A comma separated list of email addresses where notifications are sent.

Event Set

The event set assigned to this machine ID. Multiple events sets can be assigned to the same machine ID.

Interval

The number of times an event occurs within a specified number of periods. Applies only if the Alert when this event occurs <N> times within <N> <periods> option is selected. Displays `Missing` if the Alert when this event doesn't occur within <N> <periods> option is selected. Displays `1` if the Alert when this event occurs once is selected.

Duration

The number of periods and event must occur to trigger an alert. Applies only if the Alert when this event occurs <N> times within <N> <periods> or Alert when this event doesn't occur within <N> <periods> options are selected.

Re-Arm

Displays the number of periods to wait before triggering any new alerts for the same combination of event set and event category. Applies only if a re-arm period greater than zero is specified using Ignore additional alarms for <N> <periods>.

Edit Event Sets

Monitor >
Alerts *(page 113)*

On the Alerts page, select `Event Logs` from the Select Alert Function drop down list.

Select `<New Event Set>` from the Define events to match or ignore drop down list. The Edit Event Set popup window displays.

Edit Event Sets filters the triggering of alerts based on the monitoring of events in event logs maintained by the Windows OS of a managed machine. You can assign multiple event sets to a machine ID.

Event sets contain one or more conditions. Each condition contains filters for different fields in an event log entry. The fields are source, category, event ID, user, and description. An event log *(page 604)* entry has to match all the field filters of a condition to be considered a match. A field with an asterisk character (*) means any string, including a zero string, is considered a match. A match of any *one* of the conditions in an event set triggers an alert on any machine that event set is applied to.

> Note: Normally, if two conditions are added to an event set, they are typically interpreted as an OR statement. If either one is a match, the alert is triggered. The exception is when the Alert when this event doesn't occur within <N> <periods> option is selected. In this case the two conditions should be interpreted as an AND statement. Both must *not* happen within the time period specified to trigger an alert.
>
> Note: You can display event logs directly. On a Windows machine click Start, then click Control Panel, then click Administrative Tools, then click Event Viewer. Click Application, Security or System to display the events in that log. Double-click an event to display its Properties window. You can copy and paste text from the Properties window of any event into Edit Event Set fields.

To Create a New Event Set

1. On the Alerts page, select Events Logs from the Select Alert Function drop down list.
2. Select an Event Log Type from the second drop down list.
3. Select `<New Event Set>` from the Define events to match or ignore drop down list. The Edit Event Set popup window displays. You can create a new event set by:
   - Entering a new name and clicking the New button.
   - Pasting an event set data as text.
   - Importing event set data from a file.

1. If you enter a new name and click New, the Edit Event Set window displays the five properties used to filter events.
2. Click Add to add a new event to the event set.
3. Click Ignore to specify an event that should *not* trigger an alarm.
4. You can optionally Rename, Delete or Export Event Set.

Ignore Conditions

If an event log entry matches one more more ignore conditions in an event set, then no alert is triggered *by any event set*, even if multiple conditions in multiple event sets match an event log entry. Because ignored conditions override *all event sets*, it's a good idea to define just one event set for all ignored conditions, so you only have to look in one place if you suspect an ignored condition is affecting the behavior of all your alerts. You must assign the event set containing an ignored condition to a machine ID for it to override all other event sets applied to that same machine ID.

Ignore conditions only override events sharing the same log type. So if you create an "ignore set" for all ignore conditions, it must be applied multiple times to the same machine ID, *one for each log type*. For example, an ignore set applied only as a System log type will not override event conditions applied as Application and Security log type events.

1. On the Alerts page, select Event Logs from the Select Alert Function drop down list.
2. Check the Error checkbox and select `<All Events>` from the event set list. Click the Apply button to assign this setting to all selected machine IDs. This tells the system to generate an alert for every error event type. Note the assigned log type.
3. Create and assign an "ignore event set" to these same machine IDs that specifies all the events you wish to ignore. The log type must match the log type in step 2.

Using the Asterisk (*) Wildcard

Include an asterisk (*) wildcard with the text you enter to match multiple records. For example:

```
*yourFilterWord1*yourFilterWord2*
```

This would match and raise an alarm for an event with the following string:

```
"This is a test. yourFilterWord1 as well as yourFilterWord2 are in the
description."
```

Exporting and Importing Edit Events

You can export and import event set records as XML files.

- You can *export* an existing event set record to an XML file using the Edit Event Set popup window.
- You can *import* an event set XML file by selecting the `<Import Event Set>` or `<New Event Set>` value from the event set drop down list.

Example:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<event_sets>
 <set_elements setName="Test Monitor Set" eventSetId="82096018">
   <element_data ignore="0" source="*SourceValue*"
    category="*CategoryValue*" eventId="12345"
    username="*UserValue*" description="*DescriptionValue*"/>
 </set_elements>
</event_sets>
```

Alerts - LAN Watch

Monitor >
Alerts *(page 113)*

Select LAN Watch from the Select Alert Function drop-down list

The Alerts - LAN Watch page works in conjunction with the LAN Watch *(page 194)* page. LAN Watch scans a machine ID's local LAN and detects new machines and devices connected to the machine's LAN. Both LAN Watch and the Alerts - LAN Watch page can subsequently trigger an alarm, email recipients and run a script when a new machine or device is discovered on a LAN. Only the Alerts - LAN Watch page can create a ticket when a new machine or device is discovered on a LAN.

Passing Alert Information to Emails and Scripts

The following type of monitoring alert emails can be sent and formatted:

- Alert when new device discovered by LAN Watch

> Note: Changing this email alarm format changes the format for all LAN Watch alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<nd>	#nd#	new device data
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

◆ Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

- A comma separated list of email addresses where notifications are sent.

Alerts - Script Failure

Monitor >
Alerts *(page 113)*

Select `Script Failure` from the Select Alert Function drop-down list

The Script Failure page triggers an alert when a script fails to execute on a managed machine.

Passing Alert Information to Emails and Scripts

The following type of alert emails can be sent and formatted:

- Format email message generated by Script Exec Failure alerts

> Note: Changing this email alarm format changes the format for all `Script Failure` alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include

		the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<em>	#em#	script error message
<en>	#en#	script name the fetched the file
<gr>	#gr#	group ID
<id>	#id#	machine ID
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.

- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Edit Icon

Click a row's edit icon 📝 to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - Protection Violation

Monitor >
Alerts *(page 113)*

Select Protection Violation from the Select Alert Function drop-down list

The Alerts - Protection Violation page triggers an alert when a file is changed or access violation detected on a managed machine. Options include Distributed file changed on agent and was updated, File access violation detected, and Network access violation detected.

Prerequisites

- Scripts > Distribute File *(page 68)*
- Audit > File Access *(page 52)*
- Audit > Network Access *(page 54)*

Passing Alert Information to Emails and Scripts

- The following type of alert emails can be sent and formatted:
- Alert when Protection Violation detected

> *Note: Changing this email alarm format changes the format for all* `Protection Violation` *alert emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<pv>	#pv#	violation description from Agent Log
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Distributed file changed on agent and was updated

If checked, an alert is triggered when a file distributed using Script > Distributed File *(page 68)* is changed on the managed machine. The agent verifies the distributed file at every full check-in *(page 603)*.

File access violation detected

If checked, an alert is triggered when an attempt is made to access a file specified as blocked using Audit > File Access *(page 52)*.

Network access violation detected

If checked, an alert is triggered when an attempt is made to access either an internal or external internet site using an application specified as blocked using Audit > Network Access *(page 54)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - New Agent Installed

Monitor >
Alerts *(page 113)*

Select New Agent Installed from the Select Alert Function drop-down list

The New Agent Installed page triggers an alert when a new agent is installed on a managed machine in selected *groups*.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Agent checked in for the first time

Note: Changing this email alarm format changes the format for all New Agent Installed emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<ct>	#ct#	time the agent checked in for the first time
<gr>	#gr#	group ID
<id>	#id#	machine ID
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Machine Group

Lists machine groups. All machine IDs are associated with a group ID and optionally a subgroup ID.

Email Address

A comma separated list of email addresses where notifications are sent.

Alerts - Patch Alert

Patch Mgmt > Patch Alert
Monitor >
Alerts *(page 113)*

Select Patch Alert from the Select Alert Function drop-down list

The Patch Alert page creates alerts for patch management events on managed machines.

- A new patch is available for the selected machine ID.
- A patch installation failed on the selected machine ID.
- The agent credential is invalid or missing for the selected machine ID.
- Windows Auto Update changed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- New Patch Available
- Path to Patch Executable Missing - Enabled by selecting the *first* row in the paging area, called Patch Location Missing, and clicking the Apply button.
- Patch Install Failed
- Patch Approval Policies Updated - Enabled by selecting the *second* row in the paging area, called Patch Location Missing, and clicking the Apply button.
- Agent Credential Invalid
- Windows Auto Update Configuration Changed

To Create a Patch Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - ➢ Create Alarm
   - ➢ Create Ticket
   - ➢ Run Script
   - ➢ Email Recipients
2. Set additional email parameters.
3. Set additional patch alert specific parameters.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Patch Alert

1. Select the machine ID checkbox.

2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of patch alert emails can be sent and formatted:

- New Patch Available
- Path to Patch Executable Missing
- Patch Install Failed
- Patch Approval Policies Updated
- Agent Credential Invalid
- Windows Auto Update Configuration Changed

> Note: *Changing the email alarm format changes the format for all* Patch Alert *emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<au>	#au#	auto update change
<bi>	#bi#	bulletin ID
<bl>	#bl#	new bulletin list
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<fi>	#fi#	failed bulletin ID
<gr>	#gr#	group ID
<ic>	#ic#	invalid credential type
<id>	#id#	machine ID
<pl>	#pl#	new patch list
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Patch Alert Parameters

The system triggers an alarm whenever the system discovers one of three different patch alert conditions for a selected machine ID:

- New patch is available
- Patch install fails

- Agent credential is invalid or missing
- Windows Auto Update changed

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Patch Location Missing

Displays as the first row of data. If selected and the Apply button clicked, an alert is generated if the system discovers the Patch Location *(page 308)* path for a patch is missing. This is a system alert and not associated with any machines.

Approval Policy Updated

Displays as the second row of data. If selected and the Apply button clicked, an alert is generated when a new patch is added to all patch policies. See Patch Approval Policy *(page 609)*. This is a system alert and not associated with any machines.

ATSE

The ATSE response code assigned to machine IDs:

- A = Create Alarm
- T = Create Ticket

- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

New Patch

If checked, an alarm is triggered when a new patch is available for this machine ID.

Install Failed

If checked, an alarm is triggered when a patch installation has failed for this machine ID.

Invalid Credential

If checked, an alarm is triggered when the credential is invalid for this machine ID.

Win AU Changed

If checked, an alarm is triggered if the group policy for Windows Automatic Update on the managed machine is changed from the setting specified by Patch Mgmt > Windows Auto Update *(page 289)*.

> Note: *A log entry in the machine's Configuration Changes log is made regardless of this alert setting.*

Alerts - Backup Alert

Backup > Backup Alert
Monitor > Alerts ***(page 113)***

Select Backup Alert from the Select Alert Function drop-down list

The Backup Alert page creates alerts for backup events on managed machines.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

To Create a Backup Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Set additional backup alert specific parameters.

4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Patch Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of backup alert emails can be sent and formatted:

- Backup failed
- Verify backup failed
- Recurring backup skipped if machine offline
- Backup Completed Successfully
- Full Backup Completed Successfully
- Image Location free space below

> Note: *Changing the email alarm format changes the format for all* `Backup Alert` *emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<be>	#be#	backup failed error message
<bt>	#bt#	backup type
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<im>	#im#	backup image location
<mf>	#mf#	megabytes free space remaining
<sk>	#sk#	backup skip count

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Backup Alert Parameters

The system triggers an alarm whenever the system discovers one of four different backup alert conditions for a selected machine ID:

- Any Backup Completed - Alerts when any backup process completes successfully.

- Full Backup Completed - Alerts when a full backup process completes successfully.
- Backup Fails - Alerts when a backup process stops prior to completion for any reason. Typically, backup fails because the machine is turned off mid-backup or because the network connection to the file server referenced by Image Location *(page 377)* is lost.
- Recurring backup skipped if machine offline <N> times - Alerts when Skip if machine offline is set in Schedule Volumes *(page 343)* and the backup is rescheduled the specified number of times because the machine is offline. Use this alert to notify you that backups are not even starting because the machine is turned off at the scheduled volume backup time.
- Image location free space below <N> MB - Alerts when the hard disk being used to store the backups is less than a specified number of megabytes.

Three additional parameters can be set:

- Add - Adds alert parameters to selected machine IDs when Apply is selected without clearing existing parameters.
- Replace - Replaces alert parameters on selected machine IDs when Apply is selected.
- Remove - Clear alert parameters from selected machine IDs. Click the edit icon next to a machine ID group *first* to select the alert parameters you want to clear.

> Note: You may specify different alert email addresses for each backup alert type. This lets you send backup complete alerts to the user and only send failures to the administrator.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Any Complete

If checked, an alarm is triggered when any backup is completed for this machine ID.

Full Complete

If checked, an alarm is triggered when a full backup is is completed for this machine ID.

Backup Fails

If checked, an alarm is triggered when any backup fails for this machine ID.

Backup Skipped

If checked, an alarm is triggered when any backup is skipped for this machine ID.

Alerts - System

Monitor >
Alerts *(page 113)*

Select `System` from the Select Alert Function drop-down list

The Alerts - System page triggers an alert when selected events occur on the *KServer*. Selecting the Alerts - System page does not display a managed machine list. The events listed only apply to the KServer. This option only displays for master administrators *(page 599)*.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Administrator account disabled manually by a master administrator

- Administrator account disabled because logon failed count exceeded threshold
- KServer has stopped
- Database backup failed
- Email reader failed

> Note: Changing this email alarm format changes the format for all System alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<an>	#an#	disabled admin name
<at>	#at#	alert time
<bf>	#bf#	database backup error data
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<el>	#el#	email reader error message
<fc>	#fc#	value that tripped the failed logon attempt counter
<fe>	#fe#	time account re-enables
<gr>	#gr#	group ID
<id>	#id#	machine ID
<kn>	#kn#	kserver IP/name
<ms>	#ms#	disabled admin type (Master or Standard)
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to the system.

Clear

Click Clear to remove all alert parameters from the system.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Admin account disabled

If checked, an alert is triggered when an administrator account is disabled, whether manually or automatically.

KServer stopped

If checked, an alert is triggered when the KServer stops.

System database backup failed

If checked, an alert is triggered when the Kserver's database backup fails

Email reader in ticketing failed

If checked, an alert is triggered if the Ticketing > Email Reader *(page 248)* fails.

System alerts sent to

Displays the email recipients who are sent system alerts.

Monitor Lists

Monitor > Monitor Lists

The Monitor Lists page maintains the complete list of all objects, services and processes loaded on the KServer that are used to create Monitor Sets *(page 164)* and SNMP Sets *(page 186)*. The Monitor List page also maintains user-defined group alarms.

Note: The Counter Objects, Counters, Instances and Services lists can be initially populated by using the Update Lists by Scan *(page 163)* page. Additionally these lists, as well as Services and Processes, can be populated with the import of a Monitor Set *(page 164)*. MIB OIDs can be populated by using the Add SNMP Object *(page 192)* page or by the import of a SNMP Set *(page 186)*.

Counter Objects

This tab lists counter objects required to create a Monitor Set *(page 164)*. Monitor Set uses the PerfMon combination of object/counter/instance to collect counter information.

Note: Counter Objects are the primary reference. The user needs to add a record of the counter object first, before adding records of the corresponding counters or instances.

Counters

This tab lists counters required to create a Monitor Set *(page 164)*. Monitor Set uses the PerfMon combination of object/counter/instance to collect counter information.

Instances

This tab lists counter instances required to create a Monitor Set *(page 164)*. Monitor Set uses the PerfMon combination of object/counter/instance to collect counter information.

Note: Windows PerfMon requires that a counter object have at least one counter, but does not require an instance be available.

Services

This tab lists Windows services required by the edit Monitor Set *(page 164)* feature to monitor the activity of Windows Services. This list can also be populated with the execution of the Update Lists By Scan *(page 163)* page *or* the import of a Monitor Set *(page 164)*.

Processes

This tab lists Windows processes required by the edit Monitor Set *(page 164)* feature when monitoring for the transition of a process to or from a running state. A process is equivalent to an application. The processes list is *not* populated via the Update Lists by Scan *(page 163)* feature.

MIB OIDs

This tab lists SNMP MIB objects required to create SNMP Sets *(page 186)*. SNMP sets monitor the activity of SNMP devices. This list can be populated with the import of a SNMP Set *(page 186)* *or* the execution of the Add SNMP Object *(page 192)* page. MIB objects are references to values that can be monitored on SNMP devices. Example: the MIB object `sysUptime` returns how much time has passed since the device was powered-up.

SNMP Devices

This tab defines broad categories of SNMP devices called SNMP Types *(page 211)*. This enables the convenient assignment of SNMP sets to multiple SNMP devices, based on their SNMP type. Assignment can be either automatic or manual. See SNMP Services below for more information.

SNMP Services

This tab associates a `sysServicesNumber` with a SNMP type. A SNMP type is associated with a SNMP set using the Automatic Deployment to drop down list in Monitor > SNMP Sets > Define SNMP Set *(page 188)*. During a LAN Watch *(page 194)* SNMP devices are automatically assigned to be monitored by SNMP sets if the SNMP device returns a `sysServicesNumber` associated with a SNMP type used by those SNMP sets. This table comes with pre-defined SNMP types and `sysServicesNumbers` for basic devices. System updates and updates provided by customers themselves can update this table.

Group Alarm Column Names

This tab maintains user defined Group Alarm Column Names. Pre-defined group alarm column names do not display here. Use Monitor Sets *(page 164)* and Define Monitor Sets *(page 165)* to assign a monitor set to any group alarm column name. Group alarms are displayed using the Dashboard List *(page 99)* page.

Page Select

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Delete Icon

Click the delete icon ✕ to delete a list item.

Edit Icon

Click the edit icon ✎ to edit the text of a list item.

Update Lists By Scan

Monitor > Update Lists By Scan

The Update Lists by Scan page scans one or more machine IDs and returns lists of counter categories, counters, instances and services to select from when creating or editing a monitor set. Also updates the list of event types available for monitoring using Monitoring > Alerts *(page 113)*. Typically only a handful of machines of each operating system type need to be scanned to provide a set of comprehensive lists.

Scan

Click Scan to scan selected machine IDs and gather available categories of counter objects, counters, instances and services.

Cancel

Cancels a scan that is pending.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Status

Indicates a pending scan or when a scan was last completed.

Monitor Sets

Monitor > Monitor Sets

The Monitor Sets page adds, imports or modifies monitor sets. Sample monitor sets can be loaded using the System > Configure *(page 524)* page.

A monitor set is a set of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/instance/counter, service, or process in a monitor set. Alarms can be set to trigger if any of the thresholds in the monitor set are exceeded. A monitor set should be used as a logical set of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. You can assign a monitor set to any machine that has an operating system of Windows 2000 or newer.

The general procedure for working with monitor sets is as follows:

1. Optionally update monitor set counter objects, instances and counters by source machine ID using Monitor > Update Lists by Scan *(page 163)*.
2. Optionally update monitor set counter objects, instances and counters manually and review them using Monitor Lists *(page 160)*.
3. Optionally update predefined *sample* monitor sets using System > Configure *(page 524)*.
4. Create and maintain monitor sets using Monitor > Monitor Sets *(page 164)*.
5. Assign monitor sets to machine IDs using Monitor > Assign Monitoring *(page 172)*.
6. Optionally customize standard monitor sets as *individualized monitor sets*.
7. Optionally customize standard monitor sets using *Auto Learn*.
8. Review monitor set results using:
   - Monitor > Live Connect *(page 112)*
   - Monitor > Monitor Log *(page 179)*
   - Monitor > Dashboard > Network Status *(page 104)*
   - Monitor > Dashboard > Group Alarm Status *(page 104)*
   - Monitor > Dashboard > Monitoring Set Status *(page 105)*
   - Reports > Monitor *(page 428)* > Monitor Set Report
   - Reports > Monitor *(page 428)* > Monitor Action Log

> Note: Not all monitor sets may be available for editing on the Monitor Set page, since the creator of a monitor set may only have shared the use of the monitor set but not the editing of the set.

Sample Monitor Sets

The VSA provides a growing list of sample monitor sets. The names of sample monitor sets begin with ZC. They can be updated using System > Configure *(page 524)*. You can modify sample monitor sets, but its better practice to copy a sample monitor set and customize the copy. Sample monitor sets are subject to being overwritten every time the sample sets are updated. An Excel document called `Standard Monitoring Library.xls` provides a description of each sample monitor set. It can be downloaded from the Kaseya Support Forum.

Page Select

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add

Click Add to open a form that asks the user to:

1. Monitor Set Name - Name the new monitor set.
2. Monitor Set Description - Optionally describe the new monitor set.
3. Group Alarm Column - Select a group alarm column. User defined group alarm column names are maintained using the Monitor Lists *(page 160)* page. Group alarms display on the Dashboard List *(page 99)* page.

Import

Click Import to upload a monitor set XML file to your server. Monitor sets can be exported using Define Monitor Set *(page 165)*.

Edit

Click Edit to display the Define Monitor Set *(page 165)* window and edit a monitor set.

Define Monitor Sets

Monitor >
Monitor Sets >
Edit

The Define Monitor Sets window maintains a set of counter objects, counters, counter instances, services and processes included in a monitor set. This collection is drawn from a "master list" maintained using Monitor Lists *(page 160)*. Sample monitor sets can be loaded using the System > Configure *(page 524)* page.

Monitor Sets

A monitor set is a set of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/instance/counter, service, or process in a monitor set. Alarms can be set to trigger if any of the thresholds in the monitor set are exceeded. A monitor set should be used as a logical set of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. You can assign a monitor set to any machine that has an operating system of Windows 2000 or newer.

The general procedure for working with monitor sets is as follows:

1. Optionally update monitor set counter objects, instances and counters by source machine ID using Monitor > Update Lists by Scan *(page 163)*.
2. Optionally update monitor set counter objects, instances and counters manually and review them using Monitor Lists *(page 160)*.
3. Optionally update predefined *sample* monitor sets using System > Configure *(page 524)*.
4. Create and maintain monitor sets using Monitor > Monitor Sets *(page 164)*.
5. Assign monitor sets to machine IDs using Monitor > Assign Monitoring *(page 172)*.
6. Optionally customize standard monitor sets as *individualized monitor sets*.
7. Optionally customize standard monitor sets using *Auto Learn*.
8. Review monitor set results using:
   - Monitor > Live Connect *(page 112)*
   - Monitor > Monitor Log *(page 179)*
   - Monitor > Dashboard > Network Status *(page 104)*
   - Monitor > Dashboard > Group Alarm Status *(page 104)*
   - Monitor > Dashboard > Monitoring Set Status *(page 105)*
   - Reports > Monitor *(page 428)* > Monitor Set Report
   - Reports > Monitor *(page 428)* > Monitor Action Log

Click the following tabs to define monitor set details.

- Counter Thresholds *(page 167)*
- Services Check *(page 170)*
- Process Status *(page 171)*
- Monitor Icons *(page 171)*

Take Ownership...

You can't edit a public monitor set you don't own. Click the Take Ownership link to display the Save and Delete buttons. Otherwise you can make a copy of the current monitor set using the Save As... button.

Share...

You can share monitor sets you own with other individual administrators, entire administrator groups, or make the monitor set public for all administrators.

> Note: A master administrator can take ownership of a monitor set and change share rights.

Save As...

Select Save As... to save a monitor set under a different name.

Save

Select Save to save changes to a monitor set.

Delete

Select Delete to delete a monitor set.

Export Monitor Set...

Click the Export Monitor Set... link to display the script in XML format in the Export Monitor Sets popup window. You can copy it to the clipboard or download it to a text file. Monitor sets can be *imported* using the Monitor Sets *(page 164)* page.

Monitor Set Name

Enter a descriptive name for the monitor set that helps you identify it in monitor set lists.

Monitor Set Description

Describe the monitor set in more detail. The rationale for the creation of the set is meaningful here; the reason for the creation of the set is sometimes lost over time.

Group Alarm Column Name

Assign this monitor set to a Group Alarm Column Name. If a monitor set alarm is triggered, the group alarm it belongs to is triggered as well. Group alarms display in the Group Alarm Status *(page 104)* pane of the Monitor > Dashboard List page.

Counter Thresholds

Monitor > Monitor Sets > Edit > Counter Thresholds

The Counter Thresholds tab defines alarm conditions for all performance objects/instances/counters associated with a monitor set. These are the same performance objects, instances and counters displayed when you run `PerfMon.exe` on a Windows machine.

Performance Objects, Instances and Counters

When setting up counter thresholds in monitor sets, it's helpful to keep in mind exactly how both Windows and the VSA identify the components you can monitor:

- Performance Object - A logical collection of counters that is associated with a resource or service that can be monitored. For example: processors, memory, physical disks, servers each have their own sets of predefined counters.
- Performance Object Instance - A term used to distinguish between multiple performance objects of the same type on a computer. For example: multiple processors or multiple physical disks. The VSA lets you skip this field if there is only one instance of an object.

- Performance Counter - A data item that is associated with a performance object, and if necessary, the instance. Each selected counter presents a value corresponding to a particular aspect of the performance that is defined for the performance object and instance.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add / Edit

Click Add or the edit icon ✎ to use a wizard that leads you through the six steps required to add or edit a performance counter.

1. Select a Object, Counter and, if necessary, an Instance using their respective drop down lists.
   - If only one instance of a performance object exists, the Instance field can usually be skipped.
   - The drop down lists used to select performance objects, counters, and instances are based on the "master list" maintained using the Monitor Lists *(page 160)* page. If an object/instance/counter does not display in its respective drop down list, you can add it manually using Add Object, Add Counter, and Add Instance. You can also update the "master list" of all objects, instances and counters by scanning specific machine IDs using Update Lists By Scan *(page 163)*. Once the update is completed, the drop lists should be populated with the options you require.
   - When multiple instances exist, you often have the option of using an instance called `_Total`. The `_Total` instance means you want to monitor the *combined* value of all the other instances of a performance object *as a single counter*. The `_Total` can be used as a kind of "wildcard instance". Without the `_Total` instance you would have to specify each instance by its exact name, which makes applying the same monitor set to multiple machines difficult. The true benefit of the `_Total` instance is determining if there *are any performance issues for any instance of this object at all*. Once you know that you can investigate the specific cause.
   - When multiple instances exist, you sometimes have the option of using an instance called `*ALL`. The `*ALL` instance means you want to monitor all instances for the same performance object *using individual counters*.
2. Optionally change the default counter object Name and Description.
3. Select the log data collected. If the returned value is numeric, you can minimize unwanted log data by setting a narrow range of data values over and under the collection threshold.
   - Collection Operator - For character string return values, the options are `Changed`, `Equal` or `NotEqual`. For numeric return values, the options are `Equal`, `NotEqual`, `Over` or `Under`.

- Collection Threshold - Set a fixed value that the returned value is compared to, using the selected Collection Operator, to determine what log data is collected.
- Sample Interval - Defines how frequently the data is sent by the agent to the KServer.

4. Specify when an alarm is triggered.
   - Alarm Operator - For character string return values, the options are `Changed`, `Equal` or `NotEqual`. For numeric return values, the options are `Equal`, `NotEqual`, `Over` or `Under`.
   - Alarm Threshold - Set a fixed value that the returned value is compared to, using the selected Alarm Operator, to determine when an alarm is triggered.
   - Duration - Specify the time the returned values must continuously exceed the alarm threshold to generate the alarm. Many alarm conditions are only alarming if the level is sustained over a long period of time.
   - Ignore additional alarms for - Suppress additional alarms for this same issue for this time period. This reduces the confusion of many alarms for the same issue.
5. Warn when within X% of alarm threshold - Optionally display a warning alarm when the returned value is within a specified percentage of the Alarm Threshold. The default warning icon is a yellow traffic light icon ●. See Monitor Icons *(page 171)*.
6. Optionally activate a trending alarm. Trending alarms use historical data to predict when the next alarm will occur.
   - Trending Activated? - If yes, a linear regression trendline is calculated based on the last 2500 data points logged.
   - Trending Window - The time period used to extend the calculated trendline into the future. If the predicted trendline exceeds the alarm threshold within the future time period specified, a trending alarm is generated. Typically a trending window should be set to the amount of time you need to prepare for an alarm condition, if it occurs. Example: an administrator may want 10 days notice before a hard drive reaches the alarm condition, to accommodate ordering, shipping and installing a larger hard drive.
   - Ignore additional trending alarms for - Suppress additional trending alarms for this same issue for this time period.
   - By default, trending alarms display as an orange icon ●. You can change this icon using the Monitor Icons *(page 171)* tab.

   Warning status alarms and trending status alarms don't create alarms in the alarm log, but they change the image of the alarm icon in various display windows. You can generate a trending alarm report using Reports > Monitor *(page 428)*.

Next

Move the user to the next wizard page.

Previous

Move the user back to the previous wizard page.

Cancel

Ignore any changes made to wizard pages and return to the Counter Thresholds list.

Save

Save changes made to the wizard pages.

Services Check

Monitor >
Monitor Sets >
Edit >
Services Check

The Services Check tab defines alarms conditions for a service if the service on a machine ID has stopped and optionally attempts to restart the stopped service.

Select Pages

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add / Edit

Click Add or the edit icon ✎ to maintain a Services Check record.

1. Service - Selects the service to be monitored from the drop down list.
   - The drop down list is based on the "master list" maintained using the Monitor Lists *(page 160)* page. If a service does not display in the drop down list, you can add it manually using Add Service. You can also update the "master list" by scanning specific machine IDs using Update Lists By Scan *(page 163)*.
   - Select the `*ALL` selection to monitor all services on a monitored machine.
   - Select the `All Automatic Services` selection to monitor all services set to automatically start on a monitored machine.
2. Description - Describes the service and the reason for monitoring.
3. Restart Attempts - The number of times the system should attempt to restart the service.
4. Restart Interval - The time period to wait between restart attempts. Certain services need more time.

- Ignore additional alarms for - Suppresses additional alarms for the specified time period.

Delete

Click the delete icon ✕ to delete a Services Check record.

Save

Save changes to a Services Check record.

Cancel

Ignore changes to a Services Check record and return to the Services Check list.

Process Status

Monitor >
Monitor Sets >
Edit >
Process Status

The Process Status tab defines alarm conditions based on whether a process has started or stopped on a machine ID.

Select Pages

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add / Edit

Click Add or the edit icon ✎ to maintain a Process Status record.

1. Process - Selects the process to be monitored from the drop-down list. The drop-down list is based on the "master list" maintained using the Monitor Lists *(page 160)* page. If a process does not display in the drop-down list, you can add it manually using Add Process. You can also update the "master list" by scanning specific machine IDs using Update Lists By Scan *(page 163)*.
2. Description - Describes the process and the reason for monitoring.
3. Alarm on Transition - Triggers an alarm when a process (application) is started or stopped.
4. Ignore additional alarms for - Suppresses additional alarms for the specified time period.

Delete

Click the delete icon ✕ to delete a Process Status record.

Save

Save changes to a Process Status record.

Cancel

Ignore changes to a Process Status record and return to the Process Status list.

Monitor Icons

Monitor >
Monitor Sets >
Edit >
Monitor Icons

The Monitor Icons tab selects the monitor icons that display in the Dashboard List *(page 99)* page when various alarm states occur.

- Select Image for OK Status - The default icon is a green traffic light 🟢.
- Select the Image for Alarm Status - The default icon is a red traffic light 🔴.
- Select Image for Warning Status - The default icon is a yellow traffic light 🟡.
- Select the Image for Trending Status - The default icon is a orange traffic light 🟠.

- Select the Image for Not Deployed Status - The default icon is a grey traffic light ○.

Save

Save changes made to the Monitor Icons record.

Upload additional monitoring icons

Select the Upload additional monitoring icons link to upload your own icons to the status icon drop down lists.

Restore

Sets all monitor icons back to their defaults.

Assign Monitoring

Monitor > Assign Monitoring

The Assign Monitoring page creates monitor set alerts for managed machines. An alert is a response to an alarm condition. An alarm condition exists when a machine's performance succeeds or fails to meet a pre-defined criteria.

Monitor Sets

A monitor set is a set of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/instance/counter, service, or process in a monitor set. Alarms can be set to trigger if any of the thresholds in the monitor set are exceeded. A monitor set should be used as a logical set of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. You can assign a monitor set to any machine that has an operating system of Windows 2000 or newer.

The general procedure for working with monitor sets is as follows:

1. Optionally update monitor set counter objects, instances and counters by source machine ID using Monitor > Update Lists by Scan *(page 163)*.
2. Optionally update monitor set counter objects, instances and counters manually and review them using Monitor Lists *(page 160)*.
3. Optionally update predefined *sample* monitor sets using System > Configure *(page 524)*.
4. Create and maintain monitor sets using Monitor > Monitor Sets *(page 164)*.
5. Assign monitor sets to machine IDs using Monitor > Assign Monitoring *(page 172)*.
6. Optionally customize standard monitor sets as *individualized monitor sets*.
7. Optionally customize standard monitor sets using *Auto Learn*.
8. Review monitor set results using:
   - Monitor > Live Connect *(page 112)*

- Monitor > Monitor Log *(page 179)*
- Monitor > Dashboard > Network Status *(page 104)*
- Monitor > Dashboard > Group Alarm Status *(page 104)*
- Monitor > Dashboard > Monitoring Set Status *(page 105)*
- Reports > Monitor *(page 428)* > Monitor Set Report
- Reports > Monitor *(page 428)* > Monitor Action Log

Note: Changes made to a monitor set affect all machine IDs the monitor set is already assigned to, within a couple minutes of the change.

Individualized Monitor Sets

You can *individualize* monitor set settings for a single machine.

1. Using Monitor > Assign Monitoring, select a *standard* monitor set using the `<Select Monitor Set>` drop-down list.
2. Assign this standard monitor set to a machine ID. The monitor set name displays in the Monitor Set column.
3. Click the individualized monitor set icon in the Monitor Set column to display the same options you see when defining a standard monitor set *(page 164)*. *An individualized monitor set adds an (IND) prefix to the name of the monitor set.*
4. Make changes to your new individualized monitor set. These changes apply only to the single machine it is assigned to.

   Note: Changes to a standard monitor set have no affect on individualized monitor sets copied from it.

Auto Learn Alarm Thresholds for Monitor Sets

You can enable Auto Learn alarm thresholds for any standard monitor set you assign to selected machine IDs. This automatically fine-tunes alarm thresholds based on actual performance data on a per machine basis.

Each assigned machine collects performance data for a specified time period. During that time period no alarms are triggered. At the end of the auto learn session, the alarm threshold for each assigned machine is adjusted automatically based on the actual performance of the machine. You can manually adjust the alarm threshold values calculated by Auto Learn or run another session of Auto Learn again. Auto Learn cannot be used with individualized monitor sets.

To apply Auto Learn settings to selected machine IDs:

1. Using Monitor > Assign Monitoring, select a *standard* monitor set using the `<Select Monitor Set>` drop-down list.
2. Click Auto Learn to display the Auto Learn *(page 178)* popup window. Use a wizard to define parameters used to calculate alarm threshold values.
3. Assign this standard monitor set, modified by your Auto Learn parameters, to selected machine IDs.

Once auto learn is applied to a machine ID and runs for the specified time period, you can click the override auto learn icon for a specific machine ID and manually adjust the calculated alarm thresholds values. You can also re-run Auto Learn again, using a new session of actual performance data to re-calculate alarm threshold values.

To Create a Monitor Set Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Select the monitor set to add or replace.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Monitor Set Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Monitoring threshold alarm
- Monitoring trending threshold alarm
- Monitoring exit alarm state notification

> Note: *Changing this email alarm format changes the format for* all *monitor set and SNMP set emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<ad>	#ad#	alarm duration
<ao>	#ao#	alarm operator
<at>	#at#	alert time
<av>	#av#	alarm threshold
<cg>	#cg#	event category
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine

		generating the alert in an email, use #db-vMachine.ComputerName#
<dv>	#dv#	SNMP device name
<gr>	#gr#	group ID
<id>	#id#	machine ID
<ln>	#ln#	monitoring log object name
<lo>	#lo#	monitoring log object type: counter, process, object
<lv>	#lv>	monitoring log value
<mn>	#mn#	monitor set name
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking the this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.

- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select Monitor Set

Select monitor sets from the Select Monitor Set list, then click the Apply button to assign the monitor set to selected machine IDs. You may assign more than one monitor set to a machine ID. Add or edit monitor sets using Monitor > Monitor Sets *(page 164)*.

Add Monitor Set

When a monitor set is assigned to machine IDs, the monitor set is added to the list of monitor sets currently assigned to those machine IDs.

Replace Monitor Set

When a monitor set is assigned to machine IDs, the monitor set replaces all monitor sets already assigned to those machine IDs.

Apply

Applies the selected monitor set to checked machine IDs.

Clear

Clears the assignment of a selected monitor set from selected machine IDs.

Clear All

Clears all monitor sets assigned to selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Monitor Sets

Displays the list all monitor sets assigned to machine IDs.

- Edit - Always displays next to a monitor set. Click this icon to set header parameters to those matching the selected machine ID.

- Override auto learn values - Displays if Auto Learn is applied to this standard monitor set. Click this icon to display or change the actual values calculated by Auto Learn *(page 178)* for this monitor set on this machine ID.

- Individualized monitor set - Displays if Auto Learn is *not* applied to this standard monitor set. Click this icon to create or make changes to a copy of this standard monitor set *(page 164)* that is individualized for this machine ID. *An individualized monitor set adds an (IND) prefix to the name of the monitor set.*

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Auto Learn - Monitor Sets

Monitor > Assign Monitoring > Auto Learn

The Auto Learn Alarm Thresholds window maintains auto learn alarm thresholds for monitor sets.

You can enable Auto Learn alarm thresholds for any standard monitor set you assign to selected machine IDs. This automatically fine-tunes alarm thresholds based on actual performance data on a per machine basis.

Each assigned machine collects performance data for a specified time period. During that time period no alarms are triggered. At the end of the auto learn session, the alarm threshold for each assigned machine is adjusted automatically based on the actual performance of the machine. You can manually adjust the alarm threshold values calculated by Auto Learn or run another session of Auto Learn again. Auto Learn cannot be used with individualized monitor sets.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Edit

Click the edit icon ✎ to use a wizard that leads you through the three steps required to edit auto learn alarm thresholds.

1. Enable Auto Learn for this object/counter/instance combination, if appropriate, by selecting `Yes - Include`. If `No - Do not include` is selected, no other selections in this wizard are applicable.
   - Time Span - Enter the period of time performance data is collected and used to calculate alarm thresholds automatically. Alarms will not be reported during this time period.
2. Displays the Object, Counter and, if necessary, the counter Instance of the alarm threshold being modified. These options cannot be changed.
3. Enter calculated value parameters.
   - Computation - Select a calculated value parameter. Options include `MIN`, `MAX` or `AVG`. For example, selecting `MAX` means calculate the maximum value collected by an object/counter/instance during the Time Span specified above.
   - % Increase - Add this percentage to the Computation value calculated above, with the Computation value representing 100%. The resulting value represents the alarm threshold.
   - Minimum - Set a minimum value for the alarm threshold. The value is automatically calculated as *two standard deviations below* the calculated Computation value, but can be manually overridden.
   - Maximum - Set a maximum value for the alarm threshold. The

value is automatically calculated as *two standard deviations above* the calculated Computation value, but can be manually overridden.

Note: Once auto learn is applied to a machine ID and runs for the specified time period, you can click the override auto learn icon for a specific machine ID and manually adjust the calculated alarm thresholds values. You can also re-run Auto Learn again, using a new session of actual performance data to re-calculate alarm threshold values.

Next

Move the user to the next wizard page.

Previous

Move the user back to the previous wizard page.

Cancel

Ignore any changes made to wizard pages and return to the Counter Objects list.

Save

Save changes made to the wizard pages.

Monitor Log

Monitor > Monitor Log

Clicking the monitoring log icon next to a single alarm for a specific machine ID in the Monitoring Set Status *(page 105)* dashlet of the Dashboard List page displays this same information as a popup window.

The Monitor Log page displays the agent monitoring object logs in chart and table formats.

Machine ID.Group ID

Click a machine ID link to display log data for all monitor sets assigned to that machine ID. The list is limited to machine IDs currently matching the machine ID / group ID filter *(page 17)*. If no machine IDs display use Monitor > Assign Monitoring *(page 172)* to apply monitor sets to machine IDs.

Select monitoring object to display information

The page displays a list of monitoring objects assigned to the selected machine ID.

View

Select a counter object by clicking the View link. The selected row is bolded. A selected row displays either as a chart or table.

Note: If a monitoring object cannot be represented by a chart, only the table view is available.

Expand Icon

Click the expand icon ⊞ to display details about a monitoring object.

Refresh Data

Click the refresh icon 🔄 to refresh data when no values display. Applies to non-responsive monitoring.

If your monitor doesn't show any log values, verify the following:

1. Check the sample interval of the counter object. Once a monitor set is deployed counters return values to the monitor log using their specified sample interval. Wait for the sample interval plus the agent check-in interval for the first value to come back.
2. If there are no values returned, check Counter Thresholds *(page 167)* for the Monitor Counter commands. If no values on the monitored machine or device meet the collection threshold they will not be inserted into the monitor log.

If a monitor isn't responding, the log displays the message `Monitor Not Responding`. There can be several reasons for no response from the monitor:

- Counters - If your monitoring set includes a counter that does not exist on a managed machine, the log displays `Not Responding`. You can troubleshoot the monitoring of counters for a specific machine in two ways:
  - Use the Monitor > Update Lists By Scan *(page 163)* page to scan for all monitor counters and services *for that specific machine ID*.
  - Connect to the machine managed by this agent, select the Run command in the Start menu, enter `perfmon.exe`, click OK, create a new Counter Log, and check for the existence of the counter objects/counters/instances that aren't responding.
- Services - If your monitoring set includes a service that does not exist on a managed machine, the log displays `Service Does Not Exist`.
- Processes - If your monitoring set includes a process that does not exist on a managed machine, the log displays `Process Stopped`.
- Permissions - Make sure that the permissions for the agent's temporary folder are set to full access for `SYSTEM` and `NETWORK SERVICE`. This can happen if the agent temp folder is placed in the `c:\program files\` or `c:\windows` directories. This is not recommended as these folders have special permissions set by the OS.

Type

The type of monitor object: counter, process or service.

Monitor Set Name

The name of the monitor set.

Object Name

The name of the monitor object.

Bar Chart / Table

Select the Bar Chart or Table radio option to display data in either format. Only monitor objects of type Counters can be displayed in bar chart format.

- A bar chart displays the last 500 data points at the sample interval rate. The background of the chart displays in red for alarm threshold, yellow for warning threshold and green for no alarm.
- Table log data displays the most current values first and displays alarm and warning icons on log data that falls within these thresholds. See Define Monitor Set *(page 188)* for more information.

Select Page

This buttons display only if Table format is selected. When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

System Check

Monitor > System Check

The VSA can monitor machines that *don't have an agent installed on them*. This function is performed entirely within a single page called System Check. Machines without an agent are called external systems. A machine with an agent is assigned the task of performing the system check on the external system. A system check typically determines whether an external system is available or not. Types of system checks include: web server, DNS server, port connection, ping, and custom.

To Create a System Check Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - ➢ Create Alarm
   - ➢ Create Ticket
   - ➢ Run Script
   - ➢ Email Recipients

2. Set additional email parameters.
3. Set additional system-check parameters. You may check multiple systems using the same machine ID.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a System Check Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of system check alert emails can be sent and formatted:

- System check alert

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<p1>	#p1#	address checked
<p2>	#p2#	additional parameter
<sc>	#sc#	system check type
<scn>	#scn#	system check custom name
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking the this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

System Check Parameters

Select a system check type:

- Web Server - Enter a URL to poll at a selected time interval.
- DNS Server - Enter a DNS address, either a name or IP, to poll at a selected time interval.
- Port Connection - Enter an address, either a name or IP, to connect to, and a port number to connect to, at a selected time interval.

- Ping - Enter an address, either a name or IP, to ping at a selected time interval.
- Custom - Enter a path to a custom program and output file to run at a selected time interval.
    - Program, parameters and output file - Enter program path. Optionally include a parameter that creates an output file, if applicable. For example: `c:\temp\customcheck.bat > c:\temp\mytest.out`.
    - Output file path and name - Enter the name and path of the created output file. For example: `c:\temp\mytest.out`.
    - Alarm if output file contains / does not contain - Alarm if output file contains / does not contain the specified text. For example: `Hello World`.

The following optional parameters display for all types of system checks:

- Every N Period - Enter the number of times to run this task each time period.
- Add - Add this system check to selected machine IDs.
- Replace - Add this system check to selected machine IDs and remove all existing system checks.
- Remove - Remove this system check from selected machine IDs.
- Custom Name - Enter a custom name that displays in alarm messages and formatted emails.
- Only alarm when service continues to not respond for N periods after first failure detected - Suppresses the triggering of a system check alarm for a specified number of periods after the initial problem is *detected*, if N is greater than zero. This prevents triggering an alarm for a temporary problem.
- Ignore additional alarms for N periods - Suppresses the triggering of additional alarms for the same system check for a specified number of periods after the initial problem is *reported*, if N is greater than zero. This prevents reporting multiple alarms for the same problem.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Delete

Click the delete icon ✕ to delete a system check.

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Type

The type of system check:

- Web Server
- DNS Server
- Port Connection
- Ping
- Custom

Interval

The interval for the system check to recur.

Duration

The number of periods the system check alarm is suppressed, after the initial problem is *detected*. This prevents triggering an alarm for a temporary problem.

ReArm

The number of periods the triggering of additional system check alarms are suppressed, after the initial problem is *reported*. This prevents reporting multiple alarms for the same problem.

SNMP Sets

Monitor > SNMP Sets

SNMP Sets adds, imports or modifies a SNMP set. A SNMP set is a set of MIB objects used to monitor the performance of SNMP enabled network devices *(page 611)*. The SNMP protocol is used because an agent cannot be installed on the device. You can assign alarm thresholds to any performance object in a SNMP set. If you apply the SNMP set to a device, you can be notified if the alarm threshold is exceeded. The following methods can be used to configure and assign SNMP sets to machine IDs.

- SNMP quick sets - Creates and assigns an device-specific SNMP set based on the objects discovered on that device during a LAN Watch. SNMP quick sets *(page 611)* are the easiest method of implementing SNMP monitoring on a device.
- SNMP standard sets - These are usually generic SNMP sets that are maintained and applied to multiple devices. A quick set, once created, can be maintained as a standard set.
- SNMP individualized sets - This is a standard SNMP set that is applied to an individual device and then customized manually.
- SNMP auto learn - This is a standard SNMP set that is applied to an individual device and then adjusted automatically using auto learn.
- SNMP types - This is a method of assigning standard SNMP sets to devices automatically, based on the SNMP type *(page 612)* determined during a LAN Watch.

Typically the following procedure is used to configure and apply SNMP sets to devices.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*. This can include quick, standard, individualized or auto learn SNMP sets.
3. Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

The following additional SNMP functions are available and can be used in any order.

- Optionally review the list of all imported SNMP objects using Monitor > Monitor Lists *(page 160)*.
- Optionally maintain SNMP sets using Monitor > SNMP Sets *(page 186)*.

- Optionally add an SNMP object using Monitor > Add SNMP Object *(page 192)*.
- Optionally assign a SNMP type to an SNMP device manually using Monitor > SNMP Type *(page 211)*.
- Optionally write values to SNMP devices using Monitor > Set SNMP Values *(page 210)*.

> Note: Not all SNMP Sets may be available for editing, since the creator of a SNMP Set may only have shared the use of the set but not the display or editing of the set.
>
> Note: Certain command line functions from the Net-SNMP suite of applications are used to implement SNMP v1 and SNMP v2c retrieval of information from SNMP capable devices in accordance with all pertinent copyright requirements.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add

Click Add to open a form that asks the user to:

1. Monitor Set Name - Name the new SNMP set.
2. Monitor Set Description - Optionally describe the new SNMP set.
3. Automatic deployment to - Select a category of SNMP devices. If a LAN Watch detects this type of SNMP device the system automatically begins monitoring the SNMP device using this SNMP set.
4. Group Alarm Column - Select a group alarm column. User defined group alarm column names are maintained using the Monitor Lists *(page 160)* page. Group alarms display on the Dashboard List *(page 99)* page.

Import

Click Import to upload a SNMP set XML file to your server. SNMP sets can be exported using Define SNMP Sets *(page 188)*.

Edit

Click Edit to display Define SNMP Set *(page 188)* and edit a monitor set.

Define SNMP Set

Monitor >
SNMP Sets >
Define SNMP Set >
Edit

The Define SNMP Set page maintains a collection of MIB objects included in a SNMP set.

A SNMP set is a set of MIB objects used to monitor the performance of SNMP enabled network devices *(page 611)*. The SNMP protocol is used because an agent cannot be installed on the device. You can assign alarm thresholds to any performance object in a SNMP set. If you apply the SNMP set to a device, you can be notified if the alarm threshold is exceeded. The following methods can be used to configure and assign SNMP sets to machine IDs.

- SNMP quick sets - Creates and assigns an device-specific SNMP set based on the objects discovered on that device during a LAN Watch. SNMP quick sets *(page 611)* are the easiest method of implementing SNMP monitoring on a device.
- SNMP standard sets - These are usually generic SNMP sets that are maintained and applied to multiple devices. A quick set, once created, can be maintained as a standard set.
- SNMP individualized sets - This is a standard SNMP set that is applied to an individual device and then customized manually.
- SNMP auto learn - This is a standard SNMP set that is applied to an individual device and then adjusted automatically using auto learn.
- SNMP types - This is a method of assigning standard SNMP sets to devices automatically, based on the SNMP type *(page 612)* determined during a LAN Watch.

Typically the following procedure is used to configure and apply SNMP sets to devices.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*. This can include quick, standard, individualized or auto learn SNMP sets.
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The following additional SNMP functions are available and can be used in any order.

- Optionally review the list of all imported SNMP objects using Monitor > Monitor Lists *(page 160)*.
- Optionally maintain SNMP sets using Monitor > SNMP Sets *(page 186)*.
- Optionally add an SNMP object using Monitor > Add SNMP Object *(page 192)*.
- Optionally assign a SNMP type to an SNMP device manually using Monitor > SNMP Type *(page 211)*.
- Optionally write values to SNMP devices using Monitor > Set SNMP Values *(page 210)*.

Note: *Certain command line functions from the Net-SNMP suite of applications are used to implement SNMP v1 and SNMP v2c retrieval of information from SNMP capable devices in accordance with all pertinent copyright requirements.*

Note: Sample SNMP sets can be loaded from the System > Configure *(page 524)* page.

Click the following tabs to define SNMP set details.

- SNMP Sets *(page 190)*
- SNMP Icons *(page 194)*

Take Ownership...

You can't edit a public SNMP set you don't own. Click the Take Ownership link to display the Save and Delete buttons. Otherwise you can make a copy of the current SNMP set using the Save As... button.

Share...

You can share SNMP sets you own with other individual administrators, entire administrator groups, or make the SNMP set public to all administrators.

Note: A master administrator can take ownership of a SNMP set and change share rights.

Save As...

Select Save As... to save a SNMP set under a different name.

Save

Select Save to save changes to a SNMP set.

Delete

Select Delete to delete a SNMP set.

Export SNMP Set...

Click the Export SNMP Set... link to display the script in XML format in the Export Monitor Sets popup window. You can copy it to the clipboard or download it to a text file. SNMP sets can be *imported* using the SNMP Sets *(page 186)* page.

SNMP Monitor Set Name

Enter a descriptive name for the SNMP set that helps you identify it in SNMP set lists.

SNMP Monitor Set Description

Describe the SNMP set in more detail. The rationale for the creation of the set is meaningful here; the reason for the creation of the set is sometimes lost over time.

Automatic Deployment to

Selecting a type automatically assigns a newly discovered SNMP device to a SNMP type *(page 211)* when performing a LAN Watch *(page 194)* function.

Group Alarm Column Name

Assign this SNMP set to a Group Alarm Column Name. If a SNMP set alarm is triggered, the group alarm it belongs to is triggered as well. Group alarms display in the Group Alarm Status pane of the Dashboard List *(page 99)* page.

Define SNMP Set Details

Monitor >
Define SNMP Set >
Edit >
SNMP Sets

The SNMP Sets tab enables you to maintain all MIB objects associated with a SNMP set.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Add / Edit

Click Add or the edit icon to use a wizard that leads you through the six steps required to add or edit the monitoring of a MIB object.

1. Add the object/version/instance combination required to retrieve information from a SNMP device.
   - MIB Object - Select the MIB object *(page 611)*. Click Add Object *(page 192)* to add a MIB object that currently does not exist on the Monitor Lists *(page 160)* page.
   - SNMP Version - Select a SNMP version. Version 1 is supported by all devices and is the default. Version 2c defines more attributes and encrypts the packets to and from the SNMP agent. Only select version 2c if you know the device supports version 2c.
   - SNMP Instance - The last number of an object ID may be expressed as a table of values instead of as a single value. If the instance is a single value, enter `0`. If the instance is a table of values, enter a range of numbers, such as `1-5,6` or `1,3,7`. You can also enter `All`. An `All` instance represents all the instances available for an object.

> Note: If you're not sure what numbers are valid for a particular SNMP instance, select a machine ID that has performed a LAN Watch using Monitoring > Assign SNMP *(page 198)*. Click the SNMP Info hyperlink for the device you're interested in. This displays all MIB object IDs and the SNMP instances available for the device.

   - Value Returned as - If the MIB object returns a numeric value, you can choose to return this value as a Total or a Rate Per Second.

2. Optionally change the default MIB object Name and Description.

3. Select the log data collected. If the returned value is numeric, you can minimize the collection of unwanted log data by setting a narrow range of data values over and under the collection threshold.

   - Collection Operator - For character string return values, the options are `Changed`, `Equal` or `NotEqual`. For numeric return values, the options are `Equal`, `NotEqual`, `Over` or `Under`.
   - Collection Threshold - Set a fixed value that the returned value is compare to, using the selected Collection Operator, to determine what log data is collected.
   - SNMP Timeout - Specify the number of periods the agent waits for a reply from the SNMP device before giving up. Two seconds is the default.

4. Specify when a SNMP alarm is triggered.

   - Alarm Operator - For character string return values, the options are `Changed`, `Equal` or `NotEqual`. For numeric return values, the options are `Equal`, `NotEqual`, `Over`, `Under` or `Percent Of`.
   - Alarm Threshold - Set a fixed value that the returned value is compared to, using the selected Alarm Operator, to determine when an alarm is triggered.
   - Percent Object - Selecting the `Percent Of` option for Alarm Operator causes this field to display. Enter another object/version/instance in this field whose value can serve as a 100% benchmark for comparison purposes.
   - Duration - Specify the time the returned values must continuously exceed the alarm threshold to generate the alarm. Many alarm conditions are only alarming if the level is sustained over a long period of time.
   - Ignore additional alarms for - Suppress additional alarms for this same issue for this time period. This reduces the confusion of many alarms for the same issue.

5. Warn when within X% of alarm threshold - Optionally display a warning alarm in the Dashboard List *(page 99)* page when the returned value is within a specified percentage of the Alarm Threshold. The default warning icon is a yellow traffic light icon 🟡. See SNMP Icons *(page 194)*.

6. Optionally activate a trending alarm. Trending alarms use historical data to predict when the next alarm will occur.

   - Trending Activated? - If yes, a linear regression trendline is calculated based on the last 2500 data points logged.
   - Trending Window - The time period used to extend the calculated trendline into the future. If the predicted trendline

exceeds the alarm threshold within the future time period specified, a trending alarm is generated. Typically a trending window should be set to the amount of time you need to prepare for an alarm condition, if it occurs.

- Ignore additional trending alarms for - Suppresses additional trending alarms for this same issue during this time period.
- By default, trending alarms display as an orange icon ● in the Dashboard List *(page 99)* page. You can change this icon using the SNMP Icons *(page 194)* tab.
- Warning status alarms and trending status alarms don't create alarms in the alarm log, but they change the image of the alarm icon in various display windows. You can generate a trending alarm report using Reports > Monitor *(page 428)*.

Next

Move the user to the next wizard page.

Previous

- Move the user back to the previous wizard page.

Cancel

Ignore any changes made to wizard pages and return to the SNMP Sets list.

Save

Save changes made to the wizard pages.

Add SNMP Object

Monitor > Add SNMP Object
Monitor > Define SNMP Set > Edit > SNMP Sets > Add Object

When you select objects to include in an SNMP set you're given the opportunity of adding a new SNMP object. This should not be necessary for the most part, because a LAN Watch *(page 194)* retrieves the objects you typically require. But if you do need to add an SNMP object from a MIB file manually you can do so using Monitor > Add SNMP Object *(page 192)* or by clicking the Add Object... button while configuring an SNMP set.

The SNMP MIB Tree page loads a Management Information Base (MIB) file and displays it as an expandable *tree* of MIB objects. All MIB objects *(page 611)* are classified by their location on the MIB tree. Once loaded you can select the MIB objects you want to install on your VSA. SNMP device manufacturers typically provide MIB files on their websites for the devices they manufacture.

> Note: You can review the complete list of MIB objects already installed, by selecting the MIB OIDs tab in Monitoring > Monitor Lists *(page 160)*. This is the list of MIB objects you currently can include in an SNMP set.

If a vendor has supplied you with a MIB file, you can follow these steps:

1. Load the vendor's MIB file by clicking Load MIB .... There may be a message stating there are dependent files that need to be loaded first. The vendor may need to provide those also.
2. Click the ⊞ expand icons in the MIB tree—*see the sample graphic below*—and find the desired items to monitor. Select each corresponding check box.
3. Click Add MIB Objects to move the selected items from Step 2 into the MIB object list.
4. Configure the settings for monitoring the new SNMP object within an SNMP set as you normally would.
5. The number of MIB objects in the tree can soon become unwieldy. Once the desired MIB objects have been added, the MIB file can be removed.

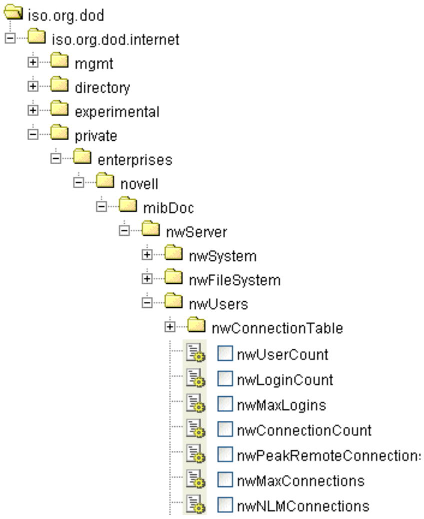
Load MIB

Click Load MIB... to browse for and upload a MIB file. When a MIB object is added, if the system does not already have the following standard MIB II files—required by most MIBs—it loads them automatically: `snmp-tc`, `snmp-smi`, `snmp-conf`, `rfc1213`, `rfc1759`. Once these files are loaded, the MIB tree located at the bottom of the Add SNMP Object page can be opened and navigated to find the new objects that the user can select. Most private vendor MIBs are installed under the `Private` folder. *See the sample graphic below*.

> Note: The MIB file can be loaded and removed at any time and does *not* affect any MIB objects that are used in SNMP sets.

MIB Tree

The MIB tree represents all MIB file objects that are currently loaded for the user to select from.



Add MIB Objects

Click Add MIB Objects to add selected objects to the VSA's list of MIB objects that can be monitored using Define SNMP Set *(page 188)*.

Remove MIB

After selections have been made the MIB file can be removed. The size of the MIB tree can become so large that it is hard to navigate. Click Remove MIB to clean that process up.

SNMP Icons

Monitor >
SNMP Sets >
Edit >
SNMP Icons

The SNMP Icons tab selects the SNMP icons that display in the Dashboard LIst *(page 99)* page when the following alarm states occur:

- Select Image for OK Status - The default icon is a green traffic light 🟢.
- Select the Image for Alarm Status - The default icon is a red traffic light 🔴.
- Select Image for Warning Status - The default icon is a yellow traffic light 🟡.
- Select the Image for Trending Status - The default icon is a orange traffic light 🟠.
- Select the Image for Not Deployed Status - The default icon is a grey traffic light ⚪.

Save

Save changes made to the SNMP Icons record.

Upload additional monitoring icons

Select the Upload additional monitoring icons link to upload your own icons to the status icon drop down lists.

Restore

Sets all SNMP icons back to their defaults.

LAN Watch

Monitor >
LAN Watch
Agent >
LAN Watch

LAN Watch uses an existing agent *(page 600)* on a managed machine to periodically scan the local area network for any and all new devices connected to that LAN since the last time LAN Watch ran. These new devices can be workstations and servers without agents or SNMP devices *(page 611)*. Optionally, the VSA can send an alert *(page 601)* when a LAN Watch discovers any new device. LAN Watch effectively uses the agent as a proxy to scan a LAN behind a firewall that might not be accessible from a remote server.

Using Multiple Machines on the Same LAN

There are only two reasons to do a SNMP LAN Watch on multiple machines within a scan range:

1. There are multiple SNMP Communities within the scan range and therefore there are multiple machines with different SNMP Community Read values.
2. The user wishes to have redundant SNMP monitoring.

Schedule

Click Schedule to schedule a recurring LAN Watch scan on each selected machine ID. The scan runs every interval that you set. The default is 1 day.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to stop the scheduled scan. Cancel also deletes all records of the devices identified on a LAN from the VSA. If you re-schedule LAN Watch after clicking Cancel, each device on the LAN generates a new alert.

Run recurring every <N> <periods>

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Scan IP Range

Set the minimum and maximum IP addresses to scan here. Selecting a machine ID to scan, by checking the box next to that machine's name, automatically fills in the minimum and maximum IP range based on that machine's IP address and subnet mask.

> Note: LAN Watch does not scan more than 2048 IP addresses. If the subnet mask of the machine running LAN Watch specifies a larger IP range, LAN Watch truncates it to 2048 addresses. LAN Watch only detects addresses on the local subnet to the machine you run LAN Watch from. For example, with a subnet mask of 255.255.255.0, there can be no more that 253 other devices on the local subnet.

Enable SNMP

If checked, scan for SNMP devices *(page 611)* within the specified Scan IP Range.

Read Community Name / Confirm

LAN Watch can only identify SNMP devices that share the same SNMP Community *(page 611)* *Read* value as the managed machine performing the LAN Watch. Enter the value in the Read Community Name and Confirm text boxes. The default read community name value is `public`.

Enable vPro

If checked, identify vPro *(page 614)*-enabled machines within the specified Scan IP Range.

> Note: vPro configuration is a prerequisite to using this feature. Refer to the latest Intel documentation for information on how to configure vPro. At the time of this writing, the following link leads to the Intel documentation: http://communities.intel.com/docs/DOC-1429.

Username / Password / Confirm

Enter the appropriate vPro credentials to return hardware asset details about vPro machines discovered during the LAN Watch. Typically the same credentials are defined for vPro machines on the same LAN. The results are displayed using Agent > View vPro *(page 478)*.

If you don't know the credentials for the vPro machines you want to discover, enter *arbitrary strings* in the Username, Password and Confirm fields. This will allow you to discover the existence of the vPro machines, but not return any other hardware assets details.

> Note: vPro-enabled machines with a vPro credential can be powered up, powered-down or rebooted using Remote Cntl > Power Mgmt *(page 320)*.

Enable Alerts

If Enable Alerts is checked and a new device is discovered by LAN Watch, an alert is sent to all email addresses listed in Email Recipients. LAN Watch alerts and email recipients can also be specified using the Monitor > Alerts *(page 113)* page.

> Note: Machines that have not connected to the LAN for more than 7 days and then connect are flagged as new devices and will generate an alert.

Email Recipients

If alerts are enabled, enter the email addresses where alert notifications are sent. You can specify a different email address for each managed machine, even if it is for the same event. The From email address is specified using System > Configure *(page 524)*.

Ignore devices seen in the last <N> days

Enter the number of days to suppress alerts for new devices. This prevents creating alerts for devices that are connected to the network temporarily.

After alert run select script on this machine ID

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Skip alert if MAC address matches existing agent

Checking this box suppresses alerts if the scan identifies that the MAC address of a network device belongs to an existing managed machine with an agent on it. Otherwise a managed machine that was offline for several days and comes back online triggers an unnecessary alert during a LAN Watch.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

IP Range Scanned

The IP addresses that are scanned by the selected machine ID when LAN Watch runs.

Last Scan

This timestamp shows when a machine ID was last scanned. When this date changes, new scan data is available to view.

Primary DC

If a primary domain controller icon displays, this machine ID is a primary domain controller *(page 609)*. Performing a scan using a primary domain controller running Active Directory enables you to install agents automatically on computers listed in Active Directory and to create VSA administrators and VSA users based on Active Directory user credentials. See View AD Computers *(page 474)* and View AD Users *(page 475)*.

SNMP Active

If the SNMP icon displays, SNMP devices are included in the scheduled scan.

vPro Active

If the vPro icon displays, vPro machines are included in the schedule scan.

Alert Active

If checked ✓ LAN Watch alerts are enabled for this scan.

Assign SNMP

Monitor > Assign SNMP

The Assign SNMP page creates SNMP alerts for SNMP devices discovered using a LAN Watch *(page 194)*. An alert *(page 601)* is a response to an alarm condition.

A SNMP set is a set of MIB objects used to monitor the performance of SNMP enabled network devices *(page 611)*. The SNMP protocol is used because an agent cannot be installed on the device. You can assign alarm thresholds to any performance object in a SNMP set. If you apply the SNMP set to a device, you can be notified if the alarm threshold is exceeded. The following methods can be used to configure and assign SNMP sets to machine IDs.

- SNMP quick sets - Creates and assigns an device-specific SNMP set based on the objects discovered on that device during a LAN Watch. SNMP quick sets *(page 611)* are the easiest method of implementing SNMP monitoring on a device.
- SNMP standard sets - These are usually generic SNMP sets that are maintained and applied to multiple devices. A quick set, once created, can be maintained as a standard set.
- SNMP individualized sets - This is a standard SNMP set that is applied to an individual device and then customized manually.
- SNMP auto learn - This is a standard SNMP set that is applied to an individual device and then adjusted automatically using auto learn.
- SNMP types - This is a method of assigning standard SNMP sets to devices automatically, based on the SNMP type *(page 612)* determined during a LAN Watch.

Typically the following procedure is used to configure and apply SNMP sets to devices.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*. This can include quick, standard, individualized or auto learn SNMP sets.
3. Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

The following additional SNMP functions are available and can be used in any order.

- Optionally review the list of all imported SNMP objects using Monitor > Monitor Lists *(page 160)*.
- Optionally maintain SNMP sets using Monitor > SNMP Sets *(page 186)*.
- Optionally add an SNMP object using Monitor > Add SNMP Object *(page 192)*.
- Optionally assign a SNMP type to an SNMP device manually using Monitor > SNMP Type *(page 211)*.
- Optionally write values to SNMP devices using Monitor > Set SNMP Values *(page 210)*.

Individualized SNMP Sets

You can *individualize* SNMP set settings for a single machine.

1. Select a *standard* SNMP set using the `<Select Monitor Set>` drop-down list.
2. Assign this standard SNMP set to a SNMP device. The SNMP set name displays in the SNMP Info / SNMP Set column.
3. Click the individualized monitor set icon in the SNMP Info / SNMP Set column to display the same options you see when defining a standard SNMP set *(page 186)*. *An individualized SNMP set adds an (IND) prefix to the name of the SNMP set.*
4. Make changes to your new individualized SNMP set. These changes apply only to the single SNMP device it is assigned to.

> Note: Changes to a standard SNMP set have no affect on individualized SNMP sets copied from it.

Auto Learn Alarm Thresholds for SNMP Sets

You can enable Auto Learn alarm thresholds for any standard SNMP set you assign to selected SNMP devices. This automatically fine-tunes alarm thresholds based on actual performance data on a per SNMP device basis.

Each assigned SNMP device generates performance data for a specified time period. During that time period no alarms are triggered. At the end of the Auto Learn session, the alarm threshold for each assigned SNMP device is adjusted automatically based on the actual performance of the SNMP device. You can manually adjust the alarm threshold values calculated by Auto Learn or run another session of Auto Learn again. Auto Learn cannot be used with individualized SNMP sets.

To apply Auto Learn settings to selected SNMP devices:

1. Select a *standard* SNMP set using the `<Select SNMP Set>` drop-down list.
2. Click Auto Learn to display the Auto Learn *(page 178)* popup window. Use a wizard to define parameters used to calculate alarm threshold values.
3. Assign this standard SNMP set, modified by your Auto Learn parameters, to selected SNMP devices.

Once Auto Learn is applied to a machine ID and runs for the specified time period, you can click the override auto learn icon for a specific SNMP device and manually adjust the calculated alarm threshold values. You can also re-run Auto Learn again, using a new session of actual performance data to re-calculate alarm threshold values.

To apply Auto Learn settings to selected SNMP devices:

1. Select a *standard* SNMP set using the `<Select SNMP Set>` drop-down list.
2. Click Auto Learn to display the Auto Learn *(page 178)* popup window. Use a wizard to define parameters used to calculate alarm threshold values.
3. Assign this standard SNMP set, modified by your Auto Learn parameters, to selected SNMP devices.

Once auto learn is applied to a machine ID and runs for the specified time period, you can click the override auto learn icon for a specific SNMP device and manually adjust the calculated alarm threshold values. You can also re-run Auto Learn again, using a new session of actual performance data to re-calculate alarm threshold values.

Quick Sets

The SNMP Info link page displays a list of SNMP objects provided by the specific SNMP device you selected. These objects are discovered by performing a limited SNMP "walk" on all discovered SNMP devices each time a LAN Watch *(page 194)* is performed. You can subsequently define device-specific SNMP sets called quick sets and associate alerts with these quick sets. Quick sets can be *individualized* for a single device. The *standard* version of the quick set can be shared with other administrators and applied to similar devices throughout the VSA. The prefix `(QS)` is used to distinguish quick set names from other kinds of SNMP sets.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*.
3. Click the SNMP info *(page 204)* link in the Assign SNMP page to display a list SNMP objects that apply to the specific SNMP device you selected.

Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

To Create a SNMP Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
    - Create Alarm
    - Create Ticket
    - Run Script
    - Email Recipients
2. Set additional email parameters.
3. Select the SNMP set to add or replace.
4. Check the SNMP device to apply the alert to.

5. Click the Apply button.

To Cancel a SNMP Alert

1. Select the SNMP device checkbox.
2. Click the Clear button.

   The alert information listed next to the SNMP device is removed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Monitoring threshold alarm
- Monitoring trending threshold alarm
- Monitoring exit alarm state notification

> Note: Changing this email alarm format changes the format for *all* monitor set and SNMP set emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<ad>	#ad#	alarm duration
<ao>	#ao#	alarm operator
<at>	#at#	alert time
<av>	#av#	alarm threshold
<cg>	#cg#	event category
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<dv>	#dv#	SNMP device name
<gr>	#gr#	group ID
<id>	#id#	machine ID
<ln>	#ln#	monitoring log object name
<lo>	#lo#	monitoring log object type: counter, process, object
<lv>	#lv>	monitoring log value
<mn>	#mn#	monitor set name
	#subject#	subject text of the email message, if an email was sent in response to an alert

	#body#	body text of the email message, if an email was sent in response to an alert

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking the this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select Monitor Set

Select SNMP sets from the Select SNMP Set list, then click the Apply button to assign the SNMP set to selected machine IDs. You may assign more than one SNMP set to a machine ID. Add or edit SNMP sets using Monitor > SNMP Sets *(page 186)*.

Add Monitor Set

Adds the selected SNMP set to selected SNMP devices.

Replace Monitor Set(s)

Adds the selected SNMP set to selected SNMP devices and removes all other SNMP sets currently assigned to selected SNMP device.

Apply

Applies the selected SNMP set to selected SNMP devices.

Clear

Clears the assignment of a selected SNMP set from selected SNMP devices.

Clear All

Clears all SNMP sets assigned to selected SNMP devices.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Name / Type

The name returned by the ARP protocol when a LAN Watch *(page 194)* is performed.

Device IP

The IP address of the SNMP device.

MAC Address

The MAC address of the SNMP device.

SNMP Info

Displays the name returned by the SNMP protocol when a LAN Watch is performed. Click the SNMP Info *(page 204)* link to display the SNMP objects for this SNMP device.

SNMP Sets

Displays the list of SNMP sets assigned to a SNMP device.

📝 - Edit - Always displays next to an SNMP set. Click this icon to set header parameters to those matching the selected SNMP device.

- Override auto learn values - Displays if Auto Learn is applied to this standard SNMP set. Click this icon to display or change the actual values calculated by Auto Learn *(page 178)* for this SNMP set on this SNMP device.

- Individualized monitor set - Displays if Auto Learn is *not* applied to this standard SNMP set. Click this icon to create or make changes to a copy of this standard SNMP set *(page 186)* that is individualized for this SNMP device. *An individualized SNMP set adds an (IND) prefix to the name of the SNMP set.*

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

SNMP Quick Sets

Monitor > Assign SNMP > SNMP Info link

The SNMP Info link page displays a list of SNMP objects provided by the specific SNMP device you selected. These objects are discovered by performing a limited SNMP "walk" on all discovered SNMP devices each time a LAN Watch *(page 194)* is performed. You can subsequently define device-specific SNMP sets called quick sets and associate alerts with these quick sets. Quick sets can be *individualized* for a single device. The *standard* version of the quick set can be shared with other administrators and applied to similar devices throughout the VSA. The prefix `(QS)` is used to distinguish quick set names from other kinds of SNMP sets.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*.
3. Click the SNMP info *(page 204)* link in the Assign SNMP page to display a list SNMP objects that apply to the specific SNMP device you selected.
4. Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

Use the following tabs on the SNMP Info link page to configure an SNMP quick set.

Discovered Objects Sets tab

The Discovered Object Sets tab lists all objects sets discovered by the last SNMP "walk" that apply to the selected SNMP device. You can use this tab to add objects and instances to an SNMP quick set for this device.

- Add Instance - Click to add this instance of this object to an SNMP "quick set" displays in the SNMP Set tab of this same window.
- Add All Instances - Click to add all instances of this object to an SNMP "quick set" displays in the SNMP Set tab of this same window.
- SNMP Object - The name of the SNMP object. If no name is provided for the object, the OID numerical designation displays.
- Instance - The instance of the object. Many objects have multiple instances, each of which have a different value. For example, the different instances could be ports on a router, or paper trays on a printer. The field is blank if the last number of an OID is zero, which indicates there can only be one member of this object. If an instance is not blank, or any number other than 0, than more than one "instance" of this same object exists for the device. You can specify monitoring of multiple instances of an object by entering a range of numbers, such as `1-5,6` or `1,3,7`. You can also enter `All`.
- Current SNMP Value - The value returned by the object/instance combination by the latest SNMP "walk".

SNMP Sets tab

The SNMP Sets tab configures the objects and instances selected to be included in your SNMP quick set. Click the edit icon 📝 to define SNMP monitoring attributes for the selected objects. You can also use the Add button to add a new object and set these same attributes.

- SNMP Object - Select the MIB object. Click Add Object *(page 192)* to add a MIB object that currently does not exist on the Monitor Lists *(page 160)* page.
- Current SNMP Value - The value returned by the object/instance combination by the latest SNMP "walk".
- Alarm Operator - For character string return values, the options are `Changed`, `Equal` or `NotEqual`. For numeric return values, the options are `Equal`, `NotEqual`, `Over`, or `Under.`
- Alarm Threshold - Set a fixed value that the returned value is compared to, using the selected Alarm Operator, to determine when an alarm is triggered.
- SNMP Instance - The last number of an object ID may be expressed as a table of values instead of as a single value. If the instance is a single value, enter `0`. If the instance is a table of values, enter a range of numbers, such as `1-5,6` or `1,3,7`. You can also enter `All`.
- Value Returned as - If the MIB object returns a numeric value, you can choose to return this value as a Total or a Rate Per Second.
- SNMP Sets tab

SNMP Icons tab

- Customize the alarm icons for this *specific SNMP quick set*. See SNMP Icons *(page 194)* for a general explanation of how to use this page.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Commit

Save changes made to this page.

Cancel

Ignore any changes made to this page and return to the SNMP Sets list.

Clear

Clears all SNMP objects from all tabs. The default list of objects repopulates the Discover Objects Set tab a few minutes later.

Auto Learn - SNMP Sets

Monitor > Assign SNMP > Auto Learn

The Auto Learn Alarm Thresholds window maintains auto learn alarm thresholds for SNMP sets.

You can enable Auto Learn alarm thresholds for any standard SNMP set you assign to selected SNMP devices. This automatically fine-tunes alarm thresholds based on actual performance data on a per SNMP device basis.

Each assigned SNMP device generates performance data for a specified time period. During that time period no alarms are triggered. At the end of the Auto Learn session, the alarm threshold for each assigned SNMP device is adjusted automatically based on the actual performance of the SNMP device. You can manually adjust the alarm threshold values calculated by Auto Learn or run another session of Auto Learn again. Auto Learn cannot be used with individualized SNMP sets.

To apply Auto Learn settings to selected SNMP devices:

1. Select a *standard* SNMP set using the `<Select SNMP Set>` drop-down list.
2. Click Auto Learn to display the Auto Learn *(page 178)* popup window. Use a wizard to define parameters used to calculate alarm threshold values.
3. Assign this standard SNMP set, modified by your Auto Learn parameters, to selected SNMP devices.

Once Auto Learn is applied to a machine ID and runs for the specified time period, you can click the override auto learn icon for a specific SNMP device and manually adjust the calculated alarm threshold values. You can also re-run Auto Learn again, using a new session of actual performance data to re-calculate alarm threshold values.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Edit

Click the edit icon 📝 to use a wizard that leads you through the three steps required to edit auto learn alarm thresholds.

1. Enable Auto Learn for this SNMP object, if appropriate, by selecting `Yes - Include`. If `No - Do not include` is selected, no other selections in this wizard are applicable.
    - ➢ Time Span - Enter the period of time performance data is collected and used to calculate alarm thresholds automatically. Alarms will not be reported during this time period.
2. Displays the SNMP Object of the alarm threshold being modified. This option cannot be changed.
3. Enter calculated value parameters.
    - ➢ Computation - Select a calculated value parameter. Options include `MIN`, `MAX` or `AVG`. For example, selecting MAX means calculate the maximum value collected by an SNMP object during the Time Span specified above.
    - ➢ % Increase - Add this percentage to the Computation value calculated above, with the Computation value representing 100%. The resulting value represents the alarm threshold.
    - ➢ Minimum - Set a minimum value for the alarm threshold. The value is automatically calculated as *two standard deviations below* the calculated Computation value, but can be manually overridden.
    - ➢ Maximum - Set a maximum value for the alarm threshold. The value is automatically calculated as *two standard deviations above* the calculated Computation value, but can be manually overridden.

Next

Move the user to the next wizard page.

Previous

Move the user back to the previous wizard page.

Cancel

Ignore any changes made to wizard pages and return to the Counter Objects list.

Save

Save changes made to the wizard pages.

SNMP Log

Monitor > SNMP Log

The SNMP Log page displays SNMP log data of MIB objects *(page 611)* in a SNMP Set *(page 186)* in chart or table formats.

1. Click a machine ID link to list all SNMP devices associated with a machine ID.
2. Click the IP address or name of an SNMP device to display all SNMP sets and MIB objects assigned to the SNMP device.
3. Click the expand icon ⊞ to display the collection and threshold settings for a MIB object.
4. Click the down arrow icon ⍗ to display MIB object log data in chart or table formats.
5. Click the Bar Chart or Table radio options to select the display format for log data.

SNMP monitor objects can contain multiple instances and be viewed together within one chart or table. For example, a network switch may have 12 ports. Each is an instance and can contain log data. All 12 instances can be combined in one chart or table. SNMP bar charts are in 3D format to allow for multiple instance viewing.

Machine ID.Group ID / SNMP Devices

All machines assigned to SNMP monitoring and currently matching the Machine ID / Group ID filter *(page 17)* are displayed. Clicking the machine ID link displays all SNMP devices associated with the machine ID. Click the SNMP device link to display all MIB objects associated with the SNMP device.

View

Click the View link to display log data for a MIB object in a chart or table.

Remove

Click Remove to remove log data from a chart or table.

View All

If the SNMP monitor object has multiple instances, clicking the View All link displays all data for every instance.

Remove All

If the SNMP monitor object has multiple instances, clicking the Remove All link removes all data displayed for each instance.

Monitor Set Name

The name of the SNMP set the MIB object belongs to.

Get Object Name

The name of the MIB object used to monitor the SNMP device.

Description

The description of MIB object in the SNMP set.

Bar Chart / Table

Select the Bar Chart or Table radio button to display data in either format.

- A bar chart displays the last 500 data points at the sample interval rate. The background of the chart displays in red for alarm threshold, yellow for warning threshold and green for no alarm.
- Table log data displays the most current values first and displays alarm and warning icons on log data that falls within these thresholds. See Define SNMP Set *(page 188)* for more information.

Display Last

Bar charts display log data for the last 500 intervals selected. For example, if you select Display Last 500 minutes, each bar in the chart represents 1 minute.

Save View

You can save custom views for each MIB object. The next time this MIB object is selected the saved information is loaded.

Log rows per Page

These fields only display in Table format. Select the number of rows to display per page.

Display Value Over / Under Value

These fields only display in Table format. Filter the table rows displayed by filtering log data that is over or under the value specified.

Refresh

Click the refresh button to display the most current log data.

If your monitor doesn't show any log values, verify the following.

1. If there are no values returned, check the collection threshold for MIB objects in SNMP sets. If no values on the monitored device meet the collection threshold they are not included in the SNMP log.
2. The log value sample interval is determined by the total number of `SNMPGet` commands retrieving information from SNMP devices to the agent of the machine ID. The more `SNMPGet` commands the

larger the sample interval. Check all SNMP devices associated with a machine ID. If some `SNMPGet` commands are returning values but others are not, the `SNMPGet` commands for the failed requests are not compatible.

If a monitor isn't responding, the log displays the message `Monitor Not Responding`. The `SNMPGet` command is incompatible with the device.

Set SNMP Values

Monitor > Set SNMP Values

The Set SNMP Values page enables you to write values to SNMP network devices. The SNMP objects must be `Read Write` capable and requires entering the Write Community password assigned to the SNMP device.

An SNMP community is a grouping of devices and management stations running SNMP. SNMP information is broadcast to all members of the same communiity on a network. SNMP default communities are:

- Write = private
- Read = public

> Note: This page only displays machines that have been previously identified using a LAN Watch *(page 194)*.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine ID.Group ID

Lists Machine ID.Group IDs *(page 606)* currently matching the Machine ID / Group ID filter *(page 17)* and assigned a SNMP Community *(page 611)* name. Click a machine ID to display SNMP devices associated with that machine ID.

SNMP Device

Select the specific SNMP device of interest. This displays a history of SNMPSet values written to an SNMP device by the agent of the machine ID.

Create a SNMPSet command

Click Create a SNMPSet command to write a new value to this SNMP device. The following fields display:

- Description - Enter an easy to remember description of this event. This displays in the history of SNMPSet values for this SNMP device.
- MIBObject - Select the MIB object. Click Add Object *(page 192)* to add a MIB object that currently does not exist on the Monitor Lists *(page 160)* page.
- SNMP Version - Select a SNMP version. Version 1 is supported by all devices and is the default. Version 2c defines more attributes and encrypts the packets to and from the SNMP agent. Only select version 2c if you know the device supports version 2c.
- writeCommunity - The write Community password for the SNMP device. The default write community password is `private`.
- timeOutValue - Enter the number of seconds to wait for the SNMP device to respond before the write command times out.
- setValue - Enter the value to set the selected MIB object on the SNMP device.
- attempts - Enter the number of times to try and write to the MIB object, if it fails to accept the write command.

Execute SNMPSet

Prepares a script that executes a SNMPSet command for the selected SNMP device.

Cancel

Ignores any data entered and re-displays the Create a SNMP command link and history.

SNMP Type

Monitor > SNMP Type

The SNMP Type page assigns types to SNMP devices. SNMP devices assigned to one of these types are monitored by SNMP sets of the same type. You can also give individual SNMP devices custom names and descriptions as well as remove the device from your database.

You can assign SNMP sets *(page 611)* to devices *(page 611)* *by type* automatically as follows:

1. Add or edit SNMP types using the SNMP Device tab in Monitor > Monitor Lists *(page 160)*.
2. Add or edit the `sysServicesNumber` associated with SNMP types using the SNMP Services tab in Monitor > Monitor Lists. Broad categories of SNMP devices share the same `sysServiceNumber`.
3. Associate a SNMP type with a SNMP set using the Automatic Deployment to drop-down list in Monitor > SNMP Sets > Define SNMP Set *(page 188)*.
4. Perform a LAN Watch *(page 194)*. During a LAN Watch SNMP devices are automatically assigned to be monitored by SNMP sets if the SNMP device returns a `sysServicesNumber` associated with a SNMP type used by those SNMP sets.
5. Manually assign a SNMP type to an SNMP device using Monitor > SNMP Type *(page 211)*. Doing so causes SNMP sets using that same type to start monitoring the SNMP device.

Assign

Applies the selected SNMP type to selected SNMP devices.

Delete

Removes selected SNMP devices from your database. If the device still exists the next time a LAN Watch is performed, the device will be re-added to the database. This is useful if a device's IP or MAC address changes.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Name

List of SNMP devices generated for the specific machine ID by a LAN Watch *(page 194)*.

Type

The SNMP type assigned to the SNMP device.

Custom Name

The custom name and custom description assigned to the SNMP device. If a device is given a custom name, the custom name displays instead of the SNMP name and IP address in alarms and in the SNMP log. To change the custom name and description click the edit icon next to the custom name.

Device IP

The IP address of the SNMP device.

MAC Address

The MAC address of the SNMP device.

SNMP Name

The name of the SNMP device.

Parser Summary

Monitor > Parser Summary

The Parser Summary page displays and optionally define alerts for all parser sets assigned to all machine IDs the administrator has access to. Parser Summary can also copy parser sets assignments to multiple machine IDs.

> Note: Copying a parser set to a machine ID on this page *activates* the log parser on the machine IDs it is copied to. Parsing occurs whenever the log file being parsed is updated.

Log Monitoring Setup

1. Log Parser - Identify a log file to parse using a log file parser definition. A log file parser definition contains the log file parameters used to store values extracted from the log file. Then assign the log parser to one or more machines.
2. Assign Parser Sets - Define a parser set to generate Log Monitoring records, based on the specific values stored in the parameters. *Activate* parsing by assigning a parser set to one or more machine IDs previously assigned that log parser. Optionally define alerts.
3. Parser Summary - Quickly copy *active* parser set assignments from a single source machine to other machine IDs. Optionally define alerts.

To Copy Parser Set Assignments

1. Select a source machine to copy parser set assignments from.
2. Select machine IDs to copy parser set assignments to.
3. Click Copy.

To Create a Parser Set Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Check the machine IDs to apply the alert to.

4. Click the Apply button.

To Cancel a Parser Set Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Log Monitoring parser alerts.
- Multiple log monitoring parser alerts.
- Missing log monitoring parser alert.

> Note: *Changing this email alarm format changes the format for both* Assign Parser Sets *and* Parser Summary *emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<ec>	#ec#	event count
<ed>	#ed#	event description
<gr>	#gr#	group ID
<id>	#id#	machine ID
<lpm>	#lpm#	Log file set criteria
<lpn>	#lpn#	Log parser set name
<lsn>	#lsn#	Log file set name

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Copy

Click Copy to copy the parser sets of the machine ID selected using the this machine ID link to other machine IDs selected in the paging area.

Apply

Applies alert checkbox settings to selected machine IDs.

Clear All

Clears all alert checkbox settings from selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Delete

Click the delete icon ✗ next to a parser set to delete its assignment to a machine ID.

Log Set Names

Lists the names of parser sets assigned to this machine ID.

ATSE

The ATSE response code assigned to machine IDs:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Interval

The interval to wait for the alert event to occur or not occur.

Duration

Applies only if Alert when this event occurs <N> times within <N> <periods> is selected. Refers to <N> <periods>.

Re-Arm

Applies only if Ignore additional alarms for <N> <periods> is selected.

Log Parser

Monitor >
Log Parser

The Log Parser page defines log parsers and assigns them to selected machine IDs.

> Note: The log parsers are only *active* if they are subsequently assigned a log parser set using Assign Parser Sets *(page 223)*.

Log Monitoring

The VSA is capable of monitoring data collected from many standard log files *(page 606)*. Log Monitoring extends that capability by extracting data from the output of *any* text-based log file. Examples include application log files and syslog *(page 612)* files created for Unix, Linux, and Macintosh operating systems, and network devices such as Cisco routers. To avoid uploading all the data contained in these logs to the KServer database, Log Monitoring uses a parser definitions and parser sets *(page 608)* to parse each log file and select only the data you're interested in. Parsed messages are displayed in Log Monitoring, which can be accessed using the Agent Logs tab of the Machine Summary *(page 23)* page or by generating a report using the Agent > Logs *(page 422)* page. Administrators can optionally trigger alerts when a Log Monitoring record is generated, as defined using Assign Parsing Sets *(page 223)* or Parser Summary *(page 213)*.

Log Monitoring Setup

1. Log Parser - Identify a log file to parse using a log file parser definition. A log file parser definition contains the log file parameters used to store values extracted from the log file. Then assign the log parser to one or more machines.
2. Assign Parser Sets - Define a parser set to generate Log Monitoring records, based on the specific values stored in the parameters. *Activate* parsing by assigning a parser set to one or more machine IDs previously assigned that log parser. Optionally define alerts.
3. Parser Summary - Quickly copy *active* parser set assignments from a single source machine to other machine IDs. Optionally define alerts.

The Log File Parsing Cycle

The parsing of a log file is triggered whenever the log file is changed. In most cases this involves appending new text to the end of the file. To avoid scanning the entire log file from the beginning each time the file is updated, the agent parses log files as follows:

- After each update the agent stores a "bookmark" of the last 512 bytes of a log file.
- When the log file is updated again, the agent compares the bookmark from the old update with the *same byte position* in the new update.
- Since log files may be archived before the log parser is run, parsing can include archives files if they exist.
- You can specify sets of log files and sets of archive files by specifying full pathnames with asterisk (*) and question mark (?) wildcards. If a set of files is specified the parser begins with the latest file in the set.

- If the bookmark text is the same in both the old update and the new update, the agent begins parsing text *after the bookmark*.
- If the bookmark text is *not* the same and no Log Archive Path is specified, the agent parses the entire log file from the beginning. If a Log Archive Path is specified, the agent searches for the bookmark in the archive files. If the bookmark cannot be found, the agent bookmarks the end of the log file and starts parsing from there in the next cycle.
- Once parsing is completed a new bookmark is defined based on the last 512 bytes of the newly updated log file and the process repeats itself.

Note: The parsing of a log file is not a script event itself. Only a new configuration, or reconfiguration, using Log Parser, Assign Parser Sets or Parser Summary generates a script you can see in the Script History or Pending Script tabs of the Machine Summary page.

Apply

Click Apply to assign a selected log parser to selected machine IDs.

Clear

Click Clear to remove a selected log parser from selected machine IDs.

Clear All

Click Clear All to remove all log parsers from selected machine IDs.

New...

Select `<Select Log Parser>` in the Log File Parser drop-down list and click New... *(page 218)* to create a new log parser.

Edit...

Select an existing log parser in the Log File Parser drop-down list and click Edit... *(page 218)* to edit the log parser.

Add Log Parser / Replace Log Parsers

Select Add Log Parser to add a log parser to existing machine IDs. Select Replace Log Parsers to add a log parser and remove all other log parsers from selected machine IDs.

Log File Parser Definition

Monitor > Log Parser > Log File Parser Definition

The Log File Parser Definition page defines templates and parameters used to parse log files. Definitions are subsequently assigned to machine IDs using the Log Parser *(page 217)* page. Log parsers are initially private *(page 609)*, but can be shared with other administrators.

The Log File Parsing Cycle

The parsing of a log file is triggered whenever the log file is changed. In most cases this involves appending new text to the end of the file. To avoid scanning the entire log file from the beginning each time the file is updated, the agent parses log files as follows:

- After each update the agent stores a "bookmark" of the last 512 bytes of a log file.
- When the log file is updated again, the agent compares the bookmark from the old update with the *same byte position* in the new update.
- Since log files may be archived before the log parser is run, parsing can include archives files if they exist.
- You can specify sets of log files and sets of archive files by specifying full pathnames with asterisk (*) and question mark (?) wildcards. If a set of files is specified the parser begins with the latest file in the set.
- If the bookmark text is the same in both the old update and the new update, the agent begins parsing text *after the bookmark*.
- If the bookmark text is *not* the same and no Log Archive Path is specified, the agent parses the entire log file from the beginning. If a Log Archive Path is specified, the agent searches for the bookmark in the archive files. If the bookmark cannot be found, the agent bookmarks the end of the log file and starts parsing from there in the next cycle.
- Once parsing is completed a new bookmark is defined based on the last 512 bytes of the newly updated log file and the process repeats itself.

> Note: The parsing of a log file is not a script event itself. Only a new configuration, or reconfiguration, using Log Parser, Assign Parser Sets or Parser Summary generates a script you can see in the Script History or Pending Script tabs of the Machine Summary page.

Save

Select Save to save changes to a log file parser definition.

Save As...

Select Save As... to save a log file parser definition under a different name.

Delete

Select Delete to delete a log file parser definition.

Share...

You can share log file parser definitions you own with other individual administrators *(page 516)*, administrator roles *(page 510)*, or make the script public to all administrators.

Parser Name

Enter the name of the parser.

Log File Path

Enter the full UNC pathname or mapped drive pathname on the target machine of the log file you want to parse. You can use asterisk (*) or question mark (?) wildcards to specify a set of log files. If a log file set is specified, the log parser starts with the latest log file first. Example: `\\morpheus\var\log\messages` or `n:\var\log\messages`.

Log Archive Path

Enter the full UNC pathname or mapped drive pathname on the target machine of the archive files you want to parse. You can use asterisk (*) or question mark (?) wildcards to specify a set of archive files. If an archive set is specified, the log parser starts with the latest log file first. Example: `\\morpheus\var\log\messages.*` or `n:\var\log\messages.*`.

Description

Enter a description for the log parser.

Template

Enter a pattern of text and log file parameters. This pattern is used to search from the beginning of each line in a log file. If a pattern finds a match in the log file, the log file parameters in the pattern are populated with the values extracted from the log file.

You can use a percent (%) wildcard to specify an alphanumeric string of any length. A log file parameter is bracketed with the dollar ($) symbol. Enter $$ to match a pattern of text containing a $ symbol. Enter %% to match a pattern of text containing a % symbol.

> Note: Template text patterns are *case sensitive*.

Example:

- Log text: `126 Oct 19 2007 12:30:30 127.0.0.1 Device0[123]: return error code -1!`
- Template: `$EventCode$ $Time$ $HostComputer$ $Dev$[$PID$]:%error code $ErrorCode$!`
- Parsed result:
```
EventCode=126
Time= 2007/10/19 12:30:30 Friday
HostComputer=127.0.0.1
Dev=Device0
PID=123
ErrorCode=-1
```

Guidelines:

- To enter a tab character in the template edit box:
  1. Copy and paste a tab character from log data.
  2. Use {tab} if it is enter manually.
- To create a template it is easier to copy the original text into the template, then replace the characters that can be ignored with %. Then replace the characters that are saved to a parameter with a parameter name.
- Make sure all parameters in the template are defined in Log File Parameters.
- A date time parameter must have both date and time information from the source data, otherwise just use a string parameter.

Multiline Template

If checked, multiple lines of text and log file parameters are used to parse the log file.

Output Template

Enter a pattern of text and log file parameters to store in Log Monitoring.

Example:

- Output template: `Received device error from $Dev$ on $HostComputer$. Code = $ErrorCode$.`
- Result output: `Received device error from Device0 on 127.0.0.1. Code = -1.`

Apply

Click Apply to add or update a parameter entered in the Name field.

Clear All

Click Clear All to remove all parameters from the parameter list.

Log File Parameters

Name

Enter the name of a parameter used to store a value. Parameters are subsequently used in the Template and Output Template text boxes.

> Note: Do *not* bracket the name of the parameter with $ symbols in the Name field. This is only required when the parameter is entered in the Template and Output Template text boxes.

Type

Enter the data type appropriate for the parameter. If data parsed from a log file cannot be stored using that data type, the parameter remains empty.

Date Format

If the Type selected is `Date Time`, enter a Date Format.

- `yy, yyyy, YY, YYYY` - two or four digit year
- `M` - single or two digit month
- `MM` - two digit month
- `MMM` - abbreviation of month name, ex. "Jan"
- `MMMM` - full month name, ex. "January"
- `D, d` - single or two digit day
- `DD, dd` - two digit day
- `DDD, ddd` - abbreviation name of day of week, Ex. "Mon"
- `DDDD, dddd` - full name of day of week, ex. "Monday"
- `H, h` - single or two digit hour
- `HH, hh` - two digit hour
- `m` - single or two digit minute
- `mm` - two digit minute
- `s` - single or two digit second
- `ss` - two digit second
- `f` - one or more digit of fraction of second
- `ff` - fffffffff - two to nine digit
- `t` - one character time mark, ex. "a"
- `tt` - two-character time mark, ex. "am"

> Note: If you include a `$Time$` parameter in your template, Log Monitoring uses the time stored in the `$Time$` parameter as the log entry time. Date and time filtering is based on the log entry time. If a $Time$ parameter is *not* included in your template, then the time the entry was added to Log Monitoring serves as the log entry time.

Example:

- Date time string: `Oct 19 2007 12:30:30`
- DateTime template: `MMM DD YYYY hh:mm:ss`

UTC Date

Log Monitoring stores all date/time values as universal time, coordinated (UTC). This enables UTC date and times to be automatically converted to the administrator's local time when Log Monitoring data is displayed or when reports are generated.

If blank, the date and time values stored in the log file parameter are converted from the local time of the machine ID assigned the log parser to UTC. If checked, the date and time values stored in the log file parameter are UTC and no conversion is necessary.

Assign Parser Sets

Monitor > Assign Parser Sets

The Assign Parser Sets page creates and edits parser sets and assigns parsers sets to machine IDs. Optionally triggers an alert based on a parser set assignment. A machine ID in the paging area only displays in the paging area of this page if:

- That machine ID has been previously assigned a log file parser definition *(page 218)* using Monitor > Log Parser *(page 217)*.
- That same log file parser definition is selected in the Select Log File Parser drop down list.

> Note: *Assigning a parser set to a machine ID on this page **activates** the log parser. Parsing occurs whenever the log file being parsed is updated.*

Parser Definitions and Parser Sets

When configuring Log Monitoring *(page 606)* it's helpful to distinguish between two kinds of configuration records: parser definitions and parser sets.

A parser definition is used to:

- Locate the log file being parsed,
- Select log data based on the log data's *format*, as specified by a template, and
- Populate parameters with log data values.

A parser set subsequently filters the selected data. Based on the *values* of populated parameters and the criteria you define, a parser set can generate log monitoring entries and optionally trigger alerts.

Without the filtering performed by the parser set, the KServer database would quickly expand. For example a log file parameter called $FileServerCapacity$ might be repeatedly updated with the latest percentage of free space on a file server. Until the free space is less than 20% you may not need to make a record of it in Log Monitoring, nor trigger an alert based on this threshold. Each parser set applies only to the parser definition it was created to filter. Multiple parser sets can be created for each parser definition. Each parser set can trigger a separate alert on each machine ID it is assigned to.

Log Monitoring Setup

1. Log Parser - Identify a log file to parse using a log file parser definition. A log file parser definition contains the log file parameters used to store values extracted from the log file. Then assign the log parser to one or more machines.

2. Assign Parser Sets - Define a parser set to generate Log Monitoring records, based on the specific values stored in the parameters. *Activate* parsing by assigning a parser set to one or more machine IDs previously assigned that log parser. Optionally define alerts.
3. Parser Summary - Quickly copy *active* parser set assignments from a single source machine to other machine IDs. Optionally define alerts.

To Create a Parser Set Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Select the parser set to add or replace.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Parser Set Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- Log Monitoring parser alerts.
- Multiple log monitoring parser alerts.
- Missing log monitoring parser alert.

> Note: *Changing this email alarm format changes the format for both Assign Parser Sets and Parser Summary emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#

<ec>	#ec#	event count
<ed>	#ed#	event description
<gr>	#gr#	group ID
<id>	#id#	machine ID
<lpm>	#lpm#	Log file set criteria
<lpn>	#lpn#	Log parser set name
<lsn>	#lsn#	Log file set name

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking the this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Select Log File Parser

Select a log parser from the Select log file parser drop-down list to display all machine IDs previously assigned this log parser using the Log Parser *(page 217)* page.

Define log sets to match

After a log parser is selected, click Edit *(page 228)* to define a new parser set or select an existing parser set from the Define log sets to match *(page 228)* drop-down list.

Alert when...

Specify the *frequency* of the parser set condition required to trigger an alert:

- Alert when this event occurs once
- Alert when this event occurs <N> times within <N> <periods>
- Alert when this event doesn't occur within <N> <periods>
- Ignore additional alarms for <N> <periods>

Add / Replace

Click the Add or Replace radio options, then click Apply to assign a selected parser set to selected machine IDs.

Remove

Click Remove to remove all parser sets from selected machine IDs.

Apply

Applies the selected parser set to checked machine IDs.

Clear

Clears the assignment of a selected parser set from selected machine IDs.

Clear All

Clears all parser sets assigned to selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Delete

Click the delete icon ✕ next to a parser set to delete its assignment to a machine ID.

Log Set Names

Lists the names of parser sets assigned to this machine ID.

ATSE

The ATSE response code assigned to machine IDs:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Interval

The interval to wait for the alert event to occur or not occur.

Duration

Applies only if Alert when this event occurs <N> times within <N> <periods> is selected. Refers to <N> <periods>.

Re-Arm

Applies only if Ignore additional alarms for <N> <periods> is selected.

Log File Set Definition

Monitor > Assign Parser Sets

Select a log parser from the Select log file parser drop-down list.

Then select `<New Parser Set>` or an existing parser set from the Define log set to match drop-down list. The Log File Set Definition popup window displays.

The Log File Set Definition page defines parser sets. A parser set is a list of conditions that must be matched to create a Log Monitoring record. Each condition combines a parameter, operator and value.

Parser Definitions and Parser Sets

When configuring Log Monitoring *(page 606)* it's helpful to distinguish between two kinds of configuration records: parser definitions and parser sets.

A parser definition is used to:

- Locate the log file being parsed,
- Select log data based on the log data's *format*, as specified by a template, and
- Populate parameters with log data values.

A parser set subsequently filters the selected data. Based on the *values* of populated parameters and the criteria you define, a parser set can generate log monitoring entries and optionally trigger alerts.

Without the filtering performed by the parser set, the KServer database would quickly expand. For example a log file parameter called $FileServerCapacity$ might be repeatedly updated with the latest percentage of free space on a file server. Until the free space is less than 20% you may not need to make a record of it in Log Monitoring, nor trigger an alert based on this threshold. Each parser set applies only to the parser definition it was created to filter. Multiple parser sets can be created for each parser definition. Each parser set can trigger a separate alert on each machine ID it is assigned to.

To Create a New Parser Set

1. Enter a name for the parser set.
2. Optionally rename the parser set by entering a new name and click Rename to confirm the change.
3. Select a log file parameter from the Parser Column drop-down list. Log file parameters are defined using the Log File Parser Definition *(page 218)* this parser set is intended to filter.
4. Select an Operator from the drop-down list. Different data types provide different lists of possible operators.
5. Enter the value the log file parameter should have in the Log File Filter field to generate a Log Monitoring record.

> Note: Template text patterns are *case sensitive*.

6. Click Add to add this parameter/operator/value combination to the list of conditions defined for this parser set.
7. Click Edit to edit and then Save an existing parameter/operator/value combination.
8. Click the delete icon ✕ to delete an existing parameter/operator/value combination.

Chapter 7

Ticketing

In This Chapter

Ticketing Tab

The Ticketing Tab manages service requests from VSA users. These service requests, and your response to them, are documented using tickets.

The ticketing system automatically sends email alerts to designated administrators and users for such system events as ticket creation, changes, or resolutions. The system organizes tickets by machine ID or group ID. You may wish to create extra machine ID accounts or group IDs to hold tickets of a global nature, such as general network problems.

Functions	Description
View Summary *(page 233)*	Define email alerts on a per machine basis.
View Ticket *(page 236)*	Create new tickets, or add or modify notes in existing tickets.
Delete/Archive *(page 239)*	Permanently delete tickets or move tickets into archival storage.
Notify Policy *(page 242)*	Determine when email notifications are sent out by the Ticketing module.
Access Policy *(page 244)*	Determine who can edit and/or display fields in tickets.
Due Date Policy *(page 245)*	Define default due dates for new tickets based on field values and email subject lines.
Edit Fields *(page 246)*	Define, modify, or create ticket fields used to classify tickets.
Email Reader *(page 248)*	Setup automatic polling of a POP3 email server to generate new ticket entries.
Email Mapping *(page 250)*	Define default field values for new tickets received using the Email Reader. Separate email maps may be defined for email addresses or domains.
User Profiles *(page 251)*	Edit machine account information.
User Access *(page 253)*	Set up user accounts to enable users to view or create tickets, chat with administrators and remote control their own machines.

View Summary

Ticketing > View Summary

Similar information is provided using Reports > Ticketing *(page 425)*.

The View Summary page lists all tickets assigned to machine IDs or group IDs. Each row displays summary data for a single ticket.

New Tickets or New Notes

New tickets, or new notes in existing tickets, are clearly highlighted in one of two ways.

- By Date - Tickets with new notes entered in the last 1 day are highlighted in red. New notes entered in the last 7 days are highlighted in yellow. You can adjust these times and colors by clicking the Change Highlight link.
- Read Flag - Each ticket is flagged to indicate if the administrator has viewed all the notes in the ticket. Once viewed, the ticket is marked as read using the icon. If another administrator or user adds or modifies a note, the flag is switched back to unread for you, showing the icon.

Filtering

The list of tickets displayed depends on several factors:

- The list displayed depends on the machine ID / group ID filter *(page 17)* and machine groups the administrator is authorized to see using System > Group Access *(page 512)*.
- You can further *sort* and *filter* listed tickets by selecting values in the field drop-down lists.
- Search does not display any tickets if notes contain none of the words being searched for.
- Users only have access to tickets for their own machine ID.

Assignees

The assignee list presented in View Summary *(page 233)* and in View Ticket *(page 236)* is created based on the access rights of the currently logged on user. There are three basic sets of rights in the system: master administrator, standard administrator, and user. The assignee list for each is generated as follows.

- Master Administrators - Includes all administrators in the VSA.
- Standard Administrators - Includes any administrator matching *one* of the following criteria:
  - Any administrator that has access to any machine group that the logged on standard administrator also has access to.
  - All administrators that are members of the same administrator role as the standard administrator.
  - All administrators that have access to all groups.
  - The currently logged in standard administrator.
- Users - Includes all administrators that have access to the same machine group the currently logged in user's machine is in.

Tickets for Deleted Machines

The system does not delete tickets when deleting machine IDs. Because no machine data exists for deleted machine IDs, views *(page 614)* are not applied to this table.

Note: See Ticketing > Delete/Archive *(page 239)* to delete or archive tickets.

Open Tickets, Past Due, Hold Tickets, Total Tickets

Shows the number of tickets open, past due, on hold, and total for all tickets matching the filtering criteria described above.

Search

Search restricts the list of tickets to only tickets containing any of the words in the search string. Search examines the ticket Summary line, submitter Name, submitter Email, submitter Phone, or any of the Notes. Include an asterisk (*) wildcard with the text you enter to match multiple records.

Clicking any of the ticket Summary links in the paging area displays the details of that ticket using the View Ticket *(page 236)* page. Words in the ticket notes matching any Search word are *highlighted with a green background.*

<last 10 searches>

The drop-down list below the Search edit box lists the `<last 10 searches>` you have made. Selecting any item from the list automatically re-searches for those words.

Sort

Click either ascending or descending to order tickets by the selected column.

Fields...

Allows each administrator or user to organize the columns displayed in the table. Clicking Fields... opens a dialog in a new browser window. There, you can select which columns to show or hide and also the order in which columns are displayed. You can show/hide any of the following columns:

- ID - Unique ID number automatically assigned to each ticket.
- Machine ID - The ticket applied to this machine.
- Category - Type of problem this ticket discusses.
- Assignee - Name of the administrator responsible for solving this problem.
- Status - Open, Hold, Closed
- Priority - High, Normal, Low

- Submitter Name - Person who submitted this ticket: administrator, user name, or machine ID.
- Submitter Email - The submitter email address.
- Submitter Phone - The submitter phone number.
- Last Modified Date - Last time any note was added to this ticket.
- Creation Date - Time when the ticket was first entered.
- Due Date - Ticket due date.
- Resolution Date - Date the ticket was closed.

You can also select additional custom fields you have previously created using Ticketing > Edit Fields *(page 246)*.

List Fields

Each field of type `List`—such as Category, Status, or Priority—are shown as selectable drop-down lists. Selecting values from one or more of these drop-down lists displays only those tickets matching the selected values. Custom `List` fields are created using Ticketing > Edit Fields *(page 246)*.

Mark All Read

Click to mark all tickets as read. Read tickets display a 📄 icon. Any changes or note additions inserted by other administrators reset the ticket to unread. Unread tickets display a 🗒 icon.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Merge...

To merge tickets, *check the box for any two tickets* listed, then click the Merge... button. The resulting merged ticket contains all the notes and attachments from both tickets. You are asked which field values you wish to use in the ticket for all field values that are different between the two tickets.

Change Highlight

Click Change Highlight to set and/or modify row highlighting based on date. Highlight tickets in two ways. Tickets with a date within 1 day of the current time are highlighted in red. Tickets with a date within 7 days are highlighted in yellow. You can independently *adjust both the number of days and the highlight color*. To disable highlighting by date, set each number of days to zero. The highlight date may be last modified date, due date, or creation date.

Column Headings

Clicking any column heading re-orders the table using that column as the sort criteria.

Data Table

Each row of the table lists summary data for a single ticket.

- To display the details of the ticket in a *new window* click the new window icon. Hovering the mouse cursor over the icon of a ticket displays a preview window of the latest notes for that ticket. Use this to quickly review tickets in your queue.
- To display the details of the ticket in the *same window* click the summary line link.
- To toggle the state to *read* click .
- To toggle the state to *unread* click .

View Ticket

Ticketing > View Ticket

The View Ticket page creates new tickets, or adds or modify notes in existing tickets. Begin by entering a ticket number in the Ticket ID field. If you don't know the number of the ticket, use View Summary *(page 233)* or Delete/Archive *(page 239)* to locate and select the ticket. The ticket will be displayed using this page.

Editing an Existing Ticket

When an existing ticket first displays on this page, the header fields show the most recent settings for the ticket.

- Making changes to any of the *list* type fields immediately creates a new note for the ticket, identifying the change.
- Making changes to any of the *non-list* type fields—such as the Summary field, Submitter information, or fields that accept freeform text entries or numbers—requires you to click Update afterwards to create a new note.
- Edit any *previous* note for a ticket by clicking the edit icon next to the note you wish to edit. This populates the header fields with the settings for this note. It also highlights the row of the note being edited in light yellow. You can change the contents of the note, including the timestamp for the note. Click Change to confirm the changes you have made.
- Delete notes by clicking the delete ✕ icon next to the note.
- Split a ticket into two tickets by clicking the split icon next to the note. The new ticket contains the note and all more recent notes. The original ticket is closed.

> Note: View, edit and delete privileges for tickets and fields are controlled using Ticketing > Access Policy *(page 244)*. Users and administrators are notified about ticket changes based on Ticketing > Notify Policy *(page 242)*. Change the number automatically assigned to the next new ticket using Edit Fields *(page 246)*.

Creating a New Ticket

Perform the following steps to create a new ticket.

1. All tickets must be assigned to either a machine ID or a group ID.
   a. Click the Select machine ID or Group ID link to display a dialog box.
   b. Select either `machine` or `group` from the Select <name> ID to assign trouble ticket to drop-down list.
   c. Select a specific machine or group to assign your new ticket to.
   d. Once you've selected a machine or group, the dialog box closes and an edit 📝 icon displays next to machine ID or group ID you have selected. You can click this icon to associate a ticket with a different machine ID or group ID.
2. Enter a short description of the problem in the Summary field.
3. The Submitter fields are populated as follows:
   - If a machine ID was selected in step 1, the submitter User Name, User Email and User Phone fields are populated with contact data maintained for this machine ID using Ticketing > Edit Profile *(page 251)*. This information can be updated if need be.
   - If a group ID was selected in step 1, these submitter fields can be filled in manually, if applicable.
   - If a ticket was created based on a user's or administrator’s email using Ticketing > Email Reader *(page 248)*, the Submitter Email field is populated with the sender's email address.
4. The Date Created is automatically assigned. This is the date the ticket is created.
5. The Age / Closed date is automatically assigned. Age lists the number of hours/days since the creation date for open and hold tickets. If the ticket has been closed then Age is replaced with Closed and displays the date and time this ticket was closed.
6. Enter a due date for this ticket by clicking the edit icon 📝 next to Due Date. The default due date is one week from the creation date. If the due date does not match one of the defined due date policies *(page 245)*, then the Due Date label is highlighted. Click the Apply button to reset the due date to the policy. If no policy matches then the system default due date is used.
7. Classify the ticket using the built-in Assignee, Category, Status, and Priority fields. You can also classify the ticket using additional `List` type fields that have been created for tickets using Ticketing > Edit Fields *(page 246)*.

   > Note: All `List` field changes are immediately saved in the ticket.

8. Enter details of the problem in the Notes edit box. Click the Note Size link to change the number of rows available for your note text.
9. To attach a file, such as a screen shot, to the ticket, click Browse... below the note entry area. Locate the file you wish to attach on your local computer. Click Open in the browse window to upload the file to the VSA server. Once the file has been successfully uploaded, tag text is automatically entered into the note in this format: `<attached file:filename.ext>`. This tag appears as a link in a note for the ticket. Display/download the file at any time by clicking that link.
10. Check the Suppress email notification checkbox if you won't want email recipients to be notified about the ticket. In most cases you'll want to leave this blank.
11. Complete the creation of the ticket in one of two ways:
    - Click Submit to complete the creation of the ticket and to notify *both* user and administrator email recipients.
    - Click New Hidden to complete the creation of the ticket to notify *only* administrators email recipients. Use hidden notes to record data or analysis that may be too detailed or confusing to users but useful to other administrators.

> Note: Hidden notes are *never* included in email notifications.

Assignees

The assignee list presented in View Summary *(page 233)* and in View Ticket *(page 236)* is created based on the access rights of the currently logged on user. There are three basic sets of rights in the system: master administrator, standard administrator, and user. The assignee list for each is generated as follows.

- Master Administrators - Includes all administrators in the VSA.
- Standard Administrators - Includes any administrator matching *one* of the following criteria:
    - Any administrator that has access to any machine group that the logged on standard administrator also has access to.
    - All administrators that are members of the same administrator role as the standard administrator.
    - All administrators that have access to all groups.
    - The currently logged in standard administrator.
- Users - Includes all administrators that have access to the same machine group the currently logged in user's machine is in.

Displaying the "View Ticket" Page Using a URL

The following URL displays the View Ticket *(page 236)* web page for a specific ticket ID

```
http://...?ticid=<TicketID>
```

For example:

`http://demo.kaseya.com?ticid=1234`Ticket ID

Enter the ticket ID to view/edit an existing ticket. Leave blank to create a new ticket.

Time/Admin

Lists the time a change was made to a ticket and the administrator or user who made the change.

Notes Table

Lists all notes relating to this ticket in ascending or descending time order. Each note is time stamped and labeled with the logon name of the person entering the note.

> Note: User entered notes are labeled with the machine ID they logged in with. See User Access *(page 253)* for details.

Hide

If checked, the note is hidden from users but not other administrators. The default setting is determined by the as hidden note checkbox in Ticketing > Access Policy *(page 244)*. Access policies are applied by administrator group. If you belong to more than one administrative group, the most restrictive policy has precedence.

Delete/Archive

Ticketing > Delete/Archive

You may reach the point where your system has so many old tickets that they are cluttering up searches with obsolete data. The Delete/Archive page deletes old tickets, or deletes tickets in a particular category or status.

> Note: View, edit and delete privileges for tickets and fields are controlled using Ticketing > Access Policy *(page 244)*.

Archiving Tickets

In addition to delete, you can also archive tickets. Archived tickets stay in the database but are moved to separate tables. Use archive to move obsolete or old tickets out of the active database without deleting them from the system. You can always move tickets back and forth between the active database table and the archive database table.

Filtering

The list of tickets displayed depends on several factors:

- The list displayed depends on the machine ID / group ID filter *(page 17)* and machine groups the administrator is authorized to see using System > Group Access *(page 512)*.
- You can further *sort* and *filter* listed tickets by selecting values in the field drop-down lists.

- Search does not display any tickets if notes contain none of the words being searched for.
- Users only have access to tickets for their own machine ID.
- Use the Hide tickets last modified after control to only display tickets *earlier* than a certain date.

Archiving Closed Tickets

If, for example, you want to archive `Closed` tickets older than 6 months perform the following steps:

1. Select `Closed` from the Status control.
2. Set the Hide tickets last modified after control to list only tickets last modified 6 months ago or earlier.
3. Click the Set button.
4. Click the Select All link.
5. Click the Archive... button.
6. Check the Display archived tickets instead of active tickets checkbox to search and examine the archived tickets. You can move tickets back to the active table here using the Restore... button.

Open Tickets, Past Due, Hold Tickets, Total Tickets

Shows the number of tickets open, past due, on hold, and total for all tickets matching the filtering criteria described above.

Search

Search restricts the list of tickets to only tickets containing any of the words in the search string. Search examines the ticket Summary line, submitter Name, submitter Email, submitter Phone, or any of the Notes. Include an asterisk (*) wildcard with the text you enter to match multiple records.

Clicking any of the ticket Summary links in the paging area displays the details of that ticket using the View Ticket *(page 236)* page. Words in the ticket notes matching any Search word are *highlighted with a green background.*

<last 10 searches>

The drop-down list below the Search edit box lists the `<last 10 searches>` you have made. Selecting any item from the list automatically re-searches for those words.

Sort

Click either ascending or descending to order tickets by the selected column.

Fields...

Allows each administrator or user to organize the columns displayed in the table. Clicking Fields... opens a dialog in a new browser window. There, you can select which columns to show or hide and also the order in which columns are displayed. You can show/hide any of the following columns:

- ID - Unique ID number automatically assigned to each ticket.
- Machine ID - The ticket applied to this machine.
- Category - Type of problem this ticket discusses.
- Assignee - Name of the administrator responsible for solving this problem.
- Status - Open, Hold, Closed
- Priority - High, Normal, Low
- Submitter Name - Person who submitted this ticket: administrator, user name, or machine ID.
- Submitter Email - The submitter email address.
- Submitter Phone - The submitter phone number.
- Last Modified Date - Last time any note was added to this ticket.
- Creation Date - Time when the ticket was first entered.
- Due Date - Ticket due date.
- Resolution Date - Date the ticket was closed.

You can also select additional custom fields you have previously created using Ticketing > Edit Fields *(page 246)*.

List Fields

Each field of type `List`—such as Category, Status, or Priority—are shown as selectable drop-down lists. Selecting values from one or more of these drop-down lists displays only those tickets matching the selected values. Custom `List` fields are created using Ticketing > Edit Fields *(page 246)*.

Hide tickets last modified after / Set

Set the date and time of this control to only display tickets *earlier* than a certain date.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Delete...

Select one or more tickets and click the Delete... button.

Archive...

Select one or more tickets and click the Archive... button. Archived tickets stay in the database but are moved to separate tables. Use archive to move obsolete or old tickets out of the active database *without* deleting them from the system. You can always move tickets back and forth between the active database table and the archive database table.

Display archived tickets instead of active tickets / Restore

Check the Display archived tickets instead of active tickets checkbox to search and examine the archived tickets. You can move tickets back to the active table here using the Restore... button.

Notify Policy

Ticketing > Notify Policy

The Notify Policy page determines when email notifications are sent out by the Ticketing module. *Multiple policies can be defined for each group ID, by clicking the Add button instead of the Update button.* This lets you specify different email lists for different ticketing events. For example, you may wish to send email alerts to a group of administrators for ticket creations and note additions, but send email to a different list of administrators for overdue tickets. As a default, no email notifications are sent. You must check the checkbox of at least one ticketing event to get an email notification sent.

To be sent email notification for a ticketing event:

1. Check the box to the left of each ticketing event you need to be notified about.
2. Enter a comma separated list of email address in the Email List edit box.
3. Check the box to the left of all group IDs you wish to apply this notification policy to.
4. Click the Update or Add button.

> Note: You can *not* send notifications to the email address used to receive tickets, defined using Ticketing > Email Reader *(page 248)*.

Notification Type Checkbox

The list below describes when the ticketing system sends an email notification to all email recipients in the email list.

- Ticket Creation - If checked, an email is sent at the time of ticket creation.

- Modify/Add Note - If checked, an email is sent when any note is added or changed to a ticket.
- Overdue Ticket - If checked, an email is sent when a ticket passes its due date without being closed.
- Assignee Change - If checked, an email is sent when a ticket is assigned to a different administrator.
- Field Change - If checked, an email is sent when anyone changes any custom field in a ticket.
- Edit Summary - If checked, an email is sent when anyone changes the summary line for a ticket.
- Due Date Change - If checked, an email is sent when anyone changes the due date of a ticket.
- Notify Ticket Submitter when note added - If checked, an email is sent to the email address entered for the ticket submitter, in addition to the email list for all email notification messages.
- Include all public notes in Modify/Add notification - If checked, *all* notes for a ticket are included when a Modify/Add Note message is sent out.
- Received email alerts always sent to assignee - If checked, an email is sent to the ticket assignee, whenever a new note is created for a ticket, even if the assignee is *not* on the notification email list for this group ID.
- Send auto response to emails creating new tickets - If checked, an automated reply message is sent out to the person that sent in an email that generated a new ticket. Automated response emails give your users an acknowledgement that their request has been received and processed by the system. Creating tickets based on inbound emails are configured using Email Reader *(page 248)* and Email Mapping *(page 250)*.
- Format Email... - This option only displays for master administrators *(page 599)*. Specifies the standard message sent in reply to inbound emails used to create new tickets.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Machine Group

Lists machine groups. All machine IDs are associated with a group ID and optionally a subgroup ID.

Enable Events TMOAFEDNIRS

Identifies the ticketing events that trigger email notification of email recipients listed in the Email List column.

Email List

The list of email recipients notified by selected ticketing events for this group ID.

Access Policy

Ticketing > Access Policy

The Access Policy page determines who can edit and/or display fields in tickets. Independent policies can be set for each administrator role and for all users. Users only see tickets assigned to their machine ID. Standard administrators only see tickets for group IDs they are authorized to access.

Select user or administrator group

Before setting any other policy options, select `<Users>` or an administrator role from the drop-down list.

Access Rights

The following access rights apply to all users or to a selected administrator role, as specified using Select user or administrator group.

- Enable ticket delete - If checked, the selected administrator role can delete entire tickets using the Delete/Archive *(page 239)* page.
- Enable ticket edit to modify or remove notes - If checked, the selected administrator role can edit existing notes.

> Note: *Adding new notes is always enabled for all administrator groups.*

- Enable due date edit when editing trouble tickets - If checked, the selected administrator role can modify the ticket due date.
- Enable suppress email notifications when editing trouble tickets - If checked, the selected administrator role can suppress email notifications when modifying an existing ticket.
- View hidden notes - If checked, the selected administrator role can view hidden notes.

> Note: Hidden notes can *never* be viewed by users.

- Change hidden notes status checkbox - If checked for the selected administrator role, notes display a Hide checkbox at the far right edge of each ticket note. Toggling the Hide checkbox makes a note hidden or not hidden.
- Automatically insert new note with every field change - If checked for the selected administrator role, notes are automatically inserted whenever any ticket field changes.

- As hidden note - If checked for the selected administrator role, automatic notes are added as hidden notes. This policy only applies if Automatically insert new note with every field change is checked.
- Define access to each ticket field - Defines access to each field for the selected administrator role. Fields are created using Edit Fields *(page 246)*. Three levels of access are possible:
  - Full Access - Can view and modify this field in every ticket.
  - View Only - Can see but not change the value of this field.
  - Hidden - Hidden fields are not shown.

Due Date Policy

Ticketing > Due Date Policy

The Due Date Policy page sets the due date for each *new ticket* based on field values. Any combination of list fields may be defined to set a due date. This allows you to set a ticket due date based on the urgency of the ticket and a guaranteed level of service. For example, define a new field named Service Level with the following list items: `Premium`, `Standard`, `Economy`. Create different due date policies for each combination such as:

- Set resolution time to `1 Hrs` when Priority = `High` and Service Level = `Premium`
- Set resolution time to `7 Days` when Priority = `Normal` and Service Level = `Economy`

When a new ticket gets created, the due date is set by adding the number of hours in the policy to the current time.

Default time to resolve tickets with no policy

Enter the number of hours or days to resolve tickets when new tickets are created that do not match any policy.

Policy Name

Enter a name for this due date policy.

Time

When new tickets are created that match the field values in this policy, then the due date is set to this number of hours or days plus the current time.

Fields

Select values for one or more fields that a new ticket must match to automatically set the due date for the new ticket.

Delete Icon

Click the delete icon ✗ to delete a row in the paging area.

Edit Icon

Click a row's edit icon 📝 to populate header parameters with values from that row. You can edit these values in the header and re-apply them. The selected row is highlighted in yellow.

Name

The name of the due date policy.

Time

The time added to the current date and time to set the due date policy for a new ticket.

All Other Columns

The values of list fields that must be matched to set a due date for a new ticket using this policy. User defined `List` fields are maintained using Edit Fields *(page 246)*.

Edit Fields

Ticketing > Edit Fields

The Edit Fields page creates fields used to classify tickets and sets the default values for those fields. Fields are associated with the entire ticket, as opposed to each note of the ticket. You can *customize* the field label and corresponding values of each field, including the mandatory fields. The fields you define here display in the following pages: View Summary *(page 233)*, View Ticket *(page 236)*, Delete/Archive *(page 239)*, Access Policy *(page 244)*, Due Date Policy *(page 245)* and Email Mapping *(page 250)*.

Mandatory Fields

Three mandatory `List` type fields exist that may not be removed from the system. The values for these list fields can be customized. The mandatory fields are:

- Category - Classifies tickets by IT category.
- Status - State of the current ticket: `Open`, `Hold`, `Closed`
- Priority - `High`, `Normal`, `Low`

Set the next ticket ID to N / Apply

Specify the ticket number for the next ticket. Displays the current "next" ticket number. Click Apply to confirm any changes.

Field Position

Click the up/down arrows ▲▼ to the left of the field label to change the display position for this field in View Tickets *(page 236)*.

Field Label

You can modify the label for any field here. Click the Update button to apply the change

Type

Specify the data type for each field.

- `String` - Can contain any text up to 500 characters in length. Best used to hold things like problem location or other variables that do not belong in the summary line.
- `Integer` - Can contain any positive or negative integer value
- `List` - Lets you create a drop-down list of choices. The choices for `List` type fields are edited by clicking the `<Edit List>` value in the Default Value drop-down list.

> Note: Only `List` type fields display as a selectable drop-down list that can filter the display of tickets on the View Summary *(page 233)* and Delete/Archive *(page 239)* page.

- `Number (nn.d)` - A number that always shows one digit to the right of the decimal point.
- `Number (nn.dd)` - A number that always shows two digits to the right of the decimal point.
- `Number (nn.ddd)`- A number that always shows three digits to the right of the decimal point.
- `Number (nn.dddd)` - A number that always shows four digits to the right of the decimal point.

Default Value

Creating a new ticket automatically sets each field to its default value. You can specify that default value here.

> Note: Default values are system wide and may not be different for different machine group IDs or administrator roles.
>
> Note: Email Mapping *(page 250)* can override the default values selected here for tickets created using Email Reader *(page 248)*.

<Edit List>

This value displays in the drop-down list for a `List` type field in the Default Value column. Click `<Edit List>` to edit the list of values for that field.

Update

Click Update to confirm changes to field labels, default values, or list values.

New

Click New to create a new field.

Email Reader

Ticketing > Email Reader

The Email Reader page specifies a POP3 email account to periodically poll. Email messages retrieved from the POP3 server are classified by Email Mapping *(page 250)* and converted into tickets.

Contents of Email

The Email Reader can receive any email, with or without attachments, and add the contents to the ticketing system. Additional information can be added to the email to enhance the mapping of the email to the ticketing system. The following tags can be included in *either the subject or the body* of the email.

- `~ticid='xxx'` - Appends the body of the email to an existing ticket rather than cause a new ticket to be created.
- `~username=’xxx’` - Automatically inserts the value given as `xxx` into the Submitter Name field.
- `~useremail=’xxx’` - Automatically inserts the value given as `xxx` into the Submitter Email field.
- `~userphone=’xxx`’ - Automatically inserts the value given as `xxx` into the Submitter Phone field.
- `~category=’xxx’` - Assigns the ticket created to a specific category. The category must exist.
- `~priority=’xxx’` - Assigns the ticket created to a specific priority. The priority must exist.
- `~status=’xxx’` - Assigns the ticket created to a specific status. The status must exist.
- `~assignee=’xxx’` - Assigns the ticket created to a specific administrator. The administrator must exist.
- `~machineid=’xxx.xxx’` - Assigns the ticket created to a machine ID. The machine ID must exist. If this information is not included, and tickets are not assigned to a machine ID or group ID using Email Mapping *(page 250)*, tickets are assigned to the `unnamed` group by default.
- `~fieldName=’xxx’` - Assigns the value `xxx` for any defined field. If the field is a `List` type, then the value must exist in the list.

Email Address

Enter the email address you wish to retrieve email messages from periodically. Replies to this email address are in turn processed by the ticketing system and added as notes to the relevant ticket.

Disable email reader

Check this box to prevent the email reader component from polling a server.

View Log

Click View Log to review the polling log for this email reader.

Host Name

The name of the POP3 host service is needed. POP3 is the only email protocol supported. An example is `pop.gmail.com`.

Port

Provide the port number used by the POP3 service. Typically non-SSL POP3 ports are 110 and SSL POP3 ports are 995.

Use SSL

Check this box to enable SSL communications with your POP server. Your POP server must support SSL to use this feature. Typically, SSL enabled POP3 servers use port 995.

Logon

Enter the email account name.

Password

Enter the email account password.

Check for new emails every N minutes

The number of minutes the Email Reader should wait before polling the POP3 server for new emails.

Filter Emails

Enter text to reject inbound emails containing this text *in the subject line*. Matching is case insensitive. Create multiple filters using multiple lines. Multiple filters act as an OR statement. Surround whole words with spaces on both sides of each word. Example:

```
Undeliverable
Do not reply
```

Apply

Click Apply to begin using the email reader.

Connect Now

Click Connect Now to connect to the POP3 server immediately instead of waiting for the next polling time. This can be used to test your configuration of the email reader.

Email Mapping

Ticketing > Email Mapping

The Email Mapping page assigns default values for tickets created using the Email Reader *(page 248)*. The default values assigned are based on the email address or email domain of the email *sender*. Matching can be optionally filtered by the text entered in the email subject line. This information overrides the standard defaults defined using Edit Fields *(page 246)*.

Email Address or Domain

The email address or domain *of the sender*. For example: `jsmith@acme.com` or `acme.com`.

Set map for unassigned emails

If checked, assigns default field values for inbound emails not covered by any other email map.

Subject Line Filter

Assigns ticket defaults when the *email subject line matches the filter string*. Matching is case insensitive. No wildcard processing is provided. A single *, without any other characters in the filter, means let anything through. Booleans statements are not accepted.

Associate map with (Select Machine or Group ID)

Click the Select Machine or Group ID link to associate tickets created using this map with either a machine ID or group ID.

Assignee

Enter the name of the administrator responsible for solving this problem.

Fields

Specify the default field values assigned to new tickets created when an email is received by the ticketing system using this map.

Create

Click Create to create a new email map using the header values you have previously selected.

Delete Icon

Click the delete icon ✗ to delete this record.

Edit icon

Click the edit icon 📝 next to a machine ID to automatically set header parameters to those matching the selected machine ID.

Edit Profile / User Profiles

Agent >
Edit Profile
Ticketing >
User Profiles

The Edit Profile page maintains contact information, the language preference for the agent menu on the user's machine and notes about each machine ID/group ID account. Profile information can be maintained in three other places:

- Notes and contact information can also be maintained using the Agent Settings tab of the Machine Summary *(page 23)* page.
- The contact information in the Edit Profile page can be automatically populated when a new account is created using the Agent > Create *(page 457)* page.
- The user can update his or her contact name, contact email and contact phone number using the Change Profile option on the User Access page.

To change user accounts settings:

1. Select a machine ID in the paging area.
2. Enter Notes, Admin Email, Contact Name, Contact Email and Contact Phone information.
3. Press Update.
4. The newly entered settings are shown in the respective machine ID account's fields.

Notes

Enter any notes about a machine ID account. Helpful information can include the machine's location, the type of machine, the company, or any other identifying information about the managed machine.

Show notes as tooltip

If checked, Edit Proflle notes are included as part of the tooltip that displays whenever the cursor hovers over a machine ID's check-in status icon (see "Check-in Status" on page 603).

Auto assign tickets

Auto assign a ticket to this machine ID if the Ticketing email reader *(page 248)* receives an email from the same email address as the Contact Email. Applies when new emails come into the ticketing email reader that do not map into any of the email mappings *(page 250)*

> Note: if multiple machine IDs have the same contact email, then only one machine ID can have this checkbox checked.

Contact Name

Enter the name of the individual using the managed machine. This setting is displayed in the Contact Name column.

Contact Email

Enter the email address of the individual using the managed machine. This setting is displayed in the Contact Email column.

> Note: A Contact Email address is required for users to receive a new password using the Get New Password option on the User Access Welcome Page *(page 613)*. See Agent > User Access *(page 253)* for more information.

Contact Phone

Enter the phone number of the individual using the managed machine. This setting is displayed in the Contact Phone column.

Admin Email

Enter the email address of the individual responsible for administering support to the managed machine. This can be the administrator, but is often someone who is part of the IT staff of the company that owns the managed machine. This setting is displayed in the Admin Email column.

Language Preference

The language selected in the Language Preference drop down list determines the language displayed by an agent menu *(page 483)* on a managed machine. The languages available are determined by the language packages installed using System > Preferences *(page 501)*.

Update

Click Update to update selected machine IDs with the profile information previously entered.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

User Access

Agent > User Access
Ticketing > User Access

The User Access page determines whether users can perform the following tasks from their own machine or from another machine using the User Access Welcome Page *(page 613)*:

- Remote control or FTP *their own managed machine from another machine*. This is the same remote control capability administrators have, except it restricts users to their own machine.
- *Initiate* a chat session with a KServer administrator from their own machine or any other machine.

> Note: An administrator can always initiate a chat *(page 334)* session with a user regardless of this setting.

- Create or display tickets for their own machine or any other machine.
- Use any other menu option on the User Access Welcome Page from another machine as though they were currently logged into their own managed machine. For example, send email.

> Note: Remote Cntl, Ticketing and Chat must be enabled using this page for these options to be visible on the User Access Welcome Page.
>
> Note: You can download a User Access Quick Start Guide from the first topic of online help.

Accessing the User Access Welcome Page Remotely

A user can display the User Access Welcome Page associated with their own machine from another machine as follows:

1. Log into `http://your_KServer_address/access/` page, substituting the appropriate target KServer name for `your_KServer_address` in the URL text.

> Note: This is the same page that administrators use to log into the KServer.

2. Log into the KServer by entering either:
   - The machine ID.group ID and the password assigned to the machine ID using this page, or
   - The user name and password assigned to the machine ID using this page.

The User Access Welcome Page displays. The user can click any menu option as though he or she were logged in from their own managed machine. The user can click the Desktop or File Transfer menu options to initiate a remote connection to their own machine, create or view ticket, or initiate a chat, if these options are enabled.

Re-Enabling User Logons

User logons follow the same Logon Policy *(page 534)* as administrator logons. If a user attempts to logon too many times with the wrong password their account will automatically be disabled. You can re-enable the logon by setting a new password or waiting for the disable account time to lapse.

Generating a New User Access Password

If a user has forgotten their user access password, they can generate a new password as follows:

1. Log into `http://your_KServer_address/access/` page, substituting the appropriate target KServer name for `your_KServer_address` in the URL text.

   > Note: *This is the same page that administrators use to log into the KServer.*

2. Enter their user name in the Username field.
3. Click the Get New Password menu option.

   A new random password is sent to the user email address of record for the managed machine. This user email address is set using the Contact Email field in Agent > Edit Profile *(page 251)*.

Customizing the User Access Welcome Page

Master administrators can customize the web page seen by users using System > Customize *(page 535)*, adding their company's logo, look, and feel to the web experience for their users.

Logon Name

Enter the Logon Name the user must use to log into the KServer to initiate chat sessions, enter or view tickets and/or get remote access to their machine. Logon names and passwords are case sensitive. Passwords must be at least six characters long. if no logon name is specified, then the Logon Name defaults to the machine.group name

> Note: *All logon names must be unique in the system. Since users may also logon using their machine ID, logon names, machine IDs, and administrator names must all be unique.*

Create Password, Confirm Password

Define a password for the user logon. Passwords must be at least 6 characters long. The user can change the password after the administrator assigns him one. See *Generating a New User Access Password* above.

Apply

Click Apply to apply the logon name and password to the selected machine ID.

Clear

Permanently remove the logon credential *(page 604)* from the selected machine ID.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Logon Name

The logon name assigned to this machine ID. Users that have been granted remote access to their machine may logon using either their machine ID or logon name.

User Web Logon

Displays `Enabled` if a logon name and password has been assigned to this machine ID, even if Remote Cntl, FTP and Chat are not checked. Indicates that a user can log into the user page from a web browser on any machine. They can always get to that same page by double clicking the agent icon on their own machine or selecting Contact Administrator... from the agent menu *(page 599)*.

Enable Remote Cntl

Check this box to allow users remote control access to their machine when they log on to the VSA through any web browser.

Enable Ticketing

Check this box to allow users to create and modify tickets for their own machines. Users can only see tickets assigned to their machine.

Enable Chat

Check this box to allow users to initiate a chat session with a logged in administrator. They will only be able to chat with administrators that have access rights to the group ID that the user's machine belongs to.

Chapter 8

Patch Management

In This Chapter

Patch Mgmt Tab

Use the Patch Mgmt tab to monitor, scan, install, and verify Microsoft patches on managed machines. Patch management automates the process of keeping all your machines up to date with the latest patches. You decide how and when updates are applied on a per machine basis. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

> Note: You can view Patch Management demos at
> http://www.kaseya.com/resources/demo.php

Functions	Description
Scan Machine *(page 263)*	Determine what patches are missing on manage machines.
Patch Status *(page 266)*	Display a summary view of installed, missing and denied patches for each managed machine.
Initial Update *(page 268)*	Perform *one-time* processing of *all* approved patches on managed machines.
Pre/Post Script *(page 270)*	Run scripts before and/or after patch Initial Update.
Automatic Update *(page 272)*	Update missing approved patches on managed machines automatically on a *recurring* basis.
Machine History *(page 273)*	Display a detailed view of patch scan results for each managed machine.
Machine Update *(page 274)*	Schedule the installation of missing patches for an individual machine.
Patch Update *(page 275)*	Apply individual patches to multiple machines.
Rollback *(page 278)*	Uninstall patches from managed machines.
Cancel Updates *(page 279)*	Cancel pending patch installations.
Create Delete *(page 280)*	Create and delete machine patch policies.
Membership *(page 282)*	Assign machine IDs as members of one or more patch policies.
Approval by Policy *(page 283)*	Approve or deny patches by patch policy.
Approval by Patch *(page 285)*	Approve or deny patches by patch.
KB Override *(page 288)*	Override patch policy default approval status by Microsoft knowledge base article.
Windows Auto Update *(page 289)*	Remotely set the Windows Automatic Updates settings on selected machines.
Reboot Action *(page 292)*	Determine whether or not to reboot the machine automatically after installing new patches.
File Source *(page 295)*	Specify where each machine gets new patch installation files from.

Patch Alert *(page 298)*	Configure alerts for patch-related events, such as when a new patch becomes available for a managed machine.
Office Source *(page 302)*	Specify an alternate source location for MS Office installation files.
Command Line *(page 305)*	Set the command line parameters used to install patches.
Patch Location *(page 308)*	Specify the URL to download a patch from when the system can not automatically locate it.

Methods of Updating Patches

The VSA provides five methods of applying Microsoft patches to managed machines:

- Initial Update is a *one-time* processing of all approved Microsoft patches applicable to a managed machine based on Patch Policy *(page 609)*. Initial Update ignores the Reboot Action *(page 292)* policy and reboots the managed machine without warning the user as often as necessary until the machine has been brought up to the latest patch level. Initial Update should only be performed during non-business hours and is typically performed on newly added machines.
- Automatic Update is the *preferred* method of updating managed machines on a *recurring* basis. Obeys both the Patch Policy and the Reboot Action policy.
- Patch Update - If you're using Automatic Update, then Patch Update is used on an exception basis to apply individual patches to multiple machines or for patches that originally failed on certain machines. Overrides the Patch Policy but obeys the Reboot Action policy.
- Machine Update - If you're using Automatic Update, then Machine Update is used on an exception basis to apply patches to individual machines. Overrides the Patch Policy but obeys the Reboot Action policy. Machine Update is often used to test a new patch prior to approving it for general release to all machines.
- Patch Deploy - You can also use a user defined script to install a Microsoft patch using Scripts > Patch Deploy *(page 61)*. Microsoft releases many hot fixes as patches for very specific issues that are not included in the Microsoft Update Catalog or in the Office Detection Tool, the two patch data sources the Patch Management module uses to manage patch updates. Patch Deploy enables customers to create a patch installation script for these hot fixes, via this wizard, that can be used to schedule the installation on any desired machine.

> Note: You can install non-Microsoft applications using Scripts > Application Deploy *(page 63)*. When a pre-defined install solution cannot be used, use Scripts > Packager *(page 66)* to create a self-extracting file ready for automated distribution.

You can also cancel a pending patch installation or uninstall patches.

- Cancel pending patch updates using Cancel Updates *(page 279)*.

- Use the Patch Update *(page 275)* page to cancel the pending update of a specific patch on all machines.
- Remove patches from managed machines using Rollback *(page 278)*.

Configuring Patch Management

Analyzing Patch Status

You can determine the patch status of managed machines using the following pages:

- Determine what patches are missing on managed machines using Scan Machine *(page 263)*.
- Display a summary view of installed, missing and denied patches for each managed machine using Patch Status *(page 266)*.
- Display a detailed view of patch scan results for each managed machine using Patch History *(page 273)*.

Configuring Patch Management

The following configuration pages apply to Initial Update, Automatic Update, Patch Update, and Machine Update unless indicated otherwise.

- Optionally create a patch policy *(page 609)* using Patch Mgmt > Create/Delete *(page 280)*. Patch policies are required to set approval policies. Applies to Automatic Update and Initial Update.
- Optionally assign machine IDs to a patch policy using Patch Mgmt > Membership *(page 282)*. Applies to Automatic Update and Initial Update.
- Optionally set patch approval policies using Approval by Policy *(page 283)*, Approval by Patch *(page 285)* or KB Override *(page 288)*. Applies to Automatic Update and Initial Update.
- Optionally change the reboot policy for machine IDs using Reboot Action *(page 292)*. Applies to Automatic Update, Patch Update and Machine Update.
- Optionally change the File Source *(page 295)* location machines use to download patches.
- Optionally change command line parameters for installing selected patches using the Command Line *(page 305)* page.
- Optionally change the URL patches are downloaded from using Patch Location *(page 308)*.
- Optionally configure alerts for patch-related events using Patch Alert *(page 298)*.
- Optionally enable or disable Windows Auto Update *(page 289)* on managed machines.
- If a credential *(page 495)* has been created for a machine ID, then all patches are installed on that machine ID using the rights of that credential. A credential must be defined to use the Office Source page.
- Optionally create an alternate source location for Office patches using Office Source *(page 302)*.
- Optionally run scripts before or after Initial Update *(page 268)*. Applies to Initial Update only.

Patch Processing

When you schedule a patch the following occurs:

1. The agent on the managed machine is told to start the update process at the scheduled time.
2. The patch executable is downloaded to the managed machine from where ever the File Source *(page 295)* is set for that machine ID.
3. The patch file is executed on the managed machine using the parameters specified in Command Line *(page 305)*. You should never have to set these switches yourself, but just in case, this capability is there.
4. After all the patches have been installed the managed machine is rebooted. *When* reboots occur for a machine ID depends on the Reboot Action *(page 292)* assigned to that machine ID. Applies to Machine Update *(page 274)*, Patch Update *(page 275)* and Automatic Update *(page 272)*. Reboots in response to an Initial Update *(page 268)* always occur immediately and without warning the user.
5. The managed machine is rescanned automatically. It takes 2 to 3 minutes after the reboot is complete for this data to show up on the VSA. Wait several minutes before checking the patch state after a reboot.

> Note: If you schedule multiple patches for installation on the same machine, all the patches are installed at the same time. After all the patches have been installed the machine reboots once. This technique saves time and reboots.
>
> Note: Service packs are always installed separately. If you are installing a service pack with other patches you will see a reboot after the service pack install and than another single reboot after all the other patches are installed.

Update Classification

Microsoft updates are organized as follows:

Update Classification	Classification Type (Non-Vista / Vista)	Included in WSUSSCN2.CAB*
Security Updates	High Priority / Important Includes critical, important, moderate, low, and non-rated security updates.	Yes
Critical Updates	High Priority / Important	Yes
Update Rollups	High Priority / Important	Yes
Service Packs	Optional – Software / Recommended	Yes
Updates	Optional – Software / Recommended	No
Feature Packs	Optional – Software / Recommended	No
Tools	Optional – Software / Recommended	No

In those cases where a machine does not have Internet connectivity at the time of a machine patch scan, Kaseya uses Microsoft's WSUSSCN2.CAB data file. Microsoft publishes this CAB file as needed. It contains a sub-set of the Microsoft Update Catalog. As seen in the table above, scan data for only the high priority updates and service packs are included in the CAB file. The KServer automatically downloads the CAB file on a daily basis to make it available for those machines needing this type of scan. See Windows Automatic Update *(page 615)*.

Patch Failure

After the patch installation attempt completes—including the reboot if requested—the system re-scans the target machine. If a patch still shows missing after the re-scan, failure is reported. Patches can fail for several reasons:

- Insufficient Disk Space - Patches are downloaded, or copied from a file share, to the local machine's hard disk. Several patches, especially service packs, may require significant additional local disk space to completely install. Verify the target machine has plenty of disk space available.
- Bad Patch File - The phrase `Bad Patch File` in the Comments column indicates the patch file failed to execute for some reason. If you schedule multiple patches to install as a batch and even *one* of them fails, all the patches are marked as `Bad Patch File`. The system is reporting a script failure and can not distinguish which patch in the script caused the failure.You can determine which patch failed by looking at the Script Log *(page 422)* for this machine. The log indicates which patches successfully installed prior to the script failure.
- Corrupted Patch File - The downloaded patch file is corrupt.
- Missing Patch Location - The phrase `Missing patch location` in the Comments column means the URL used to download patches from on the Microsoft website is missing. You can manually enter the correct location using the Patch Location *(page 308)* page.
- No Reboot - Several patches require a system reboot before they take effect. If your Reboot Action *(page 292)* settings did not allow a reboot, the patch may be installed but will not be effective until after the reboot.
- Command Line Failed - If the command line parameters set in the Command Line *(page 305)* function are incorrect, the patch executable typically displays a dialog box on the managed machine stating there is a command line problem. This error causes patch installation to halt and the patch installation script to terminate. The patch file remains on the managed machine and `Install Failed` is displayed. Enter the correct command line parameters for the patch and try again.

  > Note: Command line parameters for each patch apply globally and can only be changed by a master administrator.

- MS Office Command Line Failed - The only command line parameter permitted for use with Microsoft Office related patches is `/Q`. Because MS Office patches may require the Office installation CD(s), the use of the `/Q` command line parameter might cause the patch install to fail. If an Office related patch fails, remove the `/Q` command line parameter and try again.

> Warning: The only switch permitted for use with Microsoft Office 2000, XP, and 2003 related patches (marked as Office) is /Q. If /Q is not specified, Microsoft Office 2000, XP, and 2003 switches will be reset to /INSTALL-AS-USER. Microsoft Office 2003 patches may also include the /MSOCACHE switch used to attempt a silent install if the MSOCache exists on the machine and the /INSTALL-AS-USER switch is set.

- Patch Download Blocked - The patch file was never delivered to the machine. The system downloads the patch directly from the internet to either the KServer, a file share, or directly to the managed machine, depending on your File Source *(page 295)* settings. Your firewall may be blocking these downloads. A patch file delivered to the agent with a size of only 1k or 2k bytes is an indication of this problem.
- User not logged in - In some cases a user on the machine being patched must be logged in to respond to dialogs presented by the install during the patch. The patch script automatically detects whether a user is currently logged in and will not continue if a user is not logged in. Reschedule the installation of the patch when a user is available and logged in to the machine.
- Manual install only - Not a patch failure, but a requirement. Some patches and service packs require passwords or knowledge of a customized setup that the VSA can not know. The VSA does not automatically install patches having the following warnings:

```
Manual install only
Patch only available only available from
Windows Update web site
No patch available; must be upgraded to latest
version
```

These updates must be installed manually on each machine.

Scan Machine

Patch Mgmt > Scan Machine

The Scan Machine page schedules scans to search for missing patches on each managed machine. Scanning takes very little resources and can be safely scheduled to run at any time of day. The scanning operation does not impact users at all.

Refresh patch database

When new patches are published, your KServer's patch database is updated with the information by scheduling the Refresh patch database record at the top of this page. Typically Refresh patch database is updated daily.

Scanning Frequency

System and network security depends on all your machines having the latest security hot fixes and patches applied. Patches are released at irregular and unpredictable intervals. To insure your machines are updated you should scan all managed machines on a daily basis.

Scanning the KServer

To scan the KServer, you must install an agent on the KServer. Once installed, you can scan the KServer just like any other managed machine.

Remind me when machines need a patch scan scheduled

If checked, a warning message displays the number of machine IDs not currently scheduled. The number of machine IDs reported depends on the Machine ID / Group ID filter *(page 17)* and machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Schedule

Click Schedule to schedule this task on selected machine IDs using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Run Now

Click Run Now to run this task on selected machine IDs immediately.

Scan every N periods

This task is always performed as a recurring task. Enter the number of times to run this task each time period.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Last Scan

This timestamp shows when a machine ID was last scanned. When this date changes, new scan data is available to view.

Next Scan

This timestamp shows the next scheduled scan. The timestamp displays as red text with yellow highlight if the scheduled time is in the past.

Interval

The interval for the scheduled task to recur.

Patch Status

Patch > Patch Status

Similar information is provided using Reports > Patch Management *(page 411)*.

The Patch Status page provides a summary view of the patch status for each of your managed machines. You can quickly identify machines that are missing patches or are indicating errors. The total of all missing patches is the sum of the Missing Approved, Missing Denied, and Missing Manual.

Patch Test

Most patch problems are the result of configuration and/or permissions issues. The test function exercises the entire patch deployment process without actually installing anything on the target machine or causing a reboot. If a machine ID's operating system does not support patching, the operating system is displayed. The system resets test results every time a machine ID's File Source *(page 295)* or Set Credential *(page 495)* changes.

> Warning: Test cancels any pending patch installs except Initial Updates *(page 268)*.

> Note: Machines being processed by Initial Update are *not* tested. The Initial Update status message and date/time is displayed instead of the column totals.

Test

Click Test to verify patches can update selected machine IDs. Does not actually install any patches.

Cancel

Click Cancel to stop the test.

Auto Refresh Table

If checked, the paging area is automatically updated every five seconds. This checkbox is automatically selected and activated whenever Test is clicked.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Install Patches

The number of patches installed.

Missing Approved

The number of approved patches missing.

Missing Denied

The number of unapproved patches missing.

Missing Manual

The number of patches missing that must be installed manually. These patches cannot be processed by Automatic Update *(page 272)* or Initial Update *(page 268)*.

Pending Patches

The number of patches scheduled to be installed.

User Not Logged In

The number of patches not installed because the the patch requires the user to be logged in.

Failed Patches

The number of patches that attempted to install but failed.

Test Results

The status returned after clicking the Test button:

- Untested
- Pending
- Passed

- Failed

Initial Update

Patch Mgmt > Initial Update

Initial Update is a *one-time* processing of all approved Microsoft patches applicable to a managed machine based on Patch Policy *(page 609)*. Initial Update ignores the Reboot Action *(page 292)* policy and reboots the managed machine without warning the user as often as necessary until the machine has been brought up to the latest patch level. Initial Update should only be performed during non-business hours and is typically performed on newly added machines. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

> Note: The agent for the KServer is not displayed on this page. Initial Update cannot be used on the KServer.

Sequence of Updates

When a machine is scheduled, a patch scan is performed to ensure the latest scan results are available. Then updates are installed as required in successive groups in the following order:

1. The Windows Installer.
2. Operating system related service packs.
3. Non-security patches.
4. Microsoft security patches (`MSyy-xxx`).
5. Office related service packs, when applicable. These may require a CD on the local machine.
6. Office related patches, when applicable. These may require a CD on the local machine.

> Note: Reboots are forced after each upgrade, service pack and at the end of each patch group without warning. This is necessary to permit the re-scan and installation of the subsequent groups of patches.

Scripting

Scripts can be configured to be executed just before an Initial Update begins and/or after completion. For example, you can run scripts to automate the preparation and setup of newly added machines before or after Initial Update. Use Patch Mgmt > Pre/Post Script *(page 270)* to configure these scripts on a per-machine basis.

Schedule

Click Schedule to schedule this task on selected machine IDs using the schedule options previously selected.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Scheduled

This timestamp shows the scheduled Initial Update.

Updated

If checked, an Initial Update has been performed successfully on the machine ID. This timestamp shows when the Status being reported was completed.

Status

During processing, the Status column displays the following types of messages, if applicable:

- Started
- Processing Windows Installer
- Processing operating system service packs
- Processing non-security patches
- Processing Microsoft security patches
- Processing Office service packs
- Processing Office patches

When all processing has been completed, the Status column displays either:

- Completed - fully patched
- Completed - remaining patches require manual processing

If the latter status displays, select the appropriate machine ID in Patch Mgmt > Machine Update *(page 274)* to determine why all patches were not applied. Some patches might require manual install or for the user to be logged in. In the case of patch failures, manually schedule failed patches to be reapplied. Due to occasional conflicts between patches resulting from not rebooting after each individual patch, simply reapplying the patches typically resolves the failures.

Pre/Post Script: Patch Management

Patch Mgmt > Pre/Post Script

Use the Pre/Post Script page to run scripts either before and/or after Initial Update *(page 268)*. For example, you can run scripts to automate the preparation and setup of newly added machines before or after Initial Update.

> Note: Post scripts run even if there are patch installation failures.

To Run a Pre/Post Script

1. Select machine IDs.
2. Click the select script link to select a script to run before or after Initial Update.
3. Click Set.

Set

Click Set to run selected scripts before or after an Initial Update on selected machine IDs.

Run Select Script Before Initial Update Starts

If checked, runs the selected script *before* an Initial Update on selected machine IDs.

Run Select Script After Initial Update Completes

If checked, runs the selected script *after* an Initial Update on selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

👁 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Pre Script / Post Script

This column lists the scripts set to run before and/or after an Initial Update.

Automatic Update

Patch Mgmt > Automatic Update

The Automatic Update page is the *preferred* method of updating manage machines with Microsoft patches on a *recurring* basis. Automatic Update obeys both the Patch Approval Policy *(page 609)* and the Reboot Action *(page 292)* policy. Use Initial Update *(page 268)* if you are installing patches for the first time on a managed machine. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

- Service packs and patches that require manual intervention are not included in Automatic Updates. These are shown in the Missing Manual column of the Patch Status *(page 266)* page and on the individual Machine Update *(page 274)* page.
- Patch installation only occurs when a new missing patch is found by Scan Machine *(page 263)*.
- Automatic Update is suspended for a machine while Initial Update is being processed. Automatic Update automatically resumes when Initial Update completes.

Set Auto

Click Set Auto to schedule an automatic update of new patches on selected machine IDs on a recurring basis.

Daily / Weekly / Monthly

Perform this task every day, every week, or every month. Weekly displays a day of week drop-down list. Monthly displays a 1-31 drop down list. If a month has fewer days than the day selected, the task is performed on the last day of the month.

Time

Enter the hour and minute to schedule this task.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Auto Update Time

The day and time this task is scheduled to recur.

Machine History

Patch Mgmt > Machine History

Similar information is provided using Reports > Patch Management *(page 411)*.

The Machine History page displays the results from the most recent patch scan of managed machines. All installed and missing patches applicable to a managed machine are listed, regardless of whether the patch is approved or not.

- Click a machine ID link to display its patch history.
- Patches are grouped by update classification *(page 613)* first and knowledge base article number second.
- Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.
- Patches classified as security updates have a security bulletin ID (`MSyy-xxx`). Clicking this link displays the security bulletin.

- The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

> Note: If `Patch location not available` is displayed, then the KServer does not know where it can download the patch file executable from. See Patch Mgmt > Patch Location *(page 308)* to remedy this.

Machine Update

Patch Mgmt > Machine Update

Print a report of similar information using Reports > Patch Management *(page 411)*.

The Machine Update page manually installs Microsoft patches on individual machines. Machine Update overrides the Patch Approval Policy *(page 609)* but obeys the Reboot Action *(page 292)* policy. If you're using Automatic Update, then Machine Update is used on an exception basis. Machine Update is often used to test a new patch prior to approving it for general release to all machines. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

Using Machine Update

1. Click a machine ID to display all patches missing on that machine. Patches are grouped by update classification *(page 613)* first and knowledge base article number second.

   The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

2. Optionally click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.
3. Optionally click a Security Bulletin link to review a security bulletin, if available. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`).
4. Check the box next to patches you want installed on the selected machine ID.
5. Select install parameters.
6. Click the Schedule button to install patches using the install parameters.
7. Click the Cancel button to remove any pending patch installs.

Schedule

Click Schedule to schedule the update of selected missing patches on a machine ID using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Hide patches denied by Patch Approval

If checked, hides patches denied patch approval. Patches with the status `Pending Approval` are considered denied by Patch Update.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Patch Update

Patch Mgmt > Patch Update

Print a report of similar information using Reports > Patch Management *(page 411)*.

The Patch Update page updates missing Microsoft patches on all machines displayed in the paging area. Patch Update overrides the Patch Approval Policy *(page 609)* but obeys the Reboot Action *(page 292)* policy. If you're using Automatic Update, then Patch Update is used on an exception basis to apply individual patches to multiple machines or to re-apply patches that originally failed on certain machines. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

Patches Displayed

The display of patches on this page are based on:

- The Machine ID/Group ID filter *(page 607)*.
- The patches reported using Scan Machine *(page 263)*. Managed machines should be scanned daily.
- The patches of machines using Automatic Update *(page 272)*. If the Hide machines set for Automatic Update box is checked, these patches are *not* listed here. These patches are automatically applied at the Automatic Update scheduled time for each machine.

- If the Hide patches denied by Patch Approval box is checked, patches that are denied or pending approval are not listed here.
- The patches of machines being processed by Initial Update *(page 268)*. These patches are excluded from this page until Initial Update completes.

Duplicate Entries

Microsoft may use a common knowledge base article for one or more patches, causing patches to appear to be listed more than once. Patch Update displays patches sorted by Update Classification or Product first and knowledge base article number second. Check the Product name or click the KB Article link to distinguish patches associated with a common knowledge base article.

Using Patch Update

1. Optionally click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.
2. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`). Optionally click the Security Bulletin link to review the security bulletin, if available.
3. Optionally click the box next to a KB Article to schedule that patch on all managed machines missing that patch.
4. Optionally click the Machines... button to schedule a patch on individual machines or to set machines to ignore a patch. The Ignore setting applies to the selected patch on the selected machines. If Ignore is set, the patch is considered `Denied`. Patches marked as Ignore on the selected machines cannot be installed by any of the installation methods. To be installed, the Ignore setting must be cleared.

   > Note: *A warning icon ⚠ indicates the patch status for one or more machines should be checked before installing this patch. Click the* Machines *button and review the* Status *column for each machine missing this patch.*

5. Select install parameters.
6. Click the Schedule button to install the patches using the install parameters.
7. Click the Cancel button to remove any pending patch installs.

Hide machines set for Automatic Update

If checked, hides patches missing from machine IDs set to Automatic Update *(page 272)*.

Hide patches denied by Approval Policy

If checked, hides patches denied by Patch Approval Policy *(page 609)*.

Patch Group By

Display patch groups by Classification or Product.

Schedule

Click Schedule to schedule a update of selected patches on all machine IDs missing this patch, using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Show Details

Click the Show Details checkbox to display the expanded title and installation warnings, if any, of each patch.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Status Warning Icon

A warning icon ⚠ indicates the patch status for one or more machines should be checked before installing this patch. Click the Machines button and review the Status column for each machine missing this patch.

KB Article

The knowledge base article describing the patch. Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

Missing

The number of machines missing this patch.

Auto

Displays only if the Hide machines set for Automatic Update box is *not* checked. The number of machines scheduled to install this patch by Automatic Update.

Ignore

The number of machine set to ignore a patch using the Machines button. The Ignore setting applies to the selected patch on the selected machines. If Ignore is set, the patch is considered `Denied`. Patches marked as Ignore on the selected machines cannot be installed by any of the installation methods. To be installed, the Ignore setting must be cleared.

Product

The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

Update Classification

See Update Classification *(page 261)* for an explanation of Classification and Type.

Rollback

Patch Mgmt > Rollback

The Rollback page removes patches after they have been installed on a system. Not all patches may be uninstalled. The system only lists patches supporting the rollback feature. Patches are grouped by update classification *(page 613)* first and knowledge base article number second. Includes the date the patch was installed, if available.

> Warning: Removing Windows software in the wrong order may cause the operating system to stop functioning.

Follow these steps to remove a patch from any managed machine:

1. Click the machine ID that you want to remove a patch from.
2. Check the box to the left of the patch you want to uninstall.
3. Specify the date and time to perform the rollback operation.
4. Click the Rollback button.

Rollback

Click Rollback to schedule a update of selected machine IDs using the schedule options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to clear a scheduled rollback.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

KB Article

The knowledge base article describing the patch. Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

Security Bulletin

The security bulletin associated with a patch. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`). Click the Security Bulletin link to review the security bulletin, if available.

Cancel Updates

Patch Mgmt > Cancel Updates

The Cancel Updates page clears all *pending* patch installations on selected machine IDs.

Note: Use the Patch Update *(page 275)* page to cancel the pending update of a specific patch on all machines.

Warning: This page also cancels initial updates *(page 268)*.

Warning: If an installation script has already begun, Cancel Updates might not stop the script from running.

Cancel

Click Cancel to clear all pending patch installations on selected machine IDs.

Show Patch List

Check this box to list all *pending patch IDs* on each machine ID in the Pending Update Install Status column. If unchecked, the *total number of pending patches* are listed for each machine ID.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Create/Delete: Patch Policy

Patch Mgmt > Patch Policy: Create/Delete

The Create/Delete page creates or deletes patch policies. Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.

- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.
- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.
- Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

Create

Click Create to to define a new patch policy, after entering a new machine patch policy name in the edit field.

Delete

Click Delete to delete selected patch policies.

Enter name for a new patch policy

Enter the name for a new patch policy.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Edit Icon

Click the edit icon 📝 to the left of a patch policy to rename it.

Policy Name

Lists all machine patch policies defined for the entire system.

Member Count

Lists the number of machines that are members of each patch policy.

Show Machines

Click Show Machines to list the members of a patch policy.

Membership: Patch Policy

Patch Mgmt > Patch Policy: Membership

The Membership page assigns machine IDs to one or more patch policies. Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.
- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.
- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.

Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

Add

Click Add to add selected machine IDs to selected patch policies.

Remove

Click Remove to remove selected machine IDs from selected patch policies.

Assign machines to a patch policy

Click one or more patch policy names to mark them for adding or removing from selected machine IDs.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Policy Membership

Displays a comma separated list of patch policies that each machine ID is a member of.

Approval by Policy

Patch Mgmt > Approval by Policy

The Approval by Policy page approves or denies the installation of Microsoft patches on managed machines by *patch policy*. Patches pending approval are considered denied until they are approved. This gives you the chance to test and verify a patch in your environment before the patch automatically pushes out. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

Setting Patch Approval Policies

Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.
- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.

- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.
- Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

Policy

Select a patch policy by name from the drop-down list.

Save As...

Click Save As... to save the currently selected patch policy to a new policy with identical settings. All patch approval/denial statuses are copied as are the default approval statuses for the policy. Machine membership is *not* copied to the new policy.

Policy View / Group By

Display patch groups by classification or product.

Patch Approval Policy Status

This table displays the approval status of patches by update classification *(page 613)* or product group. Approved, Denied, Pending Approval, and Totals statistics are provided for each update classification or product group.

Select a Default Approval Status for any category for this patch policy. Newly identified patches for this patch policy are automatically set to this default value. Choices include:

✓ - Approved

✖ - Denied

? - Pending Approval

Click any link in this table to display a Patch Approval Policy Details page listing individual patches and their approval status. The list is filtered by the type of link clicked:

- Classification or Product
- Approved
- Denied
- Pending Approval
- Totals

In the Patch Approval Policy Details page you can:

- Approve or deny approval of patches individually.
- Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

> Note: Microsoft may use a common knowledge base article for one or more patches, causing patches to appear to be listed more than once. Check the Product name or click the KB Article link to distinguish patches associated with a common knowledge base article.

- Click the Security Bulletin link to review the security bulletin, if available. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`).
- The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.
- See Update Classification *(page 261)* for an explanation of Classification and Type.
- Click the Show Details checkbox to display the expanded title, patch status notes and installation warnings, if any, of each patch.
- Click Filter... to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.
- Optionally add a note, up to 500 characters, using Patch Status Notes. The note is added when the Approve or Deny buttons are selected. If the text box is empty when the Approval or Deny buttons are selected, the note is removed for selected patches.

Approval by Patch

Patch Mgmt > Approval by Patch

The Approval by Patch page approves or denies the installation of Microsoft patches on managed machines by *patch* for *all* patch policies. This page only displays for master administrators *(page 599)*. Changes affect patches installed by all administrators. This saves you the trouble of approving pending patches separately for each patch policy. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

Setting Patch Approval Policies

Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.
- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.
- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.
- Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

Patch Status Notes

Optionally add a note, up to 500 characters, using Patch Status Notes. The note is added when the Approve or Deny buttons are selected. If the text box is empty when the Approval or Deny buttons are selected, the note is removed for selected patches.

Approve

Click Approve to approve selected patches for all patch policies.

Deny

Click Deny to deny selected patches for all patch policies.

Show Details

Check Show Details to display multiple rows of information for all patches. This includes the title of a patch, the number of patch policies that have been approved, denied, or are pending approval for a patch, patch status notes, and installation warnings, if any.

Filter...

Click Filter... to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

KB Article

Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

> Note: Microsoft may use a common knowledge base article for one or more patches, causing patches to appear to be listed more than once. Check the Product name or click the KB Article link to distinguish patches associated with a common knowledge base article.

Security Bulletin

Click the Security Bulletin link to review the security bulletin, if available. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`).

Product

The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

Classification / Type

See Update Classification *(page 261)* for an explanation of Classification and Type.

Published

The date the patch was released.

Language

The language the patch applies to.

KB Override

Patch Mgmt > KB Override

The KB Override page sets overrides of the *default* approval status of patches set using Approval by Policy *(page 283)* by *KB Article* for *all* patch policies. It also sets the approval status for *existing* patches by KB Article for all patch policies. This page only displays for master administrators *(page 599)*. Changes affect patches in *all* patch policies installed by *all* administrators. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

For example, KB890830, "The Microsoft Windows Malicious Software Removal Tool" is released monthly. If you decide to approve all patches associated with this KB Article using KB Override, then not only are existing patches approved but all *new* patches associated with this KB article are automatically approved each month the new patch is released.

Setting Patch Approval Policies

Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.
- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.
- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.
- Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

KB Article

Enter the KB Article to approve or deny.

> Note: See Approval by Policy *(page 283)* or Approval by Patch *(page 285)* for a listing of all available KB Articles.

Approve

Click Approve to approve patches associated with this KB Article. Multiple patches can be associated with a KB Article.

Deny

Click Deny to deny patches associated with this KB Article. Multiple patches can be associated with a KB Article.

KB Article

Click the KB Article link to display the knowledge base article.

Override Status

`Approved` or `Denied`. Applies to all patches associated with this KB Article.

Admin

The administrator who approved or denied patches associated with this KB Article.

Changed

The date and time the administrator approved or denied patched associated with this KB Article.

Windows Auto Update

Patch > Windows Auto Update

The Windows Auto Update page determines whether Windows Automatic Updates on managed machines is disabled, left for the user to control, or configured.

Window Automatic Updates

Windows Automatic Updates is a Microsoft tool that automatically delivers updates to a computer. Windows Automatic Updates is supported in the following operating systems: Windows 2003, Windows XP, and Windows 2000 SP3 or later. While Windows Millennium Edition (Me) has an Automatic Updates capability, it cannot be managed as the above operating systems can. Patch Mgmt > Windows Auto Update *(page 289)* can enable or disable this feature on managed machines.

Windows Automatic Update Cannot Use Template Accounts

Windows Automatic Updates is one feature that cannot be preconfigured in a machine ID template *(page 607)*. This is because Windows Automatic Updates is only supported on Windows 2000 SP3/SP4, Windows XP, and Windows Server 2003. Since a machine ID template cannot have a specified operating system, a setting for this feature cannot be stored in the machine ID template. Also, we need to know the machine's current settings before we can override those settings. The current settings are obtained when a Scan Machine *(page 263)* is performed.

> Note: A checkbox does not display for any machine that either has an operating system that does not support Windows Automatic Updates or for which an initial Scan Machine has not been completed.
>
> For Windows XP SP2 machines: Whenever an administrator disables or forces a specific configuration for Windows Automatic Updates, a registry setting is updated to prevent the bubble warning from the Security Center icon in the system tray to be displayed for Windows Automatic Updates. This is done to avoid end-user confusion since the end-user will not be able to make any changes to the Windows Automatic Updates configuration. It is possible that some anti-malware tools will see this registry setting change as an attempt by malware to eliminate the user warning and therefore will reset the warning to "on".

Disable

Select Disable to disable Windows Automatic Updates on selected machine IDs and let Patch Management control patching of the managed machine. Overrides the existing user settings and disables the controls in Windows Automatic Updates so the user *cannot* change any of the settings. Users can still patch their systems manually.

User Control

Let machine users enable or disable Windows Automatic Updates for selected machine IDs.

Configure

Forces the configuration of Windows Automatic Updates on selected machine IDs to the following settings. Overrides the existing user settings and disables the controls in Windows Automatic Updates so the user *cannot* change any of the settings. Users can still patch their systems manually.

- Notify user for download and installation - Notifies the user when new patches are available but does not download or install them.
- Automatically download and notify user for installation - Automatically downloads updates for the user but lets the user choose when to install them.
- Automatically download and schedule installation - Automatically downloads updates and installs the updates at the scheduled time.

Schedule every day / <day of week> at <time of day>

Applies only if Automatically download and schedule installation is selected. Perform this task every day or once a week at the specified time of day.

Force auto-reboot if user is logged on

Optionally check the box next to Force auto-reboot if user is logged on. By default, Windows Auto Update does *not* force a reboot. Reboot Action *(page 292)* settings do not apply to Windows Auto Update.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Machine Updated

Displays the status of configuring Windows Automatic Updates on selected machine IDs using this page.

- Pending - Windows Automatic Updates is being configured on the selected machine ID.
- Timestamp - The date and time Windows Automatic Updates was configured on the selected machine ID.

Windows Automatic Update Configuration

The Windows Automatic Update configuration assigned to each selected machine ID.

> Note: If the Windows Automatic Update Configuration column displays `Automatic Update not initialized on machine`, the user must select the Windows Automatic Updates icon in the system tray to run the Windows Automatic Updates Setup wizard to setup Windows Automatic Updates.

Reboot Action

Patch Mgmt > Reboot Action

The Reboot Action page defines how reboots are performed after a patch install. Patch installs do not take effect until after a machine is rebooted. The Reboot Action policy applies to Machine Update *(page 274)*, Patch Update *(page 275)* and Automatic Update *(page 272)*. It does *not* apply to Initial Update *(page 268)*. See Methods of Updating Patches *(page 259)*, Configuring Patch Management *(page 260)*, Patch Processing *(page 261)*, Update Classification *(page 261)* and Patch Failure *(page 262)* for a general description of patch management.

> Warning: It is strongly recommended that the Reboot Action for the agent on the KServer be set to `Do not reboot after update`! Automatic rebooting of the KServer can have adverse effects on other KServer processes!

The patch installation script runs at the scheduled time and performs the following steps:

- Downloads, or copies from a file share, all the patch files to a local drive, typically the same drive the agent is installed on.
- Executes each patch file, one at a time.
- Performs a reboot of the machine, as specified by this page.

> Note: If you schedule multiple patches for installation on the same machine, all the patches are installed at the same time. After all the patches have been installed the machine reboots once. This technique saves time and reboots.
>
> Note: Service packs are always installed separately. If you are installing a service pack with other patches you will see a reboot after the service pack install and than another single reboot after all the other patches are installed.

Apply

Click Apply to apply the selected Reboot Action radio option to selected machine IDs.

Reboot immediately after update.

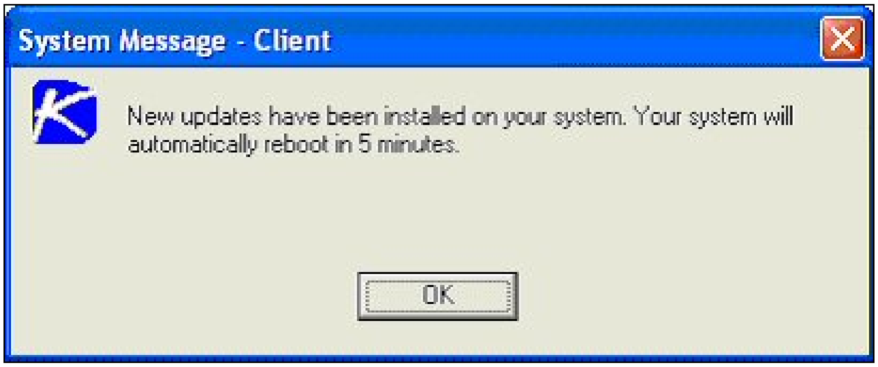
Reboots the computer immediately after the install completes.

Reboot <day of week> at <time of day> after install.

After the patch install completes the computer is rebooted at the selected day of week and time of day. Use these settings to install patches during the day when users are logged in—to get the UNC path—then force a reboot in the middle of the night. Selecting every day reboots the machine at the next specified time of day following the patch installation.

Warn user that machine will reboot in N minutes (without asking permission).

When the patch install completes, the message below pops open warning the user and giving them a specified number of minutes to finish up what they are doing and save their work. If no one is currently logged in, the system reboots immediately.



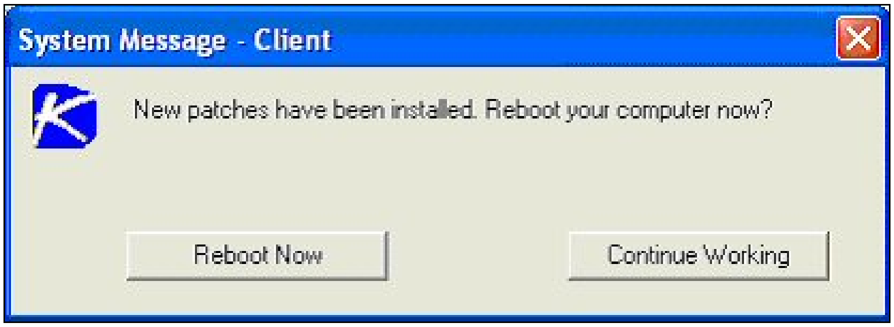
New updates have been installed on your system. Your system will automatically reboot in 5 minutes.

Skip reboot if user logged in.

If the user is logged in, the reboot is skipped after the patch install completes. Use this setting to avoid interrupting your users.

If user logged in ask to reboot every N minutes until the reboot occurs.

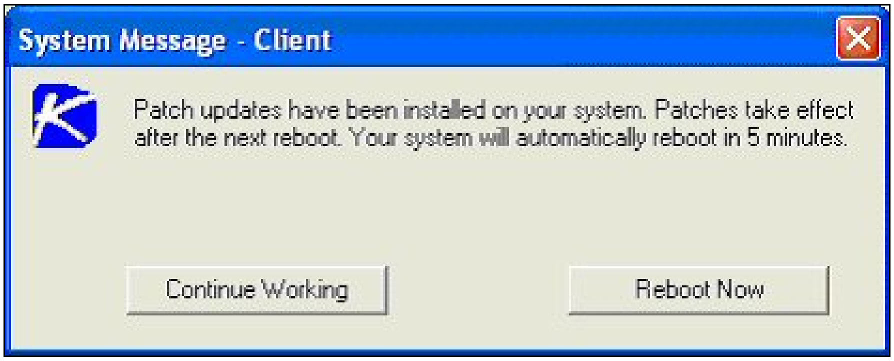
This setting displays the message below, asking the user if it is OK to reboot now. If no one is at the computer or they answer no, the same message appears every N minutes repeatedly, until the system has been rebooted. If no one is currently logged in, the system reboots immediately.



New patches have been installed. Reboot your computer now?

If user logged in ask permission. Reboot if no response in N minutes. Reboot if user not logged in.

This setting displays the message below, asking the user if it is OK to reboot now. If no one is at the computer, it reboots automatically after N minutes without saving any open documents. If no one is currently logged in, the system reboots immediately.

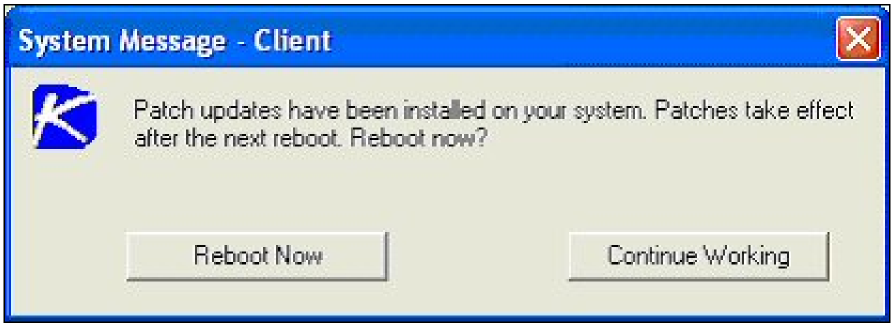


System Message - Client

Patch updates have been installed on your system. Patches take effect after the next reboot. Your system will automatically reboot in 5 minutes.

If user logged in ask permission. Do nothing if no response in N minutes. Reboot if user not logged in.

This setting displays the message below, asking the user if it is OK to reboot now. If no one is at the computer, the reboot is skipped. If no one is logged in, reboot immediately.



System Message - Client

Patch updates have been installed on your system. Patches take effect after the next reboot. Reboot now?

Do not reboot after update

Does not reboot. Typically used if the machine is a server and you need to control the reboot. You can be notified via email when a new patch has been installed by checking Email when reboot required and filling in an email address.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Reboot Action

The type of reboot action assigned to each machine ID.

File Source

Patch Mgmt > File Source

The File Source page defines where each machine gets patch executable files from prior to installation and where these patch executables are copied to on the local machine. File source locations include:

- The internet
- The KServer
- A file share

> Note: Selecting the File share located on option below affects where backup software is installed from, using Backup > Install/Remove *(page 373)*.
>
> Note: Patch download links with a cab extension are always downloaded directly from the Internet. regardless of the File Source setting.

Apply

Click Apply to apply the selected patch source option to selected machine IDs.

Copy packages to temp directory on local drive with most free space

Patches are downloaded, or copied from a file share, to the managed machine's hard disk. Several patches, especially service packs, may require significant additional local disk space to completely install. Check this box to download patches to the temporary directory specified in Temp Directory *(page 489)*, but use the drive on the managed machine with the most free disk space. Uncheck this box to always use the drive specified in Temp Directory for the machine ID.

Delete package after install (from temp directory)

The install package is typically deleted after the install to free up disk space. Uncheck this box to leave the package behind for debugging purposes. If the install fails and you need to verify the Command Line *(page 305)* switches, do not delete the package so you have something to test with. The package is stored in the temporary directory specified in Temp Directory on the drive specified in the previous option.

Download from Internet

Each managed machine downloads the patch executable file directly from the internet at the URL specified in Patch Location *(page 308)*.

Pulled from system server

First the KServer checks to see if it already has a copy of the patch file. If not, the new patch executable is downloaded automatically and stored on the KServer, then used for all subsequent distributions to managed machines. When a patch needs to be installed on a managed machine, this patch file is pushed to that machine from the KServer.

> Note: The default location for patch files stored on the KServer is `C:\Kaseya\WebPages\ManagedFiles\VSAPatchFiles\`

Pulled from file server using UNC path

This method can be best if you support many machines on the same LAN. The patch executable file is copied from a file share accessible to a managed machine.

1. Use the Machine Group Filter drop-down list to select a group ID.
2. Select a machine ID from the File share located on drop down list.
3. Enter the file share name in the in local directory field.

> Note: The value in the in local directory field must be in full path format, such as `c:\shareddir\dir`. The value in the Pulled from file server using UNC path must be in UNC format such as `\\computername\sharedname\dir\`.

First the KServer checks to see if the patch file is already in the file share. If not, the agent automatically loads the patch file either directly from the internet, or gets it from the

KServer. In either case, the managed machine with the file share must have an agent on it.

4. File Server automatically gets patch files from - Select one of the following options:
   - the Internet - Use this setting when the managed machine running the file share has full internet access.
   - the system server - Use this setting when the managed machine running the file share is blocked from getting internet access.
5. Download from Internet if machine is unable to connect to the file server - Optionally check this box to download from the internet. A bad network credential, for example, may prevent a machine from connecting to the file server. This is especially useful for laptops that are disconnected from the company network but have internet access.
6. After the patch file has been downloaded *to* the file share, the agent on the managed machine being patched connects to the file share to download the patch *from* the file share. A user credential is required to connect to the file share. Two methods are available:
   - Set Credential - If a credential *(page 495)* has been specified for machine ID with the file share, the patch install script uses that credential to access the file share and to install the patch files.
   - User Logged In - If a credential has not been set for this machine ID, then a user must be logged in during the install process in order for the agent to connect to the remote file share.

   The patch file is then downloaded from the file share and installed on the managed machine.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Patch Source

Lists the patch source selected for each machine ID.

Patch Alert

Patch Mgmt > Patch Alert

Monitor > Alerts ***(page 113)***

Select `Patch Alert` from the Select Alert Function drop-down list

The Patch Alert page creates alerts for patch management events on managed machines.

- A new patch is available for the selected machine ID.
- A patch installation failed on the selected machine ID.
- The agent credential is invalid or missing for the selected machine ID.
- Windows Auto Update changed.

Passing Alert Information to Emails and Scripts

The following types of monitoring alert emails can be sent and formatted:

- New Patch Available
- Path to Patch Executable Missing - Enabled by selecting the *first* row in the paging area, called Patch Location Missing, and clicking the Apply button.
- Patch Install Failed
- Patch Approval Policies Updated - Enabled by selecting the *second* row in the paging area, called Patch Location Missing, and clicking the Apply button.
- Agent Credential Invalid
- Windows Auto Update Configuration Changed

To Create a Patch Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Set additional patch alert specific parameters.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Patch Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of patch alert emails can be sent and formatted:

- New Patch Available
- Path to Patch Executable Missing
- Patch Install Failed
- Patch Approval Policies Updated
- Agent Credential Invalid
- Windows Auto Update Configuration Changed

> Note: *Changing the email alarm format changes the format for all* Patch Alert *emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<au>	#au#	auto update change
<bi>	#bi#	bulletin ID
<bl>	#bl#	new bulletin list
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<fi>	#fi#	failed bulletin ID
<gr>	#gr#	group ID
<ic>	#ic#	invalid credential type
<id>	#id#	machine ID
<pl>	#pl#	new patch list
	#subject#	subject text of the email message, if an email was sent in response to an alert
	#body#	body text of the email message, if an email was sent in response to an alert

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Patch Alert Parameters

The system triggers an alarm whenever the system discovers one of three different patch alert conditions for a selected machine ID:

- New patch is available
- Patch install fails

- Agent credential is invalid or missing
- Windows Auto Update changed

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Patch Location Missing

Displays as the first row of data. If selected and the Apply button clicked, an alert is generated if the system discovers the Patch Location *(page 308)* path for a patch is missing. This is a system alert and not associated with any machines.

Approval Policy Updated

Displays as the second row of data. If selected and the Apply button clicked, an alert is generated when a new patch is added to all patch policies. See Patch Approval Policy *(page 609)*. This is a system alert and not associated with any machines.

ATSE

The ATSE response code assigned to machine IDs:

- A = Create Alarm
- T = Create Ticket

- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

New Patch

If checked, an alarm is triggered when a new patch is available for this machine ID.

Install Failed

If checked, an alarm is triggered when a patch installation has failed for this machine ID.

Invalid Credential

If checked, an alarm is triggered when the credential is invalid for this machine ID.

Win AU Changed

If checked, an alarm is triggered if the group policy for Windows Automatic Update on the managed machine is changed from the setting specified by Patch Mgmt > Windows Auto Update *(page 289)*.

> Note: *A log entry in the machine's Configuration Changes log is made regardless of this alert setting.*

Office Source

Patch Mgmt > Office Source

The Office Source page sets *alternate* source locations for installing Office and Office component applications. The source location can be changed from the default CD-ROM, which is the typical installation source, to a network share or a directory on a local hard drive. By changing the installation source to a network share or a local directory, those patches that require the Office installation source for installation can get access without prompting the user for the installation media. This alternate source location can be configured to be read-only. It must contain an exact copy of the installation media contents including all hidden files and/or directories.

An Office source for a managed machine is only available after you have run Scan Machine *(page 263)* at least once for the managed machine. Machine IDs are displayed on this page only if they:

- Currently match the Machine ID / Group ID filter *(page 17)*.
- Have Office or Office component applications installed for Office 2000, XP, or 2003.

Note: Office 2007 is not displayed on this page. Office 2007 installs a full set of source installation files on a machine, so an alternate source location is not required.

Multiple Entries

Multiple entries may be displayed for a machine because the machine contains one or more Office component applications, such as FrontPage or Project, that were installed separately from their own installation source and were not part of the Office installation.

Credential Required

Managed machines must have a credential set *(page 495)* to use the Office Source page. The agent must have a credential to use the alternate Office source location.

Validation

The specified location is validated to be sure that the location is accessible from the machine and that the installation source in the specified location contains the correct edition and version of Office or the Office component application. Only after the validation succeeds is the machine's registry modified to use the specified location.

Installing Office Products

Some patches—particularly Office service packs—still display progress dialogs even though the silent installation switch (`/Q`) is included using Patch Mgmt > Command Line *(page 305)*. These progress dialogs do not require any user intervention.

Some patches and service packs display a modal dialog indicating the update has completed, again even though the silent installation switch (`/Q`) is used. This requires the user to click on the OK button to dismiss the dialog. Until this happens, the patch installation script appears to be hung and will not complete until this dialog is dismissed!

Some Office service packs fail for no apparent reason. Checking the machine's application event log reveals that another Office component service pack failed. This has been observed with Office 2003 service pack 2 requiring the availablility of FrontPage 2003 service pack 2. When the Office source location for the FrontPage 2003 is configured, the Office 2003 service pack 2 finally successfully installs.

Filter on Office Product

Because each managed machine may be listed multiple times—once for each Office product or Office component application installed—you can filter the Office products/components displayed. This ensures selecting the same product code for multiple machines when setting the installation source location.

Apply

Click Apply to apply the Office source location specified in Location of Office installation source to selected machine IDs.

Location of Office installation source

Add the network share as a UNC path (i.e., `\\machinename\sharename`) or a local directory as a fully qualified path (i.e., `C:\OfficeCD\Office2003Pro`) in the installation source text box.

Reset

Click Reset to restore selected machine IDs back to their original installation source, typically the CD-ROM.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Status

Displays one of the following:

- Missing Credential
- Update Script Failed

- Validation Script Failed
- Original Source
- Pending Validation
- Updating Machine
- Incorrect Edition
- Processing Error
- Restoring Original
- Office Source Updated

Office Product

Displays the name of the Office product.

Office Source

Displays the current installation source location for this Office product on this machine ID.

Product Code

Displays the Office product code.

Command Line

Patch Mgmt > Command Line

The Command Line page defines the command line switches used to silently install a specified patch. Occasionally a patch is released that does not use normal switch settings or the patch database has not been updated with the new switches. If you find a patch does not successfully install with its assigned switch settings, you can change them with this page. Locate patch switches by clicking the KB Article link and reading through the knowledge base article.

> Warning: *Changes to the switches effect all administrators. Only a master administrator can access this page.*

Suppress Automatic Reboot

Usually you want to load a patch without requiring any user interaction at all. The system supports batch installs of multiple patches at the same time and reboots once at the end of all patch installations. Therefore, use switch settings to suppress automatic reboot wherever possible.

Switch Settings

Typical patch file switch settings for silent, unattended installs without reboot:

- `/quiet /norestart` - This is the standard setting for most patches in recent years.

- `/u /q /z` - Typical switch settings used to silently install older patches that do not use the Windows Installer technology.
- `/m /q /z` - Typical switch settings to silently install older patches released for Windows NT4.
- `/q:a /r:n` - Internet Explorer and other application switch settings to install in quiet administrator mode (`/q:a`) and not automatically reset (`/r:n`) when the install completes.
- Other switch settings found with Microsoft patch installations include:
  - `/?` - Display the list of installation switches.
  - `/u` - Use Unattended mode.
  - `/m` - Unattended mode in older patches.
  - `/f` - Force other programs to quit when the computer shuts down.
  - `/n` - Do not back up files for removal.
  - `/o` - Overwrite OEM files without prompting.
  - `/z` - Do not restart when the installation is complete.
  - `/q` - Use quiet mode (no user interaction).
  - `/l` - List the installed hotfixes.
  - `/x` - Extract files without running Setup.

Microsoft Office command line switches

The only switch permitted for use with Microsoft Office related patches is `/Q`. If `/Q` is not specified, Microsoft Office 2000, Microsoft Office XP and 2003 switches will be automatically reset to `/INSTALL-AS-USER`. Microsoft Office 2003 patches may also include the `/MSOCACHE` switch used to attempt a silent install if the MSOCache exists on the machine. These settings are enforced by the application.

Note:The `/MSOCACHE` switch only applies to Office 2003. When the patch database is updated, this switch is automatically added to all Office 2003 patches where an administrator has never modified a particular patch's command line switches. It is not automatically added to Office 2003 service packs. When this switch is used, the system determines if the MSOCache exists on the target machine. If the MSOCache does exist and this switch is used, the system automatically uses the run silently switch (`/Q`) thereby relying on the MSOCache rather than requiring the actual installation media. If the MSOCache does not exist on the target machine, the existing switch is used. If a patch installation fails that uses the `/MSOCACHE` switch, it typically means that the MSOCache could not be used by the patch. In this case, you must clear out all command line switches for this patch. This results in the `/INSTALL-AS-USER` switch to be automatically added. Re-running the patch installation should now succeed. Unfortunately, this requires user intervention and also probably requires the Office 2003 installation media.

Server-side command line switches

Special server-side command line switches can be combined with patch specific switches:

- `/INSTALL-AS-USER` - Tells the system to only install this patch as a user. Some rare patches do not install successfully unless someone is logged onto the machine. Add this switch if you find a patch is failing to install if no one is logged in.

  > Warning: This setting conflicts with the Skip update if user logged in setting found in Reboot Action *(page 292)*. `/INSTALL-AS-USER` requires that a user be logged in to install.

- `/DELAY-AFTER=xxx` - After the install wait `xxx` seconds before performing the reboot step. The reboot step starts after the install package completes. Some rare installers spawn additional programs that must also complete before rebooting. Add this switch to give other processes time to complete after the main installer is done.

Filter patches by

Based on the patch category selected, this page displays all patches and service packs for all machines, both missing and installed, that match the current Machine ID/Group ID filter *(page 607)*.

New Switches

Enter the command line switches you want to apply to selected patches.

Apply

Click Apply to apply the specified command line switches to selected patches.

Reset

Click Reset to reset the command lines of selected patches back to their default settings.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

KB Article

The knowledge base article describing the patch. Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

Patch Name

The patch install filename.

Security Bulletin

The security bulletin associated with a patch. Patches classified as security updates have a security bulletin ID (`MSyy-xxx`). Click the Security Bulletin link to review the security bulletin, if available.

Product

The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

Switches

The command line switches used to install this patch.

Patch Location

Patch Mgmt > Patch Location

The Patch Location page defines the URL from which each patch is downloaded. Only patches *missing* from machine IDs that currently match the Machine ID / Group ID filter *(page 17)* are displayed here. You should consult this page if, when attempting to install a patch, you are notified of a `Path Missing`.

The KServer maintains a list of each patch and the URL it should be downloaded from. This list is refreshed each time a `Refresh Patch Database` task is performed using Scan Machine *(page 263)*. In most cases the download URLs provided for patches are correct. `Path Missing` errors may occur for the following reasons:

- Each language may require a separate URL to download from.
- The URL may change for one or more patches.
- The KServer's record for the URL may be entered incorrectly or be corrupted.

In such cases, administrators can change the download path associated with a patch. Manually entered URLs are shown in dark red.

> Note: Only master administrators can access this page. Changes effect patches installed by all administrators.

To find the URL to a missing path

1. Click the KB Article listed for the missing path.
2. Read through the knowledge base article and locate the download URL for the patch.

> Note: There may be several products referenced by the same KB Article. For instance, each Windows operating system is a different product. Also, patches can be different for specific service packs of the operating system.

3. Click on the download link for your patch. If a *different patch is available for each language*, you will be prompted to select a language.
4. Select the appropriate language for the download, if applicable.
5. Click the Download link or button and download the patch file.
6. On your web browser, click the History icon to view your URL history.
7. Locate the file you just downloaded from your history list. Typically, the file will be in the `download.microsoft.com` folder.
8. Right- click the filename you just downloaded and select Copy from the menu. This copies the entire URL into your clipboard.
9. Return to the Patch Location page and:
   a. Paste the URL into the New Location edit box.
   b. Select the radio button to the left of the KB Article for which you are entering a new patch location.
   c. Click the Apply button.

Filter Patch By

Select the patches displayed in the paging area by patch category.

New Location

Enter a new URL.

Apply

Click Apply to apply the URL listed in the New Location field to the selected patch.

Remove

Click Remove to delete the download URL associated with a patch ID. The default path is restored the next time `refresh patch database` runs.

> Warning: Removing a path disables patching managed machines using this patch until the correct path is entered.

KB Article

The knowledge base article describing the patch. Click the KB Article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

Product

The Product column helps identify the product category associated with a specific patch. If a patch is used across multiple operating system families (i.e., Windows XP, Windows Server 2003, Vista, etc.), the product category is `Common Windows Component`. Examples include Internet Explorer, Windows Media Player, MDAC, MSXML, etc.

Chapter 9

Remote Control

In This Chapter

Remote Cntl Tab

View and operate managed machines as if they were right in front of you simply by clicking its machine ID.

- Automatically connects the administrator to the remote computer independent of any gateway or firewall configurations, even behind NAT.
- Remote control even without a agent using video streaming.
- Work independently or with the user to solve problems interactively where both parties can see what is happening in real time
- Policy settings allow users to block remote control or require administrators to ask permission before accessing a machine
- Integrates four best of breed remote control packages: WinVNC, pcAnywhere™ (Symantec), RAdmin (Famatech), or Terminal Server (Microsoft)
- FTP to any managed machine and access files even behind NAT gateways and firewalls
- Direct chat with any managed machine. Perfect for supporting dial up users with only a single phone line. Remote control and chat at the same time.

> Note: You can view Remote Control demos at http://www.kaseya.com/resources/demo.php

Functions	Description
Control Machine *(page 313)*	Allows administrators to view and/or take control of a managed machine's desktop remotely for troubleshooting and/or instructional purposes.
Video Streaming *(page 316)*	Remote control machines that do not have an agent installed.
Reset Password *(page 318)*	Reset the password for an local account on a managed machine.
Power Mgmt *(page 320)*	Powers on, powers off or reboots vPro-enabled machines.
Select Type *(page 321)*	Specify the type of remote control software the VSA uses on a per machine basis. WinVNC, Remote Administrator, pcAnywhere, and Terminal Server are all supported.
Set Parameters *(page 323)*	Specify the remote control settings to use with each remote control package.
Preinstall RC *(page 325)*	Install the remote control service
Uninstall RC *(page 326)*	Uninstall the remote control service
FTP *(page 331)*	Initiate an FTP session with any remote managed machine.
Chat *(page 334)*	Start a chat session between an administrator and any remote machine.
Send Message *(page 337)*	Allows administrators to send network messages to selected managed machines.

Task Manager *(page 338)*	Remotely executes the NT task manager and displays data in the browser.

Control Machine

Remote Ctrl > Control Machine

The Control Machine page establishes a remote control session between the administrator's local machine and a selected machine ID. Select the type of package to remote control a managed machine using Select Type *(page 321)*. Set parameters for remote control sessions using Set Parameters *(page 323)*.

> Note: Use Video Streaming *(page 316)* to remote control a target machine that does not have an agent.

Automatic Installation

- If WinVNC, K-VNC or RAdmin are *not* installed on a machine and a remote control session is initiated using Control Machine *(page 313)* or Video Streaming *(page 316)*, then these packages are automatically installed. Installation does not require a reboot. Automatic installation takes up to an extra minute. To eliminate this delay during first time use, you can pre-install WinVNC, K-VNC or RAdmin on any managed machine using Preinstall RC *(page 325)*.

> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 326)* to uninstall remote control on the managed machine.

Initiating Remote Control

Initiate remote control by clicking the name of the target machine. Icons next to the managed machine ID indicate the current connection status for that machine. Only machine IDs with an OK or OK icon can be connected to target machines and have live links; all others will be inactive.

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

> Note: Users can disable remote control and FTP sessions by right-clicking the icon on their managed machine and selecting Disable Remote Control. You can deny users this ability by removing Disable Remote Control using Agent > Agent Menu *(page 483)*.

ActiveX Control

An ActiveX control automatically configures and runs the remote control or FTP package for you. The first time you use any remote control or FTP package on a new machine, your browser may ask if it is OK to download and install this ActiveX control. Click yes when asked. If the ActiveX control is blocked by the browser from running, the administrator or user is presented with a link to manually download and run the remote control package manually.

Helper Applications

In setting up a remote control or FTP session, gateway and port blocking problems are eliminated by always initiating outbound connections from both the target machine and the administrator machine. Helper applications, unique to each supported remote control or FTP package, automatically determine the optimal routing path between the administrator machine and the target machine. If a direct connection is not possible then the helper applications route the remote control traffic through the KServer on the same port used by agents to check-in (default 5721).

Enable verbose relay

Remote control or FTP of machines behind firewalls and NAT gateways may be relayed through the VSA server using a helper application. Checking this box displays a popup window with status information about the normally hidden helper application.

Remote Controlling the KServer

Clicking the KServer link starts a remote control session to the KServer itself. Use this feature to remotely manage your own KServer. Only master administrators can remote control the KServer.

Remote Control and FTP for Users

Administrators can provide users with the same remote control and FTP access that administrators have using Agent > User Access *(page 253)*.

Remote Control Malfunctions

Some reasons for remote control failure—for both target machines with and without an agent—are:

- The administrator machine is blocking outbound traffic on the agent check-in port (default 5721). The firewall may need to be reconfigured.
- The target machine is on a slow connection. Let the applications run longer than the timeout period and see if that works.
- Anti-virus software on the target machine may block the connection. This problem is eliminated if KES Security protection is installed on the target machine.

- Wrong primary KServer address - Remote control can only connect through the primary KServer address. Machines with an agent can connect through either the primary or secondary address. Verify the remote machine can see the primary KServer address using Agent > Check-in Control *(page 485)*.
- XP supports only one RDP/Terminal Service session on the target machine and logs off other users. Starting a remote logon session from a second machine logs off the first remote logon session. The VSA uses the port relay to get through firewalls and gateways. To Windows XP, it appears as if the Terminal Server session is connecting from the localhost.

  > Warning: Using the credential of a currently logged on user confuses XP. It can not determine if the user is reactivating the existing session locally or remotely initiating a new connection. As a result Window XP may hang, requiring a reboot to recover. The VSA can not protect you from this. Do not log on using the user name of an already logged on account.

- Your pcAnywhere viewer is connecting to your administrator machine, not the target machine. The KServer relay is telling the viewer to connect to `localhost`. If you have a pcAnywhere host running on the machine you are viewing from, then the viewer connects to it and not the VSA relay. Right click the pcAnywhere icon in the system tray and select Cancel Host.
- pcAnywhere presents an error dialog saying `Cannot find callhost file: C:\Document and Settings\All Users\Application Data\Symantec\pcAnywhere\Network.CHF`. There is no `Network` remote control item configured in pcAnywhere.

  1. Open the pcAnywhere application and click on the Remote Control function.
  2. Click Add Remote Control Item.
  3. Create an item named Network.
  4. Select TCP/IP as the connection device.
  5. Leave the host name blank.
  6. Close pcAnywhere.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Remote Control Package

The remote control package assigned to this machine ID. Select the type of package to remote control a managed machine using Select Type *(page 321)*.

- WinVNC
- K-VNC
- Remote Administrator
- pcAnywhere
- RDP/Terminal Server

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*. Only machine IDs with an OK icon can be remote controlled and have live links; all others will be inactive.

Current User

The user currently logged into the managed machine.

Active Admin

The administrator currently conducting a remote control session to this machine ID.

Video Streaming

Remote Cntl > Video Streaming

The Video Streaming page establishes a remote control session between the administrator's local machine and a machine without an agent. Use it to help someone quickly on an infrequent basis. If you plan to provide continuous support we recommend you install an agent.

The following conditions apply:

- The remote user must log into a URL after the administrator has started the video streaming session.
- The remote user must have administrator privileges on the local machine.
- Each administrator can only initiate a single video streaming session at a time.

Set parameters for remote control sessions using Set Parameters *(page 323)*. See Select Type *(page 321)* for a description of the different types of remote control packages.

Note: Use Control Machine *(page 313)* to remote control a target machine that has an agent.

Automatic Installation

If WinVNC, K-VNC or RAdmin are *not* installed on a machine and a remote control session is initiated using Control Machine *(page 313)* or Video Streaming *(page 316)*, then these packages are automatically installed. Installation does not require a reboot. Automatic installation takes up to an extra minute.

Automatic Uninstallation

When either side terminates the Video Streaming session, the remote server on the target machine uninstalls automatically, removing all remote control files and registry additions.

ActiveX Control

An ActiveX control automatically configures and runs the remote control or FTP package for you. The first time you use any remote control or FTP package on a new machine, your browser may ask if it is OK to download and install this ActiveX control. Click yes when asked. If the ActiveX control is blocked by the browser from running, the administrator or user is presented with a link to manually download and run the remote control package manually.

Helper Applications

In setting up a remote control or FTP session, gateway and port blocking problems are eliminated by always initiating outbound connections from both the target machine and the administrator machine. Helper applications, unique to each supported remote control or FTP package, automatically determine the optimal routing path between the administrator machine and the target machine. If a direct connection is not possible then the helper applications route the remote control traffic through the KServer on the same port used by agents to check-in (default 5721).

Remote Control Malfunctions

Some reasons for remote control failure—for both target machines with and without an agent—are:

- The administrator machine is blocking outbound traffic on the agent check-in port (default 5721). The firewall may need to be reconfigured.
- The target machine is on a slow connection. Let the applications run longer than the timeout period and see if that works.
- Anti-virus software on the target machine may block the connection. This problem is eliminated if KES Security protection is installed on the target machine.
- Wrong primary KServer address - Remote control can only connect through the primary KServer address. Machines with an agent can connect through either the primary or secondary address. Verify the remote machine can see the primary KServer address using Agent > Check-in Control *(page 485)*.

Start

Click the Start button. Ask the remote user to display the `http://<yourKServerURL>/gethelp.asp` web page and click your administrator name to begin the video streaming session.

Enable verbose relay

Remote control or FTP of machines behind firewalls and NAT gateways may be relayed through the VSA server using a helper application. Checking this box displays a popup window with status information about the normally hidden helper application.

Select remote control package to use

The default remote control service uses WinVNC. See Select Type *(page 321)* for a description of the different types of remote control packages.

- WinVNC
- K-VNC
- Remote Administrator

Specify the default HTML message seen by users when no administrator is waiting to help.

This is the message displayed if the user displays the `http://<yourKServerURL>/gethelp.asp` web page and no administrator is logged into the KServer.

Reset Password

Remote Cntl > Reset Password

The Reset Password page creates a new password and, if necessary, a new user account on a managed machine. If the username does not already exist, checking the Create new account checkbox creates a new account with the specified password. Reset Password returns an error if you attempt to reset the password for a username that is not already created on the managed machine or if you create a password that is already being used by a user account. Blank passwords are not permitted.

> Note: To delete a user account, you can create a script to delete the user account or use remote control to manually delete the user account.

Resetting the Administrator Password

Use Reset Password to reset the Administrator password on all your managed machines when:

- Your Administrator password is compromised.
- Someone leaves your organization who knew the Administrator password.

- It is time to change the Administrator password as part of a good security policy.

Apply

Click Apply to apply password and user account parameters to selected machine IDs.

Cancel

Click Cancel to clear pending password changes and user account creations on selected machine IDs.

Username

Enter the username on the managed machine.

Create new account

Check this box to create a new user account on the managed machine.

as Administrator

Check this box to create the new user account as an administrator.

Password / Confirm

Enter a new password.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Status

The status of pending password changes and user account creations.

Power Mgmt

Remote Cntl > Power Mgmt

The Power Mgmt page powers on, powers off or reboots vPro-enabled machines. Power management options are executed using the agent of the managed machine that originally identified the vPro-enabled machine using LAN Watch *(page 465)*. A vPro *(page 614)* credential is required to execute power management options on a vPro-enabled machine.

> Note: You can display the hardware assets of vPro-enabled machines with credentials using Agent > View vPro *(page 478)*.

This page provides you with the following actions:

- Schedule - Display a popup window of the following schedule options:
  - Schedule / Cancel - Schedule or cancel these schedule options.
  - Schedule Date/Time - Select the date and time to schedule this task.
  - Recurrence - Select whether to run this task once, hourly, daily monthly. If more than once, enter the number of times to run this task for the period selected.
  - Skip if offline - Check to perform this task only at the scheduled time. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.
  - Stagger by N minutes - You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the scan on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...
- Run Now - Run the power management options now on selected machine IDs.
- Cancel - Cancel schedule options for selected machined IDs.
- Power Up / Power Down / Reboot - Select the power management option to execute.

Host Name

The unique local name and domain name of a vPro enabled-machine on a network, using the format `<domainname>.<computername>`.

Proxy Agent

The machine ID.group ID of another managed machine used to execute power on, power off or reboot this vPro-enabled machine. The Proxy Agent must be on the same LAN as the vPro machine.

Machine ID. Group ID

The machine ID.Group ID of this vPro-enabled machine, if an agent is installed. Blank, if no agent is installed.

Type

The power management option scheduled to be executed.

Last Power Mgmt

The last time a power management option was executed.

New Power Mgmt

The next time a power management option is scheduled to be executed.

Credentials

If not-checked, a vPro credential is not registered in the VSA for this vPro-enabled machine and you cannot execute power management option. If checked, a vPro credential is registered in the VSA. In either case, you can click any cell in the Credentials column to display a popup window that lets you register a credential.

Recur Interval

The interval for the scheduled task to recur.

Skip if Machine Offline

If a checkmark ✓ displays and the machine is offline, skip and run the next scheduled period and time. If no checkmark displays, perform this task as soon as the machine connects after the scheduled time.

Stagger By

The number of minutes to stagger this task on multiple machines.

Select Type

Remote Ctnl > Select Type

The Select Type page specifies which remote control package is used by Control Machine *(page 313)* to remote control a managed machine. You can assign different packages to different machines. Each machine ID displays the icon of the remote control package it is currently assigned to use.

Virtual Network Computing

Virtual Network Computing (VNC), also called remote control or remote desktop, is a graphical desktop sharing system which uses the Remote Framebuffer (RFB) protocol to remotely control another computer. It transmits the keyboard and mouse events from one computer to another, relaying the graphical screen updates back in the other direction, over a network. It is included with the KServer primarily to provide immediate technical support. VNC is platform-independent. A VNC viewer on any operating system can usually connect to a VNC server on any other operating system. The VNC server is the program on the target machine that shares its screen. The VNC client (or viewer) is the program on the administrator's machine that watches and interacts with the target machine. The VNC client machine requires user access rights to the VNC server machine. Since Kaseya VNC sessions are relayed through the KServer, all VNC sessions are protected by the Kaseya 256 bit rolling encryption protocol.

The VSA supports the following third party remote control packages.

- WinVNC - This open source, freely available, remote control package comes bundled with the VSA. WinVNC is the default package used on all managed machines. The VSA automatically installs WinVNC servers on selected machines the first time you remote control that machine.
- K-VNC - The enterprise version of VNC. This is the only remote control option available for Vista. It can also be used on Windows 2000, XP and 2003. The VSA automatically installs the K-VNC server on selected machines the first time you remote control that machine.
- Remote Administrator - RAdmin is a commercially available remote control package offering both high speed and file transfer capability. Use RAdmin where bandwidth limitations exist or you need remote file transfer to the machine. The VSA automatically installs the RAdmin server on selected machines the first time you remote control that machine. The RAdmin package bundled with the VSA expires after 30 days. Obtain licenses from www.radmin.com.
- pcAnywhere - pcAnywhere is a widely used remote control package available from Symantec. The VSA fully supports pcAnywhere but does not automatically install it. You must purchase pcAnywhere separately and install it on the workstation before you can use this option. Combining the VSA with existing installations of pcAnywhere allows you to remote control machines behind gateways without mapping ports or opening firewalls.
- Terminal Server - Microsoft Terminal Server is only available with Windows NT, 2000, XP, or 2003. The VSA does not automatically install Terminal Server but does allow you to remote control machines behind gateways without mapping ports or opening firewalls. XP comes pre-installed with Terminal Service access for a single user. For other operating systems see Terminal Service Client Access License requirements on the Microsoft website.

To Assign Remote Control Packages to Machine IDs

1. Select the type of package to use from the drop down list.

2. Check the box to the left of machine IDs you want to use this remote control package.
3. Click the Select button.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Remote Control Package

The remote control package assigned to this machine ID.

WinVNC

K-VNC

Remote Administrator

pcAnywhere

RDP/Terminal Server

Set Parameters

Remote Cntl > Set Parameters

The Set Parameters page sets the default parameters for your remote control session. These settings are remembered on a per administrator basis. Changes take effect immediately and are reused every time you start remote control. See Select Type *(page 321)* for a description of the different types of remote control packages.

WinVNC and K-VNC Options

- View Only Mode - The administrator can view the remote machine. No mouse or keyboard events are sent to the target machine.
- Hide WinVNC system tray icon on the remote machine - Check this box to hide the WinVNC icon on the remote machine.
- Restrict to 64 colors - The display on the listening machine is set to 64 colors. This is useful for slower connections.
- Full Screen mode - The entire display of the administrator machine is used to display the screen contents of the target machine. Exit by displaying the remote control menu (default F8) and unselect Full screen.

RAdmin Options

- Full Control - The administrator can view and/or control the screen keyboard and mouse of the target machine.
- View Only - The administrator can view the remote machine. No mouse or keyboard events are sent to the target machine.
- File Transfer - Start a file transfer (FTP) session with the remote machine. This mode presents you with two standard file browsers, one for the target machine and one for the administrator machine. Drag and drop files between the two machines in this mode.
- Full Screen View Mode - The entire display of the administrator machine is used to display the screen contents of the target machine. This option is only available in a Full Control or View Only session.
- Encrypt Data Stream - Checking this box encrypts all traffic between the administrator and target machines.
- Update/sec - Sets the maximum number of update per second RAdmin generates. Higher update rates consume more CPU cycles on the remote machine.
- Color Format - Specifies the number of colors used for remote control. Large color formats use more bandwidth.

Terminal Service Options

- Console mode - Remote control the console session of the remote machine.
- Full Screen mode - Use your full screen to remote control the remote machine.
- Fixed Screen size - Set a fixed width and height for your remote control session.
- Share Disk Drives - Connect your disk drives to the remote machine.
- Share Printers - Connect your printers to the remote machine.
- Disable Desktop Wallpaper - Turn off wallpaper on remote computer for faster processing.

Preinstall RC

Remote Cntl > Preinstall RC

The Preinstall RC page installs WinVNC, K-VNC or RAdmin on selected machine IDs without initiating a remote control session. Select the type of package to remote control a managed machine using Select Type *(page 321)*. When an install is pending on any machine ID this page automatically refreshes every 5 seconds until the script completes.

> Note: Preinstall RC does not install pcAnywhere or Terminal Server.

Automatic Installation

If WinVNC, K-VNC or RAdmin are *not* installed on a machine and a remote control session is initiated using Control Machine *(page 313)* or Video Streaming *(page 316)*, then these packages are automatically installed. Installation does not require a reboot. Automatic installation takes up to an extra minute. To eliminate this delay during first time use, you can pre-install WinVNC, K-VNC or RAdmin on any managed machine using Preinstall RC *(page 325)*.

> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 326)* to uninstall remote control on the managed machine.

Install

Click Install to install WinVNC, K-VNC or RAdmin on selected machine IDs.

Cancel

Click Cancel to clear pending install scripts for selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Remote Control Package

The remote control package assigned to this machine ID. Select the type of package to remote control a managed machine using Select Type *(page 321)*.

WinVNC

K-VNC

Remote Administrator

pcAnywhere

RDP/Terminal Server

Last Status

`Pending` indicates the install will run the next time that machine checks into the KServer. Otherwise, this column displays when the remote control package was installed on the machine ID.

Uninstall RC

Remote Cntl > Uninstall RC

The Uninstall RC page uninstalls WinVNC, K-VNC or RAdmin on selected machine IDs. Multiple types of remote control packages may be installed on a single machine ID. Select the type of package to uninstall from a managed machine using Select Type *(page 321)*. When an uninstall is pending on any machine ID this page automatically refreshes every 5 seconds until the script completes.

If an existing installation of WinVNC or RAdmin has problems then the VSA may not be able to establish a remote control session. If remote control fails then running Uninstall RC on that machine ID cleans out any existing problem installs. A fresh copy of the remote control package is installed the next time a remote control session is started or using Preinstall RC *(page 325)*.

> Note: Uninstall RC does not uninstall pcAnywhere or Terminal Server.
>
> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 326)* to uninstall remote control on the managed machine.

Automatic Uninstallation

Uninstall RC is not required for Video Streaming. When either side terminates the Video Streaming session, the remote server on the target machine uninstalls automatically, removing all remote control files and registry additions.

Uninstall

Click Uninstall to uninstall WinVNC, K-VNC or RAdmin on selected machine IDs.

Cancel

Click Cancel to clear pending uninstall scripts for selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Remote Control Package

The remote control package assigned to this machine ID. Select the type of package to remote control a managed machine using Select Type *(page 321)*.

WinVNC

K-VNC

Remote Administrator

pcAnywhere

RDP/Terminal Server

Last Status

`Pending` indicates the uninstall will run the next time that machine checks into the VSA. Otherwise, this column displays when the remote control package was uninstalled on the machine ID.

Admin Role Policy

Remote Cntl > Admin Role Policy

The Admin Role Policy page determines how you want to notify users that a remote control session to their machine is about to begin. Policies are applied by administrator roles *(page 510)*.

> Note: See Machine Policy *(page 329)* to apply remote control notification policies by machine ID. Machine policy takes precedence over administrator role policy.

Apply

Click Apply to apply policy parameters to selected machine IDs.

Select User Notification Type

- Silently take control - Do not tell the user anything. Take control immediately and silently.
- If user logged in display alert - Display notification alert text. The alert text can be edited in the text box below this option.
- If user logged in ask permission - Ask the user if it is alright to begin a remote control session. The ask permission text can be edited in the text box below this option. Remote control can not proceed until the user clicks the Yes button. If nothing is clicked after one minute, No is assumed and the VSA removes the dialog box from the target machine. If no user is logged in, proceed with the remote control session.
- Require Permission. Denied if no one logged in - Ask the user if it is alright to begin a remote control session. The ask permission text can be edited in the text box below this option. Remote control can not proceed until the user clicks the Yes button. If nothing is clicked after one minute, No is assumed and the VSA removes the dialog box from the target machine. The remote control session is cancelled.

Notify user when session terminates.

Check this box to notify the user when the session terminates.

Session Termination Message

Displays only if the Notify user when session terminates box is checked. Modify the default message if necessary. The `<admin>` variable is the only variable that can be used in this message.

Notification Alert Text / Ask Permission Text

Displays only if the Select User Notification Type is *not* `Silently take control`. Modify the default message if necessary. The `<admin>` variable is the only variable that can be used in this message.

Remove

Click Remove to clear policy parameters from selected machine IDs.

Require admin note to start remote control

Click this box to require administrators to enter a note before starting the remote control session. The note is included in the remote control log and is not displayed to the user.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Delete

Click the delete icon ✗ next to an administrator role to clear the policy.

Edit Icon

Click a row's edit icon 📝 to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Role Name

The list of administrator roles *(page 510)*.

Policy

The remote control policy applied to an administrator role.

Message

The Session Termination Message applied to an administrator role.

Machine Policy

Remote Cntl > Machine Policy

The Machine Policy page determines how you want to notify users a remote control session to their machine is about to begin. This policy is applied to machine IDs.

Note: See Admin Role Policy *(page 328)* to apply remote control notification policies by machine ID. Machine policy takes precedence over administrator role policy.

Apply

Click Apply to apply policy parameters to selected machine IDs.

Select User Notification Type

- Silently take control - Do not tell the user anything. Take control immediately and silently.
- If user logged in display alert - Display notification alert text. The alert text can be edited in the text box below this option.
- If user logged in ask permission - Ask the user if it is alright to begin a remote control session. The ask permission text can be edited in the text box below this option. Remote control can not proceed until the user clicks the Yes button. If nothing is clicked after one minute, No is assumed and the VSA removes the dialog box from the target machine. If no user is logged in, proceed with the remote control session.
- Require Permission. Denied if no one logged in - Ask the user if it is alright to begin a remote control session. The ask permission text can be edited in the text box below this option. Remote control can not proceed until the user clicks the Yes button. If nothing is clicked after one minute, No is assumed and the VSA removes the dialog box from the target machine. The remote control session is cancelled.

Notify user when session terminates.

Check this box to notify the user when the session terminates.

Session Termination Message

Displays only if the Notify user when session terminates box is checked. Modify the default message if necessary. The `<admin>` variable is the only variable that can be used in this message.

Notification Alert Text / Ask Permission Text

Displays only if the Select User Notification Type is *not* `Silently take control`. Modify the default message if necessary. The `<admin>` variable is the only variable that can be used in this message.

Remove

Click Remove to clear policy parameters from selected machine IDs.

Require admin note to start remote control

Click this box to require administrators to enter a note before starting the remote control session. The note is included in the remote control log and is not displayed to the user.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Delete

Click the delete icon ✕ next to a machine ID to clear the policy.

Edit Icon

Click a row's edit icon ✎ to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Policy

The remote control policy applied to a machine ID.

Message

The Session Termination Message applied to a machine ID.

FTP

Remote Cntl - FTP

The FTP page establishes a FTP session between the administrator's local machine and a selected machine ID. The VSA uses the FTP client built into Internet Explorer so you can operate with the same Windows look and feel. Once the FTP session is initiated, a new browser window pops up displaying the contents of a fixed disk on the managed machine. Just drag and drop files as you normally would.

File Transfer Protocol (FTP

File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol. The FTP server is the program on the target machine that listens on the network for connection requests from other computers. The FTP client is the program on the administrator's machine that initiates a connection to the server. The FTP client machine requires user access rights to the FTP server machine. It is included with the KServer primarily to provide immediate technical support. Once connected, the client can upload files to the server, download files from the server, rename or delete files on the server and so on. Any software company or individual programmer is able to create FTP server or client software because the protocol is an open standard. Virtually every computer platform supports the FTP protocol. Since Kaseya FTP sessions are relayed through the KServer, all FTP sessions are protected by the Kaseya 256 bit rolling encryption protocol.

Initiating FTP

Initiate a FTP session by clicking the name of the target machine. Icons next to the managed machine ID indicate the current connection status for that machine. Only machine IDs with an ◆ or ▣ icon can be connected to target machines and have live links; all others will be inactive.

◆ Agent has checked in

▣ Agent has checked in and user is logged on. Tool tip lists the logon name.

◆ Agent has not recently checked in

◆ Agent has never checked in

▣ Online but waiting for first audit to complete

● The agent is online but remote control is disabled

✋ The agent has been suspended

> Note: Users can disable remote control and FTP sessions by right-clicking the K icon on their managed machine and selecting Disable Remote Control. You can deny users this ability by removing Disable Remote Control using Agent > Agent Menu *(page 483)*.

ActiveX Control

An ActiveX control automatically configures and runs the remote control or FTP package for you. The first time you use any remote control or FTP package on a new machine, your browser may ask if it is OK to download and install this ActiveX control. Click yes when asked. If the ActiveX control is blocked by the browser from running, the administrator or user is presented with a link to manually download and run the remote control package manually.

Helper Applications

In setting up a remote control or FTP session, gateway and port blocking problems are eliminated by always initiating outbound connections from both the target machine and the administrator machine. Helper applications, unique to each supported remote control or FTP package, automatically determine the optimal routing path between the administrator machine and the target machine. If a direct connection is not possible then the helper applications route the remote control traffic through the KServer on the same port used by agents to check-in (default 5721).

Enable verbose relay

Remote control or FTP of machines behind firewalls and NAT gateways may be relayed through the VSA server using a helper application. Checking this box displays a popup window with status information about the normally hidden helper application.

FTP the KServer

Clicking the FTP the KServer link starts an FTP session with the KServer itself. Only master administrators can FTP the KServer.

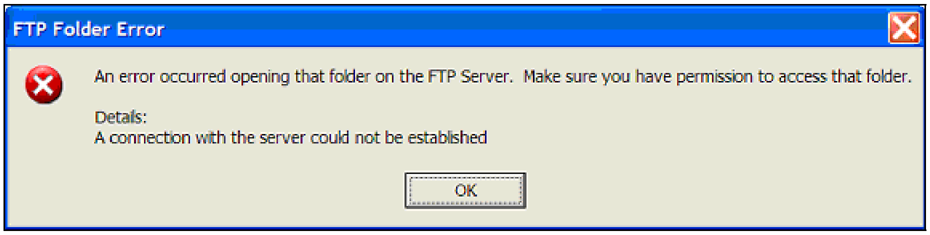
Remote Control and FTP for Users

Administrators can provide users with the same remote control and FTP access that administrators have using Agent > User Access *(page 253)*.

FTP Malfunctions

Some reasons for FTP failure with managed machines are:

- The administrator machine is blocking outbound traffic on the agent check-in port (default 5721). The firewall may need to be reconfigured.
- The target machine is on a slow connection. Let the applications run longer than the timeout period and see if that works.
- Anti-virus software on the target machine may block the connection. This problem is eliminated if KES Security protection is installed on the target machine.
- Wrong primary KServer address - Remote control can only connect through the primary KServer address. Machines with an agent can connect through either the primary or secondary address. Verify the remote machine can see the primary KServer address using Agent > Check-in Control *(page 485)*.
- You accessed the KServer from a different address. The helper application gets connection information from a cookie on the local machine. To access this information, the helper passes the URL of the KServer to Windows. Say you downloaded the helper application from `www.yourKServer.net`. Then you open a new browser and access the KServer by typing in its IP address `192.168.1.34`. The KServer drops a cookie for `192.168.13.34` while the helper tries to get a cookie corresponding to `www.youKServer.net`. The helper won't find the cookie. If this happens to you, just download a new helper application and try again.
- FTP requires Passive FTP be turned off. If you get the following error after attempting an FTP session:



FTP Folder Error

An error occurred opening that folder on the FTP Server. Make sure you have permission to access that folder.

Details:
A connection with the server could not be established

Then disable Passive FTP on your browser as follows:

1. Open Internet Options... from IE's Tools menu.
2. Click on the Advanced tab.
3. In the Browsing section, look for Use Passive FTP and uncheck this setting.
4. Click OK and try FTP again.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Enter a drive letter to FTP to

Enter the drive letter to FTP to instead of selecting a remote fixed drive option.

> Note: The KServer determines how many fixed disks a managed machine has via its Latest Audit *(page 35)*.

Chat

Remote Cntl > Chat

The Chat page initiates or continues chat sessions with users on managed machines. Multiple chat sessions may be active at the same time. Each window title displays the machine ID name for that session. The system automatically removes all messages older than one hour. Press the Shift-Enter key combination to insert a carriage return into a message.

To Initiate a Chat Session

Click the machine ID of the machine you wish to start chatting with. A chat session window opens on your machine and a chat window opens in a browser on the remote machine the next time it checks in. Enter text in the text pane. Click the Send button to send the message.

To Respond to a Chat Session

If a chat popup window displays while you are logged into the KServer, respond by entering text in the text pane. Click the Send button to send the message.

Join Session link

Multiple administrators may participate in the same chat session with a user. If a chat session is in progress, the Join Session link displays next to that machine ID. Click this link to join the session. If the session was abnormally shut down, click this link to restart the chat session and recover all messages for the session.

Chatting with Other Administrators

The names of logged in administrators with Group Access *(page 512)* rights to the group IDs currently displayed by the machine ID.group ID filter display on the Chat page as well. Click the link of another logged in administrator to initiate a chat with that administrator. \

Enable / Disable the User's Ability to Initiate Chat with Administrators

Administrators can enable / disable the user's ability to initiate a chat session using Agent > User Access *(page 253)*.

Ensuring Chat Opens a New Window

The default setting for Internet Explorer reuses open browser windows when any task opens a new URL. This same behavior occurs when you click a link in an email or Word document (the already open browser window is redirected to the new URL). To set Internet Explorer's default behavior to open new URLs in a new window perform the following steps:

1. Select Internet Option... from the Tools menu of any Internet Explorer window.
2. Click on the Advanced tab.
3. Uncheck the box labeled Reuse windows for launching shortcuts in the Browsing section.
4. Click OK.

My Machine Makes a 'Clicking' Noise Every Time the Chat Window Refreshes

Many Windows themes configure the system to play a sound every time Internet Explorer navigates to a new URL. One of these, `start.wav`, sounds like a click. To turn off the sound perform the following steps:

1. Open the Control Panel and select Sounds and Multimedia.
2. Click on the Sounds tab.
3. Scroll down and select Start Navigation in the Windows Explorer section.

4. Select (None) from the drop down control labeled Name.
5. Click OK.

Play tone with each new message

Check this box to cause a tone to sound every time a new message is sent or received by a chat window.

Automatically close chat window when either party ends chat

Check this box to close the chat window when either party ends the chat. Leave blank, if you want each party to be able to view and copy text from the chat window, even if the other party ends the chat.

Remove your name from chat list seen by other administrators

Check this box to remove your name from the chat list seen by other administrators.

Remove your name from chat list seen by users

Check this box to remove your name from the chat list seen by users.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Send Message

Remote Cntl > Send Message

The Send Message page sends network messages to a select group of users. Messages can be sent immediately at the next managed machine check-in, or can be scheduled to be sent at a future date and time.

The message either displays immediately on the managed machine, or the agent icon in the system tray of the managed machine flashes between a white background and its normal background when a message is waiting to be read. When the user click's the flashing icon the message displays.

Users can also be notified by a conventional Windows dialog box or through a browser window. If a browser window is used, enter a URL instead of a text message. This feature can be handy, for example, to automatically take users to a web page displaying an updated contact sheet or other relevant information.

Enter message/URL sent to remote machines (dialog box or URL)

The text you enter depends on the display window you select.

- Enter a text message if the display window is a dialog box.
- Enter a URL if the display window is a browser.

Select display window

Select the manner in which the user is notified on the managed machine. The default is `Dialog Box`, which displays a standard Windows dialog box with the network message. `Browser` displays a URL in a web browser window.

Send Now

Click Send Now to send the message when the recipient's machine conducts its next check-in. The message displays in the Messages Not Yet Sent column until the message is received by the recipient machine.

Clear Messages

Click Clear Messages to remove messages that have not been delivered to managed machines.

Schedule time to send message

Enter the year, month, day, hour, and minute to send the message.

Schedule

Click Schedule to schedule delivery of the message to selected machine IDs using the schedule options previously selected. The message displays in the Messages Not Yet Sent column until the message is received by the recipient machine.

Display Immediately/Flash Icon

This setting determines how managed machine users are notified once their message has been retrieved from the KServer.

- Display Immediately notifies the user immediately.
- Flash Icon flashes the agent icon in the system tray (on page 612) until the user clicks the icon. The message is then displayed according to the settings in Select display window.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

◆ Agent has not recently checked in

◆ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Messages Not Yet Sent

This column displays messages not yet sent.

Task Manager

Remote Cntl > Task Manager

The Task Manager page performs the same function as Microsoft's Windows NT/2000 task manager. It lists all currently active processes on a managed machine. Clicking the link of a machine ID tasks the agent on the managed machine to collect 10 seconds of process data at the next check-in. Task Manager displays the results in tabular form. Task Manager supports all Windows operating systems, Windows 95 and up.

kperfmon.exe

kperfmon.exe is a small program run by the agent to collect task data on the target machine. It only runs while collecting task data. On some OS configurations kperfmon.exe may take about 4% of the CPU during the 10 seconds required to collect data.

Name

The name of the process actively running on the managed machine.

CPU

The percent of CPU time consumed by that process over the 10 second data collection interval.

Mem Usage

The amount of main memory used by each active process.

Threads

The number of active threads associated with each active process.

End Process

You can kill any active process on the managed machine by selecting the radio button to the left of the process name and then clicking the End Process button. In addition to killing the active process, it re-collects the task data again.

Chapter 10

Backup

In This Chapter

Backup Tab

Backup

Use the functions in the Backup tab to install, configure, and schedule recurring backups for managed machines.

Functions	Description
Backup Status *(page 343)*	Review the status of scheduled backups for any machine.
Schedule Volumes *(page 343)*	Schedules backups for selected hard disk volumes on any managed machine.
Pre/Post Script *(page 349)*	Specify a script to run before and/or after Volume Backup
Schedule Folders *(page 350)*	Can independently schedule backups for individual folders.
Backup Sets *(page 355)*	Displays a list of the current backup sets you have stored, for both volumes and folders.
Backup Logs *(page 356)*	Review the logs generated by every backup action.
Explore Volumes *(page 356)*	Mounts a backup as a new drive letter on the managed machine.
Explore Folders *(page 357)*	Copies the .zip archive back to the managed machine.
Verify Images *(page 358)*	Verify any volume or folder backup image
Auto Recovery *(page 358)*	Select a volume backup image to automatically restore to a selected machine. Requires the machine can still boot and the agent can communicate with the server.
CD Recovery *(page 361)*	Boot the managed machine from a CD and then automatically restore a selected volume backup image.
Universal Restore *(page 363)*	Provides instructions for creating a boot CD and restoring a backup image manually by walking through a wizard.
Offsite Servers *(page 363)*	Specify a machine to act as an offsite server and receive files from a local server.
Local Servers *(page 366)*	Specify a machine to act as a local server and send files to an offsite server.
Offsite Alert *(page 369)*	Generate alerts when a local server fails to connect to an offsite server.
Schedule Transfer *(page 372)*	Set up a day by day schedule for each local server to push files to an offsite server.
Install/Remove *(page 373)*	Install and uninstall the backup driver and software on any managed machine.
Image Location *(page 377)*	Set the path to the backup storage location.
Image Password *(page 380)*	Look up the password used to protect backup images.
Folder Backup *(page 381)*	Specify a list of folders to backup during Schedule Folders

Backup Alert *(page 383)*	Activate/deactivate alerts associated with backup events.
Compression *(page 387)*	Set compression level used by both volume and folder backups
Max File Size *(page 388)*	Set a maximum file size used for backup images. Images larger than this maximum are broken into multiple files.
Max Log Age *(page 390)*	Set the maximum number of days to save backup log data.
Secure Zone *(page 391)*	Install a secure zone to support Auto Recovery

Backup Status

Backup > Backup Status

Similar information is provided using Reports > Backup *(page 427)*.

The Backup Status page provides a dashboard view of the backup status of machine IDs that have the backup client installed. The dashboard is organized into three panes:

- In Process Backups - Lists backups in process and the percentage complete.
- Backup Status at a Glance - Displays pie charts showing scheduled, succeeded, skipped, failed and cancelled backups. Click on any slice of the pie chart or any label of the pie chart to display a list of individual machines belonging to that slice.
- Backup Status by Machine - Shows the status of backups scheduled, succeeded, skipped, failed or cancelled for each machine.

Show Status for Last <N> <Periods> and Refresh

Specify the number of periods to collect the results shown on this page, then click the Refresh button.

Schedule Volumes

Backup > Schedule Volumes

The Schedule Volumes page schedules the backup of volumes for selected machine IDs. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Note: If a network connection is dropped, the system retries for up to 10 seconds before giving up.

Warning: Do not attempt to backup the KServer using BUDR while the KServer is running. KServer data is backed up automatically each time a database maintenance cycle is run. Database maintenance cycle frequency is set using the Run database backup / maintenance every <N> Days @ <Time> option in System > Configure *(page 524)*.

Volume Backups vs Folder Backups

When you perform a backup using Schedule Folders *(page 350)*, only the data, along with the folder tree, is compressed and stored.

Backing up disks and partitions is performed in a different way: Schedule Volumes stores a sector-by-sector snapshot of the disk, which includes the operating system, registry, drivers, software applications and data files, as well as system areas hidden from the user. This procedure is called creating a disk image, and the resulting backup archive is often called a disk/partition image.

- Only those hard disk parts that contain data are stored. Further, it does not back up swap file information. This reduces image size and speeds up image creation and restoration.

You can backup individual drive letters (partitions) or entire disk drives.

- A partition image includes all files and folders independent of their attributes (including hidden and system files), boot record, FAT (file allocation table), root and the zero track of the hard disk with master boot record (MBR).
- A disk image includes images of all disk partitions as well as the zero track with master boot record (MBR). To ensure recovery from complete disk failure, you should backup entire disk drives. Only by backing up entire disks will you capture hidden recovery partitions that may have been installed by your PC system vendor.

Full Backups, Incremental and Differential Backups

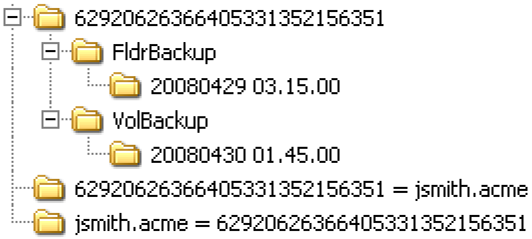
Full backups take significant time to complete compared with incremental or differential backups. To save time and disk space, schedule full backups to run less frequently than incremental or differential backups. Typically full backups are scheduled once per week or once per month, while incremental or differential backups run daily. All files required for a full backup, including all incremental or differential backups, are saved together in a backup set. You may save any number of full backup sets you wish.

Backup Folder Structure

Separate Image Location *(page 377)* paths may be specified for volume and folder backups. Volume backups and folder backups are saved as full backup sets. Each backup set gets its own folder. Backup files have a '*.tib extension.

Backup folders are organized by the GUID used to uniquely identify each machine ID. By using the GUID instead of the machine ID, renaming the machine ID or assigning the machine ID to a different group does not prevent the backup files from becoming unavailable.

Two extra, empty, folders in the same backup image location folder identify the machine ID associated with each GUID. For instance, if you have a machine ID named `jsmith.acme` and its GUID is `62920626366405331352156351` then folders might be organized as follows in the image location folder:



```
62920626366405331352156351
    FldrBackup
        20080429 03.15.00
    VolBackup
        20080430 01.45.00
62920626366405331352156351 = jsmith.acme
jsmith.acme = 62920626366405331352156351
```

The first folder contains the backups. The second empty folder identifies the machine ID for a GUID. The third empty folder identifies the GUID for a machine ID. If you have backups for many machine IDs all stored in the same image location folder, you can use either of the two empty cross-reference folders to identify the appropriate GUID backup folder, either by machine ID or by GUID.

Schedule Full

Click Schedule Full to schedule a new full backup of selected machine IDs using the backup options previously selected. Backup options set using the four Apply buttons are applied to selected machine IDs when Schedule Full is clicked.

> Note: Backups can consume significant network bandwidth. To prevent congesting the network during normal business hours, schedule backups to run at off hours.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to clear pending backups for selected machine IDs, including backup options set using the four Apply buttons.

Backup Now

Click Backup Now to start a new full backup of selected machine IDs *immediately*. Backup options set using the four Apply buttons are *not* applied to selected machine IDs when Backup Now is clicked.

> Note: The backup logs always list an incremental or differential backup after clicking Backup Now, even if a full backup image is created.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Backup Set Type

Select the type of backup set to schedule:

- Incremental - Captures only the files that have changed *since the previous full or incremental backup.* Restoring from an incremental backup requires all previous incremental image file plus the original full backup. Do not remove files from the full backup set directory.

  > Warning: Incremental backups detect changes at the sector level. If you defragment your hard disk, a large number of disk sectors will move and appear to change. This results in a large incremental backup file. This is perfectly normal for a sector level backup system.

- Last Differential - Captures all changes to the target system *since the last full backup.* To save disk space, only the latest differential backup is saved with each full backup set. Select Last Differential to minimize backup storage requirements.
- All Differentials - Captures all changes to the target system *since the last full backup.* Saves all differential backups in addition to the last differential backup.

Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Every <N> Periods

Incremental and differential backups are always performed as a recurring task. Enter the number of times to run this task each time period. Click Apply to apply these settings to selected machine IDs. Enter 0 to disable the scheduling of incremental or differential backups.

Apply Full Every <N> Periods

Full backups are always performed as a recurring task. Enter the number of times to run this task each time period. Click Apply to apply these settings to selected machine IDs.

Save last <N> backup sets

Specify the number of full backup sets to keep. A backup set is a full backup plus all incremental backups or differential backups referencing that full backup. Starting a new full backup creates a new full backup set. So, entering 3 here maintains the current full backup, plus that last two full backup sets. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Delete before running backup

If checked, delete any backups sets not being save before running a new backup.

Verify Backup

If checked, verifies each backup image immediately after each full, incremental, or differential backup completes. Verify takes the same amount of time as the original backup to complete. Only verify in situations where you question the integrity of the network connection to the backup file location. You do not generally need to use this option. Use the Verify Images *(page 358)* function to spot check backup files at any time. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Enable VSS Support

Enables Volume Shadow Service (VSS) on 2003 servers. VSS ensures completion of all transactions before the backup process starts. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Disks

The list of local hard drive disks available on a machine. Check a disk number to include it in a volume backup. Backup an entire disk to insure any hidden partitions that may have been installed by your PC vendor are also backed up. These hidden partitions may be required to boot your system in the event of a restore.

Sets

The number of backup sets maintained at any one time.

Inc / Diff

The type of backup set maintained:

◢ - Incremental

▲ - Differential

▼ - All differential

Last Backup

The last time a backup was performed.

Partitions

The list of available drive letter partitions available on a machine. Check a driver letter to include it in a volume backup.

Next Backup

The next scheduled backup. Pending timestamps display as red text with yellow highlight.

Period (full)

The scheduled interval between full backups.

Period (inc)

The scheduled interval between incremental or differential backups.

Verify VSS

If checked, Volume Shadow Service (VSS) is enabled when performing a backup.

Pre/Post Script: Backup

Backup > Pre/Post Script

Use the Pre/Post Script page to run scripts either before a Schedule Volumes *(page 343)* backup starts or after it completes. Does not apply to Schedule Folders *(page 350)* backups.

Use this page to suspend services that may lock files and prevent volume backup from completing. You may also wish to force a system service, such as Exchange or a database, to write all its data to disk prior to system backup. Typically this can be done without requiring the service in question to be down during backup. All critical services can be left fully operational at all times. For example, to backup an Exchange Server, a snap shot of the database is needed prior to the backup start. A script will quickly start and stop Exchange to take the snapshot of the database prior to the start of the backup.

To Run a Pre/Post Script

1. Select machine IDs.
2. Click the select script link to select a script to run before a Schedule Volumes backup starts or after it completes.
3. For scripts run after completion, specify whether the scripts should run `with any status`, `with success` or `with failure`.
4. Click Set.

Schedule

Click Set to run the selected scripts run before a Schedule Volumes backup starts or after it completes.

Run Select Script Before Initial Update Starts

If checked, runs the selected script *before* a Schedule Volumes backup starts.

Run Select Script After Initial Update Completes

If checked, runs the selected script *after* a Schedule Volumes backup completes. For scripts run after completion, specify whether the scripts should run `with any status`, `with success` or `with failure`.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

🚩 Agent has not recently checked in

🚩 Agent has never checked in

OK Online but waiting for first audit to complete

🚫 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Pre Script / Post Script

This column lists the scripts set to run before a Schedule Volumes backup starts or after it completes.

Schedule Folders

Backup > Schedule Folders

The Schedule Folders page schedules the backup of folders for selected machine IDs. The folders backed up are specified using Backup > Folder Backup *(page 381)*. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Note: If a network connection is dropped, the system retries for up to 10 seconds before giving up.

Sector Level Backups

Folder backups perform sector level backups of selected folders. Sector level copying allows the system to backup locked and in-use files so you can safely backup at any time of the day.

Full Backups, Incremental and Differential Backups

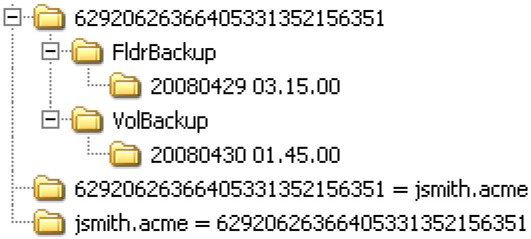
Full backups take significant time to complete compared with incremental or differential backups. To save time and disk space, schedule full backups to run less frequently than incremental or differential backups. Typically full backups are scheduled once per week or once per month, while incremental or differential backups run daily. All files required for a full backup, including all incremental or differential backups, are saved together in a backup set. You may save any number of full backup sets you wish.

Backup Folder Structure

Separate Image Location *(page 377)* paths may be specified for volume and folder backups. Volume backups and folder backups are saved as full backup sets. Each backup set gets its own folder. Backup files have a '*.tib extension.

Backup folders are organized by the GUID used to uniquely identify each machine ID. By using the GUID instead of the machine ID, renaming the machine ID or assigning the machine ID to a different group does not prevent the backup files from becoming unavailable.

Two extra, empty, folders in the same backup image location folder identify the machine ID associated with each GUID. For instance, if you have a machine ID named `jsmith.acme` and its GUID is `62920626366405331352156351` then folders might be organized as follows in the image location folder:



```
62920626366405331352156351
    FldrBackup
        20080429 03.15.00
    VolBackup
        20080430 01.45.00
62920626366405331352156351 = jsmith.acme
jsmith.acme = 62920626366405331352156351
```

The first folder contains the backups. The second empty folder identifies the machine ID for a GUID. The third empty folder identifies the GUID for a machine ID. If you have backups for many machine IDs all stored in the same image location folder, you can use either of the two empty cross-reference folders to identify the appropriate GUID backup folder, either by machine ID or by GUID.

Schedule Full

Click Schedule Full to schedule a new full backup of selected machine IDs using the backup options previously selected. Backup options set using the four Apply buttons are applied to selected machine IDs when Schedule Full is clicked.

> Note: Backups can consume significant network bandwidth. To prevent congesting the network during normal business hours, schedule backups to run at off hours.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to clear pending backups for selected machine IDs, including backup options set using the four Apply buttons.

Backup Now

Click Backup Now to start a new full backup of selected machine IDs *immediately*. Backup options set using the four Apply buttons are *not* applied to selected machine IDs when the Backup Now is clicked.

> Note: The backup logs always list an incremental or differential backup after clicking Backup Now, even if a full backup image is created.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Backup Set Type

Select the type of backup set to schedule:

- Incremental ◢ - Captures only the files that have changed *since the previous full or incremental backup.* Restoring from an incremental backup requires all previous incremental image file plus the original full backup. Do not remove files from the full backup set directory.

  > Warning: Incremental backups detect changes at the sector level. If you defragment your hard disk, a large number of disk sectors will move and appear to change. This results in a large incremental backup file. This is perfectly normal for a sector level backup system.

- Last Differential ▲ - Captures all changes to the target system *since the last full backup.* To save disk space, only the latest differential backup is saved with each full backup set. Select Last Differential to minimize backup storage requirements.
- All Differentials ▼ - Captures all changes to the target system *since the last full backup.* Saves all differential backups in addition to the last differential backup.

Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Every <N> Periods

Incremental and differential backups are always performed as a recurring task. Enter the number of times to run this task each time period. Click Apply to apply these settings to selected machine IDs. Enter 0 to disable the scheduling of incremental or differential backups.

Apply Full Every <N> Periods

Full backups are always performed as a recurring task. Enter the number of times to run this task each time period. Click Apply to apply these settings to selected machine IDs.

Save last <N> backup sets

Specify the number of full backup sets to keep. A backup set is a full backup plus all incremental backups or differential backups referencing that full backup. Starting a new full backup creates a new full backup set. So, entering 3 here maintains the current full backup, plus that last two full backup sets. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Delete before running backup

If checked, delete any backups sets not being save before running a new backup.

Verify Backup

If checked, verifies each backup image immediately after each full, incremental, or differential backup completes. Verify takes the same amount of time as the original backup to complete. Only verify in situations where you question the integrity of the network connection to the backup file location. You do not generally need to use this option. Use the Verify Images *(page 358)* function to spot check backup files at any time. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Enable VSS Support

Enables Volume Shadow Service (VSS) on 2003 servers. VSS ensures completion of all transactions before the backup process starts. Click Apply to apply these settings to selected machine IDs without changing the backup schedule.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

- Agent has never checked in
- OK Online but waiting for first audit to complete
- The agent is online but remote control is disabled
- The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Sets

The number of backup sets maintained at any one time.

Inc / Diff

The type of backup set maintained:

◢ - Incremental

▲ - Differential

▼ - All differential

Last Backup

The last time a backup was performed.

Next Backup

The next scheduled backup. Pending timestamps display as red text with yellow highlight.

Period (full)

The scheduled interval between full backups.

Period (inc)

The scheduled interval between incremental or differential backups.

Verify VSS

If checked, Volume Shadow Service (VSS) is enabled when performing a backup.

Backup Sets

Backup > Backup Sets

The Backup Sets page displays a list of the *current* backup sets *(page 602)* you have stored, for both volumes and folders. If you specified 5 backup sets using either Schedule Volumes *(page 343)* or Schedule Folders *(page 350)* this page displays 5 backups sets. This page also displays all backups that have failed while trying to store up to the specified number of backup sets. You can can also:

- Clear all backups sets for a volume or folder.

  > Note: The backup sets are not actually cleared from the image location until the next full backup runs.

- Cancel a backup in progress.
- Click the backup link to display the log details of a backup in XML format.

  You should never need to look at this log file unless backup reports strange or unexplained failures. In those cases, the log may provide more insight into the cause of the backup failure such as identifying corrupt files or disk sectors.

  > Note: Bad disks may cause backup failures. Running CHKDSK.EXE on the drive in question may resolve failures.

The backup set table lists:

- The End Time the backup set was completed.
- The Type of backup: full, differential, or incremental.
- The Duration required to perform the backup.
- The Size of the backup.
- Whether the backup succeeded or failed. If failed, an error message also displays.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

> Note: See Backup Logs *(page 356)* for a list of *all* backups.

Clear

Click the Clear button to manually remove all volume backup sets or folder backup sets. This might be necessary to remove a "stuck" backup set or to free up disk space.

> Warning: Clears *all* volume backups sets or folder backup sets for a machine ID.

Cancel

Click Cancel to cancel an in process backup.

Backup Logs

Backup >
Backup Logs

The Backup Logs page displays a list of the *all* backups you have performed, for both volumes and folders, up to the number of days specified for backup logs using Backup > Max Log Age *(page 390)*. Click a machine ID to display a log containing the date, type, duration, result and description of each backup operation performed.

> Note: Backup Logs provides more detailed information about why a backup failed than provided by Backup Sets *(page 355)*. Backups Sets displays a list of all *current* backups.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

> Note: Bad disks may cause backup failures. Running CHKDSK.EXE on the drive in question may resolve failures.

Explore Volumes

Backup >
Explore Volumes

The Explore Volumes page mounts a volume backup as a new read only drive letter on the same machine or on a different machine. The backup volume can be browsed, just like any other drive, with Windows Explorer. Individual files or folders can be copied from mounted backup volumes to any other folder on your local machine you have write access to. Mounted volume backups remain available for browsing unless the computer is rebooted or the drive is unmounted by clicking the Unplug All button.

> Note: A user with access rights to the Image Location *(page 377)* must be logged in at the time the backup is mounted.

Click a machine ID to select a volume backup to mount. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Mount to machine ID

Select Mount to machine ID to mount the backup image to the same machine ID that the backup image was made on.

Mount to select machine ID

Select Mount to select machine ID to mount the backup image to a different machine ID than the backup image was made on.

Mount

To explore a full or incremental/differential backup, click the radio button next to the date listed. The complete image, as of that date, gets mounted on the managed machine as a new drive letter. Click the Mount button to generate a script to mount the backup image. The screen automatically refreshes every 5 seconds and reports status of the mount until the mount script completes execution.

Unplug All

Click Unplug All to remove any mounted volume backups.

Explore Folders

Backup > Explore Folders

The Explore Folders page restores folder backups to a specified directory on a target machine, maintaining the same structure they had in the backup. Unlike Explore Volumes *(page 356)*, this page can not mount the data as a new drive letter. Manually delete restored backup folders to remove them.

Note: A user with access rights to the Image Location *(page 377)* must be logged in at the time the backup is mounted.

Restore to machine ID

If selected, the folder backup is restored to the same machine ID the folder backup was made on.

Restore to select machine ID

If selected, the folder backup is restored to a different machine ID the folder backup was made on..

Restore

Click Restore to restore a selected folder backup to a selected machine ID.

Create new folder in

Enter the path on the target machine where the folder backup will be restored.

Folder Backup

Click the radio button next to the date of a folder backup to select it.

Verify Images

Backup > Verify Images

The Verify Images page performs a one time verification of any selected volume or folder backup. Use this function to spot check that backups are completed successfully. Successful backups may fail to verify if the backup image file was not copied successfully to the Image Location *(page 377)* path. This problem typically only occurs in slow or unreliable networks. On slow networks, consider selecting the Verify Backup option in Schedule Volumes *(page 343)* and Schedule Folders *(page 350)* to verify the backup every time.

Click a machine ID to select a volume backup to mount. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Verify from machine ID

Select Verify from machine ID to verify the backup on the same machine ID that the backup image was made on.

Verify from select machine ID

Select Verify from select machine ID to verify the backup on a different machine ID than the backup image was made on.

Verify Volume

To verify a full or incremental/differential volume backup, select the radio button next to the date listed and click the Verify Volumes button.

Verify Folder

To verify a full or incremental/differential folder backup, click the radio button next to the date listed and click the Verify Folders button.

Auto Recovery

Backup > Auto Recovery

The Auto Recovery page restores any volume backup image to the same machine the backup was created on. Auto Recovery requires:

- The target machine's agent can still communicate with the KServer.
- Secure Zone *(page 391)* be installed on the target machine ID.

> Note: Folder backups are restored using Explore Folders *(page 357)*. To restore a target machine that cannot communicate with the KServer see CD Recovery *(page 361)* or Universal Restore *(page 363)*.

Auto Recovery lets you select any volume backup image (full, incremental, or differential) for the selected machine ID to restore without any user interaction at all. The restore may be scheduled to run at any time of day or on a recurring schedule. Set a recurring schedule to auto restore a machine in a public area subject to abuse by random users.

The server and agent configure the hidden Secure Zone partition to automatically restore the selected backup image from the Image Location *(page 377)* path. Once configuration completes, the agent reboots the machine without warning. The machine boots into the secure zone partition and automatically restores the selected backup image.

Restore Failure

Restores can fail for the following reasons:

- The Image Location points to a local driver letter - When Windows boots, drive letters are automatically assigned to hard drives starting with `C:`. With the disk manager, you can reassign these to any other unused drive letter. For example, you may decide to turn your `D:` drive into `G:` and set the Image Location path to `G:\backups`. The recovery boot process will not know about the driver letter mapping and will assign `D:` to the hard disk. The restore will then fail trying to access `G:\backups`. You can resolve this problem by setting your image location to `D:\backups` prior to selecting the restore options. Restore will then successfully access `D:\backups`.
- Image stored on a USB drive - Similar to the issue above, when the recovery boot process assigns drive letters, it may assign the USB drive a different drive letter than Windows assigned it. You can resolve this problem by setting your Image Location to the new drive letter prior to selecting the restore options. Restore will then successfully access the USB drive.
- Image stored on a network drive - If the remote drive, or the machine hosting the drive, is not turned on, or if the username and password have changed, then the recovery boot process will not be able to access the network drive.

Schedule

Click Schedule to schedule restore of volume backup images to selected machine IDs using the restore parameters previously selected. Remember, the restore reboots the machine and restores an image without warning the user first.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to clear a scheduled restore of selected machine IDs.

Restore Now

Click Restore Now to restore volume backup images to selected machine IDs immediately.

Run recurring every <N> periods

Check this box to make this task a recurring task. Enter the number of times to run this task each time period.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Select backup to restore

Select a backup image to restore from the drop down control listing all available backups for the selected machine ID.

Last Restore

The last time an image was restored to this machine ID.

Next Restore

The next time an image is scheduled to be restored.

Interval

The interval for the scheduled task to recur.

CD Recovery

Backup >
CD Recovery

The CD Recovery page restores volume backup images to the same machine or same type of machine that the backup was created on. CD Recovery requires the target machine be booted from a CD.

Use CD Recovery to restore backup images if the target machine's agent can not currently communicate with the KServer. The target machine must be physically connected to a network that provides access to the KServer. Once the target machine boots up from the CD, no further user interaction is required. The network card is configured automatically. The KServer automatically downloads and restores a backup image to the target machine.

Procedure

1. Create an ISO file - If an ISO image *(page 606)* file record doesn't already exist in the paging area, create a new ISO image file by clicking the Create New ISO button. The same ISO file is created each time this button is clicked, but with a different *filename*. It is the ISO *filename* on the recovery CD that tells the KServer which machine ID and backup image to restore from.

> Note: You can leave the the machine ID and backup image unassigned or change the machine ID and backup image associated with an ISO image file at any time. This lets you create and distribute the recovery CD in advance to all the locations you manage. Then use this page to select the backup image you want to restore from just before the target machine is booted up from the CD. However, you must assign a machine ID and backup image *before* you start the restore or an error will result.

2. Select a Machine ID - Associate a machine ID with the ISO file. The machine ID must specify an Image Location *(page 377)* that contains the backup image you want to restore.
3. Select a Backup Image - Associate a backup image timestamp with the ISO filename and machine ID.
4. Download the ISO image - Download the created ISO file to a workstation that can write the ISO file to a CD.

5. Create the Recovery CD - Use a CD recording application to write the ISO file *as an image* to a CD. Do not simply copy the ISO file to the CD as a data file.
6. Boot the target machine using the recovery CD - The target machine must be physically connected to a network that provides access to the KServer. No further user interaction is required.

Restore Failure

Restores can fail for the following reasons:

- The Image Location points to a local driver letter - When Windows boots, drive letters are automatically assigned to hard drives starting with `C:`. With the disk manager, you can reassign these to any other unused drive letter. For example, you may decide to turn your `D:` drive into `G:` and set the Image Location path to `G:\backups`. The recovery boot process will not know about the driver letter mapping and will assign `D:` to the hard disk. The restore will then fail trying to access `G:\backups`. You can resolve this problem by setting your image location to `D:\backups` prior to selecting the restore options. Restore will then successfully access `D:\backups`.
- Image stored on a USB drive - Similar to the issue above, when the recovery boot process assigns drive letters, it may assign the USB drive a different drive letter than Windows assigned it. You can resolve this problem by setting your Image Location to the new drive letter prior to selecting the restore options. Restore will then successfully access the USB drive.
- Image stored on a network drive - If the remote drive, or the machine hosting the drive, is not turned on, or if the username and password have changed, then the recovery boot process will not be able to access the network drive.
- Unable to establish a network connection - CD Recovery allows the recovery of an image without the need for the user to enter details such as the image to be restored, its location, the password, etc. Instead the machine connects to the KServer to retrieve this information. However, if there is a proxy between the managed machine and the KServer, or DHCP is not enabled, that machine may not be able to establish a network connection to get out to the internet and retrieve the settings. In cases where a DHCP server is not enabled or there is a proxy in place, use Universal Restore *(page 363)*, as there is no way to configure network connection information for CD Recovery.

Create New ISO

Click Create New ISO to create a new ISO image *(page 606)* file, if one does not already exist that you can use. Creating a new ISO image file creates a new record in the paging area.

Delete

Click the delete icon ✕ to delete an ISO image file record.

Edit

Click the edit icon to change the Title of an ISO image file record.

Share

By default, ISO images are private to the administrator that created it. You can share an ISO image with other administrators, administrator roles, or make the ISO image file public.

Title

A descriptive title of the backup image being restored.

Machine ID

Select a machine ID. The machine ID must specify an Image Location *(page 377)* that contains the backup image you want to restore.

Backup Date

Select the backup image, by date, to restore from.

Universal Restore

Backup > Universal Restore

Universal Restore enables you to restore the backup image of a system. The restore can be to a different hardware platform or to a virtual machine. Universal Restore requires someone at the machine to boot from the CD and navigate through the recovery wizard to restore the backup image. Manual recovery requires a user with knowledge of the Image Location *(page 377)* path and the Image Password *(page 380)* to restore a backup image.

A damaged boot volume may prevent a system from even booting. To restore images to the system partition, requires that the system boot from a separate partition. This recovery CD provides that image. Follow the on screen instructions to create the recovery CD and restore a volume.

Offsite Servers

Backup > Offsite Servers

The Offsite Servers page safely and securely transfers backup images from a LAN to a remote location. Offsite replication transfers all *changes* to files and sub-directories in the Local Server directory to a specified offsite server directory. File transfers are scheduled using Schedule Transfer *(page 372)*. Image Location *(page 377)* directories should be defined as subdirectories of a Local Server directory to be included in these transfers.

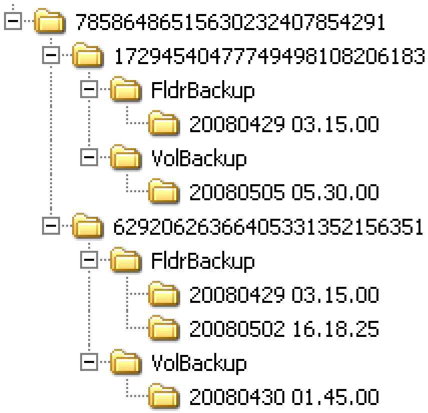
Offsite Server Configuration

Any machine ID may act as an offsite server. You may also have as many offsite servers as you like. Example Offsite Replication configurations include:

- One global offsite server - A local server at each managed LAN pushes data to the global offsite server.
- Multiple offsite servers - Several local servers are assigned to each offsite server. Multiple offsite servers are used to balance the load.
- Cross offsite servers - Supports offsite replication for companies with multiple locations. For example, two company sites each act as the offsite server location for the other company site.

Offsite Folder Structure

The offsite server stores data received from local servers in the directory specified. The top level GUID folder is the GUID of the local server the data is coming from. Second level GUID folders are the GUIDs of the machine IDs being backed up. The following diagram illustrates a typical offsite server directory structure.



```
785864865156302324O7854291
  172945404777494981O8206183
    FldrBackup
      20080429 03.15.00
    VolBackup
      20080505 05.30.00
  629206263664053313521563S1
    FldrBackup
      20080429 03.15.00
      20080502 16.18.25
    VolBackup
      20080430 01.45.00
```

File Transfers

Only file changes are pushed to the offsite server. Broken file transfers are automatically restarted at the point left off. Restarting the file transfer from the beginning is not required. Offsite replication uses the same communications technology used in the agent/server communications. All traffic is 256-bit encrypted.

Using the Same Machine for the Local Server and Offsite Server

You may assign the offsite server to be the same machine as the local server. This is *not* recommended but is allowed to support copying image data to secondary disk drives.

Setting the Name/IP Address and Port

Select a target machine with an agent that will act as the offsite server. The offsite server is always running and listens for connections from local servers using any TCP port you specify. The port cannot be used by any other application. Try using 5722 as it is similar to the agent checkin port.

You must specify a DNS name or IP address that can be resolved from the local server. Typically, this is the *external* name/IP address of the gateway/firewall/router used by the target machine. Configure port range forwarding on your gateway/firewall/router to direct requests for port 5722—or whatever port number you've chosen—to the internal IP address of the machine ID acting as the offsite server.

> Note: The offsite server must have a credential *(page 495)* set to access the network directory receiving data transfers.

Testing the Offsite Configuration

Once you have configured the offsite server, check pending scripts on the offsite server machine:

1. Click the OK or OK icon.
2. Click the Pending Scripts tab on the Machine Summary *(page 23)* page.
3. Ensure the `Start Offsite Server` script ran successfully.

Try to connect to the offsite server component using Telnet. In the command below replace the string `your.offsiteServer.com` with your Name/IP address. Replace `5722` with the port number you are using.

```
telnet your.offsiteServer.com 5722
```

If the connection is successful you should see only see a blinking cursor. Once you can verify the offsite server is ready, You can configure the Local Servers.

Create

Click Create to create an offsite server using the options previously selected.

Select Machine ID

Select the machine ID you want to act as the offsite server.

Name/IP

Enter the IP DNS name or IP address of the offsite server.

Port

Enter an unused port number.

Full path to directory (UNC or local) which receives all data transfers

Enter the full path to the directory, either UNC or local, which receives all data transfers.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Delete

Click the delete icon ✕ to delete an offsite server record.

Edit Icon

Click a row's edit icon 📝 to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Name/IP

The DNS name or IP address used by the offsite server.

Port

The port used by the offsite server.

Directory Path

The directory path used by the offsite server.

Local Servers

Backup > Local Servers

The Local Server page defines the machine ID and directory on the local LAN used to transfer all new files to an Offsite Server *(page 363)*. Offsite replication transfers all *changes* to files and sub-directories in the Local Server directory to a specified offsite server directory. Files transfers are scheduled using Schedule Transfer *(page 372)*. Image Location *(page 377)* directories should be defined as subdirectories of a Local Server directory to be included in these transfers.

For each local server specify:

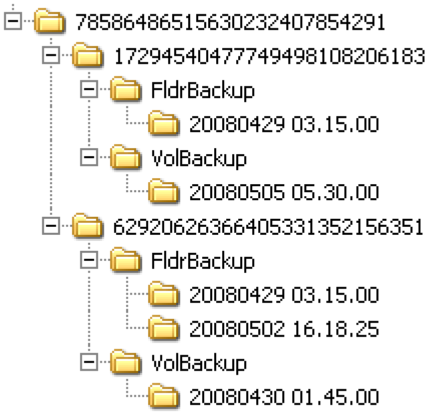
- The offsite server to push files to.
- The local directory path to push to the offsite server.

- Optional bandwidth limit.

The local server directory can be a UNC path pointing to a directory on a network file share. The local server must have a credential *(page 495)* set in order to access the network.

Offsite Folder Structure

The offsite server stores data received from local servers in the directory specified. The top level GUID folder is the GUID of the local server the data is coming from. Second level GUID folders are the GUIDs of the machine IDs being backed up. The following diagram illustrates a typical offsite server directory structure.



```
78586486515630232407854291
    17294540477749498108206183
        FldrBackup
            20080429 03.15.00
        VolBackup
            20080505 05.30.00
    62920626366405331352156351
        FldrBackup
            20080429 03.15.00
            20080502 16.18.25
        VolBackup
            20080430 01.45.00
```

File Transfers

Only file changes are pushed to the offsite server. Broken file transfers are automatically restarted at the point left off. Restarting the file transfer from the beginning is not required. Offsite replication uses the same communications technology used in the agent/server communications. All traffic is 256-bit encrypted.

Using the Same Machine for the Local Server and Offsite Server

You may assign the offsite server to be the same machine as the local server. This is *not* recommended but is allowed to support copying image data to secondary disk drives.

Create

Click Create to create an local server using the options previously selected.

Select Machine ID

Select the machine ID you want to act as the local server.

Offsite Server

Select the offsite server to transfer backup files to.

Bandwidth Limit

- No Limit - The local server transfers data to the offsite server as fast as possible.
- kBytes/Sec - The local server limits data transfer to the rate specified.

Full path to directory (UNC or local) to push to offsite replication server

Enter the full path to the directory, either UNC or local, which sends data transfers. The local server sends the total contents of this directory to the offsite server.

Check Status

Click Check Status to check the amount of data left to be written to the offsite server immediately. Normally this check is performed only at the end of an active transfer cycle.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Delete

Click the delete icon ✕ to delete a local server record.

Edit Icon

Click a row's edit icon to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Status

- Active - Indicates files are actively being sent to the offsite server.
- Suspended - The local server is suspended per the schedule set out in Schedule Transfer *(page 372)*.

- At the end of each active cycle, the system checks the local server and reports back the amount of data left to be written.

Offsite Server

The name of the offsite server being sent backup files from this local server.

BW Limit

The bandwidth limit assigned to this local server.

Directory Path

The directory on the local server sending data to the offsite server.

Offsite Alert

Backup > Offsite Alert

The Offsite Alerts page creates an alert when the specified local server can not connect to its offsite server. Alarms are only generated during the times allowed by Schedule Transfer *(page 372)* for each local server. Once defined, you can apply this alert immediately to any machine ID displayed on this page.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must be defined as a local server using Backup > Local Servers *(page 366)*.

To Create an Offsite Alert

1. Check any of the last three checkboxes to perform their corresponding actions when a offsite alarm is triggered for a machine ID.
   - Create Alarm - This is always checked. Offsite alarms are enabled when an offsite alert is defined on this page.
   - Create Ticket
   - Run Script after alarm.
   - Email Recipients
2. Set additional email parameters.
3. Set additional offsite alert specific parameters.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Offsite Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of offsite alert emails can be sent and formatted:

- Offsite failed

> Note: *Changing the email alarm format changes the format for* all *offsite alert emails.*

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<op>	#op#	offsite replication server ip:port

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run script after alert

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.

- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.
- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Offsite Alert Parameters

- Check every <N> periods - Specifies how often to check the connection between the local server and the offsite server.
- Alarms if connection fails for <N> periods - Triggers an alarm if the connection fails for greater than the number of periods specified.

Three additional parameters can be set:

- Add - Adds alert parameters to selected machine IDs when Apply is selected without clearing existing parameters.
- Replace - Replaces alert parameters on selected machine IDs when Apply is selected.
- Remove - Clear alert parameters from selected machine IDs. Click the edit icon 📝 next to a machine ID group *first* to select the alert parameters you want to clear.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Interval

The number of periods to wait before checking the connection between the local server and the offsite server.

Duration

The number of periods to wait before triggering an alert.

Schedule Transfer

Backup > Schedule Transfer

The Schedule Transfer page specifies the time of day each local server sends files to the offsite server. You may set different start and end times for each day of the week.

For example, to schedule transfers for all night Tuesday, set the Start Time for Tuesday at `6:00 pm` and the End Time for Wednesday at `6:00 am`.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must be defined as a local server using Backup > Local Servers *(page 366)*.

Apply

Click Apply to apply weekly schedule settings selected local servers.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ◆ Agent has not recently checked in
- ◆ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Edit Icon

Click a row's edit icon ✎ to populate header parameters with values from that row. You can edit these values in the header and re-apply them.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Weekday Start-End

Displays the start and end times for each day of the week that backup files are transferred from each local server to its offsite server.

Install/Remove: Backup

Backup > Install/Remove

The Install/Remove page installs or uninstalls Acronis backup and disaster recovery (BUDR) software on selected machine IDs. Each BUDR installation on a managed machine uses up one BUDR license. The number of licenses available depends on the total number of licenses purchased and allocated to each group ID using System > License Manager *(page 530)*. BUDR licenses are purchased and allocated separately for workstations and servers.

- Backups require additional agent capability so you may be prompted to update the agent prior to installing backup.
- Backup installation requires Windows Installer v3 and up. Your system checks the results from the last audit for v3. Your system will not recognize you have installed the latest Windows Installer until after the next audit runs on that machine.

Installation Requires a Reboot

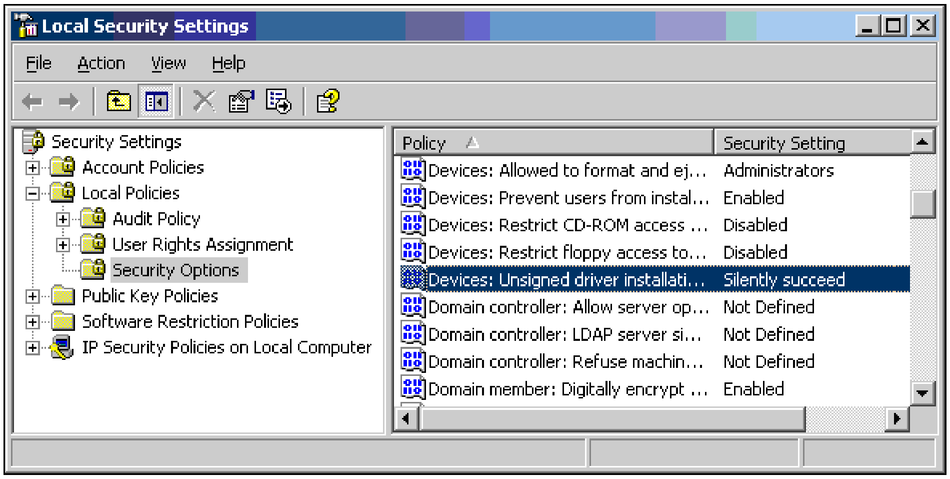
Backup can backup all volumes, including the boot volume, while in use. Backup accomplishes this through the use of a low level driver. As such, backup require a reboot to complete its installation.

- After installation completes, if a user is logged in, the systems asks the user to Reboot Now or Continue Working. If the dialog is not answered within 5 minutes, Continue Working is assumed. If no one is logged in, the system reboots immediately.
- You can avoid displaying this dialog box by clicking the Do not reboot after install checkbox.
- A Reboot Now button displays in the Install column next to a machine ID if Do not reboot after install was checked or the Reboot Now/Continue Working dialog box on the target machine timed out.
- Installing backup on a server when no one is logged in reboots the server when backup installation completes.

If Installation Fails on Windows 2003 Server

By default, Windows 2003 Server warns before installing any low level drivers. To date, Microsoft only signs their own low level drivers. Acronis can only deliver an unsigned driver as part of their backup system. To successfully install on a 2003 server, you must do one of the following:

- Click Yes when asked if it is OK to install the unsigned driver. If this dialog box gets no response in two minutes, then Windows assumes No and blocks the installation.
- Prior to installation, set the Local Group Policy to Silently Succeed for Devices: Unsigned driver installation (see below).



Policy	Security Setting
Devices: Allowed to format and ej...	Administrators
Devices: Prevent users from instal...	Enabled
Devices: Restrict CD-ROM access ...	Disabled
Devices: Restrict floppy access to...	Disabled
Devices: Unsigned driver installati...	Silently succeed
Domain controller: Allow server op...	Not Defined
Domain controller: LDAP server si...	Not Defined
Domain controller: Refuse machin...	Not Defined
Domain member: Digitally encrypt ...	Enabled

Install/Reinstall

Click Install/Reinstall to install or reinstall backup software on selected machine IDs using the options previously selected.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Verify Install

Click Verify Install to confirm the backup software is installed on selected machine IDs. Use this if you suspect someone removed the backup software on managed machines.

Copy backup settings from select machine ID

Click this link to copy the backup configuration and schedules from an existing machine to all selected machines.

Warn if installer pushes from server

If checked, a warning message displays if the backup file is installed from the KServer. The backup install file is over 100MB. Avoid file transfer from the KServer to each machine in a LAN using Patch Management > File Source *(page 295)*. Select the File share located on option. Once set, the KServer writes a single copy to the LAN file share. The backup installation runs from that location for all managed machines on that LAN.

Remove

Click Remove to uninstall the backup software from selected machine IDs. A reboot on the machine is required to remove the low level driver and complete the uninstall.

Stagger by

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the task on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time, within a 15 minute window. If the machine is offline, skip and run the next scheduled period and time. Uncheck to perform this task as soon as the machine connects after the scheduled time.

Do not reboot after install

If checked, selected machine IDs are *not* rebooted after the backup software is installed.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Installed

This column displays the status of installed software on selected machines:

- Awaiting reboot. A Reboot Now button displays in the Install column next to a machine ID if Do not reboot after install was checked or the Reboot Now/Continue Working dialog box on the target machine timed out.
- Backup does not support Vista at this time.
- Failed to install – unsigned driver installation policy may have blocked install
- Failed to install
- Install pending

- Remove pending
- Remove pending
- Reset Policy pending
- The date and time the backup software successfully installed
- Unsigned driver policy reset
- Update Agent required to support backup
- Verify failed
- Window v3 installer and up required

Version

Displays the version of Acronis backup software installed on the managed machine. If a new version is available, also displays `Update Available`. Latest at the top of the column displays the latest version of backup software available.

Verify

Displays one of the following:

- The date and time the backup software was verified as installed on the machine ID.
- `Verify pending` - Displays with a Cancel button.
- `Not Verified` - Displays with a Verify button.

Type

The type of machine the backup software is installed on:

- Workstation
- Server

Image Location

Backup > Image Location

The Image Location page specifies the folder on a local network or local drive where volume backups and folder backups are stored. Typically this is a path to a LAN based file server such as `\\LAN_Server\Backups\`. But it can also be as simple as another physical drive on the machine, such as a USB drive, or a shared network drive. Writing data to a tape drive is supported. The tape drive must be recognized by the Windows OS as a removable storage device.

- Separate paths may be specified for volume and folder backup paths.
- You can not save the backup image to the same drive you are backing up.
- Mapped drive letters are not supported. The path must be a full UNC path or a local physical drive.
- If a UNC path is specified, a credential must be defined using Agent > Set Credentials *(page 495)* that provides access to this UNC path. Without

the credential, the machine will *not* have access to the image location and the backup will fail.

> Note: Windows 98 and Windows ME do not support user credentials. You may only use local drive paths for 98 and ME.

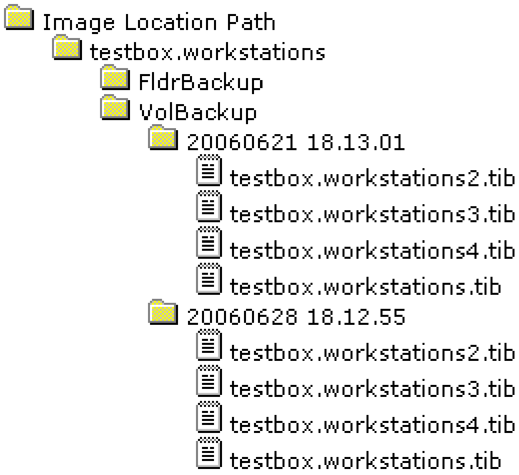
The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Local Servers and Image Locations

If you are going to configure replication using Offsite Servers *(page 363)*, then Image Location *(page 377)* directories should be defined as subdirectories of a Local Server *(page 363)* directory.

Directory Structure

The system saves each full backup set in its own folder. The backup data gets saved in the following directory structure:



```
Image Location Path
    testbox.workstations
        FldrBackup
        VolBackup
            20060621 18.13.01
                testbox.workstations2.tib
                testbox.workstations3.tib
                testbox.workstations4.tib
                testbox.workstations.tib
            20060628 18.12.55
                testbox.workstations2.tib
                testbox.workstations3.tib
                testbox.workstations4.tib
                testbox.workstations.tib
```

Set

Click Set to set the image locations used for backups for selected machine IDs.

Clear

Click Clear to remove the image location settings from selected machine IDs.

Volume Path / Folder Path

Enter folder paths to store backups.

Auto Refresh

Selecting this checkbox automatically updates the paging area every five seconds.

Check free space

You can check the amount of free space available on any machine's image location directory by checking the desired machine IDs and clicking the Check button. Also use this check to verify the credential is set correctly for the client to access the image location.

> Note: Available free space changes all the time. To prevent showing stale data, reported free space only remains available for 10 minutes after the free space check completes.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Volume Path / Folder Path

The folder paths specified for each machine ID.

Free Space

The free space available for each machine ID's image location.

Image Password

Backup > Image Password

The Image Password page sets the passwords to access backup files. Folder backup and volume backup .tib files are all password protected using a unique password for each machine ID. This password remains constant for each machine ID. You may set the password to anything you like. The same password may be set on multiple machines.

> Warning: If you decide to keep backup files outside of this system, print out the password for each machine ID or you will not be able to recover the backup later. Kaseya can not recover a backup file for you if you loose this password.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

View Password Log

Displays a history of the backup image passwords assigned to machine IDs.

Change

Click Change to change the backup image password of selected machine IDs to the password entered in Create Password and Confirm Password.

Create Password / Confirm Password

Enter a backup image password.

Suggest Password

Click Suggest Password to populate the Create Password and Confirm Password with a randomly generated alphanumeric string.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- 🚫 The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Password

The backup image password currently assigned to each machine ID.

Folder Backup

Backup > Folder Backup

The Folder Backup page specifies files and folders backed up by Schedule Folders *(page 350)* for each machine ID. You may backup any number of files and folders. You can only specify one file or folder at a time.

You can also exclude specific files from being backed up within these folders. For example, you can exclude `*.avi`, `*.mp3`, and `*.bmp` files when backing up someone's `My Documents` folder.

Folder Backup performs sector level backups. Sector level copying allows the system to backup locked and in-use files so you can safely backup at any time of the day.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Include Directories

Click Include Directories to apply Include File or Folder settings to selected machine IDs.

> Note: You cannot include the root directory of a drive, such as `c:` or `c:\`. An error will result during the backup.

Include File or Folder

Specify the full path to the file or folder you wish to back up on selected machine IDs. Paths must point to local drives, not mapped drives or network paths. You can only specify one file or folder at a time. Paths can include commas. For example, you can enter the path `C:\Program Files\Company, Inc\`.

Exclude Files

Specify files or classes of files to exclude from being backed up. Paths are not allowed. Only file names, with or without wild cards, are allowed. For example: `*.jpg`, `outlook.pst`. Click Exclude Files to apply these exclusions to selected machine IDs. You can only specify one file or class of files at a time.

Remove...

Click Remove... to display a dialog box that allows you to select the folders and files to remove from selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Path

Lists the paths of files or folders being backed up for each machine ID. Files or classes of files being excluded from backups display in red text.

Backup Alert

Backup > Backup Alert
Monitor > Alerts *(page 113)*

Select Backup Alert from the Select Alert Function drop-down list

The Backup Alert page creates alerts for backup events on managed machines.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

To Create a Backup Alert

1. Check any of these checkboxes to perform their corresponding actions when a an alarm condition is encountered:
   - Create Alarm
   - Create Ticket
   - Run Script
   - Email Recipients
2. Set additional email parameters.
3. Set additional backup alert specific parameters.
4. Check the machine IDs to apply the alert to.
5. Click the Apply button.

To Cancel a Patch Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

   The alert information listed next to the machine ID is removed.

Passing Alert Information to Emails and Scripts

The following types of backup alert emails can be sent and formatted:

- Backup failed
- Verify backup failed
- Recurring backup skipped if machine offline
- Backup Completed Successfully
- Full Backup Completed Successfully
- Image Location free space below

> Note: Changing the email alarm format changes the format for all Backup Alert emails.

The following variables can be included in your formatted email alerts and in scripts.

Within an Email	Within a Script	Description
<at>	#at#	alert time

<be>	#be#	backup failed error message
<bt>	#bt#	backup type
<db-view.column>	not available	Include a view.column *(page 547)* from the database. For example, to include the computer name of the machine generating the alert in an email, use #db-vMachine.ComputerName#
<gr>	#gr#	group ID
<id>	#id#	machine ID
<im>	#im#	backup image location
<mf>	#mf#	megabytes free space remaining
<sk>	#sk#	backup skip count

Create Alarm

If checked and an alarm condition is encountered, an alarm is created. Alarms are displayed in Monitor > Dashboard List *(page 99)*, Monitor > Alarm Summary *(page 108)* and Reports > Logs *(page 422)* > Alarm Log.

Create Ticket

If checked and an alarm condition is encountered, a ticket is created.

Run Script

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Email Recipients

If checked and an alarm condition is encountered, an email is sent to the specified email addresses.

- The email address of the currently logged in administrator displays in the Email Recipients field. It defaults from System > Preferences *(page 501)*.
- Click Format Email to display the Format Alert Email popup window. This window enables you to format the display of emails generated by the system when an alarm condition is encountered.
- If the Add to current list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses are added without removing previously assigned email addresses.
- If the Replace list radio option is selected, when Apply is clicked alert settings are applied and the specified email addresses replace the existing email addresses assigned.
- If Removed is clicked, all email addresses are removed without modifying any alert parameters.

- Email is sent directly from the KServer to the email address specified in the alert. The SMTP service in IIS sends the email directly to the address specified. Set the From Address using System > Configure *(page 524)*.

Apply

Click Apply to apply alert parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all parameter settings from selected machine IDs.

Backup Alert Parameters

The system triggers an alarm whenever the system discovers one of four different backup alert conditions for a selected machine ID:

- Any Backup Completed - Alerts when any backup process completes successfully.
- Full Backup Completed - Alerts when a full backup process completes successfully.
- Backup Fails - Alerts when a backup process stops prior to completion for any reason. Typically, backup fails because the machine is turned off mid-backup or because the network connection to the file server referenced by Image Location *(page 377)* is lost.
- Recurring backup skipped if machine offline <N> times - Alerts when Skip if machine offline is set in Schedule Volumes *(page 343)* and the backup is rescheduled the specified number of times because the machine is offline. Use this alert to notify you that backups are not even starting because the machine is turned off at the scheduled volume backup time.
- Image location free space below <N> MB - Alerts when the hard disk being used to store the backups is less than a specified number of megabytes.

Three additional parameters can be set:

- Add - Adds alert parameters to selected machine IDs when Apply is selected without clearing existing parameters.
- Replace - Replaces alert parameters on selected machine IDs when Apply is selected.
- Remove - Clear alert parameters from selected machine IDs. Click the edit icon 📝 next to a machine ID group *first* to select the alert parameters you want to clear.

Note: You may specify different alert email addresses for each backup alert type. This lets you send backup complete alerts to the user and only send failures to the administrator.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ATSE

The ATSE response code assigned to machine IDs or SNMP devices *(page 611)*:

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

Email Address

A comma separated list of email addresses where notifications are sent.

Any Complete

If checked, an alarm is triggered when any backup is completed for this machine ID.

Full Complete

If checked, an alarm is triggered when a full backup is is completed for this machine ID.

Backup Fails

If checked, an alarm is triggered when any backup fails for this machine ID.

Backup Skipped

If checked, an alarm is triggered when any backup is skipped for this machine ID.

Compression

Backup > Compression

The Compression page specifies the compression level used to backup. Higher compression takes longer to complete a backup. Lower compression produces larger backup file sizes. The compression setting effects both folder and volume backup.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Sample Compression Ratios

The table below shows the times, reduction and size of a typical Windows XP system drive (C:), with office and other expected applications. These numbers are only a guide and will differ greatly for different types of data. MP3 or other highly compressed files will not compress much, but text or other uncompressed data will compress more.

Backup Type	original	none	normal	high	maximum
Size (GB)	8.78	8.78	6.29	5.74	5.64
% reduction (%)	0	0	28.36	34.62	35.76
Time (mm:ss)	00:00	19:55	16:21	28:41	43:55

Set

Click Set to assign a compression option to selected machine IDs.

Compression Option

- None
- Normal - the default
- High
- Maximum

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Compression

The compression option assigned to each machine ID.

Max File Size

Backup > Max File Size

The Max File Size page applies to volume backups *(page 343)* only. When a volume backup runs, image files of the volume get created. The file size specified in this option is the maximum size of each image file. For example, a volume containing 10 GB of data has been set to run. The image that gets created for a full backup may be 5 GB. If the max file size is set to 600 MB, the system will create 9 files, 8 that are 600 MB and 1 file with the balance of the data.

If you are going to write the image files to a CD or DVD, select the file size that is appropriate for the media.

Unrestricted file sizes are only supported on NTFS formatted disks. If you select a max file size and modify the default unrestricted value, the largest value supported by the configuration is 2000 MB. This is to support FAT32 formatting on storage devices. If a larger size is desired the only other option is unrestricted.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Set

Click Set to assign a Max File Size to selected machine IDs.

Max File Size

Enter the maximum file size allowed for a volume image file. Cannot be larger than 2000 MB.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Max Size

The maximum file size assigned to each machine ID.

Max Log Age

Backup >
Max Log Age

The Max Log Age page specifies the number of days to retain log data for backups. Entries older than the specified maximum are automatically deleted.

A log is created for each machine every time a backup operation runs. The log contains the date, type, duration, result, and description of the backup operation performed.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 17)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 373)* page.

Set

Click Set to assign a maximum number of log days to selected machine IDs.

<N> Days

Enter the maximum number of log days for backups.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Max Age

The maximum number of log days assigned to each machine ID.

Secure Zone

Backup > Secure Zone

The Secure Zone page installs a 56 MByte hidden boot partition on managed machines. Secure zones are used by Auto Recovery *(page 358)* to boot the managed machine and restore backup volume images without any user interaction. Installing or removing a secure zone requires a reboot of the machine.

Install

Click Install to create a secure zone partition on the selected machines. Installing the secure zone reboots the selected machine.

Remove

Click Remove to uninstall the secure zone from the selected machines. Removing the secure zone reboots the selected machine.

Cancel

Click Cancel to clear a pending task.

Verify

Click Verify to verify an install if you suspect someone removed the backup installation at the managed machine.

Show Partitions

If checked, lists the disk drives and partitions on managed machines.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Secure Zone

If checked, a secure zone is installed on a managed machine.

Chapter 11

Reports

In This Chapter

Reports Tab

The Reports tab allows administrators to generate detailed reports about managed machines. These reports are based on all the other tasks performed by the VSA.

- Maintain reports using the report wizards in Run Reports.
- Schedule the running of existing reports using Schedule Reports.
- Set the logo displayed in reports using Set Logo.

> Note: You can view Reports demos at http://www.kaseya.com/resources/demo.php

Functions	Description
Set Logo *(page 395)*	Allows custom logos to be placed on generated reports.
Schedule Reports *(page 395)*	Automatically run reports at a scheduled time. Reports may be posted or delivered via email.
Executive Summary *(page 398)*	Create a concise summary report reflecting the system health of a selected group of machines.
Aggregate Table *(page 403)*	Create a single table with one row per machine and using any data as columns.
Machine Summary *(page 406)*	Generate reports on deployed Agents and the machines they reside on.
Machine Changes *(page 409)*	Run a difference report between each machine's latest audit and either the baseline or latest audit from a selected machine.
Patch Management *(page 411)*	Displays composite and individual patch status reports
Inventory *(page 413)*	Inventory summary for the selected audit category.
Software *(page 415)*	Get detailed information regarding the software installed and used by managed machines.
Disk Utilization *(page 418)*	Generate graphical report on capacity and usage of all fixed disks.
Network Statistics *(page 419)*	View detailed network usage information, from the entire network down to a managed machine.
Uptime History *(page 421)*	Chart the powered up, online, and abnormal shutdown history of each machine vs. time.
Logs *(page 422)*	Generate reports on all logged information collected by the VSA.
Ticketing *(page 425)*	Report status of all trouble tickets.
Backup *(page 427)*	Report on the backup log and status

Monitor *(page 428)*	Report summarizing data retrieved from monitoring managed machines.
Security *(page 431)*	Reports security protection data on managed machines.
User State *(page 433)*	Reports user state management data on managed machines.

Set Logo

Reports > Set Logo

The Set Logo page customizes the header of reports generated by an administrator. When you run a report, the report displays the unique HTML header you enter here at the top of every report. You have full control over the HTML entered. Make the header as simple or as complex as you want.

> Note: If you do not want other administrators to change the custom header, block them from seeing the Set Logo page using System > Function Access *(page 514)*.

Modify the HTML used for the header here

Enter the HTML you want to use in the header of all your reports.

> Note: The master administrator can customize the default report header seen by all administrators. Click System > Customize *(page 535)* and enter the custom header in the field labeled Header HTML shown on all reports.

Apply

Click Apply to update changes to the HTML you want to use in the header of all reports.

Default

Click Default to restore the header HTML to the product default setting.

Schedule Reports

Reports > Schedule Reports

The Schedule Reports page automatically exports reports to a URL on the VSA web site that *does not require a logon* to access. Schedule recurring reports to generate reports your users can access. Since the system runs these reports without the administrator logging on, only *saved* reports can be scheduled.

> Note: Standard administrators can not schedule reports that use `<All Groups>`. Only master administrators can schedule `<All Groups>` reports.

Set Filter Settings

Set unique Machine ID / Group ID filter settings for each scheduled instance of a report. This lets you define a single report and schedule it to run for each individual machine or group of machines. For instance, you could create a single Software report and then schedule it to output a unique report for each group ID. *The machine ID / group ID filter settings you specify in* Schedule Reports *overrides the filter settings saved with the report.*

Email the Report

Depending on how email notification is formatted using Format Email, either the entire report or a short message with a URL link to the report can be sent to email recipients. Customize the message content by clicking the Format Email button.

> Note: *Only master administrators can change the format of the scheduled reports email.*

Where Scheduled Reports are Stored

Reports are posted to the `dataReports` directory, on the VSA website, in a sub directory named after the administrator logon that scheduled the report and a sub directory for the Machine ID / Group ID filter. This convention groups all reports for a specific machine or group of machines into a common directory. For example:

```
http://www.your_vsa.com/dataReports/joe_admin/mach.group/
report_name.htm
```

Show reports from all administrators

Checking this box displays all saved reports, shared and private, for all administrators. Check this box to view/delete/modify scheduled reports for any administrator.

> Note: *Only master administrators can show reports for all administrators.*

Select report to schedule

This drop-down list shows all saved reports visible to the currently logged in administrator. Select the report to be scheduled from this list. The output report web page has the same filename as the report. Selecting a new report from this drop-down list resets the machine ID / group ID settings to those saved with the report. You can override the default machine ID / group ID settings using the Specify accounts to run this report on fields.

Report Type

Once a report is selected, the Report Type displays below the selected report.

Schedule

Click Schedule to run the report at the specified time and save the file in the `dataReports` directory.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Run at recurring interval every <N> <periods>

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Enter email address to notify when report is ready

Comma separate each email address to send multiple notifications/reports. Leave this field blank to disable email notification.

Format Email

Depending on how email notification is formatted using Format Email, either the entire report or a short message with a URL link to the report can be sent to email recipients. Customize the message content by clicking the Format Email button. Special tags are available to insert unique report data.

- <at> Time stamp of when the report was created
- <er> Embed full report - NOTE: Report completely replaces entire message body
- <gr> group ID
- <id> machine ID
- <rt> Report title
- <ru> report URL

Filename

List of reports that have run or are scheduled to run. If the report has already run, the filename appears as a link to the report.

Report Type

Type of report that has been scheduled. For example, Disk Utilization.

Last Run

Time when the report was last produced.

Account Filter

Specify the machine ID / group ID filter settings to use when running this scheduled report. *The machine ID / group ID filter settings you specify in* Schedule Reports *overrides the filter settings saved with the report.*

Next Run

Time the report is scheduled to run next. If this field is blank, the report is not scheduled to run again.

Email Address

Comma separated list of addresses notified about this report.

Recurring

Recurring interval at which the report runs.

Executive Summary

Reports > Executive Summary

The Executive Summary reports page creates a summary report of the status of all selected machines. This includes a network health score *(page 400)* representing the overall health of all selected machines as a group.

Executive Summary Sections

The Executive Summary report can include the following sections:

- Show Client Information - Displays the number of machines, both servers and workstations, and the names of the primary points of contact for this group.
  - Contact Person - Optionally enter a customer contact name, representing the point of contact inside the organization receiving the IT service.
  - IT Manager - Optionally enter an IT manager name, representing the person responsible for delivering IT services to the client organization.
- Show System Activity - Specify search criteria for counting the number of times certain log events occurred. Examples include the number of times machines were audited and scanned for missing patches. Click Change Rows... to fully customize this section.
- Show Ticket Status - Displays a summary of ticket status over the specified number of days.
- Show Disk Space Used - Displays a graph of the percentage free disk space on all selected machines. Restrict this chart to servers only by checking the Show servers only box.
- Show Network Health Score - Displays individual component scores and an overall health score for all the selected machines as a group. See Network Health Score *(page 400)* for details. Click Change Score... to fully customize this section.

- Show Operating Systems - Displays a pie chart showing the break down of operating systems in the selected group.
- Show Patch Status - Displays a pie chart summarizing the state of missing patches for all selected machines.
- Show Security - Lists statistics for untreated security protection threats.

> Note: The Show Security section only displays if you have separately purchased the Kaseya Endpoint Security addon module.

- Show Alarm Notifications - Summarizes alerts issued in the specified number of days. This section breaks the alarm count down by category of alarm.
- Show License Summary - Summarizes the OS and MS Office licenses found by audit.
- Show "How to read" notes at end of report - Displays standard explanatory notes at end of the report. Click Edit Notes... to customize these notes.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Summarize data collected in the last N days

Patch, ticket, alarm, and status information is time dependent. Only data collected in the specified number of days contributes to this report.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Network Health Score

Reports > Executive Summary > Change Score...

The Network Health Score section of the Executive Summary *(page 398)* report gives you a summary view of the health and usability of selected machines as a group. The score is broken into categories. Each category is assigned one of five possible percentage scores—typically 100%, 75%, 50%, 25% and 0%—based on a count of a specified criteria. In most cases, you can customize the counts used to assign percentage scores.

- You can adjust how heavily each category effects the final score by adjusting the weight value for each category. Set the weight to *0 to turn off that category*.
- You can modify the percentage scores assigned the OS Score.
- You cannot modify the Patch Score criteria.

The final network health score computes the weighted average of the above percentage scores and normalizes them to provide the final percentage score. 100% represents perfect.

Patch Score - This score is calculated using the average number of missing patches on each machine. Each machine is scored based on the number of missing patches as follows:

Fully patched	100%

missing 1-2 patches	75%
missing 3-5 patches	50%
missing > 5 patches	25%
unscanned machines	0%

OS Score - Modern operating systems score higher than older operating systems. The overall OS score is an average of each machine's score calculated as follows:

Vista	100%
2003	100%
XP	100%
2000	75%
All others	0%

> Note: The OS score weighting can be customized. You can individually weight the OS score given to Vista, 2003, XP and 2000. Enter the % weights (0 to 100) in the four columns normally used for % score. All legacy OSs are given a zero. If you have a large number of legacy OSs deployed, considered turning off the OS score.

Disk Score - Full disk drives can have a severe negative impact on your system. As such disk space used contributes to the overall system score. Disk score is computed as follows:

0% to 65% full	100%
65% to 75% full	75%
75% to 85% full	50%
85% to 95% full	25%
100% full	0%

Ticket Score - Past due tickets assigned to machines are scored as follows:

0 past due	100%
1 or 2 past due	75%
3 to 5 past due	50%
6 to 10 past due	25%
more than 10 past due	0%

> Note: The system does not delete tickets when deleting machine IDs. The ticket summary chart includes tickets matching the machine ID / group ID filter. Because no machine data exists for deleted machine IDs, views are not applied to this table.

Event Log Score - Monitored event log alerts represent potential system problems. The number of event log alerts generated by each machine over the specified period of time is scored as follows:

0 alerts	100%

1 to 4 alerts	75%
5 to 10 alerts	50%
11 to 20 alerts	25%
more than 20 alerts	0%

Backup Score - Counts days since the backup last ran. The older the backup is, the lower the score.

0 to 3 days since last backup ran	100%
4 to 7 days since last backup ran	75%
8 to 14 days since last backup ran	50%
15 to 30 days since last backup ran	25%
more than 30 days since last backup ran	0%

Alarm Score - The fewer alarms generated, the higher the score.

0 to 3 alarms	100%
4 to 9 alarms	75%
10 to 19 alarms	50%
20 or more alarms	25%

Security Score - Untreated threats represent potential system problems. The number of untreated threats generated by each machine over the specified period of time is scored as follows:

0 untreated threats	100%
1 to 4 untreated threats	75%
5 to 10 untreated threats	50%
11 to 19 untreated threats	25%
more than 20 untreated threats	0%

Note: The Security Score only displays if you have separately purchased the Kaseya Endpoint Security addon module.

Script Score - Scripts provide a recurring beneficial service to a machine. The more often the script runs, the better shape that machine is likely to be in. The longer it has been since the script ran, the lower the score. The weighted thresholds for the script score count the number of days since the script last ran on the machines. The default values provide the following score:

1	0 to 3 days since script ran	100%
2	4 to 9 days since script ran	75%
3	10 to 19 days since script ran	50%
4	20 or more days since script ran	25%

System Activity

Reports > Executive Summary > Change Rows...

The System Activity section of the Executive Summary *(page 398)* report gives you a summary view of system activity of selected machines as a group. Each row lists a *count* or *value* of a filtered log item in the *last N number of days*.

- Use the Status column in the Pending Scripts tab of the Machine Summary *(page 406)* page to identify search filter phrases to use for a script-based row type.
- Log Monitoring does not display in Pending Scripts. Review Log Monitoring in Agent Logs in the Machine Summary page to identify search filter phrases to use.
- Log Monitoring Custom refers to the *value or count* of a numeric log parsing parameter within the *last N number of days*.

Row Type	Search Item	Search Filter Examples	Count
Alarm Log	`<All Alarms>` or any specific alert/alarm.	`*Success THEN*` or `*Failed ELSE*` or `*Success ELSE*`	Not applicable.
Script Log	Select a system, private or public script.	`*Success THEN*` or `*Failed ELSE*` or `*Success ELSE*`	Not applicable.
Backup Log	`<All Backup Events>` or `Volume Backups` or `Folder Backups`	`*Backup completed successfully*`	Not applicable.
Log Monitoring	Select a Log File Parser *(page 218)*.	`*device error*`	Not applicable.
Log Monitoring Custom	Select a Log File Parser with a numeric parameter.	`EventCode` or `ErrorCode`	`Average`, `Count`, `Min`, `Max` or `Total`

Aggregate Table

Reports > Aggregate Table

The Aggregate Table reports page creates a tabular report mixing any data collected by the VSA. Each report generates a single table with a row for each machine and a column for each piece of data specified.

Adding and Removing Items

To add items, select items in the Not Displayed list, then click Add>>. To remove items, click items in the Displayed list, then click <<Remove. To change the order items are listed, click an item in the Displayed list, then click the up arrow ▲ or down arrow ▼.

Advanced Filter

Click Advanced Filter *(page 405)* to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Advanced Filtering

Advanced filtering lets you design complex searches to isolate data to just those values you want. Enter filter strings into the same edit fields you enter filter text. Advanced filtering supports the following operations:

White Space

To search for white space in a string, enclose the string in double quotes.

For example: `"Microsoft Office*"` OR `*Adobe*`

Nested operators

All equations are processed from left to right. Use parenthesis to override these defaults.

For example: `(("* adobe " OR *a*) AND *c*) OR NOT *d* AND < m`

NOT

Search for a string not containing the match data.

For example: `NOT *Microsoft*` returns all non-Microsoft applications.

AND

Use the logical AND operator to search for data that must contain multiple values but can appear in different places in the string.

For example: `Microsoft* AND *Office*` returns all items that contain both Microsoft and Office in any order.

OR

Use the logical OR operator to search for data that may contain multiple values but must contain at least one.

For example: `*Microsoft* OR *MS*` returns all items that contain either Microsoft and MS in any order.

<, <= (Less than or less than or equal to)

Returns all data whose value is numerically less than, if a number. If this is alphabetic data then it returns all strings appearing earlier in the alphabet.

For example: `< G*` returns all applications starting with a letter less than "G".

For example: `<` 3 returns all values numerically less than "3".

> Note: Ensure a *space* exists between the < operator and the value being compared.
>
> Note: Dates may also be tested for but must be in the following format: `YYYYMMDD HH:MM:SS` where `YYYY` is a four digit year, `MM` is a two digit month (01 to 12), `DD` is a two digit day (01 - 31), `HH` is a two digit hour (00 - 23), `MM` is a two digit minute (00 - 59), and `SS` is a two digit second (00 - 59). `HH:MM:SS` is optional. Date and time are separated with a space. Remember that all white space must be enclosed in double quotes.
>
> For example: `< "20040607 07:00:00"` returns all dates earlier than 7:00 on 7 June 2004.

>, >= (Greater than or greater than or equal to)

Returns all data whose value is numerically greater than, if a number. If this is alphabetic data then it returns all strings appearing after it in the alphabet.

For example: `> G*` returns all applications starting with a letter greater than "G".

For example: `>` 3 returns all values numerically greater than "3".

Machine Summary

Reports > Machine Summary

Similar information is provided using Audit > Machine Summary *(page 23).*

The Machine Summary reports page produces a detailed report for each machine ID matching the machine ID / group ID filter. Use the Machine Summary report to generate comprehensive reports for individual machines. Separate "add and remove" selection windows are provided for system data and application data to include in the Machine Summary report. The Audit > Machine Summary *(page 23)* page displays similar information.

Machine Summary Sections

The Machine Summary report can include the following sections:

- Add/Remove Programs - Lists programs in the Add/Remove list of a managed machine.
- Agent Control/Check-In - Displays information on baseline and latest audits, last check-in times, quick check-in periods, primary and secondary server and port information.
- Applications - Lists applications installed on the managed machine. The list of applications can be filtered by clicking the App Filter button.
- Apps Added Since Baseline - All new applications detected by Latest Audit *(page 35)* that have appeared on the machine since the Baseline Audit *(page 35)* was run.
- Apps Removed Since Baseline - All applications that were present when the Baseline Audit *(page 35)* was ran but are missing when Latest Audit *(page 35)* last ran.
- Computer/Network - Displays the managed machine Windows network name, operating system, CPU, RAM, IP address, gateway, DNS/DHCP server, and WINS server information.
- Distribute File - List files being distributed to the managed machine by the KServer.
- File Access - Lists protected files.
- License Codes - Lists license codes installed on the managed machine.
- Logical Disk - Lists the logical volumes on the managed machines, including removable, fixed, and CD-ROM drives.
- Recurring Scripts - Lists scripts that are executed on a scheduled basis on the managed machine.
- Pending Scripts - Lists scheduled scripts on the managed machine.
- Miscellaneous - Lists miscellaneous agent settings, such as WinVNC and user logs status.
- Network Access - Lists applications that have restricted network access.
- PCI Devices - Lists installed PCI devices on the managed machine.
- Physical Disk - Lists physical disk information for the managed machine, such as hard disks, DVD, and CD-ROM drives.
- Printers - Lists the printers found by the audit for this machine.
- System Info - All items collected by the System Info *(page 38)* function under the Audit Tab. Click the Sys Info button to make additional system information selections.
- User Profile - Lists out user contact information associated with this machine ID.

Adding and Removing Items

To add items, select items in the Not Displayed list, then click Add>>. To remove items, click items in the Displayed list, then click <<Remove. To change the order items are listed, click an item in the Displayed list, then click the up arrow ▲ or down arrow ▼.

Advanced Filter

Click Advanced Filter *(page 405)* to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Machine Changes

Reports > Machine Changes

Similar information is provided using Audit > System Info *(page 33)*, Installed Apps *(page 39)*, and Disk Volumes *(page 44)*.

The Machine Changes page creates a differences report between each machine's latest audit and its own baseline *or* compares it to the baseline audit or latest audit from a selected machine. Machine changes examined include CPU, RAM, disk space and applications installed.

Configure your report using the following options:

- Compare with machine's own baseline audit - Displays all machine changes found on each machine by comparing the information from the latest audit against the information from the baseline audit.
- Compare to select machine ID - Displays all machine changes found on each machine by comparing the information from the latest audit against the audit from a *selected machine ID*. Use this function to identify differences in a group of machines when compared against the standard for the group.
- use baseline - If checked, the selected machine ID's baseline audit is used for comparison instead of the selected machine ID's latest audit.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Patch Management

Reports > Patch Management

Similar information is provided using Patch Mgmt > Patch Status *(page 266)*, Machine History *(page 273)*, Machine Update *(page 274)* and Patch Update *(page 273)*.

The Patch Managements page creates a report that lists the patch state for all selected machines. Reports can be filtered by patch category or knowledge base article number. Reports can include patches denied by patch policy. Reports include links to KB articles.

Patch Management Sections

The Patch Management report can include the following sections:

- Show machine patch summary pie chart - Display a pie chart showing the number of machines that are:
  - ➢ Fully patched systems
  - ➢ Missing 1 or 2 patches
  - ➢ Missing 3, 4, or 5 patches
  - ➢ Missing more than 5 patches
  - ➢ Have never been scanned
- Show machine patch summary table - Display a machine patch summary table.
- Show missing patch occurrence bar chart - Display a bar chart illustrating which patches have the most machines that are missing that patch.
- Show table of missing patches - This is a composite report that shows all patches that are missing from any and all machines in the selected group. This table lists a section for each missing patch showing: patch ID, knowledge base article number, and patch title. If Show list all machines missing each patch is also checked, then the report lists each machine ID missing the patch.
- Show table of installed patches - This is a composite report that shows all patches that are installed on any and all machines in the selected group. This table is basically the opposite of the Show table of missing patches section. This table lists a section for each installed patch showing: patch ID, knowledge base article number, and patch title. If Show list all machines containing each patch is also checked, then the report lists each machine ID with the patch installed.
- Show patch status for each machine - For each machine ID a list of both installed and missing patches are shown. Patches are grouped by application. If Show summaries for each patch is checked the summary describing the patch is also displayed.
- Show missing patches for each machine - For each machine ID a list only of missing patches are shown. Patches are grouped by application. If Show summaries for each patch is checked that the summary describing the patch is also displayed.
- Show patches installed in the last <N> days - For each machine ID, a list of patches are displayed that were installed during the last number of days specified in the text box.

Report Filtering

The Patch Management report can be filtered as follows:

- Filter patches by - Select a filter criteria for the patch report.
- Show patches denied by Patch Approval Policy – By default, only missing patches that have been approved for installation are included in the report. Check the checkbox to ignore the Patch Approval Policy and include all patches whether approved or denied.
- KB Article Numbers and/or Security Bulletin Numbers - Enter a comma delimited list of KB Article numbers and/or Security Bulletin numbers to generate a report that only lists patches for these numbers.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. *Select* the data you want to display in the report.
2. *Filter* the data you want to display in the report.
3. Enter the title of the report.
4. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Inventory

Reports > Inventory

Similar information is provided using Audit > System Info *(page 38)* and PCI & Disk HW *(page 46)*.

The Inventory page creates a report listing all unique items collected during an audit and identifies the machines containing that item.

Filtering

Filter fields restrict the items listed in the inventory report to only those items matching the filter. For example, If you run an Inventory report on the Motherboard Manufacturer field and set the filter to `*Intel*` you will only see items manufactured by `Intel`, or `Intel Corp`, or any other variation in the report.

PCI & Disk HW Inventory Reports

This inventory report option displays additional fields for filtering the data in the report.

> Note: To display any data for a managed machine in a PCI & Disk HW inventory report, an audit must be run with the PCI and Disk Audit option enabled for that managed machine using Audit > Run Audit *(page 35)*.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Software

Reports > Software

Similar information is provided using Audit > Installed Apps *(page 39)*, Add/Remove *(page 40)*, Name/OS Info *(page 41)*, and SW Licenses *(page 40)*.

The Software page generates a report displaying a summary of applications present on all selected machines. Each report uses data collected from the latest audit to display the state of each group's software installed base.

Types of Software Reports

There are four primary report types:

- All Applications
- Add/Remove Programs
- Software Licenses
- Summary Licenses
- Operating Systems

All Applications

Generates a table showing each unique application found on all machines by audit. The total number of unique copies of the application are also listed. You can optionally show or hide each column of data. Hiding a column may reduce the number of rows reported if the uniqueness of the data drops. For instance, your report may show 50 copies of an application with v2.0.1 and 127 copies of the same application with v2.8. If you hide the version, by unchecking the box, then the report lists 177 copies of that application. The All Application report lists:

- Applications - The application name (theApp.exe)
- Product Name - Product name string as provided by the software vendor.
- Description - Software description string as provided by the software vendor.
- Manufacturer - The software vendor name
- Version - Software version number.

Checking Show unregistered applications lists all the unregistered applications in addition to registered applications. Registered applications place an App `Paths` key in the registry identifying the location of their main executable. Sorting on this value is a good way to separate main applications from all the helper and secondary applications.

If List machine IDs that contain each application is checked then the machine ID of each machine containing the application is listed.

Note: Click the Advanced... *(page 405)* link to learn about filtering options.

Add/Remove Programs

Generates a table listing the list of add/remove programs found in a group of machines discovered by audit. If List machine IDs that contain each application is checked then the machine ID of each machine containing the add/remove program is listed.

Note: Click the Advanced... *(page 405)* link to learn about filtering options.

Software Licenses

Generates a table listing the number of software licenses found in a group of machines discovered by audit. This report lists the total number of licenses and the number of unique licenses found across all machines. In addition, Software Licenses lists:

- Publisher - The software vendor name
- Title - The software title for each license found.

If List machine IDs is checked then the machine ID of each machine containing the application is listed. If List license codes, product keys, and machine IDs is checked, then license codes and product keys installed are each machine are displayed.

> Note: Click the Advanced... *(page 405)* link to learn about filtering options.

License Summary

Generates a table summarizing the licenses on all machines in a group or view. This report presents four tables of information summarizing the following:

- Servers - Lists all server types found and the number of machines running that server OS.
- Workstations - Lists all workstation types found and the number of machines running that workstation OS.
- Microsoft Office Licenses - Lists the number of machines with each version of Microsoft Office loaded.
- Other Applications - Summarizes the number of machines with each application license found that is not contained in the first 3 tables.

> Note: Click the Advanced... *(page 405)* link to learn about filtering options.

Operating Systems

Charts a composite view of all operating systems found on all machine IDs.

> Note: Each machine reports its operating system type and version with each check-in. Audit does not have to complete to obtain operating system information. Therefore, the number of operating systems reported by this report may be higher than the number of licenses reported for that operating system if all machines have not completed an audit.

Three Operating System report styles are available:

- Pie chart
- Bar chart
- Table

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of* *the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Disk Utilization

Reports > Disk Utilization

Similar information is provided using Audit > Disk Volumes *(page 44)*.

The Disk Utilization page generates a graphical report representing the free space, used space and total space on each disk drive.

Three types of reports are available:

- Bar chart showing percent of disk space used
- Bar chart showing disk space used, free space, and total disk size - Hovering the mouse a bar presents a tool tip with additional information.
- Table listing disk space used, free space, and total disk size

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Enter the title of the report.
2. Select the type of report you want to display.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Network Statistics

Reports > Network Statistics

Similar information is provided using System > Statistics *(page 532)*.

The Network Statistics page generates a report displaying the top consumers of TCP/IP-protocol-based network bandwidth on selected machines. Typically this report refers to bandwidth consumption caused by accessing both internal and external *internet* sites, but can include internal LAN traffic that also uses the TCP/IP protocol. There are two types of reports:

- Applications - Displays a graph outlining each application and corresponding network bandwidth consumption over the time period entered in the Display <N> Days of Network Statistics setting. The number of applications displayed can set to a maximum of 20.
- Machines - Displays a graph outlining the machines selected in the machine ID / group ID filter and corresponding network bandwidth consumption over the time period entered in the Display <N> Days of Network Statistics setting. The number of machines displayed can set to a maximum of 20.

> Note: This report requires the Network Access *(page 54)* driver be enabled. This driver inserts itself into the TCP/IP stack to measure TCP/IP-protocol-based network traffic by application. The driver is disabled by default.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Uptime History

Reports > Uptime History

The Uptime History page generates a graphical report representing:

- When each managed machine was turned on.
- When each managed machine was connected to the network.
- Any abnormal shut downs.

Hovering the mouse over any segment on the chart presents a tool tip that reads out the exact start and end time of that segment.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Logs

Reports > Logs

The Logs page generates reports for the following types of log data maintained by the VSA.

- Alarm Log
- Admin Notes
- Agent Log
- Configuration Changes
- Network Statistics
- Remote Control Log
- Script Log
- Event Logs
- Event Log Frequency
- Log Monitoring
- EPS Log

> Note: The EPS Log only displays if you have separately purchased the Kaseya Endpoint Security addon module.

Selecting Log Report Options

The most commonly used options you can select for all log reports are:

- Choose a log to display - Select the type of log you want in the report.
- Display log entries for last <N> days - Specify the number of days worth of log data to display.
- Show entries matching the following description (use * for wildcards) - Enter a string to filter entries by their description. Include an asterisk (*) wildcard with the text you enter to match multiple records.
- Preserve plain text formatting - Check this box to display plain text logs with the formatting from plain text files preserved in the HTML pages.
- Ignore machines without data - Check this box to only display machine IDs that have data matching the other filter parameters.

Additional fields display, depending on the type of log selected. These include:

- Alarm Log - Filter the report by the type of alarm. You can also filter alarm log entries by alarm email address, alarm email subject line, and/or alarm email message text.
- Script Log - Filter the report by script name and/or the administrator who scheduled the script.
- Event Log - You can also filter the report by a selected event set. By default the built-in <All Events> event set is selected. Event set alarm categories—Error, Warning, Information, Success audit, Failure audit, Critical, Verbose–must be checked to include an event in a report.
- Event Log Frequency - Enter a number of days in the Select the <N> most frequent Event IDs for each Machine ID field. Then select an event log type. Event set alarm categories—Error, Warning, Information, Success audit, Failure audit, Critical, Verbose–must be checked to include an event in a report.
- Log Monitoring - Select a Log File Parser. Log file parsers are defined using Monitor > Log Parser *(page 217)*.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.

3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Ticketing

Reports > Ticketing

Similar information is provided using Ticketing > View Summary *(page 233)*.

The Ticketing page creates a report listing all trouble tickets assigned to selected machine IDs. Similar information is provided using Ticketing > View Summary *(page 233)*.

The following options apply whether or not Display all tickets is checked.

- Display all open tickets plus tickets closed within the last <N> days
- Notes / Summary / Submitter Filter - List only tickets or ticket counts containing this string in any note, summary line or submitter information line. Use * for wildcard.
- Display pie chart for each selected list - Select multiple categories to display pie charts for.
- Display ticket status chart for each admin - Displays a separate ticket status bar chart for each administrator plus for unassigned.

The following options apply only if Display all tickets is checked.

- Display all tickets - Check this box to list tickets individually. If blank, only summary tables are displayed.
- Display notes with each ticket - Check this box to include all the detail notes with each ticket.
- Hide hidden notes - Check this box to hide hidden notes.
- Fields... - Click this button to select the columns to include in individually listed tickets.
- Select column to sort on - Select the column to sort tickets on.
- ascending / descending - Select whether to sort tickets in ascending or descending order.
- Filter tickets by
  - Assignee
  - Category
  - Status
  - Priority
  - SLA Type
  - Dispatch Tech
  - Approval

> Note: The system does not delete tickets when deleting machine IDs. The ticket summary chart includes tickets matching the Machine ID and Group ID filters. Because no machine data exists for deleted Machine IDs, Views are not applied to this report.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Backup

Reports > Backup

Similar information is provided using Backup > Backup Status *(page 343)*.

The Backup page generates a report summarizing data retrieved from the backup logs. Configure the report using the following options:

- Show backup logs from the last <N> days - Specify how many days of backup log entries to include in the report.
- Show backup log summary data - If checked, includes a summary table totaling backup events for last N number of days for volumes and folders.
- Show backup log status by machine and event - List the backup log information collected in the last N days for each machine.
  - Backup type filter - `Volume Backups` or `Folder Backups`.
  - Result filter - `<All Results>, Success, Failure, Warning, Informational`
- Ignore machines without data - If checked, only displays machine IDs that have data matching the other filter parameters.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Monitor

Reports > Monitor

Similar information is provided using Monitor > Dashboard List *(page 99)* and Alarm Summary *(page 108).*

The Monitor Page generates a report summarizing data retrieved from monitoring managed machines.

- Choose a report type - Select the type of monitoring report to generate. Each monitoring report displays additional options.
- Monitor Set Report
  - Select Monitor Set
  - Display Last <N> Periods
- Monitor Log Report
  - Show <N> log entries for each counter and machine
  - Show counter log data

  - Show service log data
  - Show process log data
  - Show SNMP log data
- Monitor Action Log Report - Displays the actions taken in response to each alarm.
  - Display monitor action log entries for the last <N> days
  - Sort by log event date time: ascending / descending
  - Monitor type: `<All Types>, Counter, Process, Service, SNMP, Alert, System Check, EPS, Log Monitoring`
  - Message Filter
- Alarm Summary Report
  - Display all monitoring alarms for the last <N> days
  - Sort by log event date time: ascending / descending
  - Monitor Type: `<All Types>, Counter, Process, Service, SNMP, Alert, System Check, EPS, Log Monitoring`
  - Alarm Type: `Alarm` or `Trending`
  - Message Filter
  - Display message with each alarm
- Monitor Trending Report
  - Select Machine
- Monitor Configuration Report
  - Assigned Sets
  - Sets to be Displayed
  - List Only Assigned Sets
- Monitor 95th Percentile Report
  - Select Set
  - Display 95th percentile between <start date> and <end date>
  - Select the counters to add to the report

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.

3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Security

Reports > Security

Similar information is provided using Security > Security Status, View Logs, and View Threats.

The Security page generates reports for the following types of security data maintained by the VSA.

> Note: Displays only if you have purchases the Security addon module.

Select security report type

Select the type of security report to generate:

- Configuration Report
  - Install Time
  - Installer
  - Version
  - License Expiration
  - Assigned Profile
  - Profile Details
  - Alarm Settings
- Current Threats Report
  - Summary
  - Threat Category Summary
  - Current Threats
- Historical Threats Report
  - Summary
  - Threat Category Summary
  - Current Threats

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

User State

Reports > User State

Similar information is provided using User State > Power Status.

The User State page generates reports for the following types of user state data maintained by the VSA.

> Note: Displays only if you have purchases the User State Management addon module.

Select the subtopics to include in the User State report:

- Include User Type - List all user groups that each user on the machine is a member of.
- Include Mapped Drives - List the drive mappings for each user.
- Include Printers - List printer mappings for each user.
- Include Share points - List all the directories shares for the machine.
- Include machines with no data - Show entries in the report for all machines, including those that have not had user state information collected.

Machine ID / Group ID Filter Settings in Reports

Reports are saved with the Machine ID / Group ID filter *(page 607)* settings that were current at the time the report was first saved or last updated. *These saved or updated filter settings are used when a report is run, regardless of the current machine ID/group ID filter settings.* Once a report has been saved, the Update button displays just below the field used to enter the title of the report. Click Update to apply the latest machine ID / group ID filter settings to a saved report. The machine ID / group ID filter settings of a saved report can be overridden using Schedule Reports *(page 395)*.

Running the Report

1. Select the data you want to display in the report.
2. Enter the title of the report.
3. Either run the report or export the report to HTML, Word or Excel output.

Report Access

Select Shared or Private to assign access to a report. By default, Private access is selected. Private reports can only be viewed and run by the administrator that created the report. Shared reports can be viewed and run by all administrators. Saved reports are identified as either private or shared in the left-hand navigation pane.

Save

Click Save to save the current settings.

Save As...

Click Save as... to save the current report under a new name.

Rename...

Click Rename... to rename the report.

Delete...

Click Delete... to delete the report.

Enter title displayed on report header

Enter the title that displays at the top of the report.

Run...

Click Run... to run the report using the report options previously selected.

Save the report as HTML, Word or Excel

Click Export... to display the report as HTML, Word or Excel output. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

Remove header from the exported report

If checked, the title, report date and machine filter information do not display at the top of the exported output.

Chapter 12

Agent

In This Chapter

Agent Tab

Agent

Functions in the Agent tab allow administrators to create, edit, and delete machine IDs, customize the appearance of the machine's agent icon in the system tray (on page 612), control agent check-in frequency, and update the version of agent software that resides on managed machines.

> Note: You can download an Agent Configuration and Deployment PDF from the first topic of online help.

Agent Status *(page 437)*	Displays active user accounts, IP addresses and last check-in times.
Agent Logs *(page 440)*	Displays logs of: ▪ Agent system and error messages ▪ Execution of scripts, whether successful or failed. ▪ Configuration changes made by an administrator. ▪ Send/receive data for applications that access the network. ▪ Application, System, and Security NT Event Log data collected from managed machine.
Log History *(page 441)*	Specifies how long to store log data.
Event Log Settings *(page 441)*	Specifies the event log types and categories included in the Log History.
Deploy Agents *(page 445)*	Creates agent install packages for multiple machines.
Create *(page 457)*	Creates machine accounts and/or install packages for single machines.
Delete *(page 461)*	Allows administrators to delete machine accounts.
Rename *(page 463)*	Renames existing machine ID accounts.
Change Group *(page 464)*	Reassigns any number of machines to a new group ID.
LAN Watch *(page 465)*	Uses an existing agent on a managed machine to periodically scan the local area network for any and all new devices connected to that LAN since the last time LAN Watch ran.
Install Agents *(page 469)*	Installs the agent *on a remote system* and creates a new machine ID / group ID account for any new PC detected by LAN Watch.
View LAN *(page 473)*	Displays the results of the latest LAN Watch scan.
View AD Computers *(page 474)*	Lists all computers listed in an Active Directory when LAN Watch runs on a system hosting Active Directory. Installs agents on AD machines.
View AD Users *(page*	Lists all Active Directory users discovered by LAN

475)	Watch when LAN Watch runs on a system hosting Active Directory. Creates VSA administrators and users from AD users.
View vPro *(page 478)*	Displays hardware information about vPro-enabled machines discovered while running LAN Watch.
Copy Settings *(page 479)*	Mass copies settings from one machine account to other machine accounts.
Import / Export *(page 481)*	Imports and exports agent settings, including script schedules, as XML files.
Suspend *(page 482)*	Suspends all agent operations, such as scripts, monitoring, and patching, without changing the agent's settings.
Agent Menu *(page 483)*	Customizes the agent menu on managed machines.
Check-In Control *(page 485)*	Controls agent check-in frequency on agent machines.
Temp Directory *(page 489)*	Sets the path to a directory used by the agent to store temporary files.
Edit Profile *(page 251)*	Edits machine account information.
User Access *(page 253)*	Sets up accounts to allow users remote control access to their own machines.
Set Credential *(page 495)*	Sets a logon credential for the agent to use in Patch Management, the Use Credential script command, backups, and User State Management.
Update Agent *(page 497)*	Updates the agent software on managed machines.

Agent Status

Agent > Agent Status

Agent status alerts can be defined using Monitoring > Alerts > Agent Status *(page 117)*.

The Agent Status page provides a summary view of a wide variety of agent data. You may choose all the data columns yourself to fully customize the view. The same options available in this display are available in the Aggregate Table *(page 403)* report. Paging rows can be sorted by clicking column heading links.

Select Columns...

Specify which columns of data to display and the order to display them in.

Filter...

Click Filter... to display a Filter Aggregate Table. Enter strings to filter the display of rows in the paging area. For example, to search for the machine ID that "jsmith" is logged into, enter `jsmith` in the edit box next to Current User. Include an asterisk (*) wildcard with the text you enter to match multiple records.

Reset Filter

Displays only if an advanced filter is set. Click Reset Filter to clear all filter strings.

Column Definitions

- Machine ID - Machine ID label used throughout the system.
- Group ID - Just the group ID portion of the machine ID.
- First Checkin Time - Time when a machine first checked into the KServer.
- Last Checkin Time - Most recent time when a machine checked into the KServer.
- Last Reboot Time - Time of the last known reboot of the machine.
- Current User - Logon name of the user currently logged into the machine (if any).
- Last Logged In User - Logon name of the last person to log into the machine.
- User Access Logon - Logon name given to a user for logging into the KServer.
- Computer Name - Computer name assigned to the machine.
- agent GUID - A globally unique identifier for a machine ID.group ID account and its corresponding agent.
- DNS Computer Name - The fully qualified DNS computer name for the machine, which comprises the computer name plus the domain name. For example: `jsmithxp.acme.com`. Displays only the computer name if the machine is a member of a workgroup.
- Domain/Workstation - The workgroup or domain the computer belongs to.
- Operating System - Operation system type the machine is running.
- OS Version - Operation system version string.
- IP Address - IP address assigned to the machine.
- Subnet Mask - Networking subnet assigned to the machine.
- Default Gateway - Default gateway assigned to the machine.
- Connection Gateway - IP address seen by the KServer when this machine checks in. If the machine is behind a DHCP server, this will be the public IP address of the subnet.
- MAC Address - MAC address of the LAN card used to communicate with the KServer.
- DNS Server 1,2 - IP address of the DNS servers assigned to the machine.
- Primary/Secondary WINS - WINS settings.
- CPU Type - Processor make and model.
- CPU Speed - Clock speed of the processor.
- RAM Size - MBytes of RAM on the machine.

- Agent Version - Version number of the Kaseya agent loaded on the machine.
- User Access Remote Cntl - Enabled if this user can log in and get remote control access *to their own machine from another machine*. Disabled if access is denied.
- User Access Ticketing - Enabled if this user can log in and enter trouble tickets. Disabled if access is denied.
- User Access Chat - Enabled if this user can *initiate* chat sessions with an administrator. Disabled if access is denied.
- Primary/Secondary KServer Address - IP address / name the machine uses to communicate with the KServer.
- Quick Checkin Period - Quick check in *(page 603)* time setting in seconds.
- Contact Name - User name entered in Edit Profile *(page 251)*.
- Contact Email - Email address entered in Edit Profile.
- Contact Phone - Phone number entered in Edit Profile.
- Contact Notes - Notes entered in Edit Profile.
- Manufacturer - System manufacturer.
- Product Name - System product name.
- System Version - Product version number.
- System Serial Number - System serial number.
- Chassis Serial Number - Serial number on the enclosure.
- Chassis Asset Tag - Asset tag number on the enclosure.
- External Bus Speed - Motherboard bus speed.
- Max Memory Size - Max memory size the motherboard can hold.
- Max Memory Slots - Total number of memory module slots available.
- Chassis Manufacturer - Manufacturer of the enclosure.
- Chassis Type - Enclosure type.
- Chassis Version - Enclosure version number.
- Motherboard Manufacturer - Motherboard manufacturer.
- Motherboard Product - Motherboard product ID.
- Motherboard Version - Motherboard version number.
- Motherboard Serial Num - Motherboard serial number.
- Processor Family - Processor type installed.
- Processor Manufacturer - Processor manufacturer.
- Processor Version - Processor version ID.
- CPU Max Speed - Max processor speed supported.
- CPU Current Speed - Speed processor is currently running at.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Agent Logs

Agent > Agent Logs

The Agent Logs page collects event information on or relating to managed machines.

> Note: *The system automatically limits the number of log entries per log type per machine to 1000. Once the limit has been reached, log entries exceeding the limit are archived, if archiving is enabled, and deleted from the system. The archive option is set in* Log History *(page 441).*

Select Log

Select a log from the Select Log drop down list. Then click the hyperlink of a machine ID. The types of logs available include:

- Alarm Log - Lists all alarms triggered for the selected machine.
- Agent Log - Displays a log of agent, system, and error messages.
- Configuration Changes - Displays a log of configuration changes made by each Administrator.
- Network Statistics - Displays a log of send/receive data for network applications.
- Event Logs - Displays event log data collected by Windows. Not available for Win9x. Only event logs that apply to the specific machine selected display in the event log drop-down list.
- Script Log - Displays a log of successful/failed scripts.
- Remote Control Log - Displays a log of successful/failed remote control sessions.
- Log Monitoring - Displays Log Monitoring *(page 606)* entries.

Events Per Page

Select the number of rows displayed per page.

Start Date / End Date

Select a range of dates to filter log data.

Filter...

Applies to the Event Log only. Click Filter... to restrict the amount of data displayed. You can specify a different advanced filter for each event category and column of data displayed.

Apply event log filter

Applies to the Event Log only. The event log filter includes options defined using the Filter... button. If Applied event log filter is checked, filtering is applied.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Log History

Agent > Log History

The Log History page determines the number of days to store log data in the database on a per log basis for each machine ID. Log data is displayed using Agent Logs *(page 440)* or printed to a report using Reports > Logs *(page 422)*. This page also determines whether agent log data is subsequently archived to text files located on a network directory. The directory is specified using System > Configure *(page 524)*. Changes made using this page take effect at the next agent check-in and display in red text until then.

> Note: Log Settings can also be maintained using the Agent Settings tab of the Machine Summary *(page 23)* page.

These settings default from the agent install package. Agent install packages are created using Agent > Deploy Agent *(page 445)*.

Estimating Database Sizing Requirements

The more data you log, the larger your database grows. Database sizing requirements can vary, depending on the number of agents deployed and the level of logging enabled. To estimate database sizing requirements for log data, create a dump of your database's `nteventlog` table. Determine how much data is being logged per day, then use that to predict the amount of extra space required to extend the log retention period.

Set days to keep log entries

Set the number of days to keep log data for each type of log:

- Agent Log - The log of agent, system, and error messages.
- Configuration Changes - The log of configuration changes made by each administrator.

- Network Statistics Log - The log of incoming and outgoing packet count information and the application or process transmitting and/or receiving such packets. This information can be viewed in detail using Agent > Agent Logs *(page 440)* > Network Statistics.
- Script Log - Displays a log of successful/failed scripts.
- Remote Control Log - Displays a log of remote control events.
- Alarms Log - The log of all alarms issued.
- Event Log - The log of all events. The events collected are specified in more detail using Agent > Event Log Settings *(page 443)*.
- Monitor Log - The log of data collected by monitoring sets.
- SNMP Log - The log of all data collected by SNMP sets.
- SYS log - The log of all System Check *(page 181)* external systems.

> Note: System > Check-in Policy *(page 507)* can restrict the number of days administrators can keep log entries, to avoid placing undue stress on servers running the KServer service.

Capture event log

If checked, keeps log data for application events, security events and system events. The system saves the most recent 500 events for each event type. No age setting applies to event logs.

Update

Click Update to update selected machine IDs with agent log settings.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Event Log Settings

Agent > Event Log Settings

The Event Log Settings page specifies the event log *(page 604)* types and categories included in the Log History *(page 441)*.

> Note: When 10000 or more event log entries of a particular type get backed up in the database, that type of event for that specific event log gets disabled. For example, if a domain controller floods the server with Security events of type Success Audit then the system stops collection of Success Audit Security events. All other types continue to get collected. If this occurs, an entry is written to the Configuration Changes log saying that `*System*` has changed the event log settings.

To specify Event Log Settings:

1. Click an event log type in the Event Log Types list box. Hold down the [Ctrl] key to click multiple event log types.
2. Click Add > or Add all >> to add event log types to the Assigned Event Types list box. Click << Remove or << Remove all to remove event log types from the Assigned Event Types list box.
3. Check one or more event categories: Error, Warning, Information, Success Audit, Failure Audit, Critical, Verbose.
4. Select one or more machine IDs.
5. Click Update or Replace to apply these settings to selected machine IDs.

Update

Adds event log types listed in the Assigned Event Types list box to the set of event log types already assigned to selected machine IDs.

Replace

Replaces all event log types assigned to selected machine IDs with the event log types listed in the Assigned Event Types list.

Clear

Clears all event log types assigned to selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Delete Icon

Click the delete icon ✕ to delete an event log.

Edit icon

Click the edit icon next to a event log to automatically set header parameters to those matching the selected event log.

Assigned Categories

The event categories stored by the VSA for this machine ID and event log:

- Error
- Warning
- Information
- Success Audit
- Failure Audit
- Critical - Applies only to Vista.
- Verbose - Applies only to Vista.

Deploy Agents

Agent > Deploy Agents

The Deploy Agent page creates and distributes an agent install package to *multiple* machines.

> Note: You can download a PDF overview of Agent Configuration and Deployment from the top topic of online help.
>
> Note: Use Agent > Create *(page 457)* to create a machine ID account and agent install package in two separate steps and apply them to a *single* machine. You can also use Create to create machine ID templates *(page 607)* or re-install an agent for an *existing* machine ID.
>
> Note: Use Install Agent *(page 469)* to install agents *on remote systems*.

Machine IDs vs. Agents

When discussing agents it is helpful to distinguish between the machine ID / group ID *(page 606)* and the agent *(page 600)*. The machine ID / group ID is the VSA's user account name for a managed machine in its database. The agent is the client software installed on the managed machine. A one-to-one relationship exists between the agent on a managed machine and its machine ID / group ID account name on the VSA. Tasks assigned to a machine ID by a VSA administrator direct the agent's actions on the managed machine.

Using the Wizard

The Deploy Agents install package is created using a Configure Automatic Account Creation wizard. The wizard copies agent settings from an *existing* machine ID or machine ID template and generates an install package called `KcsSetup.exe.` All settings and pending scripts from the machine ID you copy from—except the machine ID and group ID—are applied to every new machine ID created with the package.

Automatic Account Creation

You must have *automatic account creation enabled* using System > Check-in Policy *(page 507)* to automatically create a machine ID account when a Deploy Agents package is installed.

Machine ID Templates

A machine ID template is *a machine ID record without an agent*. Since an agent never checks into a machine ID template account, it is not counted against your total license count. You can create as many machine ID templates as you want without additional cost. When an agent install package is created, the package's settings are copied from a selected machine ID template. Typically machine ID templates are created and configured for certain types of machine. Machine type examples include desktops, Autocad, Quickbooks, small business servers, Exchange servers, SQL Servers, etc. A corresponding install package can be created based on each machine ID template you define.

- Create machine ID templates using Agent > Create *(page 457)*.
- Import a machine ID template using Agent > Import/Export *(page 481)*. Sample templates can be downloaded from the Kaseya Support Forum and imported.
- Base an agent install package on machine ID template using Agent > Deploy Agents *(page 445)*.
- Copy *selected* settings from machine ID templates to existing machine ID accounts using Agent > Copy Settings *(page 479)*.
- Identify the total number of machine ID template accounts in your VSA using System > Statistics *(page 532)*.
- Configure settings for the machine ID template using the standard VSA functions, just as you would a machine ID account with an agent.

Including Credentials in Agent Install Packages

If necessary, an agent install package can be created that includes an administrator credential *(page 604)* to access a customer network. Credentials are only necessary if users are installing packages on machines and *do not have administrator access* to their network. The administrator credential is encrypted, never available in clear text form, and bound to the install package.

Editing Existing Install Packages

Typically an existing Deploy Agents install package is edited just before re-distribution. The most common changes made to an install package are:

- Pre-selecting a group ID and sub-group ID. A group ID usually represents a single customer. A sub-group ID is sometimes used to represent a specific customer location.
- Assigning a credential, if necessary.

Once edited the install package can be re-created and distributed to the specific customer and location it is intended for.

Distribution Methods

Once created, you can use the following methods to distribute an agent install package:

- Logon Scripts - Set up an NT logon script to run the install package every time a user logs into the network. The installer skips installation if it detects an agent is already on a machine.
    1. Create the deployment package using the Agent > Deploy Agents wizard.
        - ✓ You will probably want to select the silent install option.
        - ✓ It may be necessary to bind an administrator credential if users running the logon script don't have administrator rights.
    2. Download the `KcsSetup.exe` using the `dl.asp` page and copy it to a network share which users can execute programs from.
    3. Add `KcsSetup.exe` with its network path to the logon script.
- Email - Email `KcsSetup.exe` to all users on the network. Download the install package from the Deploy Agents page, then attach it to an email on

your local machine. You can also copy and paste the link of the default install package into an email message.

- LAN Watch - Administrators can discover newly added machines during a LAN Watch *(page 465)* and subsequently install agents *remotely* using the Agent > Install Agents *(page 469)* page.
- Manually - You can instruct users to download an install package agent from the `http://your.Kserver.com/dl.asp` website to their target machines. If more than one install package is displayed on the website, instruct them which package should be selected. Users can execute the `KcsSetup.exe` using any of the following three methods:
  - Double click `KcsSetup.exe` within Windows to launch it.
  - Open a command line window and type `KcsSetup.exe` followed by any desired command line switches *(page 450)*.
  - Select Run... from the Windows Start menu and type `KcsSetup.exe` followed by any desired command line switches.
- Macintosh - See Deploying Macintosh Agents using Apple Remote Desktop *(page 452)*.

Default Install Packages

Each administrator can specify their own default install package by selecting the Set Default radio button to the left of the package name. Administrators can download their own default agent immediately by selecting the Click to download default Agent link on the Deploy Agents page.

Unique ID Number

You can tell users which install package to download by referencing the install package's *unique ID number*. Example: `http://your.Kserver.com/dl.asp?id=123`. The default install package is displayed with its unique ID number in the header of the Deploy Agents page.

Assigning New Machine IDs to Machine Group by IP Address

Using Deploy Agents, you may choose to create a generic install package that adds all new machine accounts to the `unnamed` group ID. When the agent checks in the first time, a System > Naming Policy *(page 506)* assigns it to the correct group ID and/or sub-group ID.

Windows vs. Macintosh

Agent packages can be created to install agents on machines running either Windows or Macintosh operating systems. See Deploying Macintosh Agents using Apple Remote Desktop *(page 452)*.

Create Package

Click Create Package to start a Configure Automatic Account Creation wizard where you can specify all configuration parameters for the install package. The wizard is a 7 step process.

1. Define rules for naming the machine ID.

- Prompt the user to enter a machine ID.
- Use the computer name as the machine ID.
- Specify the machine ID for this install package.
- Set the user name of the currently logged on user as the machine ID.

2. Define rules for naming the group ID.

    - Prompt User - Asks user to enter a group ID. This option is only displayed to master administrators.
    - Domain Name - Uses the user's domain name.
    - Existing Group - Select an existing group ID from a drop down list.
    - New Group - Specify a new group ID. This option is only displayed to master administrators.

3. Specify agent install package command line switches *(page 450)* including the ability to install silently without any task bars or dialog boxes *(page 610)*.
4. Specify the machine ID to copy settings and pending scripts from. All settings and pending scripts from the machine ID you copy from—except the machine ID and group ID—are applied to every new machine ID created with the package.
5. Select the operating system you are creating the install package for: `Windows` or `Macintosh`. See Deploying Macintosh Agents using Apple Remote Desktop *(page 452)*.
6. Optionally bind an administrator logon credential to the install package. Fill in the Administrator Credential form to securely bind administrator rights to the install package.

    - Users without administrator rights can install the package successfully without having to enter an administrator credential.
    - If the administrator credential is left blank and the user does not have administrator rights to install software, the install package prompts the user to enter an administrator credential during the install.

    Note: *Credentials are only necessary if users are installing packages on machines and do not have administrator access to their network.*

7. Name the install package for easy reference later. This name displays on the Deploy Agents page and the `dl.asp` download page.

    Note: *The filename of the agent install package is always* `KcsSetup.exe`.

Install Issues and Failures

See Install Issues and Failures *(page 456)* if an agent fails to install.

Click to download default Agent

Click this link to download the current administrator's default package directly from this page.

Users can download agents from

Right click the displayed link and select the Copy Shortcut option, then paste this shortcut into an email message. The *unique ID number* ensures that when the link is clicked in the email message, the default install package is selected and downloaded. Set a different install package as the default to display the link for that install package.

Set Default

Specify your own administrator default install package by selecting the radio button to the left of the package name in the Set Default column.

Delete Icon

Click the delete icon ✕ to remove a package from the paging area. If you created the package, then this also deletes the package from the system and removes it for all administrator's lists.

Edit Icon

Click the edit icon ✎ next to a package to change parameters for that package using the Configure Automatic Account Creation wizard.

Package Name

Lists the name of the package.

Public Package

Public package rows display with a brown background. Private package rows display with a gray background.

Share

Click Share to share a private package with other administrators, administrator roles or to make the package public. If a package is public, click Share to take ownership of the public package and make changes to it. Only master administrators can make a package public and available to all administrators.

List on dl.asp

Click the dl.asp link in the column header to display the web page users see when they install an agent on their machine. Check a box in this column to include its package in the list of available download packages on the dl.asp page.

Description

Displays the description of the package.

Agent Install Command Line Switches

Agent install command line switches for `KcsSetup.exe` are case insensitive and order independent. Separate switches with an empty space.

`/b` - Reboot the system after installation completes. Agent installation requires a reboot in order to load its drivers. Use this switch on packages given to users that do not have rights to shut down the computer.

`/c` - Use the computer name as the machine ID for the new account. If the computer name cannot be determined programmatically, the user is prompted to enter a machine ID. The exception is silent mode, `/s`, in which case the installation stops and an error is logged to the installation log.

`/d` - Use the current domain name as the group ID for the new account. If the domain name cannot be determined programmatically, the user will be prompted to enter the group ID. The exception is silent mode, `/s`, in which case the installation stops and an error is logged to the installation log.

`/e` - Exit immediately if the installer detects that an agent is already installed. Use `/e` at the end of logon scripts. `/k` or `/r` overrides `/e`.

`/g=xxx` - Specifies the group ID to use for the new account. `xxx` must be an alpha-numeric string and can not contain spaces or punctuation marks.

`/h` - Display the help dialog box listing all the command line switches, unless the `/s` switch is set, in which case the application exits.

`/i` - Ignore non-critical errors such as incorrect or indeterminate versions of WinSock2, or indeterminate versions of the OS, and force the installation to proceed.

`/k` - Displays a dialog box asking the user if it is OK to re-install when the agent is already detected on the machine. Without this switch, the installer exits if an agent is already present.

`/m=xxx` - Specifies the machine ID to use for the new account. `xxx` must be an alpha-numeric string and can not contain spaces or any punctuation marks except period(.).

`/p "install_path"` - Overrides the default installation path by specifying the full directory path, including drive letter, in which to install the agent. By default, the agent installation creates a directory named `Program Files\Kaseya\Agent` off the root of the drive on which Windows is installed.

`/r` - Executes the installation program and reinstalls the agent even if an agent is already on the machine.

`/s` - Runs in silent mode. Suppresses all dialog boxes.

`/t "Title"` - Specifies the title of any dialog windows shown to the user during installation. The default title is: `"Kaseya Agent"`.

`/u` - Uses the current user name as the machine ID for the new account. If the user name cannot be determined programmatically, the user is prompted to enter a machine ID. The exception is silent mode, `/s`, in which case the installation stops and an error is logged to the installation log.

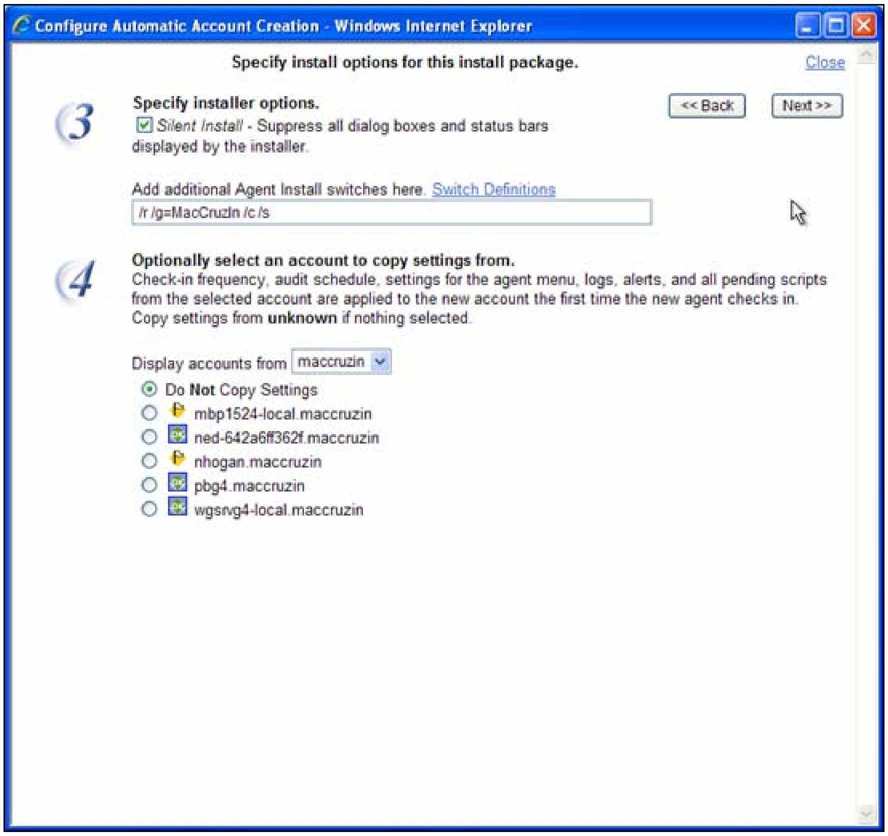
`/w` - Overwrites the existing configuration file with a configuration file included in the agent installation. Use with the `/r` switch to re-install an agent with new server settings. Intended for an existing agent that is attempting to connect to a server that no longer exists.

`/x` - Disables remote control after successfully installing the agent. This option is ignored when updating or re-installing. Remote control of this machine can only occur after the user selects Enable Remote Control by right clicking the K icon on the system tray.

`/z “Message”` - Specifies the message shown to the user when installation completes. The exception is silent mode, `/s`, in which case the installation completes and the status message is written to the installation log. The default message is: "`The Agent has been installed successfully on your computer.”`

Deploying Macintosh Agents using Apple Remote Desktop

1. Use the Configure Automatic Account Creation wizard in Agent > Deploy Agent *(page 445)* to configure an agent installation package with the desired options. Silent mode is recommended, but not required.



Configure Automatic Account Creation - Windows Internet Explorer
Close
<< Back
Next >>
3
4

Specify install options for this install package.

Specify installer options.

☑ *Silent Install* - Suppress all dialog boxes and status bars displayed by the installer.

Add additional Agent Install switches here. Switch Definitions

/r /g=MacCruzIn /c /s

Optionally select an account to copy settings from.

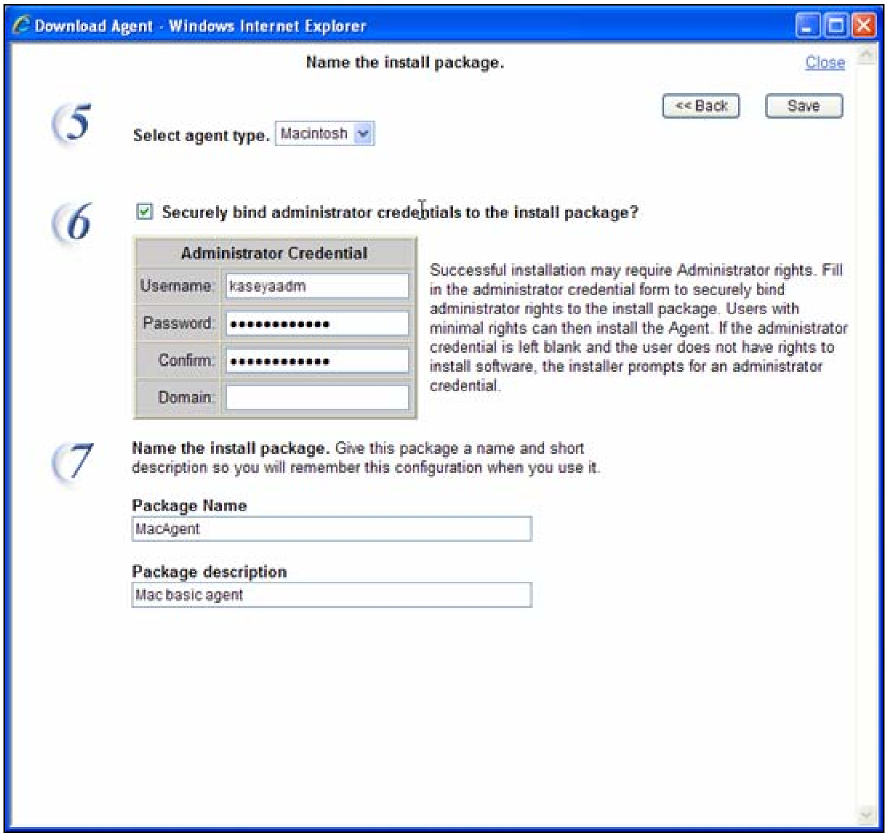
Check-in frequency, audit schedule, settings for the agent menu, logs, alerts, and all pending scripts from the selected account are applied to the new account the first time the new agent checks in. Copy settings from **unknown** if nothing selected.

Display accounts from maccruzin

● Do **Not** Copy Settings
○ mbp1524-local.maccruzin
○ ned-642a6ff362f.maccruzin
○ nhogan.maccruzin
○ pbg4.maccruzin
○ wgsrvg4-local.maccruzin

2. Select a `Macintosh` agent type.

3. Enter an existing OS X Administrator Credential username and password for the agent to use. This step is required if you wish to install the agent without a prompt and user/admin interaction.



Name the install package.

Select agent type. Macintosh

☑ Securely bind administrator credentials to the install package?

Administrator Credential	
Username:	kaseyaadm
Password:	•••••••••••••
Confirm:	•••••••••••••
Domain:	

Successful installation may require Administrator rights. Fill in the administrator credential form to securely bind administrator rights to the install package. Users with minimal rights can then install the Agent. If the administrator credential is left blank and the user does not have rights to install software, the installer prompts for an administrator credential.

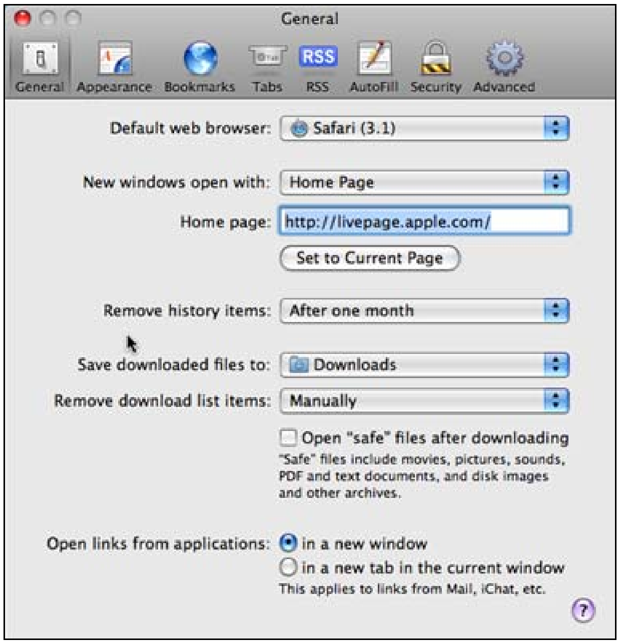
Name the install package. Give this package a name and short description so you will remember this configuration when you use it.

Package Name
MacAgent

Package description
Mac basic agent

4. Download and capture the `KscSetup.zip` file created by the Deploy Agent wizard located at `http://VSA_server.mydomain.com/dl.asp`.

Note: You may need to disable the open feature of "safe" files in Safari.



Default web browser: Safari (3.1)

New windows open with: Home Page

Home page: http://livepage.apple.com/

Remove history items: After one month

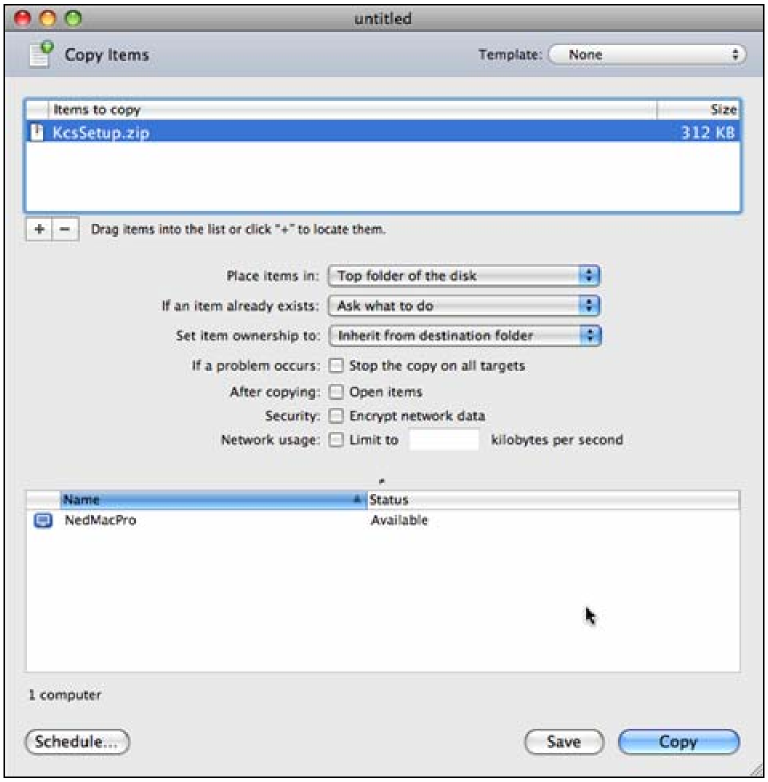
Save downloaded files to: Downloads

Remove download list items: Manually

□ Open "safe" files after downloading
"Safe" files include movies, pictures, sounds, PDF and text documents, and disk images and other archives.

Open links from applications: ● in a new window
○ in a new tab in the current window
This applies to links from Mail, iChat, etc.

5. Using Apple Remote Desktop, copy the saved `KscSetup.zip` file to the desired list of computers.



Template: None

Items to copy	Size
KcsSetup.zip	312 KB

Drag items into the list or click "+" to locate them.

Place items in: Top folder of the disk

If an item already exists: Ask what to do

Set item ownership to: Inherit from destination folder

If a problem occurs: □ Stop the copy on all targets

After copying: □ Open items

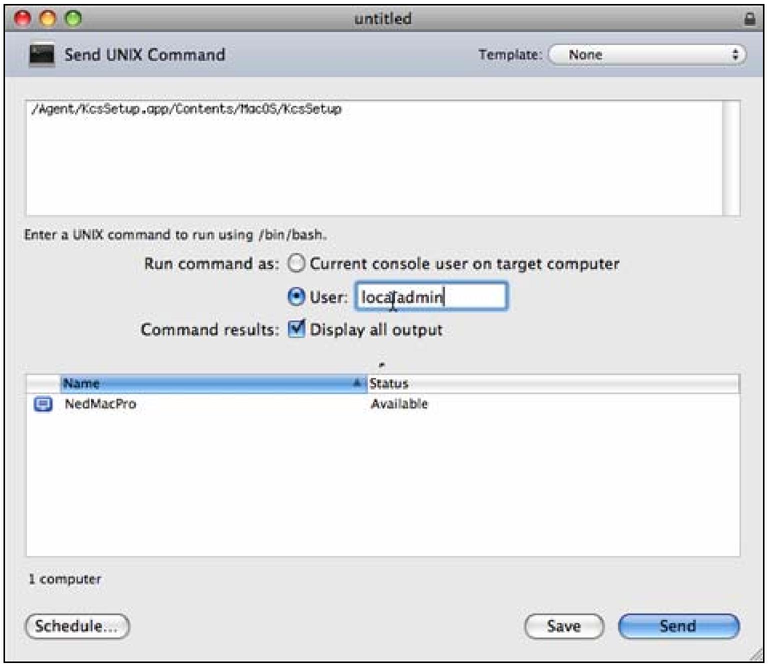
Security: □ Encrypt network data

Network usage: □ Limit to kilobytes per second

Name	Status
NedMacPro	Available

1 computer

6. Unzip the `KscSetup.zip` file and execute the `KscSetup.exe` as either the local admin or a user of your choice. Entering a credential is not required if a credential was included when the agent installation package was created in Step 3 above.



```
/Agent/KcsSetup.app/Contents/MacOS/KcsSetup
```

Enter a UNIX command to run using /bin/bash.

Run command as: ○ Current console user on target computer

● User: localadmin

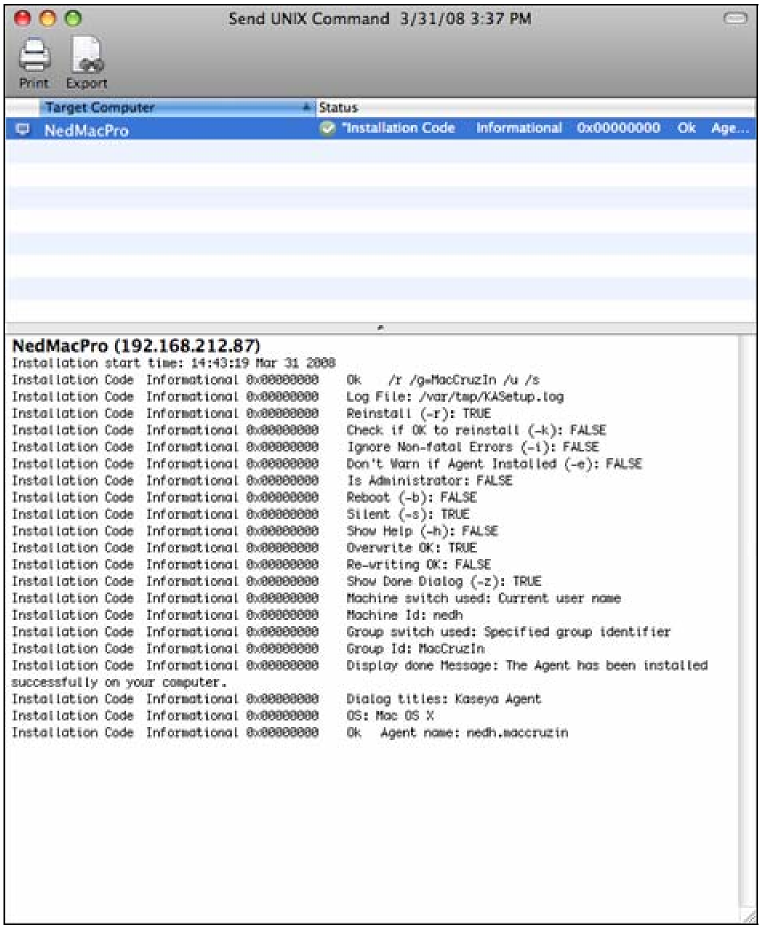
Command results: ☑ Display all output

Name	Status
NedMacPro	Available

1 computer

The agent is installed in the background. It then launches and displays the Kaseya icon on the menu bar of any user logged on the Macintosh machine. If no users are currently logged on, the agent launches on next logon,

7. To check the status of the deployment or look for errors, you can review the log file found in `/var/tmp/KASetup.log`.



Target Computer	Status
NedMacPro	"Installation Code Informational 0x00000000 Ok Age...

```
NedMacPro (192.168.212.87)
Installation start time: 14:43:19 Mar 31 2008
Installation Code  Informational 0x00000000   Ok    /r /g=MacCruzIn /u /s
Installation Code  Informational 0x00000000   Log File: /var/tmp/KASetup.log
Installation Code  Informational 0x00000000   Reinstall (-r): TRUE
Installation Code  Informational 0x00000000   Check if OK to reinstall (-k): FALSE
Installation Code  Informational 0x00000000   Ignore Non-fatal Errors (-i): FALSE
Installation Code  Informational 0x00000000   Don't Warn if Agent Installed (-e): FALSE
Installation Code  Informational 0x00000000   Is Administrator: FALSE
Installation Code  Informational 0x00000000   Reboot (-b): FALSE
Installation Code  Informational 0x00000000   Silent (-s): TRUE
Installation Code  Informational 0x00000000   Show Help (-h): FALSE
Installation Code  Informational 0x00000000   Overwrite OK: TRUE
Installation Code  Informational 0x00000000   Re-writing OK: FALSE
Installation Code  Informational 0x00000000   Show Done Dialog (-z): TRUE
Installation Code  Informational 0x00000000   Machine switch used: Current user name
Installation Code  Informational 0x00000000   Machine Id: nedh
Installation Code  Informational 0x00000000   Group switch used: Specified group identifier
Installation Code  Informational 0x00000000   Group Id: MacCruzIn
Installation Code  Informational 0x00000000   Display done Message: The Agent has been installed
successfully on your computer.
Installation Code  Informational 0x00000000   Dialog titles: Kaseya Agent
Installation Code  Informational 0x00000000   OS: Mac OS X
Installation Code  Informational 0x00000000   Ok   Agent name: nedh.maccruzin
```

8. To configure custom agent icons for Macintosh machines, see Creating Custom Agent Icons *(page 539)*.

Install Issues and Failures

The following issues and failures can occur when installing agents:

- Invalid Credential - The credential *(page 604)* bound to the package must have administrator rights on the local machine. The agent installs as a system service requiring full administrator privileges to install successfully. The username may be a domain administrator of the form domain\user.
- Domain Specified for a Machine Not in the Domain - If, in step 2 of package creation in Deploy Agent, the Domain Name option is selected and the computer is not part of a domain, an installation package will peg the CPU at 100% during install, but eventually install.
- Blocked by Anti-Virus Program - Some anti-virus programs may classify the agent installation as a security threat and block its execution.
- Blocked by Security Policy - Local or domain security policies may prevent access to the installation directory, typically by default the `Program Files` directory.

Macintosh

- Macintosh agents cannot be deployed silently.

Using Active Directory

These types of failures apply when an agent is installed using View AD Computers *(page 474)* or View AD Users *(page 474)*:

- Port Blocked - Active Directory agent deployment will fail if the Kserver assigned port is blocked by a firewall.
- Authentication Requirement for AD Imported Users - The domain controller that performs the authentication must have Authenticated users set as a member of Local Security policy - Access this computer from the network.

Create

Agent > Create

The Create page creates a machine ID account and agent install package for a *single* machine. You create the machine ID account first, then create an install package for this single machine. Typically the Create page applies to:

- Machine ID templates - In this case, no install package need be created, since machine ID templates *(page 607)* are not intended for installation to a machine.
- Secured environments - Secured environments may require each machine be setup manually. For example, you might be required to name a new machine ID account manually and/or create an agent install package with a unique credential for a single machine. A user must be logged into a target machine locally as an administrator to install the package.

> Note: Use Agent > Deploy Agents *(page 445)* to create and distribute agent install packages to *multiple* machines. The Deploy Agents install package *automatically creates a machine ID account* when it is installed provided automatic account creation is enabled using using System > Check-in Policy *(page 507)*.
>
> Note: Use Install Agent *(page 469)* to install agents *on remote systems*.

Re-Installing Agents

Because the Create install packages does *not automatically create a new machine ID account*, you can use the Create page to *re-install* agents on managed machines for *existing* accounts.

Machine IDs vs. Agents

When discussing agents it is helpful to distinguish between the machine ID / group ID *(page 606)* and the agent *(page 600)*. The machine ID / group ID is the VSA's user account name for a managed machine in its database. The agent is the client software installed on the managed machine. A one-to-one relationship exists between the agent on a managed machine and its machine ID / group ID account name on the VSA. Tasks assigned to a machine ID by a VSA administrator direct the agent's actions on the managed machine.

Including Credentials in Agent Install Packages

If necessary, an agent install package can be created that includes an administrator credential *(page 604)* to access a customer network. Credentials are only necessary if users are installing packages on machines and *do not have administrator access* to their network. The administrator credential is encrypted, never available in clear text form, and bound to the install package.

Windows vs. Macintosh

Agent packages can be created to install agents on machines running either Windows or Macintosh operating systems.

Machine ID Templates

A machine ID template is *a machine ID record without an agent*. Since an agent never checks into a machine ID template account, it is not counted against your total license count. You can create as many machine ID templates as you want without additional cost. When an agent install package is created, the package's settings are copied from a selected machine ID template. Typically machine ID templates are created and configured for certain types of machine. Machine type examples include desktops, Autocad, Quickbooks, small business servers, Exchange servers, SQL Servers, etc. A corresponding install package can be created based on each machine ID template you define.

- Create machine ID templates using Agent > Create *(page 457)*.
- Import a machine ID template using Agent > Import/Export *(page 481)*. Sample templates can be downloaded from the Kaseya Support Forum and imported.
- Base an agent install package on machine ID template using Agent > Deploy Agents *(page 445)*.
- Copy *selected* settings from machine ID templates to existing machine ID accounts using Agent > Copy Settings *(page 479)*.
- Identify the total number of machine ID template accounts in your VSA using System > Statistics *(page 532)*.
- Configure settings for the machine ID template using the standard VSA functions, just as you would a machine ID account with an agent.

Copy new account settings from

Click a radio button next to any machine ID listed in the paging area. Agent settings are copied from this machine ID.

> Note: If you don't include a machine ID to copy from and click Create, a new, usable machine ID account is created using KServer defaults. You can copy settings between existing machine ID accounts at any time using Agent > Copy Settings *(page 479)*.

New Machine ID

Enter a unique name for the new machine ID you are creating.

Group ID

Select an existing group ID for the new machine ID you are creating. The default is `unnamed`. Group IDs are created by an administrator using the System > Admin Accounts: Create / Delete *(page 516)* page.

Create

Click Create to create the new machine ID for the selected group ID.

Set/Clear New accounts created in group ID <Group ID> copy settings from <Machine ID>

For each group ID you can specify a different default machine ID to copy settings from.

1. Select a machine ID to copy settings from by clicking the radio button next to any machine ID listed in the paging area.
2. Select a group ID from the group ID drop down list. Select a group ID.
3. Click the Set to ensure that new machine IDs you create for the selected group ID will copy settings from the selected default machine ID.
4. Click the Clear link to remove this assignment.

Set/Clear Accounts created in unassigned group IDs copy settings from <Machine ID>

This option specifies the default machine ID to copy settings from if no default machine ID is set for a group ID. This option only displays if a master administrator is logged on.

1. Select a machine ID to copy settings from by clicking the radio button next to any machine ID listed in the paging area.
2. Click the Set to ensure that new machine IDs created without a group default machine ID copy settings from the master administrator's default machine ID.
3. Click the Clear link to remove this assignment.

Entering Contact Information

When you enter contact information on this page for a new machine ID account, then create the new machine ID account by clicking the Create button, these same contact information fields populate the Agent > Edit Profile *(page 251)* page. Contact information includes:

- Contact Email - Enter the email address of the individual using the managed machine
- Auto Assign - Check Auto Assign to automatically populate the Contact Email field with an email address that uses the following format: `machineid@groupid.com`. This feature assumes you are

creating machine IDs and group IDs that conform to user email addresses.

- Contact Name - Enter the name of the individual using the managed machine.

  > Note: This field is required to generate a new password for the Agent > User Access *(page 253)* page.

- Contact Phone - Enter the phone number of the individual using the managed machine.
- Admin Email - Enter the email address of the individual responsible for providing IT support for the managed machine.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Copy Settings

Click a radio button next to any machine ID listed in the paging area. Machine ID settings are copied from this machine ID.

Download / Email Agent Installation

Click a machine ID link to create and distribute an install package for an existing machine ID account using the Download Agent wizard.

> Note: An install package created using this page is for a specific machine ID account. Use Deploy Agent *(page 445)* to create install packages for *multiple* machines.

1. Select the operating system you are creating the install package for: `Windows` or `Macintosh`.
2. Optionally bind an administrator logon credential to the install package. Fill in the Administrator Credential form to securely bind administrator rights to the install package.
   - ➢ Users without administrator rights can install the package successfully without having to enter an administrator credential.

- If the administrator credential is left blank and the user does not have administrator rights to install software, the install package prompts the user to enter an administrator credential during the install.

3. Select the method of distribution.
    - Download - Download the install package immediately to the machine you are currently using. The install package is always called `KcsSetup.exe`.
    - Email - Email a text message that contains a link to download the install package.

Type

The type of operating system used by the managed machine:

- Windows
- Macintosh

First Checkin

Lists the time that each agent checked into the server for the first time.

Delete

Agent > Delete

The Delete page deletes three different combinations of *machine ID accounts* and *agents*.

Machine IDs vs. Agents

When discussing agents it is helpful to distinguish between the machine ID / group ID *(page 606)* and the agent *(page 600)*. The machine ID / group ID is the VSA's user account name for a managed machine in its database. The agent is the client software installed on the managed machine. A one-to-one relationship exists between the agent on a managed machine and its machine ID / group ID account name on the VSA. Tasks assigned to a machine ID by a VSA administrator direct the agent's actions on the managed machine.

Procedure

1. Select one or more machine IDs in the paging area.
2. Click one of the following radio buttons:
    - Uninstall agent first at next check-in - Uninstall the agent from the machine and remove the machine ID account from the KServer. The account is not deleted until the next time the agent successfully checks in.
    - Delete account now without uninstalling the agent - Leave the agent installed and remove the machine ID account from the KServer.

- Uninstall the agent and keep the account - Uninstall the agent from the machine without removing the machine ID account from the KServer.

3. Click the Delete Accounts button.

> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 326)* to uninstall remote control on the managed machine.

Clean Database

Removing a machine account using this Delete page marks the machine account for deletion. Actual deletion usually occurs during off hours to reserve resources during working hours. There are some cases where it is useful to purge machine accounts immediately. For example, your KServer may exceed the agent license count. Click Clean Database to immediately purge machine accounts that are already marked for deletion.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

🛇 The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Last Check-In

Displays the time the agent machine's agent last checked in to the KServer. Agents that have not checked-in recently display this information in red text.

Rename

Agent > Rename

The Rename page renames any existing machine ID account. You can change the machine ID and/or re-assign it to a different group ID.

Agents are identified by an unique GUID number. Renaming the agent only changes the name the agent displays, both on the KServer and in the Set Account... option on the agent menu of the user's managed machine.

> Note: See Alert > Change Group *(page 464)* to assign multiple machines to a different group ID.

Procedure

1. Select a machine ID in the paging area.
2. Click one of the following radio buttons:
   - Rename account - Select this option for machine ID accounts you wish to rename.
   - Merge offline account <Offline Machine ID> into <Select Machine ID> Delete <Offline Machine ID> after merge - Use merge to combine log data in two different accounts that pertain to the same machine. This could be necessary if an agent was uninstalled and then reinstalled with a different account name. Merge combines the accounts as follows:
     - ✓ Log data from both accounts are combined.
     - ✓ Baseline Audit *(page 602)* data from the old offline account replaces any baseline data in the selected account.
     - ✓ Alert setting from the selected account are kept.
     - ✓ Pending scripts from the selected account are kept. Pending scripts from the old offline account are discarded.
     - ✓ The old account is deleted after the merge.

     > Note: Since the machine can only be active on a single account, only offline accounts are provided in the drop down list to merge with.
3. Optionally enter in a new name for the machine ID account.
4. Optionally select a different group ID for the machine ID account.
5. Click the Rename button.

Rename

Click Rename to change the name of a selected machine ID account, using the options previously selected.

New Name

Enter the new name for the selected machine ID.

Group ID

Select the group ID to assign to the selected machine ID account. The default leaves the group ID unchanged.

Check-in status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- ⚑ Agent has not recently checked in
- ⚑ Agent has never checked in
- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled
- ✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*. Click the radio button to the left of the machine account you wish to rename.

New Name at Next Check-in

Lists the new name the account will be renamed to the next time that agent checks in. Only pending renames are displayed here.

Change Group

Agent > Change Group

The Change Group page assigns multiple machines IDs to a different group ID. Machines that are currently offline are assigned the next time they check in.

Moving an Machine ID to a Different Group

1. Select one or more machine IDs in the paging area.
2. Select a group ID from the Select new group ID drop down menu.
3. Click the Move button.

Move

Assigns selected machine IDs to the selected group ID.

Select new group ID

Specify the new group ID to assign to each selected machine ID.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

◉ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

LAN Watch

Monitor >
LAN Watch
Agent >
LAN Watch

LAN Watch uses an existing agent *(page 600)* on a managed machine to periodically scan the local area network for any and all new devices connected to that LAN since the last time LAN Watch ran. These new devices can be workstations and servers without agents or SNMP devices *(page 611)*. Optionally, the VSA can send an alert *(page 601)* when a LAN Watch discovers any new device. LAN Watch effectively uses the agent as a proxy to scan a LAN behind a firewall that might not be accessible from a remote server.

Using Multiple Machines on the Same LAN

There are only two reasons to do a SNMP LAN Watch on multiple machines within a scan range:

1. There are multiple SNMP Communities within the scan range and therefore there are multiple machines with different SNMP Community Read values.
2. The user wishes to have redundant SNMP monitoring.

Schedule

Click Schedule to schedule a recurring LAN Watch scan on each selected machine ID. The scan runs every interval that you set. The default is 1 day.

Date/Time

Enter the year, month, day, hour, and minute to schedule this task.

Cancel

Click Cancel to stop the scheduled scan. Cancel also deletes all records of the devices identified on a LAN from the VSA. If you re-schedule LAN Watch after clicking Cancel, each device on the LAN generates a new alert.

Run recurring every <N> <periods>

Check the box to make this task a recurring task. Enter the number of times to run this task each time period.

Scan IP Range

Set the minimum and maximum IP addresses to scan here. Selecting a machine ID to scan, by checking the box next to that machine's name, automatically fills in the minimum and maximum IP range based on that machine's IP address and subnet mask.

> Note: LAN Watch does not scan more than 2048 IP addresses. If the subnet mask of the machine running LAN Watch specifies a larger IP range, LAN Watch truncates it to 2048 addresses. LAN Watch only detects addresses on the local subnet to the machine you run LAN Watch from. For example, with a subnet mask of 255.255.255.0, there can be no more that 253 other devices on the local subnet.

Enable SNMP

If checked, scan for SNMP devices *(page 611)* within the specified Scan IP Range.

Read Community Name / Confirm

LAN Watch can only identify SNMP devices that share the same SNMP Community *(page 611)* *Read* value as the managed machine performing the LAN Watch. Enter the value in the Read Community Name and Confirm text boxes. The default read community name value is `public`.

Enable vPro

If checked, identify vPro *(page 614)*-enabled machines within the specified Scan IP Range.

> Note: vPro configuration is a prerequisite to using this feature. Refer to the latest Intel documentation for information on how to configure vPro. At the time of this writing, the following link leads to the Intel documentation: http://communities.intel.com/docs/DOC-1429.

Username / Password / Confirm

Enter the appropriate vPro credentials to return hardware asset details about vPro machines discovered during the LAN Watch. Typically the same credentials are defined for vPro machines on the same LAN. The results are displayed using Agent > View vPro *(page 478)*.

If you don't know the credentials for the vPro machines you want to discover, enter *arbitrary strings* in the Username, Password and Confirm fields. This will allow you to discover the existence of the vPro machines, but not return any other hardware assets details.

> Note: vPro-enabled machines with a vPro credential can be powered up, powered-down or rebooted using Remote Cntl > Power Mgmt *(page 320)*.

Enable Alerts

If Enable Alerts is checked and a new device is discovered by LAN Watch, an alert is sent to all email addresses listed in Email Recipients. LAN Watch alerts and email recipients can also be specified using the Monitor > Alerts *(page 113)* page.

> Note: Machines that have not connected to the LAN for more than 7 days and then connect are flagged as new devices and will generate an alert.

Email Recipients

If alerts are enabled, enter the email addresses where alert notifications are sent. You can specify a different email address for each managed machine, even if it is for the same event. The From email address is specified using System > Configure *(page 524)*.

Ignore devices seen in the last <N> days

Enter the number of days to suppress alerts for new devices. This prevents creating alerts for devices that are connected to the network temporarily.

After alert run select script on this machine ID

If checked and an alarm condition is encountered, a script is run. You must click the select script link to choose a script to run. You can optionally direct the script to run on a specified range of machine IDs by clicking this machine ID link. These specified machine IDs do not have to match the machine ID that triggered the alarm condition.

Skip alert if MAC address matches existing agent

Checking this box suppresses alerts if the scan identifies that the MAC address of a network device belongs to an existing managed machine with an agent on it. Otherwise a managed machine that was offline for several days and comes back online triggers an unnecessary alert during a LAN Watch.

Check-in status

These icons indicate the agent check-in status of each managed machine:

Agent has checked in

Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

IP Range Scanned

The IP addresses that are scanned by the selected machine ID when LAN Watch runs.

Last Scan

This timestamp shows when a machine ID was last scanned. When this date changes, new scan data is available to view.

Primary DC

If a primary domain controller icon displays, this machine ID is a primary domain controller *(page 609)*. Performing a scan using a primary domain controller running Active Directory enables you to install agents automatically on computers listed in Active Directory and to create VSA administrators and VSA users based on Active Directory user credentials. See View AD Computers *(page 474)* and View AD Users *(page 475)*.

SNMP Active

If the SNMP icon displays, SNMP devices are included in the scheduled scan.

vPro Active

If the vPro icon displays, vPro machines are included in the schedule scan.

Alert Active

If checked ✓ LAN Watch alerts are enabled for this scan.

Install Agents

Agent > Install Agents

The Install Agents page installs the agent *on a remote system* and creates a new machine ID / group ID account for any new PC detected by LAN Watch *(page 465)*. Install Agent remotely installs the packages created using Deploy Agents *(page 445)*. Remote install is only available for Window NT, 2000, XP and Vista based computers.

A list of machines with scan results are displayed when you first display this page. Clicking any machine ID displays a table listing all machines with a host name (see "Host name" on page 605). Machines without an agent display in red text.

PSEXEC.EXE

PSEXEC.EXE is a light-weight telnet-replacement that lets you execute processes on other systems without having to manually install client software. It used by Agent > Install Agents *(page 469)* to install agents *on remote systems* after a LAN Watch *(page 606)*.

A valid logon with administrator rights is required to successfully install an agent remotely. Nothing happens if the agent installer detects an agent is already installed on a target machine. The installer exits immediately.

Uploading PSEXEC.EXE to the KServer

Before Install Agents can be run the first time, the PSEXEC.EXE must be uploaded to the KServer as a shared managed file:

1. Download the PSEXEC.EXE file to your local machine from the following location:

   http://www.microsoft.com/technet/sysinternals/utilities/psexec.mspx

2. Click the Scripts tab, then click the 🗎 toolbar button to display the Manage Files Stored on Server window.

   > Note: *Only master administrators can upload to shared files.*

3. Upload the PSEXEC.EXE file from your local machine to the KServer as a *shared* managed file.

Running PSEXEC.EXE

When Install Agent is run, PSEXEC.EXE is downloaded from the KServer into the `\temp` directory and run using the following command line. You don't have to create this command line. Install Agent does it for you.

```
c:\temp\psexec \\hostname -u "adminname" -p
"password" -c -f -d "c:\temp\kcssetup.exe" >
c:\temp\LANInsAipAddr.txt
```

The terms `hostname` and `ipAddr` refer to the remote machine. If the agent is on a drive other than `C:` then the temp files are referenced to the same drive the agent is installed on.

Error Messages

If an agent installation fails for any reason, the KServer passes back the results reported by PSEXEC.EXE. Typically, PSEXEC.EXE is simply reporting OS errors that it received trying to execute a call.

Typical Reasons for Install Failure

- Blocked by Network Security Policy - PSEXEC.EXE connects to the remote PC through the RPC service and runs as a local account. Remote access to this service is controlled by a Local or Domain Security Setting. Open Local Security Policy (part of Administrative Tools). Open Local Policies\Security Options\Network access: Sharing and security model for local accounts. The policy must be set to Classic for PSEXEC.EXE to operate across the network.

  > Note: *Classic is the default setting for machines that are members of a domain. Guest is the default setting for machines that are* not *in a domain. Microsoft does not allow Windows XP Home Edition to become a domain member.*

- Blocked by Anti-Virus Program - PSEXEC.EXE is a powerful program capable of remotely running processes on a machine, assuming the it has a valid administrator logon. Some anti-virus programs classify PSEXEC.EXE as a security threat and may block its execution.

- Invalid Credential - The credential *(page 604)* must have administrator rights on the local machine. The agent installs as a system service requiring full administrator privileges to install successfully. The username may be a domain administrator of the form domain\user.

Testing Agent Install Failures

LAN Watch tries to connect to `\\<computer>\admin$` using the credentials that you supplied. First test that the computer is available. Start a command prompt and type the following:

```
ping <IP address>
```

If you don't get a reply see Troubleshooting below. If you do get a reply, you know that the machine is turned on and a firewall is not blocking connections. Next, verify that the share is available. Start a command prompt and type the following:

```
start \\<computername>\admin$
```

If you have a problem see Troubleshooting below. If all is OK a window appears containing the remote computer's `c:\windows` directory. Now, you now know that the machine is turned on and the share exists.

Next verify that the PSEXEC.EXE command works correctly. Remote control the machine *you ran LAN Watch on*. Start a command prompt and type:

```
c:\temp\psexec.exe \\<computername> -u <username> -p
<password> ipconfig
```

You should see the results of `ipconfig` for the target computer displayed on the machine you are running remote control on. If not, the RPC service on the target machine is probably disabled and blocking remote procedure calls.

Troubleshooting

PSEXEC.EXE's ability to run processes remotely requires:

- Both local and remote computers have file and print sharing enabled.
- The default `admin$` share—a hidden share that maps to the `\Windows` directory—is defined on the remote system.

Types of failures include:

- Ping Failures - Either the machine is not on, or there is a firewall on the machine stopping pings. Either of these will stop the process and need to be corrected before continuing.
- Start Failures - If Windows does not accept the username/password combination, you will see a box pop up asking you to try again. Correct the mistake and try again.

  If you get a message saying that the network path could not be found, it means that the `admin$` share is not available on that machine.
- PSEXEC.EXE Fails to Connect - The RPC service is not available on the target machine. For example, XP Home does not support RPC. This prevents anything from remotely executing on that box. On Windows XP you can turn this service on by opening Windows Explorer and selecting Tools - Folder Option... - View tab. Scroll to the bottom of the list and

uncheck `Use simple file sharing`. The XP default configurations are as follows:

- XP Pro on a domain - RPC enabled by default. `Use simple file sharing` is unchecked.
- XP Pro in a workgroup - RPC disabled by default. `Use simple file sharing` is checked.
- XP Home - RPC disabled always. `Use simple file sharing` is not available.

- The `admin$` share is a default share that windows creates when it boots, it is possible to turn this off via the local security policy, or domain policy.

  If you want to check the shares on that remote machine you can use PSEXEC.EXE to retrieve a list for you. Type `PSEXEC \\<computername> "net share"`. Check that the `admin$` share exists and points to `c:\windows` or `c:\winnt` on older operating systems.

Admin Logon Name

The administrator name used to remotely access the selected machine. The Admin Logon Name must have administrator rights on the remote selected machine. Multiple accounts may have administrator rights on the same machine. Your domain administrator account may be different than the local administrator account. To ensure you are using the domain account enter the logon name using the `domain\user` format. If the domain is left off, the local account will be used.

Password

The password associated with the Admin Logon Name.

Install

Click Install to schedule an installation of the selected install package on all selected machines. The install runs using PSEXEC.EXE from the same machine that ran the scan. PSEXEC.EXE attempts to remotely connect to the selected machine across the LAN to perform the agent install using the supplied administrator credential *(page 604)* for that machine.

Cancel

Click Cancel to cancel execution of this task on selected managed machines.

Select an Agent Package to Install

Select the agent package to remotely install on selected machines. These packages are created using Deploy Agents *(page 445)*.

Hide devices that match the MAC address of existing machine IDs

Check this box to hide all machines on a LAN with a MAC address (on page 606) matching the MAC address of an existing machine ID / group ID account.

Hide devices that match the computer names of existing machine in <machine ID>

Check this box to hide machines that have a common computer name in this same group ID. A LAN Watch may discover an managed machine with a second device using a different MAC ID then the one used to report to the KServer. For example, the same managed machine may connect to the internet using direct connection and have a second wireless connection with a different MAC ID. Checking this box hides the second device from this list so that you don't assume you've found a new unmanaged machine.

Host Name

The host name of each device on the LAN discovered by the latest LAN Watch scan. A host name only displays for computers. Hubs, switches, routers, or other network appliances do not return a host name.

IP Address

The private IP address of each device discovered by the latest LAN Watch scan.

MAC Address

The MAC address (on page 606) of each device discovered by the latest LAN Watch scan.

Last Seen

The time each device was last detected by the latest LAN Watch scan.

View LAN

Client > View LAN

The View LAN page displays the results of the latest LAN Watch *(page 465)* scan. A list of machines with scan results are displayed when you first display this page. Click any machine ID to display a table listing all machines with and without a host name (on page 605). Only machine IDs with returned scan data are available. Paging rows can be sorted by clicking column heading links.

Host Name

The host name of each device on the LAN discovered by the latest LAN Watch scan. A host name only displays for computers. Hubs, switches, routers, or other network appliances do not return a host name.

IP Address

The private IP address of each device discovered by the latest LAN Watch scan.

MAC Address

The MAC address (on page 606) of each device discovered by the latest LAN Watch scan.

Last Seen

The time each device was last detected by the latest LAN Watch scan.

View AD Computers

Agent > View AD Computers

The View AD Computers page shows all computers listed in an Active Directory *(page 599)* when LAN Watch *(page 465)* runs on a system hosting Active Directory. Use View AD Computers to install agents automatically on computers listed in the Active Directory by policy at computer startup. Using this method has the following benefits:

- This policy ensures an agent is always present on a machine at every reboot, even if the agent is subsequently removed by a user.
- Agents can be deployed to an entire AD network even if the VSA administrator does not know the local credentials for each computer.
- A LAN Watch scan performed by an AD machine discovers all computers that are members of a domain, *whether the machines are online or not*.

Note: You must select a *Detail View* to see AD computers listed on this page.

Switching From Summary View to Detail View

1. Select `<All Groups>` from the Select Machine Group drop-down list in the Machine ID / Group ID filter *(page 607)* to display a *summary view* of all domain controllers discovered by LAN Watch.
2. Identify the machine groups and subgroups listed in the Discovered By column.
3. Select one of the machine groups or subgroups in Step 2 above from the Select Machine Group drop-down list to display a *details view* of domain controllers for that machine group.

Summary View

The summary view of View AD Computers lists all domain controllers that have run LAN Watch for *all machine groups you're authorized to access*.

Discovered By

Lists the machine ID.group ID names of domain controllers that have performed a LAN Watch scan.

Computers Found

Lists the number of computers, *with or without agents*, listed in the domain controller directory.

Agent Installed

Lists the number of computers *with agents* that are also listed in the domain controller's directory.

Details View

The details view of View AD Computers displays computers listed in Active Directory services hosted on computers that have run LAN Watch *within a specified machine group*.

Installing Agents on Active Directory Computers

You can associate an install package with an AD computer. This installs an agent package when the AD computer reboots, unless the agent is already installed. You can specify the agent package installed for each AD computer.

> Note: See Install Issues and Failures *(page 456)* if an agent fails to install.

To associate an install package with an AD computer:

1. Select AD computers listed in the Canonical Name *(page 603)* column of the paging area.
2. Select an agent package from the Select an Agent Package to install drop-down list.
3. Click Install Agent Policy.

View AD Users

Agent > View AD Users

The View AD Users page lists all Active Directory *(page 599)* users discovered by LAN Watch *(page 465)* when LAN Watch runs on a system hosting Active Directory. Using View AD Users:

- Agents can be automatically installed on each machine an Active Directory user logs onto.
- VSA administrators can be created based on Active Directory users.
- VSA users can be created based on Active Directory users.
- Contact information can be extracted from Active Directory users and applied to the contact information for machine IDs.

> Note: You must select a *Detail View* to see AD users listed on this page.

Switching From Summary View to Detail View

1. Select `<All Groups>` from the Select Machine Group drop-down list in the Machine ID / Group ID filter *(page 607)* to display a *summary view* of all domain controllers discovered by LAN Watch.
2. Identify the machine groups and subgroups listed in the Discovered By column.
3. Select one of the machine groups or subgroups in Step 2 above from the Select Machine Group drop-down list to display a *details view* of domain controllers for that machine group.

Summary View

The summary view of the View AD Users page lists all domain controllers that ran LAN Watch for *all machine groups you're authorized to access*.

Discovered By

Lists the machine ID.group ID names of domain controllers that have performed a LAN Watch scan.

Users Found

Lists the number of users contained in Active Directory found on a domain controller that ran LAN Watch.

Assigned

Lists the number of Users Found whose contact information has been extracted from the Active Directory and assigned to a machine ID.

Details View

The details view of View AD Users displays a list of Active Directory users on domain controllers that ran LAN Watch *within a specified machine group*.

Installing Agents on Any Machine an AD User Logs Onto

You can associate an install package with an AD user. This installs an agent package on any machine a user logs onto, unless the agent is already installed. Even if the agent is subsequently removed from a machine, the agent will be re-installed the next time the user logs on. You can specify the agent package installed for each AD user.

> Note: See Install Issues and Failures *(page 456)* if an agent fails to install.

To associate an install package with an AD user:

1. Select AD users listed in the Canonical Name *(page 603)* column of the paging area.

2. Select an agent package from the Select an Agent Package drop-down list.
3. Click Install Agent Policy.
4. Select an AD user and click Cancel to un-associate an install package with an AD user.

Creating VSA Administrators Based on AD Users

Create VSA administrators based on AD users. Administrators created using this method log onto the VSA using their AD domain, user name, and password. This means administrators only have to maintain credentials in a single location, the Active Directory.

> Note: A VSA administrator created based on an AD user cannot use System > Preferences *(page 501)* to change their username or password. If there are problems with an Active Directory, System > Set Password *(page 520)* still provides you with the ability of changing a VSA administrator's password, even if that VSA administrator is based on an AD user.

To create a new VSA administrator based on an AD user:

1. Select an AD user from the Canonical Name column in the paging area.
2. Select an administrator role from the Select Admin Role drop-down list.
3. Click Create Admin.

You can confirm the creation of the new VSA Administrator using System > Create / Delete Admin Accounts *(page 516)*. VSA administrator names based on AD users are formatted as follows: `<domainname>|<username>`.

Creating VSA Users Based on AD Users

Create VSA users based on an AD users. VSA users created using this method log onto the VSA using their AD domain, user name, and password. This means credentials only have to be maintained in a single location, the Active Directory.

VSA users must be associated with a specific machine ID. Assign a Machine ID to an AD user before creating a VSA user based on the AD user.

> Note: If a VSA user is created based on an AD user, the VSA user's username and password cannot be changed within the VSA, only in Active Directory.

To create new VSA user based on an AD user:

1. Click the unassigned link for an AD user listed in the Canonical Name column of the paging area.
2. Select a machine ID.group ID account in the popup window. The popup window closes.
3. Select the checkbox for this same AD user in the left most column.
4. Click Create User.

You can confirm the creation of the new VSA user using Agent > User Access *(page 253)*.

Updating Contact Information for Machine IDs based on AD Users

If a machine ID is assigned to an AD user, then the VSA updates its own contact information for that machine ID with the latest contact information for that user in the Active Directory each time the user logs onto the machine ID. This enables administrators to update contact information once in the Active Directory and know the contact information for machine IDs in the VSA will be updated automatically.

To assign an AD user to a machine ID:

1. Click the unassigned link for an Active Directory user listed in the Canonical Name column of the paging area.
2. Select a machine ID.group ID account in the popup window. The popup window closes.

Converting Your VSA Logon to use your Domain Logon

You can convert your own VSA logon to use your domain logon as follows:

1. Open the System > Preferences page in the VSA.
2. Enter your current VSA password in the Old Password field.
3. Enter you domain and domain logon name, formatted *all in lowercase* as `dom/username`, where `dom` is your domain name and `username` is your logon name, in the Change Logon Name field.
4. Enter your domain password in the New Password / Confirm Password fields.

This enables you to logon to the VSA using your domain logon and have your VSA logon name and password managed using Active Directory. At the same time, you can continue to use all your previous VSA share rights, scripts and other administrator settings.

View vPro

The View vPro page displays hardware information about vPro-enabled machines discovered while running LAN Watch *(page 465)*. This information is only available if a machine's vPro credential is specified by the LAN Watch.

Types of hardware information returned by the vPro machine include:

- Motherboard Asset Information
- BIOS Information
- Processor Information
- RAM Information
- Hard Drive Information

> Note: vPro-enabled machines with a vPro credential can be powered up, powered-down or rebooted using Remote Cntl > Power Mgmt *(page 320)*.

Copy Settings

Agent > Copy Settings

The Copy Settings page copies selected settings from a single source machine ID to any multiple machine IDs. You can copy settings from only one source machine ID or template at a time. But you can copy different types of settings from different source machine IDs or templates in succession.

Copy Settings and Templates

Machine ID templates *(page 607)* are initially used to create an agent install package using the template as the source to copy settings from. But even after agents are installed on managed machines, you'll need to update settings on existing machine ID accounts as your customer requirements change and your knowledge of the VSA grows. In this case use Agent > Copy Settings to copy these changes to any number of machines IDs you are authorized to access. Be sure to select `Do Not Copy` for any settings you do not want to overwrite. Use `Add` to copy settings without removing existing settings. Kaseya recommends making changes to a selected template first, then using that template as the source machine ID to copy changes from. This ensures that your machine ID templates remain the "master repositories" of all your agent settings and are ready to serve as the source of agent install packages and existing machine ID accounts.

Copy

Click Copy to select a source machine. Once you select the source machine a second window displays the types of settings you can copy.

By selecting only certain types of settings to copy, you can avoid overwriting customer specific settings you want to keep, such as the Patch File Source, which is different for each customer.

Select the Add option to add settings to target machines without replacing existing settings.

The types of agent settings you can copy include are:

- Credential
- Agent Menu
- Checkin Control
- Temps Dir
- Logs
- User Access
- Remote Control Policy
- Patch Settings
- Patch File Source
- Patch Policy Memberships
- Fixed Alerts - These all the alert types on the Monitor > Alerts *(page 113)* page except for Event Log alerts and System alerts.
- Event Log Alerts

- Monitor Sets
- Distribute Files
- Protection
- Script Schedules

Select Machine ID

Click the Select Machine ID link to specify which machine ID to copy settings from.

Stagger script times by N min

You can distribute the load on your network by staggering this task. If you set this parameter to 5 minutes, then the scan on each machine ID is staggered by 5 minutes. For example, machine 1 runs at 10:00, machine 2 runs at 10:05, machine 3 runs at 10:10,

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

◆ Agent has not recently checked in

◆ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Status

Shows `Update Pending` for any machine ID whose settings have changed but not taken effect yet. Settings take effect at the next agent check-in.

Import / Export

Agent > Import / Export

The Import / Export page imports and exports machine ID account settings, including script schedules, assigned monitor sets and event sets, as XML files. Log data is not included in the import or export. You can use Import / Export to migrate machine ID account settings, including machine ID templates *(page 607)*, from one KServer to the next.

> Note: See Copy Settings *(page 479)* for a list of the types of settings settings associated with a machine ID account.
>
> Note: For the latest instructions on migrating an existing KServer to a new machine see the article How do I move my Kaseya Server to a new computer? (270436) in the Kaseya Support Knowledge Base Portal.
>
> Note: Sample templates for specific types of machines can be imported and are available on the Kaseya Support Forum.

To Export Machine ID Settings

1. Click the select the machine link. A machine selection dialog box displays.
2. Optionally filter the display of the machine IDs listed using the Machine ID and Group ID fields.
3. Click a machine ID link to export. The machine ID you selected now displays on the Import/Export page.
4. Click Export. The page displays an XML statement of the agent settings being exported.
5. Export the XML statement by:
   - Copying the XML text to the clipboard.
   - Right-clicking the Download link and selecting the Save Target As option to save the XML text as an XML file on your local computer.

To Import Machine ID Settings

1. Click Browse to select an XML file representing the settings of a machine ID account. Typically these XML files are created by exporting them from another KServer.
2. Click Import. A set of additional options displays.
3. Accept or specify the name of the machine ID. A new one is created if this name doesn't already exist in the KServer.
4. Accept or select a different group ID.
5. Optionally check the box next to Replace existing data if this machine ID already exists.
6. Optionally change the email notification address for all alerts defined for this machine ID account.
7. Click Finish to complete the import.

Suspend

Agent > Suspend

The Suspend page suspends all agent operations, such as scripts, monitoring, and patching, without changing the agent's settings. When suspended, a machine ID displays a suspended icon next to it. While a machine ID account is suspended the managed machine displays a gray agent icon in the system tray (on page 612).

Suspend

Click Suspend to suspend agent operations on selected machine IDs.

Resume

Click Resume to resume agent operations on selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Suspended

Displays `Suspended` if the machine ID is suspended.

Agent Menu

Agent > Agent Menu

The Agent Menu page specifies the options that display in the agent menu on a user's machine. The user displays the agent menu by right-clicking the agent icon in the system tray *(on page 612)* of the managed machine. This page can also prevent the agent icon from displaying on the user's machine. Changes made using this page take effect at the next agent check-in and display in red text until then.

> Note: See Agent Icons *(page 11)* for a general explanation of how agent icons display on the user's machine.
>
> Note: You can download a User Access Quick Start Guide from the first topic of online help.

Hiding the Agent Icon on the User's Machine

To hide the agent icon altogether:

1. Select one or more machine IDs.
2. Uncheck the Enable Agent Icon checkbox.
3. Click Update.

All of the other checkbox settings will become dimmed, indicating that all agent menu options have been disabled.

Preventing the User from Terminating the Agent Service on the User's Machine

If the Exit option is enabled on a user's managed machine, the user can terminate the agent service on the managed machine by selecting this option. When the agent service is stopped, the managed machine becomes invisible to KServer administrators and can no longer receive commands from the KServer.

To remove the Exit option from agent menus on managed machines:

1. Select one or more machine IDs.
2. Uncheck the Exit checkbox.
3. Click Update.

Checkboxes

- Enable Agent Icon - Check to display the agent icon in the system tray of the managed machine. Uncheck to hide the agent icon and prevent the use of agent menu options.
- About <Agent> - Check to enable the user to display the About box for the installed agent. The default option label `Agent` can be customized.
- <Contact Administrator> - Check to enable the user to display the User Access Welcome Page *(page 613)*. The user can use this page to send email or chat with the administrator or create a trouble ticket. This option can

display an alternate URL instead. The default option label `Contact Administrator` can be be customized.

- <www.kaseya.com> - Check to enable the user to display the URL specified in the corresponding URL field. The default option label `www.kaseya.com` can be customized.
- Disable Remote Control - Check to enable the user to *disable* remote control on the user's managed machine.
- Set Account... - Check to enable the user to display their machine ID.group ID and change their KServer address the agent checks into.
- Refresh - Check to enable the user to initiate an immediate full check-in *(page 603)*.
- Exit - Check to enable the user to terminate the agent service on the managed machine.

Update

Click Update to apply agent menu settings to selected machine IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

ACObSRx

This column summarizes the agent menu options enabled for a machine ID. ACObSRx applies to the keyboard shortcuts that are used to access each option in the agent menu.

A letter indicates that option will display in the agent menu. A "-" indicates that menu option will not display in the agent menu.

A = About Agent

C = Contact Administrator

O = Launches the URL specified in the URL field. The agent displays the text listed in the field to the left of the URL field.

b = Disable Remote Control

S = Set Account...

R = Refresh

x = Exit

About Title

The text appended to the label for the About option on the agent menu. For example, if the About Title is `Agent` then the label of the About option displays as `About Agent`.

Contact Title / Contact URL

The *upper* row of these two columns displays:

- The text displayed on the agent menu for contacting the administrator.
- The URL to display when this agent menu option is selected by the user. The default URL is the User Logon page for the KServer. A different URL can be entered.

Custom Title / Custom URL

The *lower* row of these two columns displays:

- The text displayed on the agent menu for contacting a custom URL.
- The URL to display when this agent menu option is selected by the user.

Check-In Control

Agent >
Check-In Control

The Check-In Control page specifies when and where each machine ID should check in with a KServer. Changes made using this page take effect at the next agent check-in and display in red text until then. You can specify the primary and secondary KServers used by the agent to check in, the bandwidth consumed by an agent to perform tasks and the check-in period.

> Note: The primary and secondary KServer values and the minimum and maximum check-in periods are subject to the policies set using System > Check-in Policy *(page 507)*. This prevents administrators from selecting settings that place undue stress on servers running the KServer service.

> Note: Check-in Control information can also be maintained using the Agent Settings tab of the Machine Summary *(page 23)* page.

Migrating Agents from one KServer to Another

You may decide for performance or logistical reasons to migrate managed machines to a new KServer. This can be done at any time, whether or not the agents are currently checking in.

1. At the original KServer, set the primary KServer setting to point to the new KServer address.
2. At the original KServer, point the secondary KServer setting to the original KServer.
3. At the new KServer, set both the primary and secondary KServer to point to the new KServer.
4. Wait for all the agents to successfully check into the new KServer. At that time, the original KServer can be taken off-line.

> Note: For the latest instructions on migrating an existing KServer to a new machine see the article How do I move my Kaseya Server to a new computer? (270436) in the Kaseya Support Knowledge Base Portal.

Changing the Port used by Agents to Check into the KServer

1. Set the Primary Port to the new port.
2. Set the Secondary Port to the old port.
3. Wait for the new settings to take effect on all the agents.
4. Display the System > Configure *(page 524)* page. Enter the new port number in the Specify port Agents check into server with edit box and click the Change Port button.

> Note: If any Agents have not migrated to the new port before you switch the KServer, you will have to manually change the port at the managed machine. Right click the agent icon in the system tray to display the agent menu on the managed machine and select the Set Account... option. Enter the server address and port. For example, `192.168.1.7:1234`.

Primary KServer

Enter the IP address or fully qualified host name (on page 605) of the machine ID's primary KServer. This setting is displayed in the Primary KServer column.

Kaseya agents initiate all communication with the KServer. For this reason the agents must always be able to reach the domain name or IP (Internet Protocol) address assigned to the KServer. Choose an IP address or domain name which can be resolved from all desired network(s), both on the local LAN and across the internet.

Best Practices: Although a public IP address may be used, Kaseya recommends using a domain name server (DNS) name for the KServer. This practice is recommended as a precaution should the IP address need to change. It is easier to modify the DNS entry than redirecting orphaned agents.

Primary Port

Enter the port number of either the primary KServer or a virtual system server. This setting is displayed in the Primary KServer column.

Warning: Do NOT use a *computer name* for your server. The agent uses standard WinSock calls to resolve a fully qualified host name (on page 605) into an IP address, which is used for all agent connections. Resolving a computer name into an IP address is done by NETBIOS, which may or may not be enabled on each computer. NETBIOS is an optional last choice that the Windows will attempt to use to resolve a name. Therefore, only fully qualified names or IP addresses are supported.

Secondary KServer

Enter the IP address or fully qualified host name of the machine ID's secondary KServer. This setting is displayed in the Secondary KServer column.

Secondary Port

Enter the port number of either the secondary KServer or a virtual system server. This setting is displayed in the Secondary KServer column.

Check-In Period

Enter the time interval for an agent to wait before performing a quick check-in *(page 603)* with the KServer. A check-in consists of a check for a recent update to the user's account, which is determined by an administrator. If a recent update has been set by a KServer administrator, the Agent starts working on the task at the next check-in. This setting is displayed in the Check-In Period column. The minimum and maximum check-in periods allowed are set using System > Check-in Policy *(page 507)*.

Best Practices: The agent maintains a persistent connection to the KServer. As a result, quick check-in times do not effect response times from the agent. The quick check-in time sets the maximum time before re-establishing a dropped connection. Setting all your machine's quick check-in time to 30 seconds guarantees each agent recovers from a dropped connection within 30 seconds, assuming connectivity is successful.

Bandwidth Throttle

Limit the agent to consuming a maximum amount of bandwidth on the system with this control. By default the agent shares bandwidth with all other running applications so you typically do not need bandwidth throttle enabled. Disable bandwidth throttle by entering a 0.

Warn if multiple agents use same account

The KServer can detect if more than one agent is connecting to the KServer and using the same machine ID.group ID. This problem could be caused by installing an agent install package pre-configured with the machine ID on more than one machine. Check this box to receive notifications of more than one agent using the same account each time you log into the KServer as an administrator.

Warn if agent on same LAN as server connects through gateway

If you are managing machines that share the same LAN as your KServer then you may get this alert. By default all agents connect back to the KServer using the external name/IP address *(page 524)*. TCP/IP messages from these agents travel through your internal LAN to your router, and then back to the KServer. Some routers do a poor job of routing internal traffic back through themselves. Check this box to receive a notification when the KServer detects an agent may be on the same LAN but connecting through the router.

> Note: Agents on the same LAN as the KServer should be configured to connect directly to the KServer using the Check-In Control *(page 485)* function.

Update

Click Update to update all selected machine IDs with the options previously selected.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Temp Directory

Agent > Temp Directory

The Temp Directory page sets the path to a directory used by the agent to store temporary files.

Depending on the task at hand, the agent uses several additional files. The server transfers these files to a temporary directory used by the agent on the managed machine. For selected machine IDs you can change the default temporary directory from `C:\temp` to any other location.

Change the directory in order to isolate files used by the system from other operations used by other applications on the machine. You can also approve this directory in security programs, such as virus checkers, to allow operations such as remote control from being blocked.

> Note: *A temporary directory can also be maintained using the* Agent Settings *tab of the* Machine Summary *(page 23) page.*

Set

Click Set to set selected machine IDs use the temp directory previously entered.

Set a path to a directory used by the agent to store temporary files

Enter the path of the temp directory used by the agent on the managed machine.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Temp Path

The path of the temporary directory assigned to this machine ID. On a Mac OS X system, if the path name contains a space, then it must be preceded with a backslash. For example: `/tmp/name\ with\ three\ spaces`

Edit Profile / User Profiles

Agent >
Edit Profile
Ticketing >
User Profiles

The Edit Profile page maintains contact information, the language preference for the agent menu on the user's machine and notes about each machine ID/group ID account. Profile information can be maintained in three other places:

- Notes and contact information can also be maintained using the Agent Settings tab of the Machine Summary *(page 23)* page.
- The contact information in the Edit Profile page can be automatically populated when a new account is created using the Agent > Create *(page 457)* page.
- The user can update his or her contact name, contact email and contact phone number using the Change Profile option on the User Access page.

To change user accounts settings:

1. Select a machine ID in the paging area.
2. Enter Notes, Admin Email, Contact Name, Contact Email and Contact Phone information.
3. Press Update.
4. The newly entered settings are shown in the respective machine ID account's fields.

Notes

Enter any notes about a machine ID account. Helpful information can include the machine's location, the type of machine, the company, or any other identifying information about the managed machine.

Show notes as tooltip

If checked, Edit Profile notes are included as part of the tooltip that displays whenever the cursor hovers over a machine ID's check-in status icon (see "Check-in Status" on page 603).

Auto assign tickets

Auto assign a ticket to this machine ID if the Ticketing email reader *(page 248)* receives an email from the same email address as the Contact Email. Applies when new emails come into the ticketing email reader that do not map into any of the email mappings *(page 250)*

> Note: if multiple machine IDs have the same contact email, then only one machine ID can have this checkbox checked.

Contact Name

Enter the name of the individual using the managed machine. This setting is displayed in the Contact Name column.

Contact Email

Enter the email address of the individual using the managed machine. This setting is displayed in the Contact Email column.

> Note: A Contact Email address is required for users to receive a new password using the Get New Password option on the User Access Welcome Page *(page 613)*. See Agent > User Access *(page 253)* for more information.

Contact Phone

Enter the phone number of the individual using the managed machine. This setting is displayed in the Contact Phone column.

Admin Email

Enter the email address of the individual responsible for administering support to the managed machine. This can be the administrator, but is often someone who is part of the IT staff of the company that owns the managed machine. This setting is displayed in the Admin Email column.

Language Preference

The language selected in the Language Preference drop down list determines the language displayed by an agent menu *(page 483)* on a managed machine. The languages available are determined by the language packages installed using System > Preferences *(page 501)*.

Update

Click Update to update selected machine IDs with the profile information previously entered.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

User Access

Agent >
User Access
Ticketing >
User Access

The User Access page determines whether users can perform the following tasks from their own machine or from another machine using the User Access Welcome Page *(page 613)*:

- Remote control or FTP *their own managed machine from another machine*. This is the same remote control capability administrators have, except it restricts users to their own machine.
- *Initiate* a chat session with a KServer administrator from their own machine or any other machine.

> Note: An administrator can always initiate a chat *(page 334)* session with a user regardless of this setting.

- Create or display tickets for their own machine or any other machine.
- Use any other menu option on the User Access Welcome Page from another machine as though they were currently logged into their own managed machine. For example, send email.

> Note: Remote Cntl, Ticketing and Chat must be enabled using this page for these options to be visible on the User Access Welcome Page.
>
> Note: You can download a User Access Quick Start Guide from the first topic of online help.

Accessing the User Access Welcome Page Remotely

A user can display the User Access Welcome Page associated with their own machine from another machine as follows:

1. Log into `http://your_KServer_address/access/` page, substituting the appropriate target KServer name for `your_KServer_address` in the URL text.

   > Note: This is the same page that administrators use to log into the KServer.

2. Log into the KServer by entering either:

   - The machine ID.group ID and the password assigned to the machine ID using this page, or
   - The user name and password assigned to the machine ID using this page.

   The User Access Welcome Page displays. The user can click any menu option as though he or she were logged in from their own managed machine. The user can click the Desktop or File Transfer menu options to initiate a remote connection to their own machine, create or view ticket, or initiate a chat, if these options are enabled.

Re-Enabling User Logons

User logons follow the same Logon Policy *(page 534)* as administrator logons. If a user attempts to logon too many times with the wrong password their account will automatically be disabled. You can re-enable the logon by setting a new password or waiting for the disable account time to lapse.

Generating a New User Access Password

If a user has forgotten their user access password, they can generate a new password as follows:

1. Log into `http://your_KServer_address/access/` page, substituting the appropriate target KServer name for `your_KServer_address` in the URL text.

   > Note: This is the same page that administrators use to log into the KServer.

2. Enter their user name in the Username field.
3. Click the Get New Password menu option.

A new random password is sent to the user email address of record for the managed machine. This user email address is set using the Contact Email field in Agent > Edit Profile *(page 251)*.

Customizing the User Access Welcome Page

Master administrators can customize the web page seen by users using System > Customize *(page 535)*, adding their company's logo, look, and feel to the web experience for their users.

Logon Name

Enter the Logon Name the user must use to log into the KServer to initiate chat sessions, enter or view tickets and/or get remote access to their machine. Logon names and passwords are case sensitive. Passwords must be at least six characters long. if no logon name is specified, then the Logon Name defaults to the machine.group name

> Note: All logon names must be unique in the system. Since users may also logon using their machine ID, logon names, machine IDs, and administrator names *must all be unique*.

Create Password, Confirm Password

Define a password for the user logon. Passwords must be at least 6 characters long. The user can change the password after the administrator assigns him one. See *Generating a New User Access Password* above.

Apply

Click Apply to apply the logon name and password to the selected machine ID.

Clear

Permanently remove the logon credential *(page 604)* from the selected machine ID.

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Logon Name

The logon name assigned to this machine ID. Users that have been granted remote access to their machine may logon using either their machine ID or logon name.

User Web Logon

Displays `Enabled` if a logon name and password has been assigned to this machine ID, even if Remote Cntl, FTP and Chat are not checked. Indicates that a user can log into the user page from a web browser on any machine. They can always get to that same page by double clicking the agent icon on their own machine or selecting Contact Administrator... from the agent menu *(page 599)*.

Enable Remote Cntl

Check this box to allow users remote control access to their machine when they log on to the VSA through any web browser.

Enable Ticketing

Check this box to allow users to create and modify tickets for their own machines. Users can only see tickets assigned to their machine.

Enable Chat

Check this box to allow users to initiate a chat session with a logged in administrator. They will only be able to chat with administrators that have access rights to the group ID that the user's machine belongs to.

Set Credential

Agent > Set Credential

The Set Credential page registers the credential required by an agent to perform administrator level tasks on a managed machine. A credential is the logon name and password used to authenticate a user or process's access to a machine or network or some other resource. Most agent tasks do not require a credential. Credentials are specifically required or referenced by the following:

- Patch Management - If a credential is defined for a machine ID, then Patch Management installs all new patches using this credential. Therefore, Set Credential should always be an *administrator credential.*
- Patch Status *(page 266)* - Patch Status resets test results every time a machine ID's Set Credential changes.
- Office Source *(page 302)* - The agent must have a credential to access the alternate Office source location, in case a patch is being installed when no user is logged into the machine.
- If-Then-Else *(page 81)* - The `Use Credential` script command behaves the same as the `Impersonate User` command except a unique credential can be used to access each machine instead of using a fixed credential in a script.
- Image Location *(page 377)* - If a UNC path is specified in Image Location, a credential must be defined using Set Credential that provides access to this UNC path. Without the credential, the machine will *not* have access to the image location and the backup will fail.

- User State Management - Installing the client for this addon module requires a credential be defined.

Blank Passwords

Blank passwords can be used if the managed machine's Local Security Policy allows blank passwords. On the managed machine, open the Local Security Policy tool in Administrative Tools. Navigate to Local Policies - Security Options. Look for a policy named `Accounts: Limit local account use of blank passwords to console logon only`. The default setting is enabled. Change it to disabled and a credential with a blank password will work.

Username

Enter the username for the credential. Typically this an administrator account.

Password

Enter the password associated with the username above.

Domain

Local user account - Select this option to use a credential that logs into this machine locally, without reference to a domain.

Use machine's current domain - Create a credential using the domain name this machine is a member of, as determined by the latest audit *(page 602)*. This makes it easier to Select All and rapidly set a common username/password on multiple machines, even if selected machines are members of different domains.

Specify domain - Manually specify the domain name to use for this credential.

Apply

Assign the credential to all checked machine IDs. Machine IDs with assigned credentials display the username and domain in the associated table columns.

Clear

Remove the credential from all checked machine IDs.

Test

Click Test to verify whether a username/password/domain credential will work before assigning it to a machine ID.

Cancel

Click Cancel to cancel the testing of a username/password/domain credential.

Update Agent

Agent >
Update Agent

The Update Agent page schedules managed machines to be updated with the latest version of the agent software at the agent's next check-in. Updating the agent software makes no changes to the agent settings *(page 599)* you have defined for each agent.

Update Agent

Click Update Agent to schedule selected machines to be updated.

Remind me at logon when agents need an update

If checked, a popup window displays when administrators logon if managed machines under their control need to be updated with the latest version of the agent software. Only agents that belong to the administrator trigger this popup window. Administrators can disable this feature at logon time and can re-activate it by selecting this checkbox.

Force update even if agent is at version x.x.x.x

If checked, machines selected for update are updated with new files to replace the agent files on the managed machine, even if the agent version is currently up to date. This performs a "clean" installation of the agent files.

Cancel Update

Click Cancel Update to cancel a pending update on selected managed machines.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Check-in status

These icons indicate the agent check-in status of each managed machine:

OK Agent has checked in

OK Agent has checked in and user is logged on. Tool tip lists the logon name.

⚑ Agent has not recently checked in

Agent has never checked in

OK Online but waiting for first audit to complete

The agent is online but remote control is disabled

✋ The agent has been suspended

Machine.Group ID

The list of Machine ID.Group IDs *(page 606)* displayed is based on the Machine ID / Group ID filter *(page 17)* and the machine groups the administrator is authorized to see using System > Group Access *(page 512)*.

Agent Version

The version of the agent software running on the managed machine. Version numbers in red indicate that the version on the agent machine is not the same as the latest version available.

Last Update

The date the agent was last updated on the managed machine. Since the server must wait for the managed machine to check-in, according to the check-in schedule as specified in Agent > Check-In Control *(page 485)*, `Pending` displays in the Last Update column until the next check-in occurs.

Chapter 13

System

In This Chapter

System Tab

System

The System tab allows administrators to maintain policies affecting the entire system:

- Machine Groups
- Administrator Roles
- Administrator Accounts
- Server Management
- Database Views

Functions	Description
Preferences *(page 501)*	Set email where alerts are sent to and to change administrator passwords.
Machine Group Create / Delete *(page 504)*	Create, edit, and delete machine group IDs.
Rename Group *(page 505)*	Renames machine groups and sub-groups.
Naming Policy *(page 506)*	Automatically enforce naming policy based on each machines IP address, network, and computer name
Check-in Policy *(page 507)*	Set limits on a variety of agent check-in parameters.
Admin Roles Create / Delete *(page 504)*	Create and delete administrator roles. Assign administrators to roles to inherit administrator rights.
Membership *(page 511)*	Define which administrators belong to which administrator roles
Group Access *(page 512)*	Define which machine groups each Administrator role gets access to.
Function Access *(page 514)*	Defines the functions available to an administrator role
Logon Hours *(page 515)*	Specifies when administrators can logon into the KServer.
Admin Account Create / Delete *(page 516)*	Create and delete standard or master administrators.
Enable/Disable *(page 519)*	Enable or disable standard or master administrator accounts.
Set Password *(page 520)*	Change administrator account passwords.
Admin History *(page 522)*	Display the functions visited in the last 30 days for each administrator.
Request Support *(page 523)*	Access Kaseya support and/or give Kaseya support access to your server.
Configure *(page 524)*	View server information, license code and subscription information, obtain latest server updates, and server IP information.
License Manager *(page 530)*	Allocates available agent licenses to group IDs.
System Log *(page 531)*	Logs events that can not be tracked by machine ID for 60 days.

Statistics *(page 532)*	Display VSA server performance statistics
Logon Policy *(page 534)*	Set logon policies.
Customize *(page 535)*	Customize the logon page and graphical user interface for the system.
Database Views *(page 542)*	Configures database view access

Preferences

System > Preferences

The Preferences page sets preference options that typically apply *only to the currently logged in administrator*. This includes changing your administrator logon name and password and the email address where you receive alert messages.

> Note: Two options on this page apply to *all administrators* and only display for master administrators: setting the System Default Language Preference and the Download button for installing language packs.

Changing My Logon Name and/or Password

To change your logon name and password:

1. Enter your old password in the Old Password field.
2. Enter a new name in the Change Logon Name field.

   > Note: The Change Logon Name field is *display only* if Prevent anyone from changing their logon is checked in System > Logon Policy.

3. Enter a new password in the New Password field.

   > Note: If you would like the system to generate a strong password for you, click Suggest. A dialog box displays showing the new password; the new password is automatically entered in the New Password and Confirm Password fields. Be sure to write it down before clicking OK and closing the dialog box.

4. Confirm the password by re-typing it in the Confirm Password field.
5. Click Change.

> Note: Your logon name, password and email address can also be changed by other administrators using System > Create/Delete *(page 516)*.
>
> Note: The logon policy for failed logons and password strength for all administrators is set using System > Logon Policy *(page 534)*.

Converting Your VSA Logon to use your Domain Logon

You can convert your own VSA logon to use your domain logon as follows:

1. Open the System > Preferences page in the VSA.
2. Enter your current VSA password in the Old Password field.
3. Enter you domain and domain logon name, formatted *all in lowercase* as `dom/username`, where `dom` is your domain name and `username` is your logon name, in the Change Logon Name field.
4. Enter your domain password in the New Password / Confirm Password fields.

This enables you to logon to the VSA using your domain logon and have your VSA logon name and password managed using Active Directory. At the same time, you can continue to use all your previous VSA share rights, scripts and other administrator settings.

Set email address to deliver messages for this administrator to

Specifies the email address that alerts, ticket notifications and other email messages will be sent to. After entering the email address, click Apply to make it active. Previously set alerts retain the original email recipient addresses specified when the alerts were set.

Apply

Click Apply to set the email address entered in the Set Email Address... field.

Change Logon Name

If changing the administrator logon name, enter a new administrator logon name in the Change Logon Name field. Logon names and passwords are both case sensitive.

Old Password / New Password / Confirm Password

If changing the administrator password, enter your old password i the Old Password field. Enter the new password in the New Password field. Confirm the new password by re-typing it in the Confirm Password field. Logon names and passwords are both case sensitive.

Change

After entering a new administrator logon name and/or new password, click Change to make the change.

Suggest

Creates a new, strong password and automatically enters it in the New Password and Confirm Password fields. The new password is displayed in a dialog box. Be sure to write the new password down.

My language preference is

Select the language you prefer displayed when you're logged into the KServer. The languages available depend on the language packs installed.

System default language preference is

Select the default language used by the KServer user interface for all administrators. The languages available depend on the language packs installed. This option only displays for master administrators *(page 599)*.

Download a Language Pack

Display a dialog box that enables you to download and install language packs. A language pack enables the KServer user interface to be displayed in that language. This option only displays for master administrators *(page 599)*.

Select display format for long names

The web pages are designed to display well for typical string sizes. Occasionally data fields contain long names that will not display properly on the web pages. You can specify how long names display as follows:

- Limit names for better page layout - This setting limits the string size to fit well on the web page. Strings exceeding a maximum length are limited with a ... To view the entire name, hover the mouse over the string and a tool tip pops up showing the entire name.
- Allow long name wrapping - Long strings are allowed to wrap within the web page. This may disturb the normal web page layout and names may wrap at any character position.

Set first function after logon

Select the name of the function you want to see when you first log on to the KServer.

Clear Snooze

Click Clear Snooze to clear all outstanding task notification messages. Task notification messages are generated for tasks that are assigned to you and for tasks that are past due. Tasks are defined using the Home > View Dashboard *(page 30)* page.

Defaults

Click Defaults to reset all settings to system defaults for this administrator.

Create / Delete: Machine Groups

System > Machine Groups: Create / Delete

The Create / Delete page creates and deletes machine groups. Each agent *(page 600)* installed on a managed machine is assigned a unique machine ID/group ID name. All machine IDs are associated with a group ID and optionally a subgroup ID. Typically a group ID represents a single customer account. Subgroup IDs typically represent a location or network within a group ID. For example, the full identifier for an agent installed on a managed machine could be defined as `jsmith.acme.chicago`. In this case `chicago` is a subgroup ID defined within the group ID called `acme`. Only a master administrator, or administrators authorized by a master administrator *(page 599)*, can create group IDs. Any administrator can create subgroup IDs.

Creating a New Group ID

To create a new machine group:

1. Enter a new group name in the text box.
2. Click Create to create the new machine group ID. The new machine group is displayed in the list.

You can now assign administrators to administer the new group.

Deleting a Group ID

To delete an *empty* machine group:

1. Select the checkbox next to the machine group ID you wish to delete. More than one checkbox can be selected if you wish to delete multiple machine groups at the same time.
2. Click Delete. A dialog box confirms the deletion.
3. Click OK to delete, or Cancel.

   The empty machine groups are removed from the list.

Enter name for new machine group

Enter the name of a new machine group ID that you wish to create.

Allow standard administrators to create root groups

By default, standard administrators may not create or delete root level machine groups. If checked, standard administrators can create or delete root level machine groups. This option only displays for master administrators *(page 599)*.

When a standard administrator creates a new root machine group, permission to access that machine group is automatically granted to all administrator roles that administrator belongs to.

Create as subgroup of

Create subgroups within machine groups. To create a subgroup select the parent group from this drop-down control prior to clicking Create. To create a new top level root group leave the drop-down control set to < `New Root Group >`.

Create

Click Create to create a new machine group with the specified name.

Delete

Click Delete to delete an *empty* machine group. An empty machine group is one with no machines assigned to that group. If any machine is assigned to a machine group, then the checkbox beside the group name is disabled and shown in gray. Deleting a group also deletes any associated subgroups.

Total Machines

Displays the total number of machines managed.

Total Groups

Displays the total number of groups defined.

Machine Group

Each machine group defined is displayed under Machine Group. The checkbox beside the machine group is checked only if *no machines are assigned to that group ID*. The checkbox can be selected to mark an empty group for deletion.

Total Group

Displays the number of machines in each machine group, including any associated subgroups. This can be used to evenly distribute machines per group, or to plan migration of some groups to a new server.

Sub Group

Shows the administrator the number of machines in an individual machine group. If the group has subgroups, none of the machines in those subgroups are counted.

Rename Group

System >
Rename Group

The Rename Group page renames any root group or sub-group. You cannot rename both a root group and sub-group at the same time.

For example, you can rename the following:

- `company.dept` -> `company.marketing`
- `company.marketing` -> `company.marcom`

- `company` -> `hughes`

In the last example, all existing sub-groups for the root group `company` move into the new root group name `hughes`.

You cannot rename a root group and sub-group at the same time, as in the following example:

- `company.dept` -> `newco.accounting`

Naming Policy

System > Naming Policy

The Naming Policy page defines the IP address criteria used to automatically re-assign machines to a different machine group. Each machine group can be assigned multiple naming policies.

Naming policies can also force the renaming of a machine ID, if the machine ID name doesn't match the computer name, reducing confusion when administering managed machines.

Assigning machines to machine groups by IP addresses has the following benefits:

- Typically group IDs represent a single customer enterprise and subgroups represent locations within that enterprise. When an employee transfers to a new location, the managed machine can be automatically re-assigned to the appropriate sub-group for that location as soon as the managed machine's agent checks in from the new location's network.
- Using managed variables *(page 79)*, managed machines can run scripts that access *locally available resources* based on the group ID or subgroup ID. Using Naming Policy this benefit can be applied automatically by IP address even to a highly mobile workforce that travels between different enterprise locations.
- Using Deploy Agents *(page 445)*, you may choose to create a generic install package that adds all new machine accounts to the `unnamed` group ID. When the agent checks in the first time, a naming policy assigns it to the correct group ID and/or sub-group ID.

Connection Gateway

Optionally check the Connection Gateway checkbox and enter the connection gateway IP address. The connection gateway is typically the WAN address of the managed machine. This rule can be applied independently to a group ID. The managed machine must have this IP address as its connection gateway to be automatically assigned to the group ID.

IP Range

Optionally check the IP Range checkbox and enter an IP address range, such as `192.168.1.2` – `192.168.1.254`. This rule can be applied independently to a group ID. The IP address of the manage machine must fall within this range to be automatically assigned to the group ID.

Force machine ID to always be computer name

Optionally check the Force machine ID to always be computer name checkbox to force each machine ID name to match its corresponding computer name. This rule can be applied independently to a group ID.

> Note: Machines are renamed to the new group ID at their next full check-in *(page 603)*. The quick check-in *(page 603)* cycle does not trigger a rename. To rename a group of machines quickly using Naming Policy, schedule the `Force Check-in` sample script located in the Scripts > Script Browser *(page 72)*.

Update

Click Update to apply the naming policy to the selected machine group. The system immediately begins enforcing the group ID's new rule as machines check in to the KServer.

Add

Click Add to add a new naming policy to existing naming policies for a selected machine group.

> Note: Each machine group can be assigned multiple naming policies. Use this capability to automatically assign machines with different IP address ranges to the same machine group.

Clear

Click Clear to remove the naming policy from a machine group. The system immediately stops applying the rule for the machine group.

Machine Group

This column lists the machine groups defined for the system. Select the radio button beside a Machine Group before updating, adding or clearing a naming policy.

Force Machine ID

Displays a check mark if Force machine ID to always be computer name is enabled for a machine group.

Check-in Policy

System > Check-in Policy

The Check-in Policy page defines group ID policies controlling the minimum, maximum and fixed values allowed for a variety of options. These policies prevent administrators from selecting settings that place undue stress on Windows servers running the KServer.

Changing One Field at a Time

If you need to make a change to only one setting in a group:

1. Enter a new value in the field you want to change.
2. Leave all other fields empty. This indicates that these fields will remain unchanged.
3. Click Update.

Min/Max Age for Log Entries

These values determine the minimum and maximum values that can be entered in the Set Max Age for Log Entries options in Agent > Logging Control *(page 441)*. To remove a value, enter `0` (zero).

Check-In Period

These values determine the minimum and maximum settings that can be entered in the Check-In Period setting of Agent > Check-In Control *(page 485)*. To remove a value, enter `0` (zero).

Fixed KServer Address

If these checkboxes are checked and the fields left *blank* and Update clicked, then the KServer column of selected group IDs display `Editable`. Administrators can enter any domain name server (DNS) name or IP address they like in the Primary KServer and Secondary KServer fields in Agent > Check-in Control.

If these checkboxes are checked and *DNS names or IP addresses are entered* in these fields and Update clicked, the KServer column of selected group IDs display fixed DNS names or IP addresses. Administrators are required to use these fixed IP addresses in the Primary KServer and Secondary KServer fields in Agent > Check-in Control.

> Best Practices: Although a public IP address may be used, Kaseya recommends using a domain name server (DNS) name for the KServer. This practice is recommended as a precaution should the IP address need to change. It is easier to modify the DNS entry than redirecting orphaned agents.

Allow automatic account creation for selected Group ID

If enabled, new machine ID accounts are created automatically for selected group IDs as soon as the machine's agent checks into the KServer the first time using a new machine ID name and selected group ID.

For example, an agent is installed on a new machine. The group ID `acme` already exists, but the machine ID `ksmith` does not. With this option enabled for the `acme` group ID, the `ksmith.acme` machineID.group ID account is created as soon as the agent checks in the first time.

> Note: Allow automatic account creation for selected Group ID is enabled by default.

To enable automatic account creation for selected group IDs:

1. Check Allow automatic account creation for selected Group ID.
2. Select group IDs in the paging area.
3. Click Update.

   `Auto Enabled` displays in the Group IDs/Auto Acct column of selected group IDs.

Allow automatic account creation for groups without a policy

This option only displays for master administrators *(page 599)*. If enabled, new machine ID accounts are created automatically for group IDs that do not have any Check-in Policy defined, as soon as the machine's agent checks into the KServer the first time using a new machine ID name.

> Note: Allow automatic account creation for groups without a policy is enabled by default.

Update

Click Update to apply changes to selected group IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Groups IDs

Lists machine groups. All machine IDs are associated with a group ID and optionally a subgroup ID.

KServer (1st) (2nd)

Lists the IP addresses/host names of the primary (1st) and secondary (2nd) servers used by group IDs. These settings are edited using the Fixed KServer Address fields in the header, for each group ID.

Log Age (Min) / Log Age (Max)

Lists the settings entered in the Set Max Age For Log Entries fields in the header, for each group ID.

Check-in (Min) / Check-in (Max)

Lists the settings entered in the Check-In Period fields in the header, for each group ID.

Create / Delete: Admin Roles

System > Create / Delete: Admin Roles

The Create / Delete page creates, renames and deletes administrator roles. The paging area displays all the administrators belonging to each administrator role. Administrators are assigned to administrator roles using System > Membership *(page 511)*.

Administrator Roles

Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Deleting Administrator Roles

You can delete an administrator role even if administrators are assigned to it. The `Master` role cannot be deleted. Server management configuration and other specialized functions apply to the master administrator *(page 599)* role only. See System > Function Access *(page 514)* for more information.

Renaming Administrator Roles

1. Click the edit icon ✎ to the left of a Role Name.

   A dialog box displays.

2. Type in the new name for the administrator role.
3. Click OK to rename or Cancel.

Create

Click Create to create a new administrator role based on the text entered in the Enter name for new administrator role field.

Delete

Click Delete to delete selected administrator roles.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Edit icon

Click the edit icon 📝 to the left of a role name to rename it.

Role Name

Lists existing administrator roles.

Member Administrators

Lists the administrators belonging to each administrator role.

Membership: Admin Roles

System > Membership

The Membership page assigns administrators to administrator roles. Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Adding Administrators to Administrator Roles

1. Select one or more administrators in the paging area.
2. Click an administrator role in the Assign administrators to roles listbox. Hold down the [Ctrl] key to click multiple administrator roles.
3. Click Add to add selected administrators to selected administrator roles.

Removing Administrators from Administrator Roles

1. Select one or more administrators in the paging area.
2. Click an administrator role in the Assign administrators to roles listbox. Hold down the [Ctrl] key to click multiple administrator roles.
3. Click Remove to remove selected administrators from selected administrator roles.

Assign Administrators to roles

Click an administrator role in the Assign administrators to roles listbox to add or remove them from administrator roles. Hold down the [Ctrl] key to click multiple administrator roles.

Add

Click Add to add selected administrators to selected administrator roles.

Remove

Click Remove to remove selected administrators from selected administrator roles.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Standard Admin / Master Admin

Administrators are listed under this column. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators *(page 599)*.

Admin Role

The list of administrator roles each administrator is a member of.

Group Access

System > Group Access

The Group Access page determines administrator access to machine groups by assigning machine groups to administrator roles. Since all machine IDs are assigned to group IDs, administrators can be permitted or denied access to machine ID.group ID user accounts using Group Access. Adding or removing a machine *group* to or from an administrator role automatically adds or removes access to any associated *subgroups*. An administrator belonging to multiple administrator roles has access to a machine group if *any* single administrator role permits it.

Administrator Roles

Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Adding Machine Groups to Administrator Roles

1. Select one or more administrator roles in the paging area.
2. Click a machine group in the Give administrator roles access to machine groups listbox. Hold down the [Ctrl] key to click multiple machine groups.
3. Click Add to add selected administrator roles to selected machine groups.

Removing Machine Groups from Administrator Roles

1. Select one or more administrator roles in the paging area.
2. Click a machine group in the Give administrator roles access to machine groups listbox. Hold down the [Ctrl] key to click multiple machine groups.
3. Click Remove to remove selected administrator roles from selected machine groups.

Renaming Administrator Roles

1. Click the edit icon to the left of an Admin Role name.

   A dialog box displays.
2. Type in the new name for the administrator role.
3. Click OK to rename or Cancel.

Give administrator roles access to machine groups

Click a machine group in the Give administrator roles access to machine groups listbox to add or remove them from administrator roles. Hold down the [Ctrl] key to click multiple machine groups.

Add

Click Add to add machine groups to selected administrator roles.

Remove

Click Remove to remove machine groups from selected administrator roles.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Edit icon

Click the edit icon to the left of a role name to rename it.

Admin Role

Administrators are listed under this column. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators *(page 599)*.

Machine Group

Lists the machine groups that an administrator role has access to. If the administrator role has access to all groups, `All Groups` displays in this column.

Function Access

System > Function Access

The Function Access page determines administrator access to VSA modules, folders and function pages, by assigning function pages to administrator roles. This includes administrator access to individual tabs of the Machine Summary *(page 23)* page.

You may wish to provide certain personnel limited access to specialized functions. For example, clerical assistants may only require access to trouble tickets and reports. At the other extreme, you may wish to permit only advanced administrators access to SNMP monitoring functions.

Master Administrators

Only master administrators have access to the following functions.

- Monitoring > System Alarms in Alerts *(page 113)*
- Ticketing > Email Reader *(page 248)*
- Patch Mgmt > Approval by Patch *(page 285)*
- Patch Mgmt > KB Override *(page 288)*
- Patch Mgmt > Command Line *(page 305)*
- Patch Mgmt > Patch Location *(page 308)*
- System > Request Support *(page 523)*
- System > Configure *(page 524)*
- System > License Manager *(page 530)*
- System > Statistics *(page 532)*
- System > Logon Policy *(page 534)*
- System > Customize *(page 535)*

All other functions can be delegated to standard administrators *(page 599)*.

Administrator Roles

Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*

- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Removing Functions from an Administrator Role

1. Select an administrator role from the Select administrator role drop down list.
2. Uncheck all the module, folders and function pages you do not want to let this administrator role use.

Enable All / Disable All

Click Enable All to check all functions. Click Disable All to uncheck all functions.

Lock Settings to Match

All function access changes made to one administrator role can be automatically applied to all other administrator roles that are locked to it. If you create unique administrator roles to isolate access by machine group, but want to give each administrator role the same list of functions, then you can use this feature to manage all function access changes from a single role.

1. Select the administrator role you want to *lock* using the Select Administrator Role.
2. Select the administrator role you want apply changes *from* using Lock Settings to Match.

Logon Hours

System > Logon Hours

The Logon Hours page determines *when* administrators can logon into the VSA by specifying the weekdays and hours for each administrator role. Each day of the week can have different hours of operation set.

Administrator Role

Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Select administrator role

Select an administrator role to display and maintain its logon hours settings.

No Hours Restrictions

If checked, administrators can logon into the VSA at any time and day of the week. Uncheck to enable all other settings.

Deny

Denies logon access for the entire weekday.

or allow between <12:00 am> and <12:00 am>

Specify the range of time logons are allowed. All times are in the KServer's time zone. For all day access, set start and end time to the same time.

Create / Delete: Admin Accounts

System > Admin Accounts: Create / Delete

The Create / Delete page creates and deletes administrator accounts. This page can also assign administrators to administrator roles *(page 511)* when the administrator account is created.

> Note: Each administrator can change their own logon name, password and email address using System > Preferences *(page 501)*. Administrator role membership can be maintained using System > Membership *(page 511)*. Passwords can be reset using System > Set Password *(page 520)*. The logon policy for failed logons and password strength for all administrators is set using System > Logon Policy *(page 534)*.

> Warning: To simplify management and auditing of your VSA, provide each administrator with their own unique logon name. Avoid using generic logons like `Admin` or `Administrator`. Generic logons make it difficult to audit the administrative actions taken by each administrator.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 607)* by the KServer and its agents *(page 600)*. KServer management configuration and other specialized functions *(page 514)* can only be performed by master administrators. Standard administrators are typically restricted to the administration and monitoring of managed machines. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators. Access to functions, machine groups and other policies are assigned by administrator role *(page 599)*. Standard administrators can only see other administrators who are members of the same roles.

Creating a New Administrator

1. Enter the administrator's name in the Admin Name field.
2. Select an administrator role from the Set Admin Role Membership drop down list.
   - ➢ If the new administrator will be a master administrator, select the `Master` group membership.
3. Enter an email address for the new administrator.
4. Enter the same password in the Create Password and Confirm Password fields.

   > Note: If you would like the system to generate a strong password for you, click Suggest. A dialog box displays showing the new password; the new password is automatically entered in the Create Password and Confirm Password fields. Be sure to write it down before clicking OK and closing the dialog box.

5. Click Create. The new administrator account is created and displays in the paging area.
6. Optionally assign the new administrator to additional administrator roles using System > Membership *(page 511)*.

Deleting Administrators

You cannot delete the currently logged in administrator account. Deleting an administrator transfers ownership of all private scripts, agent install packages, tickets and other private data to the currently logged in administrator. A standard administrator with access to this page can delete a master administrator.

1. Select an administrator from the paging area.
2. Click Delete.

Create

Click Create to create the new administrator account.

Delete

Click Delete to delete selected administrator accounts.

Admin Name

Enter the name for the administrator being created.

Set Admin Group Membership

Select an administrator role from the Set Admin Role Membership drop down list. Administrator role membership can be maintained using System > Membership *(page 511)*.

Admin Email

Enter the administrator's email address. This is the default email address used to contact this administrator.

Create/Confirm Password

Enter the administrator's password and password confirmation in the appropriate fields.

Suggest

If you would like the system to generate a strong password for you, click Suggest. A dialog box displays showing the new password; the new password is automatically entered in the Create Password and Confirm Password fields. Be sure to write it down before clicking OK and closing the dialog box.

Require password change at next logon

If checked, selected administrators are forced to change their password using System > Preferences *(page 501)* the next time they log in.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Standard Admin / Master Admin

Administrators are listed under this column. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators.

Admin Email

The default email address used to contact this administrator.

Last Logon

The last time the administrator logged on.

Account Created

The date and time the administrator account was created.

Enable / Disable

System >
Enable / Disable

The Enable / Disable page enables or disables administrator accounts. Disabled accounts display Disabled by Admin in red text in the Last Logon column. A currently logged on administrator cannot enable or disable his or her own account.

This page also displays an administrator icon next to each currently logged on administrator. You can log off any other logged on administrator immediately.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 607)* by the KServer and its agents *(page 600)*. KServer management configuration and other specialized functions *(page 514)* can only be performed by master administrators. Standard administrators are typically restricted to the administration and monitoring of managed machines. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators. Access to functions, machine groups and other policies are assigned by administrator role *(page 599)*. Standard administrators can only see other administrators who are members of the same roles.

Enabling Accounts Disabled During Logon

The system automatically locks out an administrator account if they exceed the number of failed logon attempts, as specified in System > Logon Policy *(page 534)*. Normally, the administrator has to wait the time specified in Logon Policy. Another administrator with access to this page can enable a disabled account immediately.

Enabling Administrator Accounts

1. Select one or more disabled administrator accounts in the paging area. Disabled accounts display Disabled by Admin in red text in the Last Logon column.
2. Click Enable Account.

Disabling Administrator Accounts

1. Select one or more enabled administrator accounts in the paging area. Enabled accounts do *not* display Disabled by Admin in red text in the Last Logon column.
2. Click Disable Account.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Standard Admin / Master Admin

Administrators are listed under this column. A background of two alternating shades of beige designates master administrators. A background of two alternating shades of grey designates standard administrators.

Last Logon

Displays one of the following:

- Enabled Accounts - The date and time this administrator last logged into the VSA.
- Disabled Accounts - Disabled by Admin in red text.

Account Created

The date and time the administrator account was created.

Set Password

System > Set Password

The Set Password page changes a selected administrator's password. You can also optionally force administrators to change their passwords at the next logon.

> Note: The logon policy for failed logons and password strength for all administrators is set using System > Logon Policy *(page 534)*.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 607)* by the KServer and its agents *(page 600)*. KServer management configuration and other specialized functions *(page 514)* can only be performed by master administrators. Standard administrators are typically restricted to the administration and monitoring of managed machines. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators. Access to functions, machine groups and other policies are assigned by administrator role *(page 599)*. Standard administrators can only see other administrators who are members of the same roles.

To change an administrator password:

1. Select the radio button next to an administrator.
2. Enter the new password in the New Password field.

> Note: If you would like the system to generate a strong password for you, click Suggest Password. A dialog box displays showing the new password; the new password is automatically entered in the Create Password and Confirm Password fields. Be sure to write it down before clicking OK and closing the dialog box.

3. Confirm the password by re-entering it in the Confirm Password field.
4. Click Change Password.

The password is changed. Don't forget to notify the administrator of the password change.

New Password

Enter a new password in the New Password field.

Confirm Password

Enter the same new password in the Confirm Password field.

Change Password

Click Change Password after entering the new password and confirmation. A dialog box indicates a successful password change.

Suggest Password

Click Suggest Password to generate a strong random password for better security.A dialog box displays showing the new password; the new password is automatically entered in the Create Password and Confirm Password fields. Be sure to write it down before clicking OK and closing the dialog box.

Clear Total

Clears all of the values shown in the Total Failed Logons column for selected machines.

Select Account

Select the administrator whose password you want to change.

Standard Admin/Master Admin

Lists all the administrators on the KServer. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators.

Failed Logons in a Row

Lists the number of failed logons in a row. This information is helpful in monitoring possible system security attacks. If the number of failed logons in a row exceeds the number specified in Logon Policy *(page 534)*, the administrator's account is disabled for a set amount of time. The administrator's account can only be enabled by waiting the specified amount of time or by having another master administrator manually enable the account.

Total Failed Logons

Lists the total number of failed logons attempted by an administrator.

Change Password At Next Logon

Click Force Change to force the administrator to change his or her password at the next logon.

Reset Master Admin Password

Forgotten Administrator Password

If you have forgotten your master administrator account password, the system provides a way for you to create a new master administrator account, which enables you to log back in to the system and retrieve the forgotten account information.

> Note: You must have administrator (Windows NT/2000) privileges on the server running the system. Due to security reasons, you cannot perform the following procedure remotely.

To create a new master administrator account:

1. Log in to the machine running the server component of the system.
2. Access the following web page: http://localhost/LocalAuth/setAccount.asp
3. Enter a new account name in the Master Administrator Name field.
4. Enter a password in the Enter Password field and confirm it by re-typing it in the Confirm Password field.
5. Click Create.

You will now be logged in to the system as a master administrator.

Changing the Administrator Password

Change your administrator password using System > Preferences *(page 501)*.

Admin History

System > Admin History

The Admin History page displays a history, in date order, of every function used by an administrator. The history also displays any actions captured by the System Log *(page 531)* performed by the selected administrator.The system saves history data for each administrator for the specified number of days.

Click an administrator name to display the log for that administrator.

> Note: This log data does not appear in any reports. Reports are only available for data associated with a machine ID.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 607)* by the KServer and its agents *(page 600)*. KServer management configuration and other specialized functions *(page 514)* can only be performed by master administrators. Standard administrators are typically restricted to the administration and monitoring of managed machines. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators. Access to functions, machine groups and other policies are assigned by administrator role *(page 599)*. Standard administrators can only see other administrators who are members of the same roles.

Request Support

The Request Support page provides multiple ways of contacting Kaseya support.

- Support Web Site - Find answers to common questions using the Kaseya Support website at http://www.kaseya.com/support. This website provides links to the Kaseya Support Forum and to the Kaseya Support Knowledge Base. The Support Forum hosts an interactive community of Kaseya users that discuss a wide variety of issues and solutions on a daily basis. Subscribe to the forum to get new posts of interest directly emailed to you as new information appears. The Kaseya Knowledge Base provides technical information about installation and usage of the Kaseya IT Automation Framework.
- Enable Kaseya Support to Logon - Kaseya support engineers can solve problems with your system quickly and efficiently when they can directly access your KServer. Click Create to create a `kaseyasupport` master administrator account on your system. The Kaseya Support engineer can use our system to log into your system and help solve any problems.

> Note: We realize the security implications of providing access to your server. To protect this logon, your system creates a secure logon. No one has access to the password, not even the Kaseya support engineer. The password gets changed every time you click this button.

- Create a Ticket - You can directly create and track tickets in our support system by clicking the Logon button.

> Note:You can track any and all tickets you submit by clicking the Logon button. Tickets submitted via support@kaseya.com or the phone can not be tracked by you through the online system.

- Email - Email support requests to support@kaseya.com.
- Phone - Call our support engineers from 6am to 6pm Eastern Time, Monday through Friday at 1-415-694-5700, extension 4.

Your Information

Typically Kaseya support needs some basic information about your system to begin providing support. Your administrator name, email address, Customer ID, and system URL are provided for your convenience.

Configure

System > Configure

The Configure page manages the configuration of your KServer and related services. With this page you can identify or maintain:

- KServer updates
- KServer version number
- Maximum machine ID accounts
- "From" email address
- Hotfixes
- Database schema
- Database backups
- Alarm reversal notification
- Reloading of sample scripts and monitor sets
- Server status alarms and logs
- Time format
- Server external name/IP address and port
- Versions of server operating system and related services
- License agreement
- Release notes

Note: For the latest instructions on migrating an existing KServer to a new machine see the article How do I move my Kaseya Server to a new computer? (270436) in the Kaseya Support Knowledge Base Portal.

Check for Update

Click Check for Update to determine if your KServer is the latest version available. If an update exists, a message alerts the administrator that an update is currently available and is applied at the next master administrator logon. An update is only downloaded if the version currently running is older than the version available. Otherwise, no action is performed.

Version Number

Shows the version number of the system software and the hotfix *(page 605)* level of your system.

Warn if the VSA cannot get updates from http://vsaupdate.kaseya.net on port 5721

Check this box to display a warning if your VSA cannot connect to `http://vsaupdate.kaseya.net` to fetch the latest hotfix checker list, the latest PCI ID list used by audit, or the VSA software update notifications. Your VSA attempts to automatically fetch this information from `http://vsaupdate.kaseya.net` on port 5721. Verify that port 5721 outbound is not blocked by your firewall.

Warn when the license reaches the maximum number of seats

Check this box to display a warning when the number of machine ID accounts reaches the maximum for your VSA.

> Note: Each installed agent counts against your license for 30 days. If you uninstall an agent, it will count against your license for 30 more days.

Specify email alert sender address

Specifies the From email address used by your VSA to send alarms, alerts and other types of email notifications. The email address entered must contain a resolvable domain name that supports SMTP. Click Set Email to apply the email address entered. Verify the VSA can send email from this address by clicking Test and entering an address to send an email to.

> Note: The system uses the Default SMTP Virtual Server to send email. This service must be installed and running in order to send email. The service must also be able to resolve DNS addresses to route email to other SMTP servers. If you suspect that you are not receiving emails from the KServer, send test emails to various recipient addresses to confirm whether the Default SMTP Virtual Server can send email or is unable to resolve to a specific domain.

Hotfixes

Several options affect how hotfixes *(page 605)* update your KServer.

- Enable automatic check - If checked, your KServer periodically checks for *new only* hotfixes at `http://vsaupdate.kaseya.net`. If any new hotfixes are available, the KServer automatically downloads and applies the hotfixes without any user interaction.
- Reload - Click to load *all* hotfixes for the version of KServer your system is running. Checking the Enable automatic check box only checks for *new* hotfixes.
- Get Latest Hotfix - Click to check if new hotfixes are available *immediately* and, if they are, download and apply them. Otherwise, if the Enable automatic check box is checked, your KServer checks *periodically* for new hotfixes.

- Manually apply hotfixes - If your system is not connected to the internet or can not reach `http://vsaupdate.kaseya.net`, then click this list.
  - Check Now - Click to force the system to check for new hotfixes *immediately*. If any new hotfixes are available, they are downloaded and automatically applied. Only *new* hotfixes get loaded.
  - Reload - Click to re-download and apply all hotfixes for the version of KServer your system is running.

Database

- Click Reapply Schema to reinstall and validate the last database schema that was downloaded using Check for Update. Reapply schema is a safe operation that users can run in an attempt to resolve a variety of problems. Reapply schema:
  - Sets default values and runs basic consistency checks on the database.
  - Rebuilds all pre-defined Kaseya scripts.
  - Rebuilds all pre-defined Kaseya script samples.
  - Reschedules default backend processing scripts for the KServer.

  This is all completed without the risk of losing any agent data. This is a good self healing routine to run if you observe:
  - Scripts failing in the IF condition or in specific steps.
  - Pending alerts not being processed within a two minute interval. You can monitor this using the System > Statistics *(page 532)* page. This might indicate a problem with backend processing scripts.
- Click Defrag Database to defragment the physical files on your disk arrays. Fragmented SQL Server data files can slow I/O access.

> Warning: Do not use the Microsoft SQL tuning advisor against the schema. It adds keys that conflict with the smooth operation of the system.

Reload Samples

- Check the Reload sample scripts with every update and database maintenance cycle box to load sample scripts automatically.
- Check the Reload sample event sets with every update and database maintenance cycle box to load sample event sets *(page 138)* automatically.
- Check the Reload sample monitor sets with every update and database maintenance cycle box to load sample monitor sets *(page 164)* automatically.
- Click Reload Samples to load the latest sample scripts, sample event sets, and sample monitor sets manually.

API

- Enable VSA API Web Service - Check to enable the VSA API Web Service *(page 577)*.

Backups

- Run database backup / maintenance every <N> Days @ <Time> - The KServer automatically backs up and maintains the MS-SQL database and transaction log for you. Click Set Period to set the frequency and time selected. If your KServer is shut down at the scheduled backup time, the backup will occur the next time the KServer goes online. You can enter zero to disable recurring backups.
- Backup folder on DB server - Set the directory path to store database backups in. The default directory path is typically `C:\Kaseya\UserProfiles\@dbBackup`. Click Change to confirm changes to the directory path. Click Default to reset the directory path to its default.

  > Note: Database backups older than three times the backup and maintenance period are discarded automatically to prevent your disk drive from filling up. For example, if the backup occurs every 7 days, any backup older than 21 days is deleted.

- Change DB - Connect your KServer to a database on a different machine by following these steps:
  1. Backup your existing database by clicking Backup Now.
  2. Copy the database backup file to the database server you wish to connect to.
  3. Verify your new database is set to mixed mode authentication.
     - ✓ Open the SQL Enterprise Manager.
     - ✓ Right click the database and select properties.
     - ✓ Click the Security tab.
     - ✓ Under authentication, select SQL Server and Windows.
     - ✓ Click OK.
  4. Verify your KServer is on the same LAN as your new database server and port 1433 is open on the database server.
  5. Click the Change DB button.
  6. Enter the database location using one of the following formats:
     - ✓ computer name
     - ✓ computer name\instance name
     - ✓ IP address
  7. Enter a database logon name. The default logon name is `sa`.

     > Note: This logon is only used to configure the database. The system creates its own database logon to use going forward.

8. Enter the password associated with this logon name.
9. Click Apply. The system then connects to the remote database and configures it.
10. Click Restore to load the data from the back up file you made in step one into your new database.

- Backup Now - Initiate a full database backup now. Use this function *before* you shut down or move your KServer, to ensure you have the latest KServer data saved to a backup. The backup will be scheduled to run within the next 2 minutes.
- Restore - Click to restore the KServer's database from a backup file. A file browser displays a list of KServer database backup files you can restore from.

Archive

Archiving of agent logs are enabled, by log and machine ID, using Agent > Log History *(page 441)*.

- Archive and purge logs every day at <time> - Specifies the time of day log files are archived and purged.
- Set Period - Click to confirm changing the time log files are purged and archived.
- Log file archive path - The file location where the archive files are stored.
- Change - Click to the confirm changing the archive file location. A script runs to move any existing archive files in the old file location to the new file location.
- Default - Resets the log file archive path to the default location on the KServer. A script runs to move any existing archive files in the old file location to the new file location.

Service Status

- KServer Log - Displays the last 300 kbytes of the KServer's log file. The entire log file is up to 5 Mbytes in size and is located at `xx\KServer\KServer.log` where `xx` is the parent directory of the VSA web directory.
- Stop Service - Shows the current status of the KServer: running or stopped. The KServer can be stopped by clicking Stop Service.
- Clear the Enable alarm generation box to prevent generating unnecessary alarms. This can occur if you stop the KServer, disconnect from the internet, or maintain the system. Otherwise leave this box checked.
- Enable logging of script errors marked "Continue script if step fail" - If checked, failed steps in scripts are logged. If blank, failed steps in scripts are *not* logged.

Select time format

Click the appropriate radio button to select how time data is displayed. The default is AM/PM format.

- AM/PM format - 9:55:50 pm 9-Apr-07
- 24-hour format - 21:55:50 9-Apr-07

Note: Both these display formats are compatible with Microsoft Excel.

Change external name / IP address of Server

Shows the current external name or IP address of the KServer. This is the address the agents of managed machines access for check-in purposes. The address can be changed by entering a new address or host name in the field and pressing Change Name/IP.

Note: Do *not* use a computer name for your KServer. The agent uses standard WinSock calls to resolve a IP address from a fully qualified host name. Resolving an IP address from a computer name requires NETBIOS, which may or may not be enabled on each computer. NETBIOS is an optional last choice that the Windows will attempt to use to resolve a name. Therefore, only fully qualified names or IP addresses are supported.

Change System Server Port

Specify the port used by agents to check into the KServer. Clicking Change Port switches the port the KServer uses *immediately*.

Warning: Before you change the KServer port ensure that all agents are set to use the new port with their primary or secondary KServer. Agent check-ins are configured using Agent > Check-in Control *(page 485)*.

Version Information

Displays the following information about your VSA configuration.

- OS Version
- IIS Version
- SQL Version
- Database Location
- Agent On KServer

Show License

Click Show License to display the current license agreement to use the VSA.

Release Notes

Click Release Notes to display a list of all changes and enhancements made to the VSA, for all versions of the software.

License Manager

System > License Manager

The License Manager page enables a master administrator to allocate machine licenses by group ID. The total number of licenses allocated to a group ID can be distributed between the group itself and any subgroups defined for that group ID. Typically, a group ID represents a single customer and a subgroup represents a customer location. Types of licenses managed include:

- Agent licenses
- Backup and disaster recovery (BUDR) licenses for workstations
- Backup and disaster recovery licenses for servers
- Endpoint Security licenses
- User State Management licenses

> Note: Endpoint Security licenses only display on this page if you have separately purchased the Kaseya Endpoint Security addon module.
>
> Note: User State Management licenses only display on this page if you have separately purchased the Kaseya User State Management addon module.

Update Code...

Click the Update Code... to enter a new license code or reapply your existing license code.

Expiration Date

Shows the current expiration date of running the system "as is" with the current license code.

Maintenance Expiration Date

Shows the current expiration date of maintenance services, including upgrades, hotfixes and access to tech support.

Apply Limit

The Apply Limit table shows the number of licences used and the maximum number of licenses available for agents, BUDR workstation, BUDR servers, and Endpoint Security. You can control the number of licenses of each type assigned to selected groups using the following radio options:

- No change
- Limit to a fixed number of licenses
- Unrestricted

Click Apply Limit to assign these license settings to selected group IDs.

Select All/Unselect All

Click the Select All link to check all rows on the page. Click the Unselect All link to uncheck all rows on the page.

Machine Group

Lists machine groups. All machine IDs are associated with a group ID and optionally a subgroup ID.

Licenses Used / Max

Lists the number of licenses *used* and the *maximum* number of licenses allocated for each group ID, for:

- Agent licenses
- BUDR workstation licenses
- BUDR server licenses
- Endpoint Security licenses
- User State Management licenses

System Log

System > System Log

The System Log page logs events that cannot be tracked by machine ID, for a specified time period. This log captures events not contained in any of the agent logs. Examples include:

- Deleting machine IDs
- Failed and successful logon attempts
- Video streaming sessions
- Starting/stopping of the KServer
- Deleting trouble tickets assigned to a group (not a machine)
- Scheduling reports

Save History to N Days

Click Apply to save system log events for the specified number of days.

Select Page

When more rows of data are selected than can be displayed on a single page, click the << and >> buttons to display the previous and next page. The drop down list alphabetically lists the first record of each page of data.

Search

The search function acts as a filter on the Description field. Enter a set of words to search for and click the Search button. Only rows matching the search criteria are listed. Use % or * as a wild card. Use the underscore character (_) as a single character placeholder. Text is case insensitive.

Note: This log data does not appear in any reports. Reports are only available for data associated with a machine ID.

Statistics

System > Statistics

Similar information is provided using Reports > Network Statistics *(page 419)*.

The Statistics page displays various statistics to provide an indication that the KServer is running optimally. The statistics shown are not affected by the machine ID/group ID filter *(page 607)* setting.

Agents currently online

Number of agents currently checking into the system.

Total Licenses Used

Number of licenses used.

Total Template Accounts

Number of machine ID templates *(page 607)* defined.

Total Machine IDs

Number of machine IDs defined on the KServer, whether their agents have ever checked in or not. *Total Licenses Used + Total Template Accounts = Total Machine IDs.*

KServer CPU usage

over the last 5 minutes: x%
long term average: x%

Total System CPU usage

over the last 5 minutes: x%
long term average: x%

Remote Control Sessions

The number of remote control sessions relayed through the KServer that are currently active.

Pending Alerts

Alerts are processed by the background task every two minutes. This number shows how many alerts are backed up waiting to be processed by your system. If more than 0 alerts are pending, a button appears labeled Clear Alerts appears. Click this button to clear out all pending alerts.

Event log entries last hour

Click Check to compute the number of event log entries in the last hour for all online managed machines and identify the machine ID that captured the most number of events.

Database Location

Displays the type of database

Database Size

Total size of your database. Typical systems consume about 1 to 2 MB of database size per machine ID.

Database File Path

Full path to the database on the database server machine.

Kaseya File Path

Full path on the Kaseya server to the location of it system files.

Statistics Collected

Active connections - Number of managed machines that currently have active connections to the KServer.

New connections in last 10 seconds - Number of new TCP/IP connections accepted by the KServer. Agents using a connection established during a prior check-in do not contribute to this count.

Checkin message queue length - Number of check-in messages waiting for processing by the KServer.

Command message queue length - Number of messages, other than check-in, waiting for processing by the KServer.

Bandwidth - received bytes/second - Bytes per second input into the KServer agent port.

Bandwidth - sent bytes/second - Bytes per second output from the KServer agent port.

Database CPU utilization - This number indicates the percentage of CPU utilization by the database server at the time specified. Excessively high values for prolonged periods may be an indication that this server is underpowered or could benefit from additional RAM.

Total connections processed since KServer start - This number indicates the total agent connections processed by the KServer since the service last started.

Event log entries received in last minute - The number of event log entries received in the last minute for the entire system.

Event log entries received in last five minutes - The number of event log entries received in the last five minutes for the entire system.

Event log entries received in last hour - The number of event log entries received in the last hour for the entire system.

Top scripts run in the last hour

This table lists the scripts that have run and completed execution on all online machines in the last hour, with the greatest frequency listed first.

Top scripts pending (online machines only)

This table lists the scripts waiting to execute on all online machines, with the greatest frequency listed first.

Logon Policy

System > Logon Policy

The Logon Policy page sets logon policies that apply to all administrators and users *(page 253)*. Logon policies prevent a brute force break-in to the system. By limiting the successive number of bad logon attempts and disabling rogue accounts for a set amount of time, you can prevent unauthorized access achieved by repeatedly entering random passwords.

To Set Logon Policy

1. Specify the number of consecutive bad logons an administrator or user is allowed before their account is disabled in the Number of consecutive failed logon attempts allowed before disabling account field. The count is reset to zero after a successful logon.
2. Specify the amount of time, in hours or days, that the account is disabled in the Length of time to disable account after max logon failures exceeded field.
3. Specify the time period of administrator or user inactivity before the administrator is automatically logged out. Set the number of minutes of inactivity in the Minutes of inactivity before an administrator session expires field.

> Note: To activate the account manually before the lockout time elapses, another master administrator must enable the account using the System > Enable/Disable *(page 519)* page.

4. Prevent anyone from changing their logon *name* by checking the box beside Prevent anyone from changing their logon.

5. Hide the Domain field on the logon page by checking the box beside Do not show domain on logon page.
6. Hide the Remember my username and domain (if any) on this computer checkbox on the logon page by checking the box beside Do not show remember me checkbox on logon.
7. Specify a password strength policy by checking the boxes beside the following:
   - Require password change every N days
   - Enforce minimum password length
   - Prohibit password reuse for N passwords
   - Require upper and lower case alpha characters
   - Require both alpha and numeric characters
   - Require non-alphanumeric characters
8. Press Update to apply the settings

Customize

System > Customize

The Customize page provides four different methods of customizing the user interface that administrators and users see.

- Customize the header on the logon page (both users and administrators).
- Customize the function list first seen by users after logon.
- Customize the function list first seen by administrators after logon.
- Customize the graphical user interface.

Customize the header on the logon page (both users and administrators).

1. Click the Customize link associated with this option. This option selects the URL of the top frame seen *by both administrators and users during logon*. Perform the following tasks in any order:
   - Enter the URL of a web page in the URL of top frame field. Typically this page contains a company logo.
   - Enter the height in pixels of the top most frame of the web page in the Top frame height field.
   - Click the Category button at the bottom of the page to create a new category label in the function list. Enter a name for the new category label in the left column text box.
   - Click the Link button at the bottom of the page to create a new link in the function list. Enter a name for the new link in the left column text box. Enter a URL in the right column text box to direct the browser when the link is selected from the function list.
   - Click the up and down arrow icons ▲▼ to move a category label or link up or down in the function list. This change is applied immediately.

- Click the delete icon ✕ next to a existing category label or link to remove the category label or link from the function list.
- Check or uncheck any of the following display options for the logon page:
  - ✓ Display Get New Password on logon page
  - ✓ Display System Status on logon page
  - ✓ Display System Version on logon page
  - ✓ Display Customer ID on logon page

2. Click the Update button at the top of the page to apply your changes to the function list immediately.
3. Click the Default button at the top of the page to restore the default settings for the home page seen by administrators. This change is applied immediately.
4. Click the Close link at the top of the page to exit the customization web page.

Customize the function list first seen by users after logon.

1. Click the Customize link associated with this option. A new web page displays the current function list displayed when a user displays the User Access Welcome Page *(page 613)*. This option also selects the URL of the top frame seen *by users after logon*. Perform the following tasks in any order:
   - Enter the URL of a web page in the URL of top frame field. Typically this page contains a company logo.
   - Enter the height in pixels of the top most frame of the web page in the Top frame height field.
   - Enter the text first shown to users on the web page in the Default text displayed on the user welcome page text box.
   - Click the Category button at the bottom of the page to create a new category label in the function list. Enter a name for the new category label in the left column text box.
   - Click the Link button at the bottom of the page to create a new link in the function list. Enter a name for the new link in the left column text box. Enter a URL in the right column text box to direct the browser when the link is selected from the function list.
   - Click the up and down arrow icons ▲▼ to move a category label or link up or down in the function list. This change is applied immediately.
   - Click the delete icon ✕ next to a existing category label or link to remove the category label or link from the function list.
2. Click the Update button at the top of the page to apply your changes to the function list immediately.
3. Click the Default button at the top of the page to restore the default settings for the home page seen by administrators. This change is applied immediately.

4. Click the Close link at the top of the page to exit the customization web page.

Customize the function list first seen by administrators after logon.

1. Click the Customize link associated with this option. A new web page displays the current function list displayed when an administrator first logs on. Perform the following tasks in any order:
   - Click the Category button at the bottom of the page to create a new category label in the function list. Enter a name for the new category label in the left column text box.
   - Click the Link button at the bottom of the page to create a new link in the function list. Enter a name for the new link in the left column text box. Enter a URL in the right column text box to direct the browser when the link is selected from the function list.
   - Click the up and down arrow icons ▲▼ to move a category label or link up or down in the function list. This change is applied immediately.
   - Click the delete icon ✕ next to a existing category label or link to remove the category label or link from the function list.
2. Click the Update button at the top of the page to apply your changes to the function list immediately.
3. Click the Default button at the top of the page to restore the default settings for the home page seen by administrators. This change is applied immediately.
4. Click the Close link at the top of the page to exit the customization web page.

Customize the graphical user interface.

Click the Customize link associated with this option. A new web page displays, enabling you to change the entire look of all the web pages. In addition to changing the color scheme, you can customize the top frame of the VSA interface. You can also swap out the Kaseya agent icon displayed in the system tray of each managed machine with your own icon.

Themes

Three themes are provided: Default, Banner and Compact. You can change any of the attributes of any of the three themes or reset their attributes back to their default settings. The changes you make apply to the graphical display of the entire VSA and to all administrators and users logging into the VSA.

Some of the attributes are only available with specific themes. Principally the three themes differ by how they display the header frame at the top of the page.

Top Frame

- Pixel height of the top frame header
- URL that the logo links to. Applies to Banner theme only.

- Style for unused area to right of menu bar. Applies to Banner theme only.
- Top Frame Header Body Style

Module Tabs

- Inactive tab background style
- Active tab background style
- Hover tab background style
- Inactive tab text style
- Active tab text style

Logoff Link

- Logoff link style
- Logoff link hover style

Toolbox

- Toolbox Background Color
- Toolbox Text Color
- Toolbox Text Hover Color

Machine ID.Group ID Filter

- Main Logon / Select Machine ID and Machine Group Body Style
- Select Machine ID and Machine Group Text Style

Function Lists

- Pixel width of the function list frame
- Function List Header Style
- Function Category Header Style
- Function List Hover Style
- Function List Active Selection Style
- Function List Inactive Selection Style
- Function List Background Color
- Function List Frame Color
- Function List Hilite Color

Miscellaneous

- URL that the logo links to.
- Header HTML shown on all reports

> Note: You can customize the header HTML shown on all reports by administrator using Reports > Set Logo *(page 395)*.

- HTML displayed on Agent download page.
  <here> - link to package, <packageName> - display package name
- Product Title
- Nav Menu Bullet Icon

- Corporate logo image. The color depth cannot exceed 256 colors.

Agent System Tray Icons

- Agent system tray icon when Agent is online (must be .ico format)
- Agent system tray icon when Agent is offline (must be .ico format)
- Agent system tray icon when Agent is blinking (must be .ico format)
- Agent system tray icon when remote control is disabled (must be .ico format)

> Note: See Creating Custom Agent Icons *(page 539)* for more information.

Creating Custom Agent Icons

Four Agent Icons

To incorporate custom agent icons in the system tray of each managed machine you create *four icons* in Windows icon format. These four icons must be named:

- `online.ico` – The blue K icon displayed when agent is connected to the KServer
- `offline.ico` – The gray K icon displayed when agent is not connected to the Server
- `blink.ico` – The white K icon displayed when agent requires the user to click the icon to display a message that has been received using Remote Control > Send Message *(page 337)*.
- `noremote.ico` – The red K icon displayed when the user has selected the Disable remote control menu item from the agent popup menu

Creating Your Own Agent Icons

To create an icon in the Windows format, use an editor such as one in the Microsoft Visual Studio development environment.

1. Select New > File... from the File menu in Microsoft Visual Studio.
2. Select an Icon File template and click the OK button.
3. Edit a standard 32x32 size icon image and save it as one of the four *.ico names listed above.
4. Repeat this step and create four icons.

   > Note: The color depth must not exceed 256 colors nor be larger than 32x32 pixels.

Uploading Your Custom Agent Icons into the KServer

1. Select System > Customize *(page 535)*.
2. Click the Customize the graphical user interface link.
3. Scroll to the bottom of the page and update the agent icon images for each of the following items. The agent displays the default VSA icons if any of the custom icons are omitted.

- ➢ Agent system tray icon when agent is online (must be .ico format)
- ➢ Agent system tray icon when agent is offline (must be .ico format)
- ➢ Agent system tray icon when agent is blinking (must be .ico format)
- ➢ Agent system tray icon when remote control is disabled (must be .ico format)

4. Optionally enter four different agent icons for Macintosh machines just as you did in step 3. The agent displays the default VSA icons if any of the custom icons are omitted.

Formatting Custom Agent Icons

For Windows custom agent icons:

- The format must use the Windows icon format. A simple bitmap file cannot simple be renamed using the .ico extension.
- The size cannot be larger than 32x32 pixels.
- The color depth cannot exceed 8 bit color (256 colors).

For Macintosh custom agent icons:

- The format must be .tiff.
- The size cannot be larger than 32x32 pixels.
- The color depth should be RGB 32 bit color.

Updating Existing Agents with Custom Agent Icons

Schedule an agent update using Agent > Update Agent *(page 497)*. You will need to check the Force update check box to update agents that are already at the current version.

Creating Agent Install Packages with Custom Agent Icons

The custom icons are included in install packages created using the Create Package wizard in Deploy Agent *(page 445)*. If you are using a `KcsSetup.exe` file created by Agent Deploy in a domain logon script, then you must replace the `KcsSetup.exe` file on the domain server with the version updated with the new custom icons.

Chapter 14

Database Views

In This Chapter

Database Views

System > Database Views

The system exposes a set of database views *(page 547)* allowing clients to directly access data within the Kaseya repository. These views can be used by to bring data into a spreadsheet for analysis or to prepare reports. This document describes the views and gives two example applications, Crystal Reporting *(page 543)* and Microsoft Excel *(page 543)*. Kaseya does not present itself as an expert in how to use Excel or Crystal. These examples are to assist in the basics of getting started. For third party product training or other questions please contact the third party tool vendor. Finally, an appendix is provided with a field-by-field description of the contents of the views.

The views provided can be broken into four groups of database views *(page 547)*.

- The first group provides information on all the machines being monitored.
- The second group provides information about the activity and current status of key parts of the system.
- The third group provides information on the ticketing system.
- The fourth group provide information on the monitoring alarms.

Access to Views

The views are installed whenever the Reapply Schema action is taken. Once this is accomplished the views are ready to be used. A single data user id, KaseyaViews will be provided. To give access to these views an administrator needs to go to the system menu. Under the title View Access there is a function to change the password of KaseyaViews. By selecting this option the administrator will be presented with a screen to enter a password. Once this is accomplished, the new views can be accessed using the KaseyaViews user id and the password entered.

MSDE/SQL Server Variations

If you are using MSDE/SQL Server rather than the full SQL Server, there are a few minor variations to the steps listed above.

- The SQL server name is always [ComputerName]\KVSAMSDE for Kaseya installations before 4.7. For 4.7 Kaseya installations and later the SQL server name is [ComputerName]\KVSAEXPR05.
- Always set the authentication using a logon ID and password. This will be KaseyaViews with the password you have defined.

Excel Usage

Microsoft Excel can access the views by setting up a data source. Selecting the Settings option from the Start button allows the creation a data source. From the Settings option select the Control Panel. From the Control Panel next select Administrative Tools. From this menu a data source can be created.

The data source should be set up as a System DSN. From this dialog, create a source using the SQL Server driver. The set-up will require the name of the database server (usually the ComputerName), the user id (KaseyaViews) and password, and the database schema name (ksubscribers).

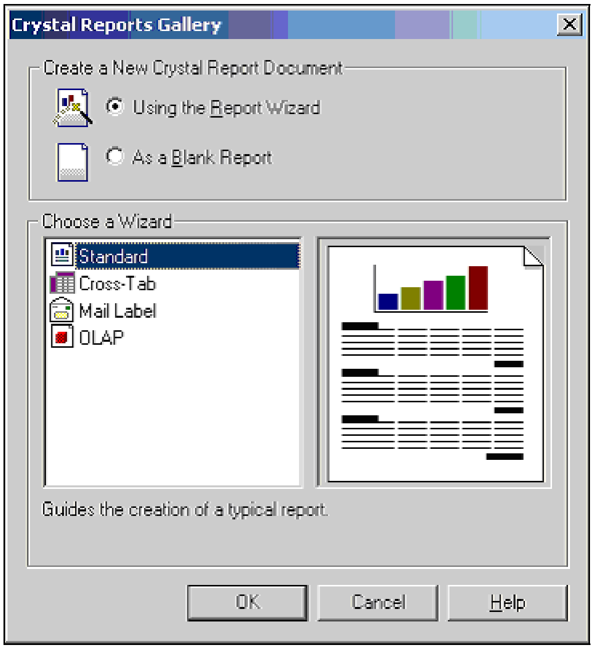
Once a data source is created it can be referenced by Excel. Selecting Get External Data from the Data menu does this. A new database query can be started from this selection. The user is prompted for the credentials to the database. Once this completes a view can be selected. A SQL query can be constructed to bring information directly into Excel at this point.

A data source is a core definition within Microsoft. Most Microsoft products have facilities to access data through a data source definition.

Crystal Reporting Usage

Crystal Reporting can be used to create client specified reports. Crystal 9 and 10 can be used to produce various output formats include PDF, Word and Excel. To set up a report the Crystal Report Wizard can be used. This process begins with the following dialog.

1. The client picks a report format. For this example standard will be used.

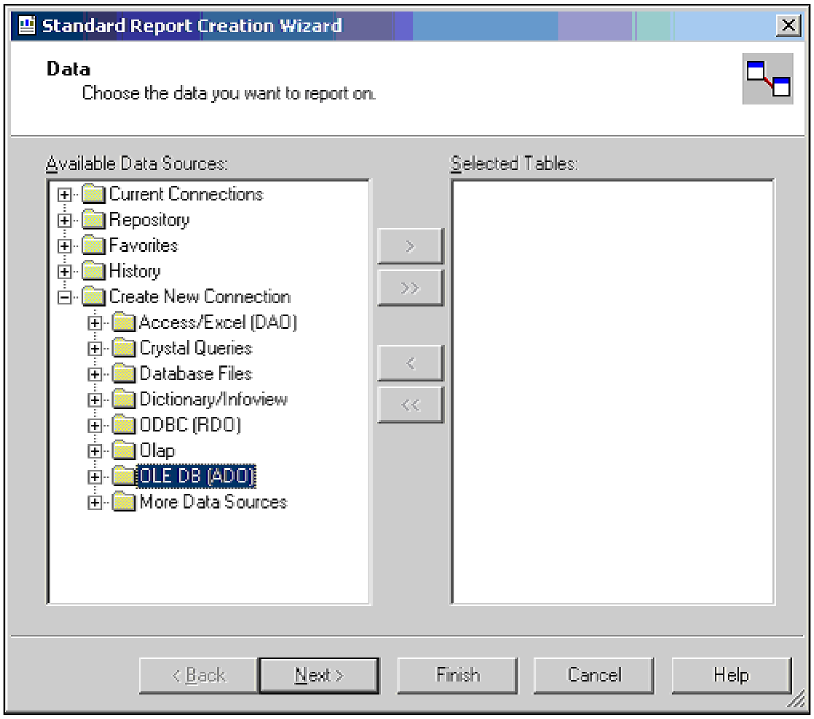


● Using the Report Wizard

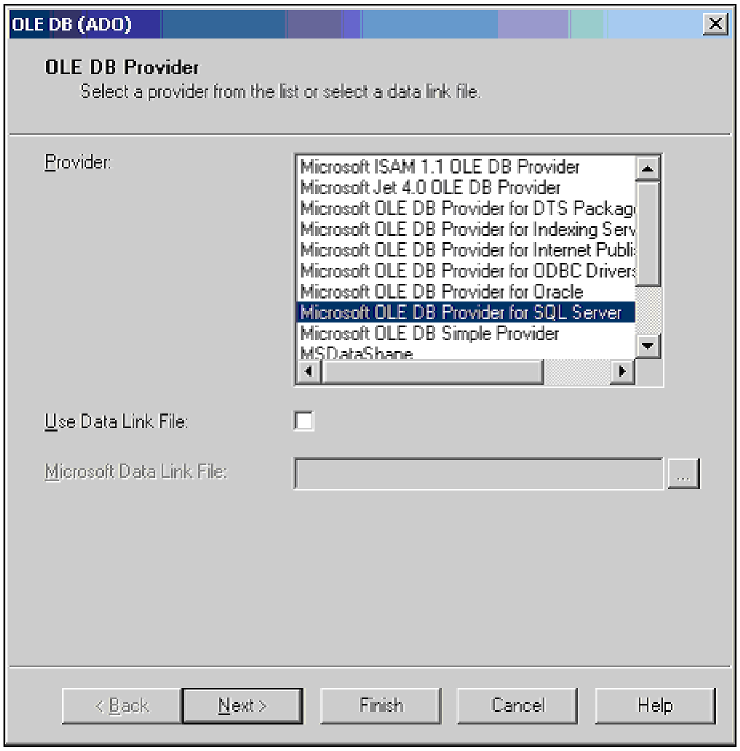
○ As a Blank Report

Guides the creation of a typical report.

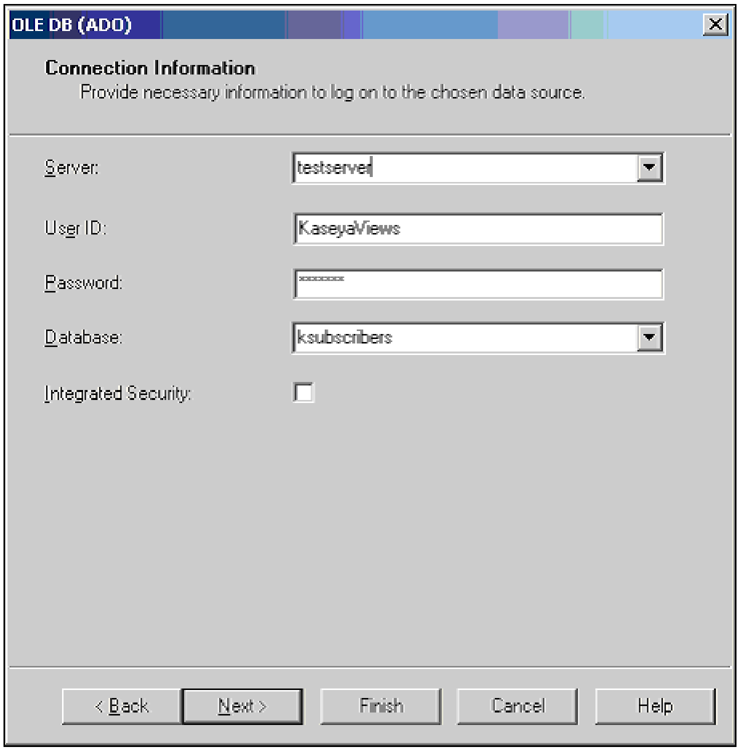
2. Next the data source is selected. This begins by picking an access method. ADO should be selected.



3. Once ADO is selected the SQL Server driver can be selected. This is the correct selection to access the Kaseya database.


OLE DB (ADO)
OLE DB Provider
Select a provider from the list or select a data link file.
Provider:
Microsoft ISAM 1.1 OLE DB Provider
Microsoft Jet 4.0 OLE DB Provider
Microsoft OLE DB Provider for DTS Packag
Microsoft OLE DB Provider for Indexing Serv
Microsoft OLE DB Provider for Internet Publi
Microsoft OLE DB Provider for ODBC Drivers
Microsoft OLE DB Provider for Oracle
Microsoft OLE DB Provider for SQL Server
Microsoft OLE DB Simple Provider
MSDataShape
Use Data Link File: □
Microsoft Data Link File:
...
< Back
Next >
Finish
Cancel
Help

4. The next step is providing the credential to make connection to the database. As shown in this dialog, the Server, User Id, Password, and Database must be provided.



OLE DB (ADO)

Connection Information

Provide necessary information to log on to the chosen data source.

Server: testserver

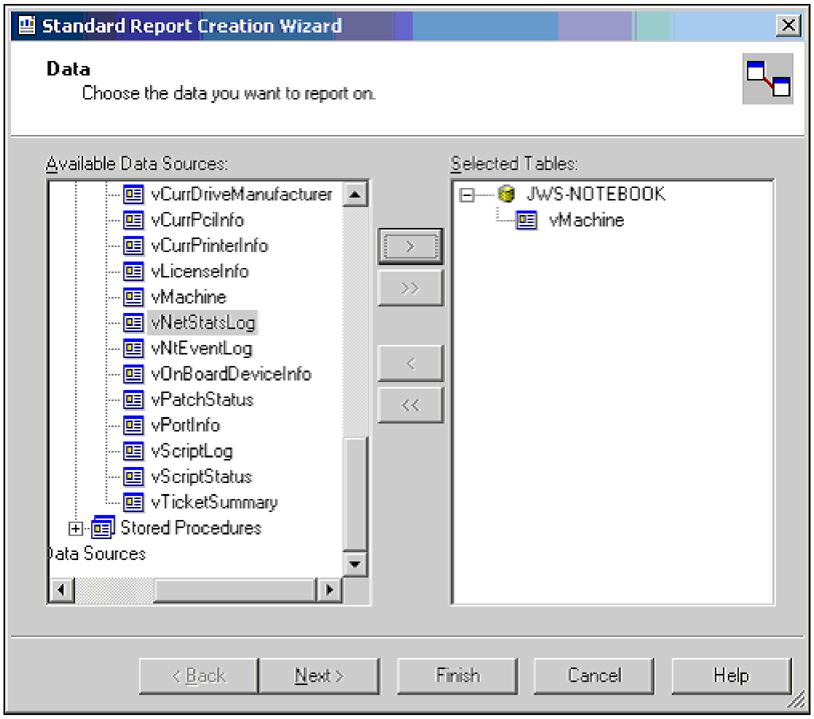
User ID: KaseyaViews

Password: ********

Database: ksubscribers

Integrated Security: □

5. Once the credentials are provide all the available views are displayed. Pick one or more for the report desired.



Standard Report Creation Wizard

Data

Choose the data you want to report on.

Available Data Sources:

- vCurrDriveManufacturer
- vCurrPciInfo
- vCurrPrinterInfo
- vLicenseInfo
- vMachine
- vNetStatsLog
- vNtEventLog
- vOnBoardDeviceInfo
- vPatchStatus
- vPortInfo
- vScriptLog
- vScriptStatus
- vTicketSummary
- Stored Procedures

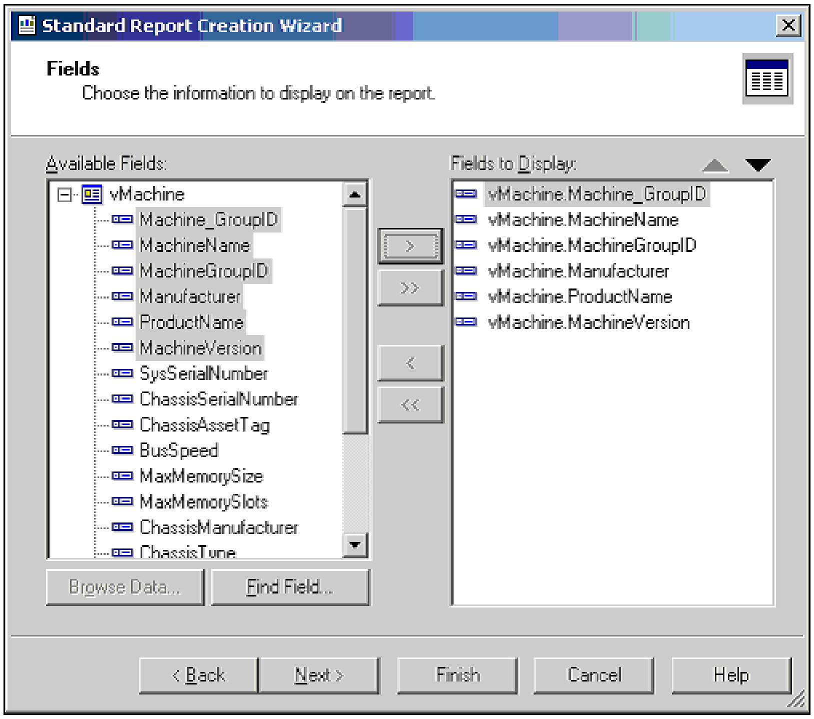
ata Sources

Selected Tables:

- JWS-NOTEBOOK
  - vMachine

6. After a view is selected the columns to be included can then be selected. Crystal provides a variety of ways to format this data. This

document does not attempt to describe these options. The Crystal documentation should be reviewed for this information.



Standard Report Creation Wizard

Fields

Choose the information to display on the report.

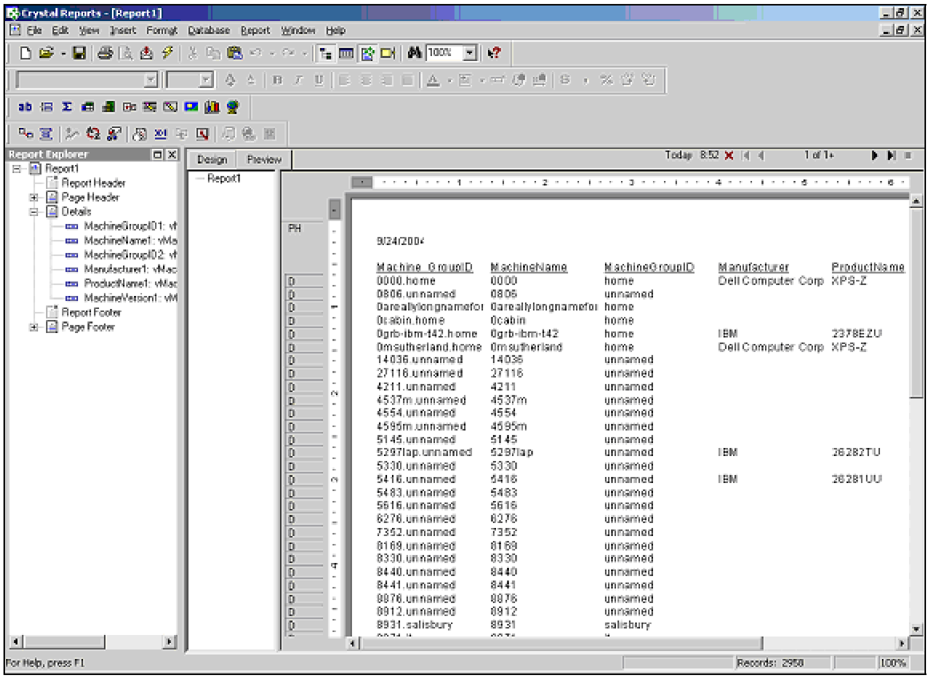
Available Fields:

- vMachine
  - Machine_GroupID
  - MachineName
  - MachineGroupID
  - Manufacturer
  - ProductName
  - MachineVersion
  - SysSerialNumber
  - ChassisSerialNumber
  - ChassisAssetTag
  - BusSpeed
  - MaxMemorySize
  - MaxMemorySlots
  - ChassisManufacturer
  - ChassisType

Fields to Display:

- vMachine.Machine_GroupID
- vMachine.MachineName
- vMachine.MachineGroupID
- vMachine.Manufacturer
- vMachine.ProductName
- vMachine.MachineVersion

7. The resulting report can be printed or emailed to the appropriate consumers of the report. The format of the report can be designated. This facility can be used to produce a PDF or a variety of other formats.



Crystal Reports - [Report1]

- Report1
  - Report Header
  - Page Header
  - Details
    - MachineGroupID1: vM
    - MachineName1: vMa
    - MachineGroupID2: vM
    - Manufacturer1: vMac
    - ProductName1: vMac
    - MachineVersion1: vM
  - Report Footer
  - Page Footer

9/24/2004

Machine_GroupID	MachineName	MachineGroupID	Manufacturer	ProductName
0000.home	0000	home	Dell Computer Corp	XPS-Z
0806.unnamed	0806	unnamed		
0areallylongnamefor	0areallylongnamefor	home		
0cabin.home	0cabin	home		
0grb-ibm-t42.home	0grb-ibm-t42	home	IBM	2378EZU
0msutherland.home	0msutherland	home	Dell Computer Corp	XPS-Z
14036.unnamed	14036	unnamed		
27116.unnamed	27116	unnamed		
4211.unnamed	4211	unnamed		
4537m.unnamed	4537m	unnamed		
4554.unnamed	4554	unnamed		
4595m.unnamed	4595m	unnamed		
5145.unnamed	5145	unnamed		
5297lap.unnamed	5297lap	unnamed	IBM	26282TU
5330.unnamed	5330	unnamed		
5416.unnamed	5416	unnamed	IBM	26281UU
5483.unnamed	5483	unnamed		
5616.unnamed	5616	unnamed		
6276.unnamed	6276	unnamed		
7352.unnamed	7352	unnamed		
8169.unnamed	8169	unnamed		
8330.unnamed	8330	unnamed		
8440.unnamed	8440	unnamed		
8441.unnamed	8441	unnamed		
8876.unnamed	8876	unnamed		
8912.unnamed	8912	unnamed		
8931.salisbury	8931	salisbury		

Views Provided

Machines Group

vBaseApplicationInfo *(page 552)*	The baseline list of applications on a client desktop machine.
vBaseCpuInfo *(page 553)*	The baseline list of the CPUs in a client desktop machine.
vBaseDiskInfo *(page 553)*	The baseline list of the disks in a client desktop machine.
vBaseDriveManufacturer *(page 554)*	The baseline list of the manufacturers of the disks in a client desktop machine.
vBasePciInfo *(page 554)*	The baseline list of the PCI cards in a client desktop machine.
vBasePrinterInfo *(page 555)*	The baseline list of printers in a client desktop machine.
vCollectionMember *(page 555)*	List the collections each machine ID belongs to (if any)
vCurrApplicationInfo *(page 552)*	The current list of applications on a client desktop machine.
vCurrCpuInfo *(page 553)*	The current list of the CPUs in a client desktop machine.
vCurrDiskInfo *(page 553)*	The current list of the disks in a client desktop machine.
vCurrDriveManufacturer *(page 554)*	The current list of the manufacturers of the disks in a client desktop machine.
vCurrPciInfo *(page 554)*	The current list of the PCI cards in a client desktop machine.
vCurrPrinterInfo *(page 555)*	The current list of printers in a client desktop machine.
vLicenseInfo *(page 556)*	The licenses of applications on this machine.
vMachine *(page 556)*	The information known about each client desktop machine.
vOnBoardDeviceInfo *(page 564)*	The current list of on board devices in a client desktop machine.
vPortInf *(page 567)*	The current list of ports in a client desktop machine.
vSystemInfo *(page 569)*	All items collected by the Audit > System Info *(page 38)* function.

Activity / Status Group

vAdminNotesLog *(page 548)*	Notes each admin enters manually for a machine or group of machines. Entries in this log never expire.
vAgentConfiguration *(page 549)*	Lists agent specific configuration data
vAgentLabel *(page 550)*	
vAlertLog *(page 550)*	Logs each alert sent out via email. Multiple rows per machine.
vBackupLog *(page 551)*	Logs all backup related events
vConfigLog *(page 555)*	Log of all configuration changes. One entry per change.
vNetStatsLog *(page 563)*	Network statistics log from the Agent.
vNtEventLog *(page 563)*	NT Event log data collected from each managed machine.
vPatchApprovalStatus *(page 563)*	Show the approval status of a patch. There is one row for each active patch.
vPatchPolicy *(page 565)*	Show the approval status of a patch. There is one row for each active patch in each patch policy.
vPatchPolicyMember *(page 566)*	Lists all patch policies to which each machine ID is a member, if any.

vPatchStatus *(page 567)* Information on the state of all patches on a per machine basis. There is one row per patch for each machine.

vScriptLog *(page 564)* Log of script executions as viewed by the KServer.

vScriptStatus *(page 568)* Script status for each client.

Ticketing Group

vTicketSummary *(page 570)* Trouble ticket summary. One row per ticket. Column names are used as the names displayed in the view summary table.

vTicketNote *(page 570)* The notes associated with a ticket. Potentially multiple rows per ticket.

vTicketField *(page 570)* The fields associated with a ticket. The standard fields, category, status and priority are always attached to a ticket. User fields added will also be included in this view.

Monitor Alarm Group

vMonitorAlarmAlert *(page 558)* The current list of alarms for all alerts.

vMonitorAlarmCounter *(page 559)* The current list of alarms for all monitor counters.

vMonitorAlarmProcess *(page 560)* The current list of alarms for all monitor processes.

vMonitorAlarmService *(page 561)* The current list of alarms for all monitor services.

vMonitorAlarmSNMP *(page 561)* The current list of alarms for all monitor SNMP Get objects.

vMonitorAlarmSystemCheck *(page 562)* The current list of alarms for all system checks.

vAdminNotesLog

vAdminNotesLog	Notes each admin enters manually for a machine or group of machines. Entries in this log never expire.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
AdminLogin	varchar	Admin logon name. (note: no not name this col adminName)
EventTime	datetime	Time stamp string representing the time the action took place. Default is CURRENT_TIMESTAMP so nothing needs to be entered here.
NoteDesc	varchar	description of the action

vAgentConfiguration

vAgentConfiguration	Logs each alert sent out via email. Multiple rows per machine	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
firstCheckin	datetime	timestamp recording the first time this agent checked into the system
lastCheckin	datetime	timestamp recording the most recent time this agent checked into the system
currentUser	varchar	login name of the currently logged in user. Blank if no one logged in at this time
lastLoginName	varchar	login name of the last user to log into this system
lastReboot	datetime	timestamp when this system was last rebooted
agentVersion	int	version number of agent installed on this system
contactName	varchar	User contact name assigned to this agent
contactEmail	varchar	User email address assigned to this agent
contactPhone	varchar	Contact phone number assigned to this agent
contactNotes	varchar	Notes associated with the contact information for this agent
enableTickets	int	0 if this user does not have access to ticketing through the user interface
enableRemoteControl	int	0 if this user does not have access to remote control through the user interface
enableChat	int	0 if this user does not have access to chat through the user interface
loginName	varchar	Login Name assigned to this user (if any) to access the system user portal interface.
credentialName	varchar	The username of the credential set for this agent (if any)
primaryKServer	varchar	address:port agent connects to for its primary kserver connection
secondaryKServer	varchar	address:port agent connects to for its secondary kserver connection
quickCheckinSecs	int	interval in seconds between quick checkins
agentTempDir	varchar	The temp directory used by the agent on this system

vAgentLabel

vAgentLabel		
Column Name	Type	Purpose
displayName	varchar	The name of the machine ID.group name.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
agentGuidStr	varchar	A string version of agentGuid. Some languages convert the large number numeric to exponential notation. This string conversion prevents that.
online	int	0 -> Agent is offline. 1 -> Agent is online.
timezoneOffset	int	The timezone offset for the agent as compared to universal time.
currentLogin	varchar	The login name of the current user.
toolTipNotes	varchar	The tooltip text displayed for a machine ID.
showToolTip	tinyint	0 -> Do not show machine ID tool tips. 1 -> Do show tool machine ID tool tips.
agntTyp	int	0 -> windows agent 1 -> mac agent

vAlertLog

vAlertLog	Logs each alert sent out via email. Multiple rows per machine	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
EventTime	datetime	time stamp when the event was recorded
AlertEmail	varchar	email address to send the alert to

AlertType	int	1 -> Admin account disabled
		2 -> Get File change alert
		3 -> New Agent checked in for the first time
		4 -> Application has been installed or deleted
		5 -> Script failure detected
		6 -> NT Event Log error detected
		7 -> KServer stopped
		8 -> Protection violation detected.
		9 -> PCI configuration has been changed
		10 -> Disk drive configuration change
		11 -> RAM size changed.
		12 -> Test email sent by serverInfo.asp
		13 -> Scheduled report completed
		14 -> LAN Watch alert type
		15 -> agent offline
		16 -> low on disk space
		17 -> disabled remote control
		18 -> agent online
		19 -> new patch found
		20 -> patch path missing
		21 -> patch install failed
		23 -> Backup Alert
EmailSubject	varchar	Email subject line
EmailBody	varchar	Email body

vBackupLog

vBackupLog	Logs each alert sent out via email. Multiple rows per machine	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
EventTime	datetime	time stamp when the event was recorded
description	varchar	description of the reported task
durationSec	int	number of seconds the reported task took to complete

statusType	int	0: full backup 1: offsite replication 2: incremental backup 3: offsite replication suspended 4: offsite replication skipped because backup failed 5: folder backup 6: offsite folder suspended
result	int	0: failure 1: success 2: archive incomplete
imageSize	float	The size of the backup.

vBaseApplicationInfo / vCurrApplicationInfo

vBaseApplicationInfo vCurrApplicationInfo	audit results for installed applications. One entry per installed application found in the registry key HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\App Paths.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
ProductName	varchar	Product name (e.g. Microsoft Office 2000)
ProductVersion	varchar	Version (e.g. 9.0.3822)
ApplicationName	varchar	Application name (e.g. Winword.exe)
manufacturer	varchar	Manufacturers name (e.g. Microsoft Corporation)
ApplicationDesc	varchar	Description (e.g. Microsoft Word for Windows)
LastModifiedDate	varchar	File date (e.g. 02/24/2000 17:23:44)
ApplicationSize	int	File size in bytes (e.g. 8810548)
DirectoryPath	varchar	Directory path on client desktop (e.g. C:\PROGRA~1\MICROS~4\OFFICE)

vBaseCpuInfo / vCurrCpuInfo

vBaseCpuInfo vCurrCpuInfo	audit results for the CPU in a client desktop machine. One entry per audit of a client desktop.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
CpuDesc	varchar	CPU description (e.g. Pentium III Model 8)
CpuSpeed	int	CPU speed in MHz (e.g. 601)
CpuCount	int	Number of processors (e.g. 1)
TotalRam	int	Amount of RAM in MBytes (e.g. 250)

vBaseDiskInfo / vCurrDiskInfo

vBaseDiskInfo vCurrDiskInfo	audit results for the logical disks found in a client desktop machine. One entry per logical disk from an audit of a client desktop.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
DriveLetter	varchar	Logical disk drive letter (e.g. C)
TotalSpace	int	Total MBytes on the disk (e.g. 28609 for 28.609 GB) May be null if unavailable.
UsedSpace	int	Number of MBytes used (e.g. 21406 for 21.406 GB). May be null if unavailable.
FreeSpace	int	Number of MBytes free (e.g. 21406 for 21.406 GB). May be null if unavailable.
DriveType	varchar	Fixed = hard diskRemovable = floppy or other removable mediaCDROMNetwork = mapped network drive
VolumeName	varchar	Name assigned to the volume
FormatType	varchar	NTFS, FAT32, CDFS, etc.

vBaseDriveManufacturer / vCurrDriveManufacturer

vBaseDriveManufacturer vCurrDriveManufacturer	Hardware audit results for the IDE & SCSI drives manufacturer and product info found in a client desktop machine. One entry per drive from an audit of a client desktop.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
DriveManufacturer	varchar	Manufacturer name (data currently has 8 characters max)
DriveProductName	varchar	Product identification (data currently has 16 characters max)
DriveProductRevision	varchar	Product revision (data currently has 4 characters max)
DriveType	varchar	Type of disk drive found

vBasePciInfo / vCurrPciInfo

vBasePciInfo vCurrPciInfo	Hardware audit results for the PCI cards manufacturer and product info found in a client desktop machine. One entry per PCI card from an audit of a client desktop.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
VendorName	varchar	PCI Vendor Name
productName	varchar	PCI Product Name
ProductRevision	int	Product revision
PciBaseClass	int	PCI base class number
PciSubclass	int	PCI subclass number
PciBusNumber	int	PCI bus number
PciSlotNumber	int	PCI slot number

vBasePrinterInfo / vCurrPrinterInfo

vBasePrinterInfo vCurrPrinterInfo	Printer audit results for the printers found for the current user logged on to a client desktop machine. One entry per printer from an audit of a client desktop. If no user is logged in, then Agent audits the printers for the system account, typically administrator.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
PrinterName	varchar	Name given to the printer. Same as shown in the Control Panels printer configuration window.
PortName	varchar	Name of the port to which the printer is attached. Same as shown in the Control Panels printer configuration window.
PrinterModel	varchar	Model name is the driver name retrieved from the printer information.

vCollectionMember

vCollectionMember	Lists all collections each machine ID is a member of (if any).	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
collectionName	varchar	Collection Name

vConfigLog

vConfigLog	Log of all configuration changes. One entry per change.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.

agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
EventTime	datetime	Time stamp string representing the time the change was entered. (note: timestamp type was picked to force times into the database as year- month-day-hr-min-sec all in numeric format independent of the format sent in the SQL command. This allows records to be easily sorted by time during retrieval.)
ConfigDesc	varchar	Description of the change

vLicenseInfo

vLicenseInfo	License information collected during audit.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
Publisher	varchar	software publisher (usually in the Publisher reg value)
ProductName	varchar	Software title (usually in DisplayName value but may be the reg key title)
LicenseCode	varchar	License code (usually in the ProductID value)
LicenseVersion	varchar	version string returned by the scanner (if any)
InstallDate	varchar	install date string returned by the scanner (if any)

vMachine

vMachine	The information known about each client desktop machine.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	full machine name. Everything to the left of the left most decimal point is the machine name.
groupName	varchar	full group name for this account. Everything to the right of the left most decimal point is the group name.
Manufacturer	varchar	Manufacturer string (type 1)

ProductName	varchar	Product Name string (type 1)
MachineVersion	varchar	Version string (type 1)
SysSerialNumber	varchar	Serial Number string (type 1)
ChassisSerialNum	varchar	Chassis Serial Number (type 3)
ChassisAssetTag	varchar	Chassis Asset Tag number (type 3)
BusSpeed	varchar	External Bus Speed (in MHz) (type 4)
MaxMemorySize	varchar	Maximum Memory Module Size (in MB) (type 16 - Maximum Capacity or if type 16 not available, Maximum Memory Module Size type 5)
MaxMemorySlots	varchar	Number of Associated Memory Slots (Number of Memory Devices in type 16 or if type 16 not available Number of Associated Memory Slots in type 5)
ChassisManufacturer	varchar	Chassis Manufacturer (type 3)
ChassisType	varchar	Chassis Type (type 3)
ChassisVersion	varchar	Chassis Ver (type 3)
MotherboardManfacturer	varchar	Motherboard Manufacturer (type 2)
MotherboardProductCode	varchar	Motherboard Product Code (type 2)
MotherboardVersion	varchar	Motherboard Version (type 2)
MotherboardSerialNumber	varchar	Motherboard Serial Number (type 2)
ComputerName	varchar	Name of the Computer
IpAddress	varchar	IP Address of the computer in a.b.c.d notation
SubnetMask	varchar	Subnet mask in a.b.c.d notation. String is empty if data is unavailable
DefaultGateway	varchar	Default gateway IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer1	varchar	DNS server #1s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer2	varchar	DNS server #2s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer3	varchar	DNS server #3s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer4	varchar	DNS server #4s IP address in a.b.c.d notation. String is empty if data is unavailable.
DhcpEnable	int	0 -> Data is unavailable
		1 -> DHCP on client computer is enabled
		2 -> Disabled
DhcpServer	varchar	DHCP servers IP address in a.b.c.d notation. String is empty if data is unavailable.
WinsEnabled	int	0 -> Data is unavailable
		1 -> WINS resolution on client computer is enabled
		2 -> Disabled
PrimaryWinsServer	varchar	Primary WINS servers IP address in a.b.c.d notation. String is empty if unavailable.

SecondaryWinsServer	varchar	Secondary WINS servers IP address in a.b.c.d notation. String is empty if unavailable.
ConnectionGatewayIp	varchar	IP Address in a.b.c.d notation obtained by the Kserver as the source address of the Agent. This IP is the Agents network gateway and will be different from the IpAddress if the computer is behind NAT for example. String is empty if unavailable.
OsType	varchar	String contains OS type, such as 95, 98, NT4, 2000, NT3.51, or WIN32s. Derived from portions of MajorVersion, MinorVersion, and PlatformId.
OsInfo	varchar	String contains additional OS info, such as Build 1381 Service Pack 3. Derived from portions of BuildNumber and CsdVersion.
MajorVersion	int	Major version number from GetVersionEx() Windows function call.
MinorVersion	int	Minor version number from GetVersionEx() Windows function call.If PlatformId is Win32 for Windows, then a 0 MinorVersion indicates Windows 95. If PlatformId is Win32 for Windows, then then a MinorVersion > 0 indicates Windows 98.
MacAddr	varchar	String containing the physical address, i.e. the Media Access Control address, of the connection. A MAC address has the form of: 00-03- 47-12-65-77
LoginName	varchar	User name of the currently logged on user. This value is updated with every quick check in. The agent error log file is updated with each change.

vMonitorAlarmAlert

vMonitorAlarmAlert	Listing of all alarms created by monitor alerts.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	4 -> Monitor alert
EventLogType	int	Only applies to AlertType=6(NT Event Log) 0 -> Application Event Log 1 -> System Event Log 2 -> Security Event Log
AlarmType	smallint	0 -> Alarm 1 -> Trending

AlertType	int	2 -> Get File change alert
		3 -> New Agent checked in for the first time
		4 -> Application has been installed or deleted
		5 -> Script failure detected
		6 -> NT Event Log error detected
		8 -> Protection violation detected
		9 -> PCI configuration has been changed
		10 -> Disk drive configuration change
		11 -> RAM size changed
		14 -> LAN Watch alert type
		15 -> Agent offline
		16 -> Low on disk space
		17 -> Disabled remote control
		18 -> Agent online
		19 -> New patch found
		20 -> Patch path missing
		21 -> Patch install failed
		23 -> Backup Alert
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
AdminName	varchar	Administrator who assigned monitor alert to machine

vMonitorAlarmCounter

vMonitorAlarmCounter	Listing of all alarms created by monitor counters.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	0 -> Monitor Counter

MonitorName	varchar	Name of monitor counter object
AlarmType	smallint	0 -> Alarm
		1 -> Trending
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
LogValue	float	Value causing alarm
AdminName	varchar	Administrator who assigned monitor counter to machine

vMonitorAlarmProcess

vMonitorAlarmProcess	Listing of all alarms created by monitor processes.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	2 -> Monitor Process
MonitorName	varchar	Name of monitor process object
AlarmType	smallint	0 -> Alarm
		1 -> Trending
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
LogValue	float	Value causing alarm, below are process values:
		0 -> Stopped
		1 -> Running
AdminName	varchar	Administrator who assigned monitor process to machine

vMonitorAlarmService

vMonitorAlarmService	Listing of all of the alarms created by monitor services.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	0 -> Monitor Service
MonitorName	varchar	Name of monitor service object
AlarmType	smallint	0 -> Alarm
		1 -> Trending
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
LogValue	float	Value causing alarm, below are service values:
		-1 -> Does not exist
		0 -> Reserved
		1 -> Stopped
		2 -> Start Pending
		3 -> Stop Pending
		4 -> Running
		5 -> Continue Pending
		6 -> Pause Pending
		7 -> Paused
AdminName	varchar	Administrator who assigned monitor service to machine

vMonitorAlarmSNMP

vMonitorAlarmSNMP	Listing of all alarms created by monitor SNMP Get objects.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with

agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	3 -> Monitor SNMP Get
MonitorName	varchar	Name of monitor SNMP Get object
AlarmType	smallint	0 -> Alarm
		1 -> Trending
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
LogValue	float	Value causing alarm, if the return value of the SNMP Object Get command is a string the value will be the the Message
SNMPName	varchar	Name returned from SNMP Device on scan
SNMPCustomName	varchar	Custom name for SNMP Device
AdminName	varchar	Administrator who assigned monitor SNMP Get to machine

vMonitorAlarmSystemCheck

vMonitorAlarmSystemCheck	Listing of all alarms created by monitor system checks.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number
MonitorType	tinyint	5 -> Monitor system check
SystemCheckType	int	1 -> Web Server
		2 -> DNS Server
		4 -> Port Connection
		5 -> Ping
		6 -> Custom
AlarmType	smallint	0 -> Alarm
		1 -> Trending

Parameter1	varchar	First parameter used in system check
Parameter2	varchar	(Optional) Second parameter used by system check
Message	varchar	Message created from alarm, email message body
AlarmSubject	varchar	Subject of alarm and email subject
AlarmEmail	varchar	Email Address(es) alarm is sent to
EventTime	datetime	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
AdminName	varchar	Administrator who assigned of monitor counter to machine

vNetStatsLog

vNetStatsLog	network statistics log from the Agent	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
EventTime	datetime	Time stamp string representing the time the change was entered. (note: timestamp type was picked to force times into the database as year-month-day-hr-min-sec all in numeric format independent of the format sent in the SQL command. This allows records to be easily sorted by time during retrieval.)
BytesRcvd	int	Number of bytes received during this statistics period
BytesSent	int	Number of bytes sent during this statistics period
ApplicationName	varchar	Application name using the network

vNtEventLog

vNtEventLog	Event log data collected from each managed machine	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent

LogType	int	1 -> Application Log 2 -> Security Log 3 -> System Log
EventType	int	1 -> Error 2 -> Warning 4 -> Informational 8 -> Success Audit 16 -> Failure Audit
EventTime	datetime	Time the event occurred
ApplicationName	varchar	event log source
EventCategory	varchar	event log category
EventID	int	event log event ID
UserName	varchar	event log user
ComputerName	varchar	event log computer name
EventMessage	varchar	event log message

vOnBoardDeviceInfo

vOnBoardDeviceInfo	Data collected by KaSmBios.exe during an audit for on-board device information. There is one row per active slot. All information is retrieved from Type 10.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
DeviceType	varchar	Device Type
DeviceDesc	varchar	Device Description

vPatchApprovalStatus

vPatchApprovalStatus	Show the approval status of a patch. There is one row for each active patch.	
Column Name	Type	Purpose
patchDataId	int	Unique identifier for this patch within the database
KBArticle	varchar	Microsoft knowledge base article number
SecurityBulletin	varchar	Microsoft security bulleting number

Title	varchar	Patch title
UpdateClassificationId	smallint	Numeric representation of the patch update classification; included to make filtering easier; Values are: 100 = Critical Security Update (High Priority) 101 = Important Security Update (High Priority) 102 = Moderate Security Update (High Priority) 103 = Low Security Update (High Priority) 104 = Non-rated Security Update (High Priority) 110 = Critical Update (High Priority) 120 = Update Rollup (High Priority) 200 = Service Pack (Optional) 210 = Update (Optional) 220 = Feature Pack (Optional) 230 = Tool (Optional)
UpdateClassification	varchar	Textual representation of the patch update classification
Product	varchar	Product this to which this patch is associated
PublishedDate	datetime	Date that this patch was last update by Microsoft, if available
Language	varchar	Language support for the patch
numApproved	int	Number of patch policies in which this patch is approved
numDenied	int	Number of patch policies in which this patch is denied
numPending	int	Number of patch policies in which this patch is pending approval

vPatchPolicy

vPatchPolicy	Show the approval status of a patch. There is one row for each active patch in each patch policy.	
Column Name	Type	Purpose
patchDataId	int	Unique identifier for this patch within the database
Policy	varchar	Name of patch policy
KBArticle	varchar	Microsoft knowledge base article number
SecurityBulletin	varchar	Microsoft security bulleting number
Title	varchar	Patch title

UpdateClassificationId	smallint	Numeric representation of the patch update classification; included to make filtering easier; Values are: 100 = Critical Security Update (High Priority) 101 = Important Security Update (High Priority) 102 = Moderate Security Update (High Priority) 103 = Low Security Update (High Priority) 104 = Non-rated Security Update (High Priority) 110 = Critical Update (High Priority) 120 = Update Rollup (High Priority) 200 = Service Pack (Optional) 210 = Update (Optional) 220 = Feature Pack (Optional) 230 = Tool (Optional)
UpdateClassification	varchar	Textual representation of the patch update classification
ApprovalStatusId	smallint	Numeric representation of the patch approval status; included to make filtering easier; Values are: 0 = Approved 1 = Denied 2 = Pending Approval
ApprovalStatus	varchar	Textual representation of the patch approval status
Product	varchar	Product this to which this patch is associated
PublishedDate	datetime	Date that this patch was last update by Microsoft, if available
Language	varchar	Language support for the patch
Admin	varchar	Name of administrator that made the most recent status change ("*System*" indicates that the approval status was set by the system based upon patch policy default approval status or by KB Override)
Changed	datetime	Timestamp of most recent approval status change
StatusNotes	varchar	Notes added by Admin concerning the patch approval status

vPatchPolicyMember

vPatchPolicyMember	Lists all patch policies to which each machine ID is a member, if any.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id to which it is associated
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent

PolicyName	varchar	Patch Policy Name

vPatchStatus

vPatchStatus	Shows the state of all patches on a per machine basis. There is one row per patch for each machine.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	varchar	Machine Name used for each agent
GroupName	varchar	Group Name used for each agent
KBArticle	varchar	
SecurityBulletin	varchar	bulletin ID string reported from the patch scanner
Title	varchar	
UpdateClassification	smallint	
InstallSeparate	tinyint	
IsSuperseded	tinyint	
PatchAppliedFlag	int	0 -> patch has not been applied 1 -> patch has been applied
PatchStatus	int	
PatchIgnoreFlag	int	0 -> process this patch 1 -> ignore this patch
InstallDate	dateTime	timestamp when this patch was applied by the VSA
InstalledBy	varchar	Name of admin (if we installed the patch) or value from registry (if scanner retuned the value)

vPortInfo

vPortInfo	Data collected by KaSmBios.exe during an audit on port connector information. There is one row per active slot. All information is retrieved from Type 8.	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent

InternalDesc	varchar	Internal Description
ExternalDesc	varchar	External Description
ConnectionType	varchar	Connection Type
PortType	varchar	Port Type

vScriptLog

vScriptLog	Log of script executions as viewed by the KServer	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
EventTime	datetime	Time stamp string representing the time the change was entered. (note: timestamp type was picked to force times into the database as year- month-day-hr-min-sec all in numeric format independent of the format sent in the SQL command. This allows records to be easily sorted by time during retrieval.)
ScriptName	varchar	Name of script
ScriptDesc	varchar	Event description
AdminName	varchar	Admin name that scheduled this script.

vScriptStatus

vScriptStatus	script status for each client	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
ScriptName	varchar	Name of script
LastExecTime	datetime	Time stamp string representing the last time that the script was executed

lastExecStatus	varchar	Status of the last execution. The string will be one of the following:Script Summary: Success <ELSE or THEN>Script Summary: Failed <ELSE or THEN> in # step<ELSE or THEN> is replaced with the respective word ELSE or THEN.# is replaced by the number of steps that failed in the script (not useful unless allowing the processing to continue after a failure)step is replaced by the work steps if the script failed more than 1 step.
AdminLogin	varchar	Admin name that last scheduled this script. (Dont name this column adminName because that is a primary key used by database migration. adminName and emailAddr should not appear in the same table.

vSystemInfo

vSystemInfo	Data collected by System Info function	
Column Name	Type	Purpose
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
Manufacturer	varchar	System manufacturer string
Product Name	varchar	Name or model number of the machine supplied by the manufacturer
System Version	varchar	Machine version string
System Serial Number	varchar	Machine serial number string entered by the manufacturer
Chassis Serial Number	varchar	Serial number string supplied by the manufacturer
Chassis Asset Tag	varchar	Asset tag string supplied by the manufacturer
External Bus Speed	varchar	Motherboard bus speed
Max Memory Size	varchar	Max memory this system may be configured with
Max Memory Slots	varchar	Max number of memory slots this system has
Chassis Manufacturer	varchar	Name of manufacturer of the chassis
Chassis Type	varchar	system chassis type
Chassis Version	varchar	version string of the chassis
Motherboard Manufacturer	varchar	Name of motherboard manufacturer
Motherboard Product	varchar	Motherboard model name
Processor Family	varchar	processor family name
Processor Manufacturer	varchar	processor manufacturer name
Processor Version	varchar	processor version string
CPU Max Speed	varchar	max speed of this processor
CPU Current Speed	varchar	configured speed of this processor

* Custom columns defined using Audit > System Info *(page 38)* display as additional columns at the end of this view.

vTicketField

vTicketField	Each ticket will have a set of fields associated with it. Three of these fields are standard fields, status, priority, and category. Also, a series of user fields can be added that will also be seen in this view. Each field has a datatype. All lists are stored as integer values. The view vTicketField has the associated text for each list value.	
Column Name	Type	Purpose
TicketID	int	unique trouble ticket ID number
TicketLabel	varchar	The label of the field
IntegerValue	int	The value of a integer field
NumberValue	numeric	The value of a number field
StringValue	varchar	The value of a string field
ListValue	varchar	The value of a list field

vTicketNote

vTicketNote	Trouble ticket notes are stored in the database. Each ticket summary can have multiple notes. There is a timestamp that identifies the order they were attached.	
Column Name	Type	Purpose
TicketID	int	unique trouble ticket ID number
Author	varchar	person who wrote this note in the ticket
TicketNoteTime	dateTime	Timestamp identifying when the note was added
TicketNote	varchar	Contents of the ticket note
HiddenNote	int	0 if the note is visible. 1 if the note is hidden.

vTicketSummary

vTicketSummary	Trouble ticket summary. One row per ticket. Column names are used as the names displayed in the view summary table.	
Column Name	Type	Purpose
TicketID	int	unique trouble ticket ID number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	numeric	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	varchar	Machine Name used for each agent

groupName	varchar	Group Name used for each agent
TicketSummary	varchar	summary string briefly describing the ticket
Assignee	varchar	Admin name this ticket is assigned to
CreatedBy	varchar	admin name (or machine ID if entered by user) of the person that created this ticket
CreationDate	datetime	timestamp when the ticket was created
DueDate	datetime	ticket due date
LastModifiedDate	datetime	Date of the most recent note entered for this ticket
ResolutionDate	datetime	timestamp when the ticket was closed
UserName	varchar	The name of the submitter
UserEmail	varchar	The email address of the submitter
UserPhone	varchar	The phone number of the submitter

Chapter 15

VSA API Web Service

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Chapter 16

Overview

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VSA API Web Service Summary

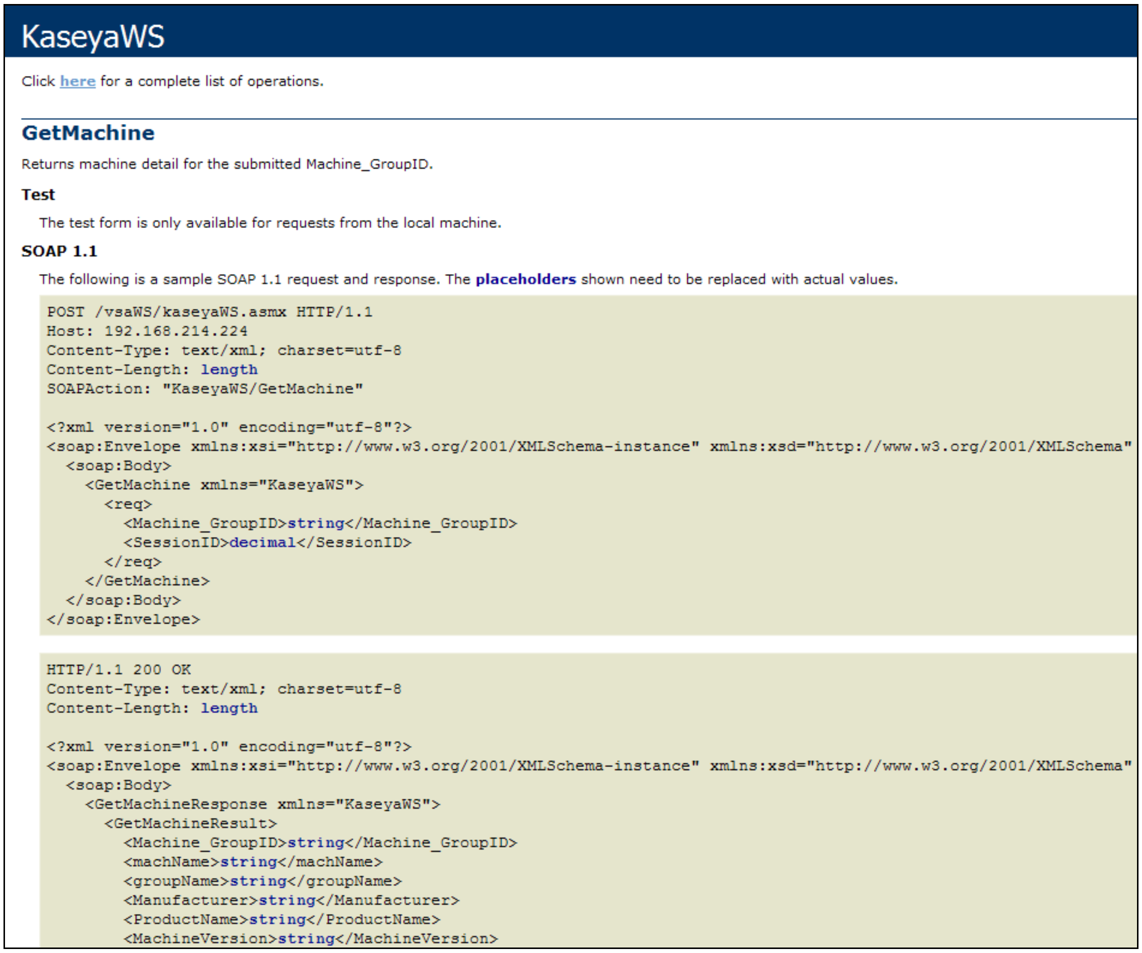
The VSA API Web Service provides a generalized interface for a client to programmatically interface to the VSA. This API facilitates a client being able to interface a third party package. The API focuses on the following services:

- Connect - This service facilitates the consumer of the API to authenticate and receive a GUID to use throughout the communication. This GUID ages off similarly to how users age off.
- Incidents - This service provides basic facilities for the user to be notified of new tickets. This facility allows users to update fields on a ticket.
- Alarms - This service provides basic facilities for the user to be notified of new alarms and mark an alarms as closed.
- Machines - This service provides a request to collect a set of data about one or more machines.

VSA API Web Service

The VSA API Web Service is an API documentation resource based on the Web Services Description Language (WSDL). The WSDL displays in a browser and provides an abstract description of the data being exchanged to and from a web service. A client program connecting to a web service can read the WSDL to determine what functions are available on the server. Any special datatypes used are embedded in the WSDL file in the form of XML Schema. The client can then use SOAP to actually call one of the functions listed in the WSDL.

The following is an example of vsaWS output:



KaseyaWS

Click here for a complete list of operations.

GetMachine

Returns machine detail for the submitted Machine_GroupID.

Test

The test form is only available for requests from the local machine.

SOAP 1.1

The following is a sample SOAP 1.1 request and response. The **placeholders** shown need to be replaced with actual values.

```
POST /vsaWS/kaseyaWS.asmx HTTP/1.1
Host: 192.168.214.224
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "KaseyaWS/GetMachine"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  <soap:Body>
    <GetMachine xmlns="KaseyaWS">
      <req>
        <Machine_GroupID>string</Machine_GroupID>
        <SessionID>decimal</SessionID>
      </req>
    </GetMachine>
  </soap:Body>
</soap:Envelope>
```

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  <soap:Body>
    <GetMachineResponse xmlns="KaseyaWS">
      <GetMachineResult>
        <Machine_GroupID>string</Machine_GroupID>
        <machName>string</machName>
        <groupName>string</groupName>
        <Manufacturer>string</Manufacturer>
        <ProductName>string</ProductName>
        <MachineVersion>string</MachineVersion>
```

Enabling VSA API Web Service

To enable the VSA API Web Service:

- Display the System > Configure *(page 524)* page in the VSA.
- Check the Enable VSA API Web Service checkbox.
- Append the string `/vsaWS/KaseyaWS.asmx` to the VSA URL you are using to display the VSA API Web Service.

Special Fields

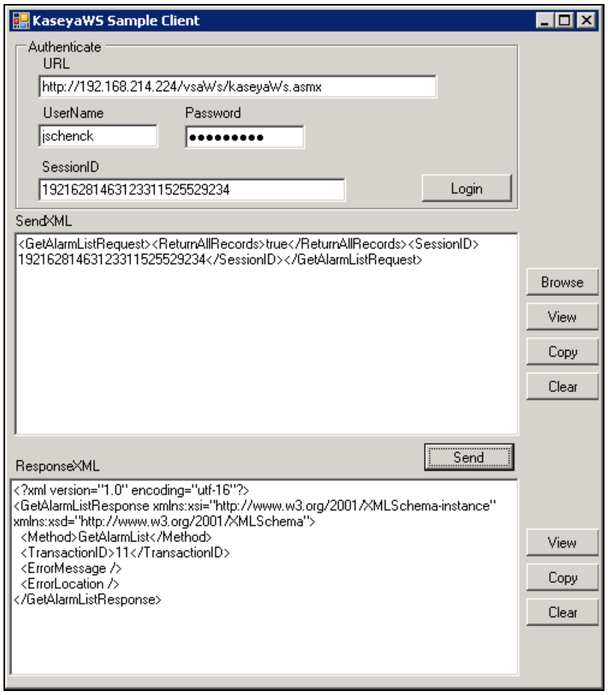
The following fields are included in the response to every request.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

A Session ID is created by the web service and returned to the client the first time a method is invoked by the client. That same session ID must be returned by the client with every method invoked during the session. The SessionID is only valid when received from the same IP address the authentication originates from.

VSA API Web Service Sample Client

A test client and set of test XMLs are distributed with the VSA API Web Service to help you familiarize yourself with the various API operations. The source code for the VSA API Web Service Sample Client is provided to you without restriction. You can use it to see how the client was constructed and incorporate any part of its code into your own application.



URL: http://192.168.214.224/vsaWs/kaseyaWs.asmx

UserName: jschenck

Password: ●●●●●●●●●

SessionID: 19216281463123311525529234

SendXML:

```
<GetAlarmListRequest><ReturnAllRecords>true</ReturnAllRecords><SessionID>
19216281463123311525529234</SessionID></GetAlarmListRequest>
```

ResponseXML:

```
<?xml version="1.0" encoding="utf-16"?>
<GetAlarmListResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Method>GetAlarmList</Method>
  <TransactionID>11</TransactionID>
  <ErrorMessage />
  <ErrorLocation />
</GetAlarmListResponse>
```

To run the sample client:

1. Run the sample client located on your KServer:
   `<Install Dir>\vsaWs\TestClient\KaseyaWStestClient.exe`
2. Enter the UserName and Password of a user authorized to connect with the KServer.

   > Note: This is the same username and password that an administrator uses to login into the KServer.

3. Click the Login button to display a value in the SessionID field.
4. Click the Browse button to select a test XML file. This populates the SendXML textbox with the text of the XML file.

   > Note: You do not have to enter a value between the <SessionID> element tags of the test XML message. The Sample Client automatically inserts the displayed SessionID into any XML message when you click the Send button.

5. Click the Send button to send the XML message to the target URL. A response XML message displays in the ResponseXML textbox.

VSA API Web Service Security

General

The VSA API Web Service is accessible, by default, from any IP address in the world using any valid VSA administrator credentials. In this default configuration, valid username /password combinations are considered for authentication originating from any machine.

In any configuration, the `hash.dll` provided by the VSA must be used to encrypt the password for submission. Implementation details for the `hash.dll` are contained in the sample source code provided.

Once a successful Authentication request issues a SessionID, this SessionID must be submitted with every service invocation, and is only valid when received from the IP address it was issued to. The issued SessionID expires after a period of inactivity.

Security can be enhanced by preparing and deploying an `AccesRules.xml` file. This file is used by the VSA API Web Service to define access rules based on the IP addresses requests are received from. IP filtering is a mechanism commonly used in business-to-business systems to ensure that requests are honored only from the partner's servers.

The `AccesRules.xml` file is divided into three sections:

- Default Access Rules
- IP Ranges
- User Mapping

Note: 127.0.0.1 (localhost) always has access for any account, regardless of configuration.

XML Structure

```
<AccessRules>
        <DefaultAccessRules>
                <GrantAnyIPToUndefinedUsers/>
                <GrantAllIPRangesToUndefinedUsers/>
                <DenyAccessToUndefinedUsers/>
        </DefaultAccessRules>
        <IPRanges>
                <IPRange RangeID="" FromIPAddress="" ToIPAddress="" RangeDescription=""/>
                <IPRange RangeID="" FromIPAddress="" ToIPAddress="" RangeDescription=""/>
        </IPRanges>
        <UserMapping>
                <User UserName="" RangeID="" GrantAllRanges="" GrantAnyIP="" DenyAccess=""/>
                <User UserName="" RangeID="" GrantAllRanges="" GrantAnyIP="" DenyAccess=""/>
        </UserMapping>
</AccessRules>
```

Default Access Rules

The elements in this section define the access rules for those accounts that are not specifically addressed in the User Mapping section.

`<GrantAnyIPToUndefinedUsers/> true/false`

true: Any user not in UserMapping gets access from any IP address.

`<GrantAllIPRangesToUndefinedUsers/> true/false`

true: Any user not in UserMapping gets access from any IP address contained in IPRanges.

`<DenyAccessToUndefinedUsers/> true/false`

true: Any user not in UserMapping denied access.

IP Ranges

This section is used to define specific machines, or ranges of machines, by IP, that are used to assign user access.

`RangeID="integer"`

An arbitrary, user assigned integer used to refer to the Range in UserMapping.

`FromIPAddress="string"`

Starting IP address, inclusive. First three positions of the quartet must match ToIPAddress.

`ToIPAddress=" string"`

Ending IP address, inclusive. First three positions of the quartet must match FromIPAddress.

`RangeDescription=" string"`

Description of the IP Range. For example: “Production Servers”.

User Mapping

`UserName="string"`

The VSA Admin name. The VSA API Web Service uses the same credentials and password encryption as VSA. So, if you change your password in VSA, be sure to change it in your VSA API Web Service client implementation, as well.

`RangeID="integer"`

Used to point to a defined IP Range in the IP Ranges section. A user can have multiple UserMapping elements to express all the IP Ranges he has access from. Not used when one of the Grant / Deny attributes below are used.

`GrantAllRanges="true/false"`

true: User has access from any range defined in the IP Ranges section.

`GrantAnyIP=" true/false"`

true: User has access from any IP address.

`DenyAccess=" true/false"`

true: User has no access at all.

Sample Access Configuration XML

```
<AccessRules>
        <DefaultAccessRules>
                <GrantAnyIPToUndefinedUsers>false</GrantAnyIPToUndefinedUsers>
                <GrantAllIPRangesToUndefinedUsers>false</GrantAllIPRangesToUndefinedUsers>
                <DenyAccessToUndefinedUsers>true</DenyAccessToUndefinedUsers>
        </DefaultAccessRules>
        <IPRanges>
                <IPRange RangeID="1" FromIPAddress="192.168.214.01" ToIPAddress="192.168.214.10"
RangeDescription="Partner X Production Web Farm"/>
                <IPRange RangeID="2" FromIPAddress="192.168.15.102" ToIPAddress="192.168.15.102"
RangeDescription="Senior Developer Machine"/>
                <IPRange RangeID="3" FromIPAddress="192.168.15.105" ToIPAddress="192.168.15.109"
RangeDescription="Sales Demo Machines"/>
                <IPRange RangeID="4" FromIPAddress="192.168.210.35" ToIPAddress="192.168.210.35"
RangeDescription="Interal QA Machine"/>
        </IPRanges>
        <UserMapping>
                <User UserName="B2BMasterAdmin" RangeID="1" GrantAllRanges="false"
GrantAnyIP="false" DenyAccess="false"/>
                <User UserName="DevTestAccount" RangeID="2" GrantAllRanges="false"
GrantAnyIP="false" DenyAccess="false"/>
                <User UserName="SalesTestAccount" RangeID="3" GrantAllRanges="false"
GrantAnyIP="false" DenyAccess="false"/>
                <User UserName="SalesTestAccount2" RangeID="3" GrantAllRanges="false"
GrantAnyIP="false" DenyAccess="false"/>
```

```
                <User UserName="QAMasterAdmin" RangeID="4" GrantAllRanges="false"
GrantAnyIP="false" DenyAccess="false"/>
                <User UserName="SalesTravellingTestAccount" RangeID="" GrantAllRanges="false"
GrantAnyIP="true" DenyAccess="false"/>
                <User UserName="Bob" RangeID="" GrantAllRanges="true" GrantAnyIP="false"
DenyAccess="false"/>
                <User UserName="Sally" RangeID="" GrantAllRanges="false" GrantAnyIP="false"
DenyAccess="true"/>
        </UserMapping>
</AccessRules>
```

Web Links - Inbound and Outbound

Aside from API operations described later in the document, the KServer also supports the following inbound and outbound links:

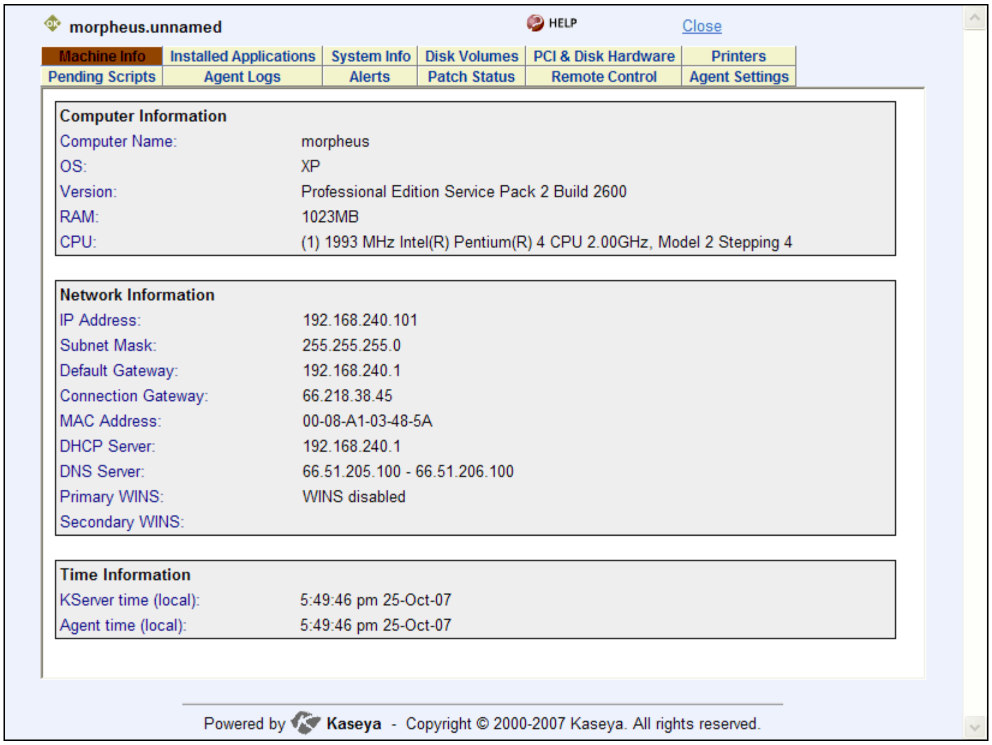
Inbound

The URL to display the Machine Summary web page for a specific machine ID is:

```
http//....?machName=<MachineID>
```

For example:

```
http://demo.kaseya.com?machName=jconners.acme
```



Computer Information	
Computer Name:	morpheus
OS:	XP
Version:	Professional Edition Service Pack 2 Build 2600
RAM:	1023MB
CPU:	(1) 1993 MHz Intel(R) Pentium(R) 4 CPU 2.00GHz, Model 2 Stepping 4

Network Information	
IP Address:	192.168.240.101
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.240.1
Connection Gateway:	66.218.38.45
MAC Address:	00-08-A1-03-48-5A
DHCP Server:	192.168.240.1
DNS Server:	66.51.205.100 - 66.51.206.100
Primary WINS:	WINS disabled
Secondary WINS:	

Time Information	
KServer time (local):	5:49:46 pm 25-Oct-07
Agent time (local):	5:49:46 pm 25-Oct-07

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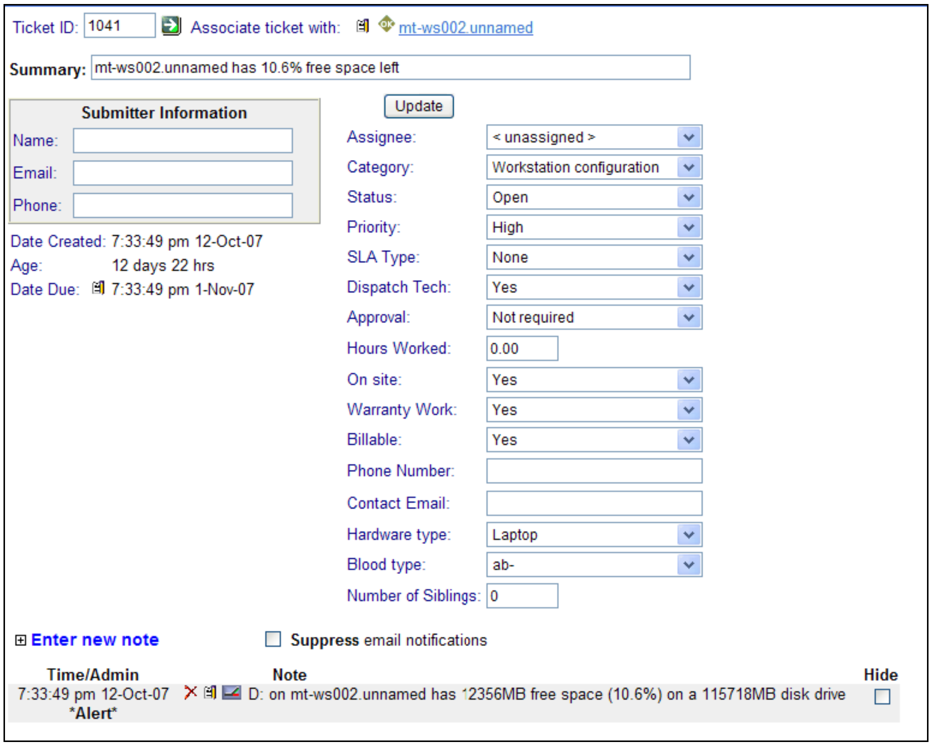
The URL to display the Ticket web page for a specific ticket ID is:

```
http://...?ticid=<TicketID>
```

For example:

```
http://demo.kaseya.com?ticid=1234
```



Ticket ID: 1041 Associate ticket with: mt-ws002.unnamed

Summary: mt-ws002.unnamed has 10.6% free space left

Submitter Information

Name:

Email:

Phone:

Date Created: 7:33:49 pm 12-Oct-07

Age: 12 days 22 hrs

Date Due: 7:33:49 pm 1-Nov-07

Update

Assignee:	< unassigned >
Category:	Workstation configuration
Status:	Open
Priority:	High
SLA Type:	None
Dispatch Tech:	Yes
Approval:	Not required
Hours Worked:	0.00
On site:	Yes
Warranty Work:	Yes
Billable:	Yes
Phone Number:	
Contact Email:	
Hardware type:	Laptop
Blood type:	ab-
Number of Siblings:	0

⊞ Enter new note

□ Suppress email notifications

Time/Admin	Note	Hide
7:33:49 pm 12-Oct-07 *Alert*	D: on mt-ws002.unnamed has 12356MB free space (10.6%) on a 115718MB disk drive	□

Outbound

To customize the New Ticket link on the Machine Summary page fill out the `externalLink.xml` file as described in the comments section of the XML below. To activate the new ticket link, place the `externalLink.xml` file in the `\WebPages\install\` directory of your KServer.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<externalLinks>
  <!--
  URL STRING SUBSTITUTIONS: The URL string displayed is associated
  with a particular machine ID. The string is searched for the following
  case sensitive values and substituted for the values below.
  machineNameVal - the machine name for the active machine is substituted
                   in the URL string.
  groupNameVal - the group name for the active group.
  -->
  <ticketLink displayName="Ext Ticket"
url="http://192.168.212.52/?mname=machineNameVal&amp;gname=groupNameVal"/>
</externalLinks>
```

Chapter 17

Operations

In This Chapter

Authenticate

Required to begin the VSA API Web Service session. The SessionID returned must be submitted with every method invoked during session. The SessionID is only valid when received from the same machine the authentication originates from.

A single record of the following fields is returned.

SessionID	decimal	The unique session ID assigned to a user connection with the target URL.
Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

CloseAlarm

Closes the alarm for the submitted MonitorAlarmID.

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

Echo

Test method for connectivity test and benchmarking. Does not require authentication. Returns the submitted string.

A single record of the following field is returned.

EchoResult	string	This value should match the input included in the request.

GetAlarm

Returns alarm detail for the submitted MonitorAlarmID.

A single record of the following fields is returned.

Machine_GroupID	string	A concatenated representation of the machine id and the group ID it is associated with
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MachineName	string	Machine Name used for each agent
GroupName	string	Group Name used for each agent
MonitorAlarmID	int	unique monitor alarm number

MonitorType	int	0=Counter 1=Service 2=Process 3=SNMP 4=Alert 5=System Check 6=EPS
AlarmType	string	0 -> Alarm 1 -> Trending
Message	string	Message created from alarm, email message body
AlarmSubject	string	Subject of alarm and email subject
AlarmEmail	string	Email Address(es) alarm is sent to
EventTime	string	Date and Time of alarm
TicketID	int	Ticket ID created from alarm
AdminName	string	Administrator who assigned monitor counter to machine
MonitorName	string	Name of monitor SNMP Get object
LogType		1 -> Application Log 2 -> Security Log 3 -> System Log
EventType	int	1 -> Error 2 -> Warning 4 -> Informational 8 -> Success Audit 16 -> Failure Audit
LogValue	decimal	Value causing alarm, if the return value of the SNMP Object Get command is a string the value will be the the Message
SNMPName	string	Name returned from SNMP Device on scan
SNMPCustomerName	string	Custom name for SNMP Device
SystemCheckParam1	string	First parameter used in system check
SystemCheckParam2	string	(Optional) Second parameter used by system check
Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetMachineCollectionList

Returns an array of all machine collections. Items returned can be used as arguments on GetMachineList to filter output.

Multiple records of the following field are returned, if applicable.

collectionName	string	The name of the collection.

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetMachineGroupList

Returns an array of all MachineGroups the authenticated account has privileges to see. Items returned can be used as arguments on GetMachineList to filter output.

Multiple records of the following field are returned, if applicable.

groupName	string	The machine group ID.

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetAlarmList

Returns an array of new alarms added since last request by default. Returns all alarms when ReturnAllRecords is set to true.

Multiple records of the following fields are returned, if applicable.

Machine_GroupID	string	A concatenated representation of the machine id and the group id it is associated with
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
MonitorAlarmID	int	unique monitor alarm number

AlertType	int	1 -> Admin account disabled 2 -> Get File change alert 3 -> New Agent checked in for the first time 4 -> Application has been installed or deleted 5 -> Script failure detected 6 -> NT Event Log error detected 7 -> KServer stopped 8 -> Protection violation detected. 9 -> PCI configuration has been changed 10 -> Disk drive configuration change 11 -> RAM size changed. 12 -> Test email sent by serverInfo.asp 13 -> Scheduled report completed 14 -> LAN Watch alert type 15 -> agent offline 16 -> low on disk space 17 -> disabled remote control 18 -> agent online 19 -> new patch found 20 -> patch path missing 21 -> patch install failed 23 -> Backup Alert
AlarmSubject	string	Subject of alarm and email subject
EventTime	dateTime	Date and time of alarm

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetLogEntry

Returns transaction log detail for the submitted TransactionID.

A single record of the following fields is returned.

LogTransactionId	decimal	The log transactionID.
LogErrorLocation	string	The log error location.
LogErrorMessage	string	The log error message.
LogMethod	string	The log operation that requested a response.

ExecutionTimeInSeconds	decimal	The log time required to respond to the request.
SessionId	decimal	The log session ID.
UserName	string	The log user name.
ClientIP	string	The log IP address of the client.
DateSubmitted	dateTime	The log date and time the request was submitted.
DateUpdated	dateTime	The log date and time the response was returned.
TransactionXML	string	The XML message used to submit the request.
Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetMachine

Returns machine detail for the submitted Machine_GroupID.

A single record of the following fields is returned.

Machine_GroupID	string	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	string	full machine name. Everything to the left of the left most decimal point is the machine name.
groupName	string	full group name for this account. Everything to the right of the left most decimal point is the group name.
Manufacturer	string	Manufacturer string (type 1)
ProductName	string	Product Name string (type 1)
MachineVersion	string	Version string (type 1)
SysSerialNumber	string	Serial Number string (type 1)
ChassisSerialNumber	string	Chassis Serial Number (type 3)
ChassisAssetTag	string	Chassis Asset Tag number (type 3)
BusSpeed	string	External Bus Speed (in MHz) (type 4)
MaxMemorySize	string	Maximum Memory Module Size (in MB) (type 16 - Maximum Capacity or if type 16 not available, Maximum Memory Module Size type 5)
MaxMemorySlots	string	Number of Associated Memory Slots (Number of Memory Devices in type 16 or if type 16 not available Number of Associated Memory Slots in type 5)
ChassisManufacturer	string	Chassis Manufacturer (type 3)
ChassisType	string	Chassis Type (type 3)
ChassisVersion	string	Chassis Ver (type 3)
MotherboardManufacturer	string	Motherboard Manufacturer (type 2)

MotherboardProductCode	string	Motherboard Product Code (type 2)
MotherboardVersion	string	Motherboard Version (type 2)
MotherboardSerialNumber	string	Motherboard Serial Number (type 2)
ComputerName	string	Name of the Computer
IpAddress	string	IP Address of the computer in a.b.c.d notation
SubnetMask	string	Subnet mask in a.b.c.d notation. String is empty if data is unavailable
DefaultGateway	string	Default gateway IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer1	string	DNS server #1s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer2	string	DNS server #2s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer3	string	DNS server #3s IP address in a.b.c.d notation. String is empty if data is unavailable.
DnsServer4	string	DNS server #4s IP address in a.b.c.d notation. String is empty if data is unavailable.
DhcpEnabled	int	0 -> Data is unavailable, 1 -> DHCP on client computer is enabled, 2 -> Disabled
DhcpServer	string	DHCP servers IP address in a.b.c.d notation. String is empty if data is unavailable.
WinsEnabled	string	0 -> Data is unavailable, 1 -> WINS resolution on client computer is enabled, 2 -> Disabled
PrimaryWinsServer	string	Primary WINS servers IP address in a.b.c.d notation. String is empty if unavailable.
SecondaryWinsServer	int	Secondary WINS servers IP address in a.b.c.d notation. String is empty if unavailable.
ConnectionGatewayIp	int	IP Address in a.b.c.d notation obtained by the Kserver as the source address of the Agent. This IP is the Agents network gateway and will be different from the IpAddress if the computer is behind NAT for example. String is empty if unavailable.
OsType	string	String contains OS type, such as 95, 98, NT4, 2000, NT3.51, or WIN32s. Derived from portions of MajorVersion, MinorVersion, and PlatformId.
OsInfo	string	String contains additional OS info, such as Build 1381 Service Pack 3. Derived from portions of BuildNumber and CsdVersion.
MajorVersion	decimal	Major version number from GetVersionEx() Windows function call.
MinorVersion	string	Minor version number from GetVersionEx() Windows function call.If PlatformId is Win32 for Windows, then a 0 MinorVersion indicates Windows 95. If PlatformId is Win32 for Windows, then then a MinorVersion > 0 indicates Windows 98.
MacAddr	string	String containing the physical address, i.e. the Media Access Control address, of the connection. A MAC address has the form of: 00-03- 47-12-65-77
LoginName	string	User name of the currently logged on user. This value is updated with every quick check in. The agent error log file is updated with each change.
firstCheckin	dateTime	timestamp recording the first time this agent checked into the system

lastCheckin	dateTime	timestamp recording the most recent time this agent checked into the system
currentUser	string	login name of the currently logged in user. Blank if no one logged in at this time
lastLoginName	string	login name of the last user to log into this system
lastReboot	dateTime	timestamp when this system was last rebooted
agentVersion	int	version number of agent installed on this system
contactName	string	User contact name assigned to this agent
contactEmail	string	User email address assigned to this agent
contactPhone	string	User email address assigned to this agent
contactNotes	string	Notes associated with the contact information for this agent
enableTickets	int	0 if this user does not have access to ticketing through the user interface
enableRemoteControl	int	0 if this user does not have access to remote control through the user interface
enableChat	int	0 if this user does not have access to chat through the user interface
credentialName	string	The username of the credential set for this agent (if any)
primaryKServer	string	address:port agent connects to for its primary kserver connection
secondaryKServer	string	address:port agent connects to for its secondary kserver connection
quickCheckinSecs	int	the time to wait, in secs, before performing another agent quick check-in
agentTempDir	string	The temp directory used by the agent on this system

Multiple records of the following fields are returned, if applicable.

CpuDesc	string	CPU description (e.g. Pentium III Model 8)
CpuSpeed	int	CPU speed in MHz (e.g. 601)
CpuCount	int	Number of processors (e.g. 1)
TotalRam	int	Amount of RAM in MBytes (e.g. 250)

Multiple records of the following fields are returned, if applicable.

DriveLetter	string	Logical disk drive letter (e.g. C)
TotalSpace	int	Total MBytes on the disk (e.g. 28609 for 28.609 GB) May be null if unavailable.
UsedSpace	int	Number of MBytes used (e.g. 21406 for 21.406 GB). May be null if unavailable.
FreeSpace	int	Number of MBytes free (e.g. 21406 for 21.406 GB). May be null if unavailable.
DriveType	string	Fixed = hard diskRemovable = floppy or other removable mediaCDROMNetwork = mapped network drive
VolumeName	string	Name assigned to the volume
FormatType	string	NTFS, FAT32, CDFS, etc.

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.

ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetMachineList

Returns an array of all the machines that the authenticated administrator has access rights to see. Supports optional filtering of the return by submitted MachineGroup or MachineCollection. Multiple records of the following fields are returned, if applicable.

Multiple records of the following fields are returned, if applicable.

MachineGroupID	string	A currently existing Machine group. If this field is left blank all machines will be returned.
IpAddress	string	the IP address of the agent machine
MacAddr	string	the MAC address of the agent machine
groupName	string	Group Name used for each agent
firstCheckin	datetime	the first time an agent checks into the VSA
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetTicket

Returns ticket detail for the submitted MonitorTicketID.

TicketID	int	unique trouble ticket ID number
Machine_GroupID	string	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
machName	string	Machine Name used for each agent
groupName	string	Group Name used for each agent
TicketSummary	string	summary string briefly describing the ticket
Assignee	string	Admin name this ticket is assigned to
CreatedBy	string	admin name (or machine ID if entered by user) of the person that created this ticket
CreationDate	string	timestamp when the ticket was created
DueDate	string	ticket due date
LastModifiedDate	string	Date of the most recent note entered for this ticket

ResolutionDate	string	timestamp when the ticket was closed
UserName	string	The name of the submitter
UserEmail	string	The email address of the submitter
UserPhone	string	The phone number of the submitter

Multiple records of the following fields are returned, if applicable.

TicketLabel	string	The label of the field
IntegerValue	int	The value of a integer field
NumberValue	decimal	The value of a number field
StringValue	string	The value of a string field
ListValue	string	The value of a list field

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

GetTicketList

Returns an array of new tickets added since last request by default. Returns all tickets when ReturnAllRecords is set to true.

Multiple records of the following fields are returned, if applicable.

TicketID	int	unique trouble ticket ID number
Machine_GroupID	string	A concatenated representation of the machine id and the group id it is associated with.
agentGuid	decimal	A globally unique identifier for a machine ID.group ID account and its corresponding agent.
TicketSummary	string	summary string briefly describing the ticket

A single record of the following fields is returned.

Method	string	The operation that requested this response.
TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

UpdateTicket

Closes the ticket for the submitted MonitorTicketID.

A single record of the following fields is returned.

Method	string	The operation that requested this response.

TransactionID	decimal	The unique message ID for this message.
ErrorMessage	string	If blank, no error was returned.
ErrorLocation	string	If blank, no error was returned.

Currently, the only supported update to a ticket is closing the ticket. That is, to set the ticket's Status field to the value that represents the system's 'Closed' state (3). The data structure is designed to accept an array of fields, organized in name / value pairs to provide for future extensions of this method. The example below closes a ticket with an ID of 1.

```
<UpdateTicketRequest>
        <TicketID>1</TicketID>
        <TicketFields>
                <TicketField>
                        <Name>Status</Name>
                        <Value>3</Value>
                </TicketField>
        </TicketFields>
        <SessionID>13642146236194247244181221</SessionID>
</UpdateTicketRequest>
```

Primitives

The following primitive operations are also provided. They return a single string value that requires subsequent processing.

PrimitiveAuthenticate

Primitive Datatype version of Authenticate using the same xml contract in string form.

PrimitiveAuthenticateResult	string

PrimitiveCloseAlarm

Primitive Datatype version of CloseAlarm using the same xml contract in string form.

PrimitiveCloseAlarmResult	string

PrimitiveGetAlarm

Primitive Datatype version of GetAlarm using the same xml contract in string form.

PrimitiveGetAlarmResult	string

PrimitiveGetAlarmList

Primitive Datatype version of GetAlarmList using the same xml contract in string form.

PrimitiveGetAlarmListResult	string

PrimitiveGetLogEntry

Primitive Datatype version of GetLogEntry using the same xml contract in string form.

PrimitiveGetLogEntryResult	string

PrimitiveGetMachine

Primitive Datatype version of GetMachine using the same xml contract in string form.

PrimitiveGetMachineResult	string

PrimitiveGetMachineCollectionList

Primitive Datatype version of GetMachineCollectionList using the same xml contract in string form.

PrimitiveGetMachineCollectionListResult	string

PrimitiveGetMachineGroupList

Primitive Datatype version of GetMachineGroupList using the same xml contract in string form.

PrimitiveGetMachineGroupListResult	string

PrimitiveGetMachineList

Primitive Datatype version of GetMachineList using the same xml contract in string form.

PrimitiveGetMachineListResult	string

PrimitiveGetTicket

Primitive Datatype version of GetTicket using the same xml contract in string form.

PrimitiveGetTicketResult	string

PrimitiveGetTicketList

Primitive Datatype version of GetTicketList using the same xml contract in string form.

PrimitiveGetTicketListResult	string

PrimitiveUpdateTicket

Primitive Datatype version of UpdateTicket using the same xml contract in string form.

PrimitiveUpdateTicketResult	string

Glossary of Terms

Active Directory

Active Directory is a directory service used to store information about the network resources across a domain. Its main purpose is to provide central authentication and authorization services for Windows based computers. An Active Directory structure is a hierarchical framework of objects. The objects fall into three broad categories: resources (e.g. printers), services (e.g. e-mail) and users (user accounts and groups). The AD provides information on the objects, organizes the objects, controls access and sets security.

The VSA can reference information stored in Active Directory during a LAN Watch *(page 606)*. Subsequently, agents can be automatically installed on machines using View AD Computers *(page 474)*. Using View AD Users *(page 475)*, agents can be automatically installed on each machine a AD user logs onto. Also the latest user contact information can be extracted from Active Directory and applied to the machine ID an AD user is currently logged onto. This provides VSA administrators with up-to-date contact information automatically.

Administrator Roles

Administrators *(page 599)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to machine group IDs using System > Group Access *(page 512)*
- Access to VSA modules and functions using System > Function Access *(page 514)*
- Access to the entire VSA by weekday and hour using System > Logon Hours *(page 515)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 328)*

In addition, scripts and agent installation packages can be shared by administrator role. Standard administrators can only see other administrators who are members of the same roles.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 607)* by the KServer and its agents *(page 600)*. KServer management configuration and other specialized functions *(page 514)* can only be performed by master administrators. Standard administrators are typically restricted to the administration and monitoring of managed machines. A background of two alternating shades of *beige* designates master administrators. A background of two alternating shades of *grey* designates standard administrators. Access to functions, machine groups and other policies are assigned by administrator role *(page 599)*. Standard administrators can only see other administrators who are members of the same roles.

Agent Menu

The set of options that display when the user right-clicks the agent *(page 600)* icon in the system tray (on page 612) of the managed machine. The agent menu can be customized *(page 483)*.

Agent Settings

To provide both flexibility and automation, the VSA enables you to specify different values for the following types of agent settings on a per machine basis:

- Set Credential *(page 495)*
- Agent Menu *(page 483)*

- Check-in Control *(page 485)*
- Temp Directory *(page 489)*
- Log History *(page 441)*
- User Access *(page 253)*
- Remote Control Policy *(page 321)*
- Patch Policy *(page 609)*
- Patch File Source *(page 295)*
- Patch Policy Memberships *(page 282)*
- Fixed Alerts *(page 113)*
- Event Log Alerts *(page 113)*
- Monitor Sets *(page 164)*
- Distribute Files *(page 68)*
- Protection
- Script Schedules *(page 69)*

Agents

The VSA manages machines by installing a software client called an agent on a managed machine. The agent is a system service that does not require the user to be logged in for it to function and it does not require a reboot for it to be installed. The agent is configurable and can be totally invisible to the user. The sole purpose of the agent is to carry out the tasks requested by the IT administrator. Once installed:

- A K icon displays in the icon tray of the remote machine. This can be a custom image or removed altogether.
- Each installed agent is assigned a unique VSA machine ID / group ID *(page 606)*. Machine IDs can be created automatically at agent install time or individually prior to agent installation.
- Each installed agent uses up one of the available licenses purchased by the service provider.
- Agents are typically installed using packages created using Agent > Deploy Agents *(page 445)* inside the VSA.

Agents - Macintosh

Agents can be installed on Mac OS X version 10.3.9 and up. Both Intel and PowerPC platforms are supported. For Macintosh machines, the VSA supports:

- Hardware & Software Audit
- Scripts
- Remote Control via K-VNC
- FTP
- Reset Password
- Task Manager

See Deploying Macintosh Agents using Apple Remote Desktop *(page 452)*.

Alarm

In graphical displays throughout the VSA, when an alarm condition *(page 601)* exists, the VSA displays, by default, a red traffic light 🔴 icon. If no alarm condition exists, a green traffic light icon 🟢 displays. These icons can be customized.

Alarms, and other types of responses *(page 602)*, are enabled using the following pages:

- Monitor > Alerts *(page 113)*
- Monitor > Assign Monitoring *(page 172)*

- Monitor > Assign SNMP *(page 198)*
- Monitor > System Checks *(page 181)*
- Monitor > Parser Summary *(page 213)*
- Monitor > Assign Parser Sets *(page 223)*
- Patch Mgmt > Patch Alerts *(page 298)*
- Remote Cntl > Offsite Alerts *(page 369)*
- Backup > Backup Alerts *(page 383)*
- Security > Apply Alarm Sets
- Agent > LAN Watch *(page 465)*

Alarm Condition

An alarm condition exists when a machine's performance succeeds or fails to meet a pre-defined criteria.

Alarms - Suspending

The Suspend Alarms page suppresses alarms *(page 600)* for specified time periods, including recurring time periods. This allows upgrade and maintenance activity to take place without generating alarms. When alarms are suspended for a machine ID, *the agent still collects data, but does not generate corresponding alarms.*

Alert

Alerts are responses to alarm conditions *(page 601)*. This differs from an audit *(page 602)*, which simply collects selected data for reference purposes without regard to any criteria.

Alerts have two meanings, generic and specific:

Generic Alerts

Typically there are four types of alert responses to an alarm condition:

- Create Alarm
- Create Ticket
- Run Script
- Email Recipients

Defining an alert sets the ATSE response code *(page 602)* for that machine ID or SNMP device.

Alerts are defined using:

- Monitor > Alerts *(page 113)*
- Monitor > Assign Monitoring *(page 172)*
- Monitor > Assign SNMP *(page 198)*
- Monitor > System Checks *(page 181)*
- Monitor > Parser Summary *(page 213)*
- Monitor > Assign Parser Sets *(page 223)*
- Patch Mgmt > Patch Alerts *(page 298)*
- Remote Cntl > Offsite Alerts *(page 369)*
- Backup > Backup Alerts *(page 383)*
- Security > Apply Alarm Sets
- Agent > LAN Watch *(page 465)*

Specific Alerts

The Alerts page enables you to quickly define alerts for typical alarm conditions *(page 601)* found in an IT environment. For example, low disk space is frequently a problem on managed machines. Selecting the `Low Disk` type of alarm displays a single additional field that lets you define the `% free space` threshold. Once defined, you can apply this alarm immediately to any machine ID displayed on the Alerts page and specify the response to the alarm.

ATSE Response Code

Creating an alarm represents one of three ways to notify administrators of an alarm condition. The other two ways are to send an email or to create a ticket. In an addition, alarm conditions can run a script to automatically respond to the alarm condition. These four types of response are called the ATSE response code. Whether assigned to a machine ID, a group ID, or an SNMP device, the designation indicates which types of responses are active for the alarm condition defined.

- A = Create Alarm
- T = Create Ticket
- S = Run Script
- E = Email Recipients

None of the ATSE responses are required. The alarm condition and the ATSE responses, including no response, is reported to the Reports > Monitor *(page 428)* > Monitor Action Log.

The same ATSE design applies to all methods of monitoring provided by the VSA.

Audit

Agents *(page 600)* can be scheduled to automatically audit the hardware and software configurations of their managed machines on a recurring basis. Agents report the information back to the KServer so you can access it using the VSA even when managed machines are powered down. Audits enable you to examine configurations before they develop into serious problems. The system maintains three types of audits for each machine ID:

- Baseline audit - The configuration of the system in its original state. Typically a baseline audit is performed when a system is first set up.
- Latest audit - The configuration of the system as of the last audit. Once per day is recommended.
- System Info - All DMI / SMBIOS data of the system as of the last system info audit. This data seldom changes and typically only needs to be run once.

The VSA detects changes in a machines's configuration by comparing the latest audit to the baseline audit. The latest audit record is stored for as many days as you specify.

Most of the agent and managed machine data displayed by function pages and Reports *(page 394)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 113)* types specifically address changes between a baseline audit and the latest audit: Application Changes and Hardware Changes.

Auto Learn Monitor Sets

You can enable Auto Learn alarm thresholds for any standard monitor set you assign to selected machine IDs. This automatically fine-tunes alarm thresholds based on actual performance data on a per machine basis.

Each assigned machine collects performance data for a specified time period. During that time period no alarms are triggered. At the end of the auto learn session, the alarm threshold for each assigned machine is adjusted automatically based on the actual performance of the machine. You can manually adjust the alarm threshold values calculated by Auto Learn or run another session of Auto Learn again. Auto Learn cannot be used with individualized monitor sets.

Backup Sets

All files required for a full backup, including all incremental or differential backups, are saved together in a backup set.

Canonical Name

The primary name for an object in DNS. Each object can also have an unlimited number of aliases.

Chat

Online chat is a text-based, instant messaging system. It is included with the KServer primarily to provide immediate technical support. Administrator's can chat with users of managed machines and/or chat with other administrators currently logged on the same Kserver. Administrators can enable or disable the user's ability to initiate chat sessions with administrators. Since Kaseya chats are relayed through the KServer, all chats are protected by the Kaseya 256 bit rolling encryption protocol.

Check-in Status

These icons indicate the agent check-in status of each managed machine:

- OK Agent has checked in
- OK Agent has checked in and user is logged on. Tool tip lists the logon name.
- Agent is currently offline
- Agent has never checked in
- OK Online but waiting for first audit to complete
- The agent is online but remote control is disabled
- The agent has been suspended

Check-in: Full vs. Quick

A full check-in occurs when an agent completes the processing of any and all outstanding tasks assigned to it by the KServer. These tasks can include processing a script, posting cached log data, or refreshing the agent configuration file.A full checkin occurs if 24 hours elapses without a specific task requiring it. A quick check-in occurs when an account checks in at the configured check-in interval, indicating to the KServer that the machine ID is still online. This doesn't require the completion of all outstanding tasks. Some functions require a full check-in before an agent can begin processing a new task. For example, System -> Naming Policy *(page 506)*.

Collection

Collections are a free-form selection of *individual machine IDs within a view*. It doesn't matter which groups the machine IDs belong to, so long as the administrator is authorized to have access to those groups. This enables the administrator to view and report on logical collections of related machine IDs, such as laptops, workstations, servers, MS Exchange Servers, etc. Collections are created using the Only show selected machine IDs checkbox in View Definitions *(page 19)*. Save a view first before selecting machines IDs using this option. Once the view is saved, a <N> machines selected link displays to the right of this option. Click this link to display a Define Collection window, which allows you to create a view using a free-form selection of individual machine IDs.

Copy Settings and Templates

Machine ID templates *(page 607)* are initially used to create an agent install package using the template as the source to copy settings from. But even after agents are installed on managed machines, you'll need to update settings on existing machine ID accounts as your customer requirements change and your knowledge of the VSA grows. In this case use Agent > Copy Settings to copy these changes to any number of machines IDs you are authorized to access. Be sure to select `Do Not Copy` for any settings you do not want to overwrite. Use Add to copy settings without removing existing settings. Kaseya recommends making changes to a selected template first, then using that template as the source machine ID to copy changes from. This ensures that your machine ID templates remain the "master repositories" of all your agent settings and are ready to serve as the source of agent install packages and existing machine ID accounts.

Credential

A credential is the logon name and password used to authenticate a user or process's access to a machine or network or some other resource. See Agent > Set Credentials *(page 495)*.

Dashboard

The dashboard is a summary display of the status of the entire system. The dashboard's data is filtered by the Machine ID / Group ID filter *(page 607)*. Navigation: Home > View Dashboard *(page 30)*.

Dashboard List

The dashboard list is a summary display of the alarm statuses of all machines being monitored. The dashboard list's data is filtered by the Machine ID / Group ID filter *(page 607)*. Navigation: Home > Dashboard List *(page 99)* or Monitor > Dashboard List.

Distribute File

The Distribute File function sends files stored on your VSA server to managed machines. It is ideal for mass distribution of configuration files, such as virus foot prints, or maintaining the latest version of executables on all machines. The VSA checks the integrity of the file every full check-in *(page 603)*. If the file is ever deleted, corrupted, or an updated version is available on the VSA, the VSA sends down a new copy prior to any script execution. Use it in conjunction with recurring scripts to run batch commands on managed machines.

Event Logs

An event log service runs on Windows operating systems (Not available with Win9x). The event log service enables event log messages to be issued by Window based programs and components. These events are stored in event logs located on each machine. The event logs of managed machines can be stored in the KServer database, serve as the basis of alerts and reports, and be archived.

Depending on the operating system, the event logs types available include but are not limited to:

- Application log
- Security log
- System log
- Directory service log
- File Replication service log
- DNS server log

The list of event types available to select can be updated using Monitoring > Update Lists by Scan *(page 163)*.

Windows events are further classified by the following event log categories:

- Error
- Warning
- Information
- Success Audit
- Failure Audit
- Critical - Applies only to Vista.
- Verbose - Applies only to Vista.

Event logs are used or referenced by the following VSA pages:

- Monitor > Agent Logs *(page 440)*

- Monitor > Alerts > Event Logs *(page 132)*
- Monitor > Alerts > Edit Event Sets *(page 138)*
- Monitor > Update Lists by Scan *(page 163)*
- Agent > Log History *(page 441)*
- Agent > Event Log Settings *(page 443)*
- Agent > Agent Logs *(page 440)*
- Reports > Logs *(page 606)*
- System > Database Views > vNtEventLog *(page 563)*

Events Sets

Because the number of events in Windows based events logs is enormous the VSA uses a record type called an event set to filter the triggering of alerts.

Event sets contain one or more conditions. Each condition contains filters for different fields in an event log entry. The fields are source, category, event ID, user, and description. An event log *(page 604)* entry has to match all the field filters of a condition to be considered a match. A field with an asterisk character (*) means any string, including a zero string, is considered a match. A match of any *one* of the conditions in an event set triggers an alert on any machine that event set is applied to.

For details on how to configure event sets, see Monitor > Alerts > Event Logs > Edit Event Sets *(page 138)*.

File Transfer Protocol (FTP)

File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol. The FTP server is the program on the target machine that listens on the network for connection requests from other computers. The FTP client is the program on the administrator's machine that initiates a connection to the server. The FTP client machine requires user access rights to the FTP server machine. It is included with the KServer primarily to provide immediate technical support. Once connected, the client can upload files to the server, download files from the server, rename or delete files on the server and so on. Any software company or individual programmer is able to create FTP server or client software because the protocol is an open standard. Virtually every computer platform supports the FTP protocol. Since Kaseya FTP sessions are relayed through the KServer, all FTP sessions are protected by the Kaseya 256 bit rolling encryption protocol.

Group Alarms

Alert, system check, and log monitoring alarms are automatically assigned to a group alarm category. If an alert alarm is triggered, the group alarm it belongs to is triggered as well. The group alarm categories for monitor sets and SNMP sets are manually assigned when the sets are defined. Group alarms display in the Group Alarm Status *(page 104)* dashlet of the Monitor > Dashboard List page. You can create new groups using the Group Alarm Column Names tab in Monitor > Monitor Lists *(page 160)*.

Host name

The text equivalent of an IP address. For example, the IP address `89.234.7.197` should resolve to the host name of `www.kaseya.com`. Host names are only available from computers. Hubs, switches, routers, or other network appliances do not return a host name.

Hotfix

Kaseya frequently posts hotfixes to correct small problems in the latest release. If the Enable automatic check box is checked in System > Configure *(page 524)*, your VSA periodically checks for *new only* hotfixes at `http://vsaupdate.kaseya.net`. If any new hotfixes are available, the KServer automatically downloads and applies the hotfixes without any user interaction.

The hotfix mechanism addresses minor issues only, typically either cosmetic typos, or ASP page errors. The KServer, agents, or database schema are never updated via hotfixes. Any changes affecting system operation go into full product updates that you approve before installing. Hotfixes just correct minor issues without having to wait for the release cycle.

ISO Image

An ISO image (.iso) is a disk image of an ISO 9660 file system. ISO 9660 is an international standard originally devised for storing data on CD-ROM. In addition to the data files that are contained in the ISO image, the ISO image also contains all the filesystem metadata, including *boot code*, structures, and attributes. All of this information is contained in a single file. CD writers typically provide the option of writing an ISO file *as an image* when writing to a CD.

LAN Watch

LAN Watch uses an existing agent *(page 600)* on a managed machine to periodically scan the local area network for any and all new devices connected to that LAN since the last time LAN Watch ran. These new devices can be workstations and servers without agents or SNMP devices *(page 611)*. Optionally, the VSA can send an alert *(page 601)* when a LAN Watch discovers any new device. LAN Watch effectively uses the agent as a proxy to scan a LAN behind a firewall that might not be accessible from a remote server.

Log Monitoring

The VSA is capable of monitoring data collected from many standard log files *(page 606)*. Log Monitoring extends that capability by extracting data from the output of *any* text-based log file. Examples include application log files and syslog *(page 612)* files created for Unix, Linux, and Macintosh operating systems, and network devices such as Cisco routers. To avoid uploading all the data contained in these logs to the KServer database, Log Monitoring uses a parser definitions and parser sets *(page 608)* to parse each log file and select only the data you're interested in. Parsed messages are displayed in Log Monitoring, which can be accessed using the Agent Logs tab of the Machine Summary *(page 23)* page or by generating a report using the Agent > Logs *(page 422)* page. Administrators can optionally trigger alerts when a Log Monitoring record is generated, as defined using Assign Parsing Sets *(page 223)* or Parser Summary *(page 213)*.

Logs

Logs collect event information about multiple systems, including the KServer. The different types of logs that can be generated are:

- Alarm Log - List out all triggered alarms issued against the selected machine.
- Admin Notes - Lists administrator notes, sorted by administrator.
- Agent Log - Shows a list of activity associated with the Agent machine Agent. Start and stop times, `.ini` file changes, and other information is captured. The date and time of each activity is also noted.
- Configuration Changes - Shows a log of changes made by a master or standard administrator to an managed machine's agent configuration.
- Network Statistics - Shows a list of applications that have accessed the network and the packet size of the information exchanged during the network access session. The time of the exchange is also listed.
- Event Logs - Shows the event log *(page 604)* data collected by Windows. (Not available with Win9x)
- Remote Control Log - Lists successful remote controls sessions.
- Script Log - Shows a list of scripts executed on the selected agent machine. The date and time of each script execution is also noted, as well as whether it completed successfully or not.

> Note: Log Monitoring *(page 606)* enables you to monitor the data generated by any text-based log.

MAC address

The unique media access control (MAC) identifier assigned to network adapter cards (NICs).

Machine ID / Group ID

Each agent *(page 600)* installed on a managed machine is assigned a unique machine ID/group ID name. All machine IDs are associated with a group ID and optionally a subgroup ID. Typically a group ID represents a single customer account. Subgroup IDs typically represent a location or network within a group ID. For example, the full identifier for an agent installed on a managed machine could be defined as `jsmith.acme.chicago`. In this case `chicago` is a subgroup ID defined within the group ID called `acme`. Only a master administrator, or administrators authorized by a master administrator *(page 599)*, can create group IDs. Any administrator can create subgroup IDs. Group IDs and subgroup IDs are created using the System > Machine Groups > Create/Delete *(page 504)* page.

Machine ID / Group ID filter

The Machine ID / Group ID filter is available on all tabs and functions. It allows you to limit the machines displayed on *all* function pages. The View Definitions window lets you further refine a Machine ID / Group ID filter based on attributes contained on each machine—for example, the operating system type. Once filter parameters are specified, click the green arrow icon ➡ to apply filter settings to *all* function pages. By default, the Machine ID / Group ID filter displays all machine IDs in `<All Groups>` managed by the currently logged in administrator.

> Note: Even if an administrator selects `<All Groups>`, only groups the administrator is granted access to using System > Group Access *(page 512)* are displayed.

Machine ID Template

A machine ID template is *a machine ID record without an agent*. Since an agent never checks into a machine ID template account, it is not counted against your total license count. You can create as many machine ID templates as you want without additional cost. When an agent install package is created, the package's settings are copied from a selected machine ID template. Typically machine ID templates are created and configured for certain types of machine. Machine type examples include desktops, Autocad, Quickbooks, small business servers, Exchange servers, SQL Servers, etc. A corresponding install package can be created based on each machine ID template you define.

- Create machine ID templates using Agent > Create *(page 457)*.
- Import a machine ID template using Agent > Import/Export *(page 481)*. Sample templates can be downloaded from the Kaseya Support Forum and imported.
- Base an agent install package on machine ID template using Agent > Deploy Agents *(page 445)*.
- Copy *selected* settings from machine ID templates to existing machine ID accounts using Agent > Copy Settings *(page 479)*.
- Identify the total number of machine ID template accounts in your VSA using System > Statistics *(page 532)*.
- Configure settings for the machine ID template using the standard VSA functions, just as you would a machine ID account with an agent.

Machine IDs vs. Agents

When discussing agents it is helpful to distinguish between the machine ID / group ID *(page 606)* and the agent *(page 600)*. The machine ID / group ID is the VSA's user account name for a managed machine in its database. The agent is the client software installed on the managed machine. A one-to-one relationship exists between the agent on a managed machine and its machine ID / group ID account name on the VSA. Tasks assigned to a machine ID by a VSA administrator direct the agent's actions on the managed machine.

Managed Machine

A monitored machine with an installed agent *(page 600)* and active machine ID/group ID *(page 607)* account on the KServer. Each managed machine uses up one agent license *(page 530)*.

Migrating the KServer

For the latest instructions on migrating an existing KServer to a new machine see the article How do I move my Kaseya Server to a new computer? (270436) in the Kaseya Support Knowledge Base Portal.

Monitor Sets

A monitor set is a set of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/instance/counter, service, or process in a monitor set. Alarms can be set to trigger if any of the thresholds in the monitor set are exceeded. A monitor set should be used as a logical set of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. You can assign a monitor set to any machine that has an operating system of Windows 2000 or newer.

The general procedure for working with monitor sets is as follows:

1. Optionally update monitor set counter objects, instances and counters by source machine ID using Monitor > Update Lists by Scan *(page 163)*.
2. Optionally update monitor set counter objects, instances and counters manually and review them using Monitor Lists *(page 160)*.
3. Optionally update predefined *sample* monitor sets using System > Configure *(page 524)*.
4. Create and maintain monitor sets using Monitor > Monitor Sets *(page 164)*.
5. Assign monitor sets to machine IDs using Monitor > Assign Monitoring *(page 172)*.
6. Optionally customize standard monitor sets as *individualized monitor sets*.
7. Optionally customize standard monitor sets using *Auto Learn*.
8. Review monitor set results using:
   - Monitor > Live Connect *(page 112)*
   - Monitor > Monitor Log *(page 179)*
   - Monitor > Dashboard > Network Status *(page 104)*
   - Monitor > Dashboard > Group Alarm Status *(page 104)*
   - Monitor > Dashboard > Monitoring Set Status *(page 105)*
   - Reports > Monitor *(page 428)* > Monitor Set Report
   - Reports > Monitor *(page 428)* > Monitor Action Log

Packager

The Packager is a wizard tool used to create a package when a pre-defined install solution cannot be used. Packager evaluates the state of a source machine before and after an installation and/or resource change. The Packager compiles the differences into a single executable file—the package—that can be distributed via scripts to any managed machine. Distribute a package any way you choose. You can email it, or store it on a server where a custom script *(page 72)* can perform a silent installation on any managed machine.

Parser Definitions and Parser Sets

When configuring Log Monitoring *(page 606)* it's helpful to distinguish between two kinds of configuration records: parser definitions and parser sets.

A parser definition is used to:

- Locate the log file being parsed,
- Select log data based on the log data's *format*, as specified by a template, and
- Populate parameters with log data values.

A parser set subsequently filters the selected data. Based on the *values* of populated parameters and the criteria you define, a parser set can generate log monitoring entries and optionally trigger alerts.

Without the filtering performed by the parser set, the KServer database would quickly expand. For example a log file parameter called $FileServerCapacity$ might be repeatedly updated with the latest percentage of free space on a file server. Until the free space is less than 20% you may not need to make a record of it in Log Monitoring, nor trigger an alert based on this threshold. Each parser set applies only to the parser definition it was created to filter. Multiple parser sets can be created for each parser definition. Each parser set can trigger a separate alert on each machine ID it is assigned to.

Patch Policy

Patch policies contain all active patches for the purpose of approving or denying patches. An active patch is defined as a patch that has been reported by a patch scan by at least one machine in the VSA. Any machine can be made a member of one or more patch policies.

For example, you can create a patch policy named `servers` and assign all your servers to be members of this patch policy and another patch policy named `workstations` and assign all your workstations to be members of this policy. This way, you can configure patch approvals differently for servers and workstations.

- The patches of machines that are not a member of any patch policy are treated as if they were *automatically approved*.
- When a new patch policy is created the default approval status is *pending approval* for all patch categories.
- The default approval status for each category of patches can be individually set.
- If a machine is a member of multiple patch policies and those policies have conflicting approval statuses, the most restrictive approval status is used.
- Initial Update *(page 268)* and Automatic Update *(page 272)* require patches be approved before these patches are installed.
- Approval by Policy *(page 283)* approves or denies patch by *policy*.
- Approval by Patch *(page 285)* approves or denies patches by *patch* and sets the approval status for that patch in all patch policies.
- KB Override *(page 288)* overrides the default approval status by *KB Article* for all patch policies and sets the approval status for patches associated with the KB Article in all patch policies.
- Patch Update *(page 275)* and Machine Update *(page 274)* can install denied patches.
- Standard administrators can only see patch policies they have created or patch policies that have machine IDs the administrator is authorized to see based on the administrator roles they are assigned.

Performance Objects, Instances and Counters

When setting up counter thresholds in monitor sets, it's helpful to keep in mind exactly how both Windows and the VSA identify the components you can monitor:

- Performance Object - A logical collection of counters that is associated with a resource or service that can be monitored. For example: processors, memory, physical disks, servers each have their own sets of predefined counters.
- Performance Object Instance - A term used to distinguish between multiple performance objects of the same type on a computer. For example: multiple processors or multiple physical disks. The VSA lets you skip this field if there is only one instance of an object.
- Performance Counter - A data item that is associated with a performance object, and if necessary, the instance. Each selected counter presents a value corresponding to a particular aspect of the performance that is defined for the performance object and instance.

Primary Domain Controller

Primary domain controllers have full access to the accounts databases stored on their machines. Only primary domain controllers run Active Directory *(page 599)*.

Private, Shared or Public

Administrators can define many types of records within the VSA, then decide whether these records are private, shared or public. These types of records include scripts, reports, files, managed variables *(page 614)*, and log file parser definitions *(page 218)*. Private is the default and means only a single administrator has access to the record. Shared means selected administrators or administrator roles have access to the record. When a record is public, all administrators have access to the record. In some cases an administrator must "take ownership" of a public record to edit the record.

PSEXEC.EXE

PSEXEC.EXE is a light-weight telnet-replacement that lets you execute processes on other systems without having to manually install client software. It used by Agent > Install Agents *(page 469)* to install agents *on remote systems* after a LAN Watch *(page 606)*.

Quick Status

A Quick Status feature enables you to select *any* monitor set counter, service or process from *any* machine ID and add it to the same single display window. Using Quick Status, you can quickly compare the performance of the same counter, service or process on different machines, or display selected counters, services and processes from different monitor sets all within a single view. SNMP sets provide a similar Quick Status view for selected SNMP objects. Any Quick Status view you create exists only for the current session. The Quick Status window is accessed using Monitor > Dashboard > Monitoring Set Status *(page 105)*, then clicking the Quick Status link or the Quick Status icon 🟩.

Sample Templates

The easiest method of assigning monitoring sets and event sets to machine IDs is to use the sample templates *(page 607)* provided by Kaseya. Each sample template is an XML file defined for a certain type of machine, for example, `Windows Server Basic.xml` and `Workstation XP.xml`. Each sample template contains references to the appropriate set of sample monitor sets, sample event sets and sample scripts for that type of machine. These sample monitor sets, sample event sets and sample scripts, are loaded and updated automatically when you install the VSA, if enabled using System > Configure. Sample templates can be downloaded from the Kaseya Support Forum. Use Copy Settings to assign a set of sample monitor sets, sample event sets and sample scripts from a sample template to machine IDs.

To update monitoring of machine IDs using sample templates:

1. Ensure sample monitor sets, sample events and sample scripts are enabled using System > Configure *(page 524)*.
2. Import the sample template using Agent > Import/Export *(page 481)*.
3. Copy monitor set assignments and event log alert assignments from the template to selected machine IDs using Agent > Copy Settings *(page 479)*.
    - Set Monitor Sets and Event Log Alert options to `Add`. This adds the assignments to selected machine IDs without removing any existing assignments.
    - Set all other Copy Settings options to `Do Not Copy` unless you have a specific reason for copying them.
4. Review sample monitor set assignments on target machine IDs using Monitor > Assign Monitoring *(page 172)*.
5. Review sample event log alert assignments on target machine IDs using Monitor > Alerts > Event Logs *(page 132)*.

To customize monitoring using templates:

- If you create a customized monitor set, or event set or script, you can apply it to a new or imported template, then perform the same procedure above, starting with step 3.

Silent Install

Silent installs, also called silent deploys, do not prompt the user for input. Silent installs may not require user input or else provide a typical configuration that serves the purposes of most users, or else provide command line parameters that enable users to configure the installation at execution. If an install does not support a silent install but still needs to be distributed automatically, administrators can use Packager *(page 608)* to create a custom installation package. See Creating Silent Installs *(page 64)*.

SNMP Community

An SNMP community is a grouping of devices and management stations running SNMP. SNMP information is broadcast to all members of the same communiity on a network. SNMP default communities are:

- Write = private
- Read = public

SNMP Devices

Certain network devices such as printers, routers, firewalls, servers and UPS devices can't support the installation of an agent *(page 600)*. But a VSA agent installed on a managed machine on the same network as the device can read or write to that device using simple network management protocol (SNMP). Read/write instructions are communicated using a set of object variables. Collectively, the set of object variables made available by a device is called its Management Information Base or MIB. The objects within a MIB are therefore referred to as MIB objects.

Vendors typically provide a specific data file for each device called a MIB file. MIB files are used by monitoring systems such as the VSA to identify the MIB objects available on a device and the typical read or write values for each MIB object. The MIB file includes the "friendly name" associated with an object's ID number or OID number, enabling you to easily identify the object in SNMP sets.

SNMP Quick Sets

The SNMP Info link page displays a list of SNMP objects provided by the specific SNMP device you selected. These objects are discovered by performing a limited SNMP "walk" on all discovered SNMP devices each time a LAN Watch *(page 194)* is performed. You can subsequently define device-specific SNMP sets called quick sets and associate alerts with these quick sets. Quick sets can be *individualized* for a single device. The *standard* version of the quick set can be shared with other administrators and applied to similar devices throughout the VSA. The prefix `(QS)` is used to distinguish quick set names from other kinds of SNMP sets.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*.
3. Click the SNMP info *(page 204)* link in the Assign SNMP page to display a list SNMP objects that apply to the specific SNMP device you selected.
4. Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

SNMP Sets

A SNMP set is a set of MIB objects used to monitor the performance of SNMP enabled network devices *(page 611)*. The SNMP protocol is used because an agent cannot be installed on the device. You can assign alarm thresholds to any performance object in a SNMP set. If you apply the SNMP set to a device, you can be notified if the alarm threshold is exceeded. The following methods can be used to configure and assign SNMP sets to machine IDs.

- SNMP quick sets - Creates and assigns an device-specific SNMP set based on the objects discovered on that device during a LAN Watch. SNMP quick sets *(page 611)* are the easiest method of implementing SNMP monitoring on a device.
- SNMP standard sets - These are usually generic SNMP sets that are maintained and applied to multiple devices. A quick set, once created, can be maintained as a standard set.
- SNMP individualized sets - This is a standard SNMP set that is applied to an individual device and then customized manually.
- SNMP auto learn - This is a standard SNMP set that is applied to an individual device and then adjusted automatically using auto learn.

- SNMP types - This is a method of assigning standard SNMP sets to devices automatically, based on the SNMP type *(page 612)* determined during a LAN Watch.

Typically the following procedure is used to configure and apply SNMP sets to devices.

1. Discover SNMP devices using Monitor > LAN Watch *(page 194)*.
2. Assign SNMP sets to discovered devices using Monitor > Assign SNMP *(page 198)*. This can include quick, standard, individualized or auto learn SNMP sets.
3. Display SNMP alarms using Monitor > SNMP Log *(page 208)* or Dashboard List *(page 99)*.

The following additional SNMP functions are available and can be used in any order.

- Optionally review the list of all imported SNMP objects using Monitor > Monitor Lists *(page 160)*.
- Optionally maintain SNMP sets using Monitor > SNMP Sets *(page 186)*.
- Optionally add an SNMP object using Monitor > Add SNMP Object *(page 192)*.
- Optionally assign a SNMP type to an SNMP device manually using Monitor > SNMP Type *(page 211)*.
- Optionally write values to SNMP devices using Monitor > Set SNMP Values *(page 210)*.

SNMP Types

You can assign SNMP sets *(page 611)* to devices *(page 611)* *by type* automatically as follows:

1. Add or edit SNMP types using the SNMP Device tab in Monitor > Monitor Lists *(page 160)*.
2. Add or edit the `sysServicesNumber` associated with SNMP types using the SNMP Services tab in Monitor > Monitor Lists. Broad categories of SNMP devices share the same `sysServiceNumber`.
3. Associate a SNMP type with a SNMP set using the Automatic Deployment to drop-down list in Monitor > SNMP Sets > Define SNMP Set *(page 188)*.
4. Perform a LAN Watch *(page 194)*. During a LAN Watch SNMP devices are automatically assigned to be monitored by SNMP sets if the SNMP device returns a `sysServicesNumber` associated with a SNMP type used by those SNMP sets.
5. Manually assign a SNMP type to an SNMP device using Monitor > SNMP Type *(page 211)*. Doing so causes SNMP sets using that same type to start monitoring the SNMP device.

syslog

Syslog is a standard for forwarding log messages in an IP network to a syslog server. A syslog server collects the messages broadcast by various devices on the network and integrates them into a centralized repository of syslog files. Syslog is commonly used by Unix, Linux and Macintosh operating systems and hardware devices such as Cisco routers. Log Monitoring *(page 606)* enables you to monitor syslog files.

A typical format for a syslog file entry is:

```
<time> <hostname> <tag>:<message>
```

For example:

```
Oct 15 19:11:12 Georges-Dev-Computer kernel[0]: vmnet: bridge-en1:
interface en is going DOWN
```

System Checks

The VSA can monitor machines that *don't have an agent installed on them*. This function is performed entirely within a single page called System Check. Machines without an agent are called external systems. A machine with an agent is assigned the task of performing the system check on the external system. A system check typically determines whether an external system is available or not. Types of system checks include: web server, DNS server, port connection, ping, and custom.

System Tray

The system tray is located, by default, in the lower right-hand corner of the Windows desktop, in the Taskbar. It contains the system clock, and other system icons.

Update Classification

Microsoft updates are organized as follows:

Update Classification	Classification Type (Non-Vista / Vista)	Included in WSUSSCN2.CAB*
Security Updates	High Priority / Important Includes critical, important, moderate, low, and non-rated security updates.	Yes
Critical Updates	High Priority / Important	Yes
Update Rollups	High Priority / Important	Yes
Service Packs	Optional – Software / Recommended	Yes
Updates	Optional – Software / Recommended	No
Feature Packs	Optional – Software / Recommended	No
Tools	Optional – Software / Recommended	No

In those cases where a machine does not have Internet connectivity at the time of a machine patch scan, Kaseya uses Microsoft's WSUSSCN2.CAB data file. Microsoft publishes this CAB file as needed. It contains a sub-set of the Microsoft Update Catalog. As seen in the table above, scan data for only the high priority updates and service packs are included in the CAB file. The KServer automatically downloads the CAB file on a daily basis to make it available for those machines needing this type of scan. See Windows Automatic Update *(page 615)*.

URL to Display Machine Summary Page

The following URL displays the Machine Summary *(page 23)* web page for a specific machine ID:

```
http//....?machName=<MachineID>
```

For example:

```
http://demo.kaseya.com?machName=jconners.acme
```

URL to Display View Ticket Page

The following URL displays the View Ticket *(page 236)* web page for a specific ticket ID

```
http://...?ticid=<TicketID>
```

For example:

```
http://demo.kaseya.com?ticid=1234
```

User Access Welcome Page

The User Access Welcome Page is the page the user sees when the agent icon on the system tray of a managed machine is double-clicked. The User Access Welcome Page contains user options such as changing the user's contact information, creating or tracking trouble tickets, chatting with administrators or remote controlling their own machine from another machine. Some of these options are enabled by an administrator using Agent > User Access *(page 253)*. The function list the user sees on the User Access Welcome Page can be customized using System > Customize *(page 535)*.

User Account

See Machine IDs vs. Agents *(page 607)*

Variables

Use variables to store values that can be referenced in multiple script steps. Variables are passed automatically to nested scripts.

- Variables are created using two methods:
    - Script Variables - Use the Get Variable command within a script to create a new variable name without any special characters. Example: `VariableName`. In subsequent steps, including steps in nested scripts, reference the variable by bracketing the variable name with the # character. Example: `#VariableName#`. Scripts variables cannot be referenced outside of the script or nested scripts that use them.
    - Managed Variables - Use the Variable Manager *(page 79)* to define variables that can be used repeatedly in different scripts. You can maintain multiple values for each managed variable, with each value applied to one or more group IDs. Managed variables cannot be re-assigned new values within a script. Within a script, reference a managed variable by bracketing the variable name with the < and > character. Example: `<VariableName>`.
- Reserved Characters - Because the <, > and # characters are used to identify variable names, these characters must be entered *twice* as regular text in a command line. For example the following command `c:\dir >> filelist.txt` is interpreted at script runtime as `c:\dir > filelist.txt`.
- Automatic SQL View Data Variables - SQL view parameters are available as automatically declared script variables. Use the format `#SqlViewName.ColumnName#` or `#SqlViewName/ColumnName/Machine.GroupID#` in a script to return the value of a dbo.SqlView.Column. If the optional machine ID is omitted, then the value for the agent executing the script is retrieved. Automatic variables enable you to skip using the GetVariable command with the SQL View Data option.
- GetVariable SQL View Data Command - Use the GetVariable command with the SQL View Data option to create a new script variable and set it to the value of a dbo.SqlView.Column value. Use the format `SqlViewName/ColumnName/mach.groupID` or `SqlViewName/ColumnName`. See System > Database Views *(page 542)* for a list of the SQL views and columns that are available.

View Definitions

The View Definitions *(page 19)* window lets you further refine a Machine ID / Group ID filter based on attributes contained on each machine—for example, the operating system type. Views provide administrators flexibility for machine management and reporting. View filtering is applied to *all* function pages by selecting a view from the Select View drop-down list on the Machine ID / Group ID Filter *(page 17)* panel and clicking the green arrow ➡ icon. Any number of views can be created and shared with other administrators. Views are created by clicking the Edit button to the right of the Views drop-down list.

Virtual Network Computing (VNC)

Virtual Network Computing (VNC), also called remote control or remote desktop, is a graphical desktop sharing system which uses the Remote Framebuffer (RFB) protocol to remotely control another computer. It transmits the keyboard and mouse events from one computer to another, relaying the graphical screen updates back in the other direction, over a network. It is included with the KServer primarily to provide immediate technical support. VNC is platform-independent. A VNC viewer on any operating system can usually connect to a VNC server on any other operating system. The VNC server is the program on the target machine that shares its screen. The VNC client (or viewer) is the program on the administrator's machine that watches and interacts with the target machine. The VNC client machine requires user access rights to the VNC server machine. Since Kaseya VNC sessions are relayed through the KServer, all VNC sessions are protected by the Kaseya 256 bit rolling encryption protocol.

vPro

Intel® vPro™ Technology provides hardware-based management integration independent of operating system software and network management software. The VSA can discover vPro-enabled machines during a LAN Watch *(page 606)*, list the hardware assets of vPro machines, access hardware-based security use the power management and remote booting of ISO images capabilities provided by vPro.

Windows Automatic Update

Windows Automatic Updates is a Microsoft tool that automatically delivers updates to a computer. Windows Automatic Updates is supported in the following operating systems: Windows 2003, Windows XP, and Windows 2000 SP3 or later. While Windows Millennium Edition (Me) has an Automatic Updates capability, it cannot be managed as the above operating systems can. Patch Mgmt > Windows Auto Update *(page 289)* can enable or disable this feature on managed machines.

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