Kaseya® Automating IT

Virtual System Administrator

User Guide

Version 4.8.1

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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 in the Configure *(page 397)* function under the System tab.
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 select 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 in the Configure function under the System tab. The default email address is vsa@kaseya.com.

Agents

The KServer manages machines using agents installed on remote machines. Once installed:

- A K icon K displays in the icon tray of the remote machine.
- Each installed agent is assigned a unique Kaseya machine ID / group ID *(page 449)*. 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 monitoring service provider.

Note: See Agent > Deploy Agents *(page 336)* for details about installing agents.

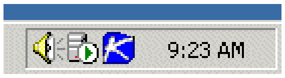
Agent Icons

Once installed on a machine, the agent displays an icon in the computer's system tray. This icon is the user's only interface to the agent. The icon may be disabled at the discretion of the administrator using the Agent > Agent Menu *(page 358)* page.

Note: You can fully customize the agent icon using System > Customize *(page 407)*.

Agent Icon Background is Blue

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

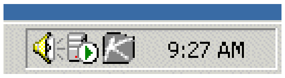


9:23 AM

Note: Double clicking the agent icon displays the User Access Welcome Page *(page 452)*.

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.

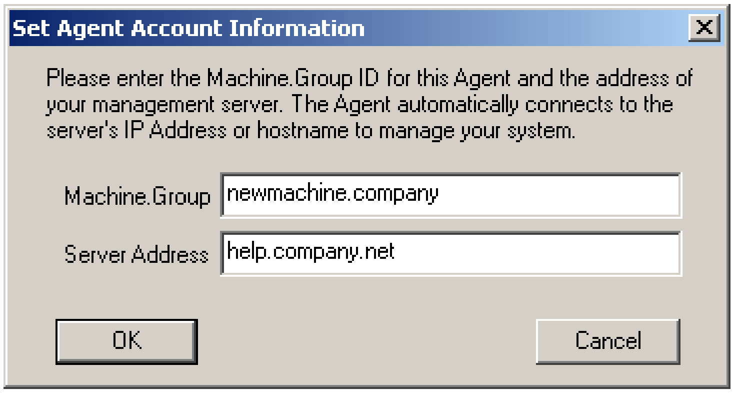


9:27 AM

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 (default is port 5721);
3. Verify this machine account's Check-in Control *(page 361)* settings are correct.

4. Manually set the address of your VSA 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

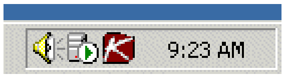
Please enter the Machine.Group ID for this Agent and the address of your management server. The Agent automatically connects to the server's IP Address or hostname to manage your system.

Machine.Group: newmachine.company

Server Address: help.company.net

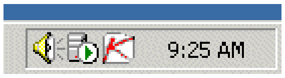
Agent Icon Background is Red

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

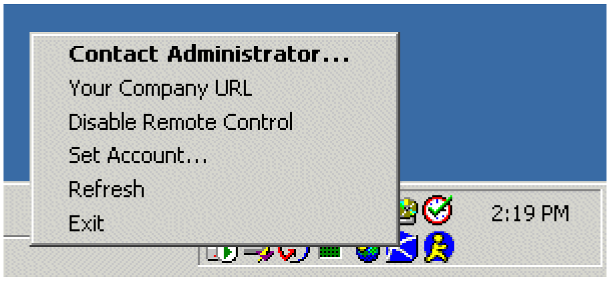
The agent icon flashes between a white background and its normal background when a *message is waiting* to be read. Clicking the icon displays the message.



Note: See Remote Cntl > Send Message *(page 240)* for an explanation of how to set up the sending of messages.

Agent Menu Options

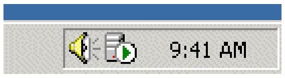
Right clicking the agent icon pops up a menu of options available to the user.



> Note: See Agent > Agent Menu *(page 358)* for a description of how to turn these options on or off.

Disabling the Agent Menu

Administrators may completely disable the agent menu *(page 358)* and remove the icon for 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. The 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

Login and Browser Settings

To login to Virtual System Administrator

1. Use your browser to display the login page of your Virtual System Administrator server.
2. Enter your administrator name and password.

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

3. Click the login 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.

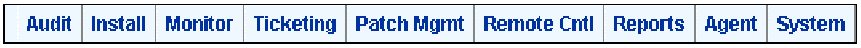
To Enable Cookies in Internet Explorer 6

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 .
8. Press OK.

VSA Tabs



All Virtual System Administrator 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.

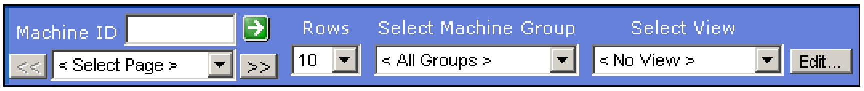
> Note: The System *(page 376)* tab can only be displayed and accessed by a master administrator.

Machine ID / Group ID Filter

Machine ID / Group ID Filter

Each agent *(page 445)* installed on a managed machine is assigned a unique machine ID/group ID combination. 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 the master administrator *(page 445)*, can create group IDs. Any administrator can create subgroup IDs. Group IDs and subgroup IDs are created using the System > Create/Delete *(page 379)* function page.

Filtering Views



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 387)* are displayed.

Machine ID

Limits the display of data on *all* function pages by machine ID string. Enter a string matching one or more machine IDs using an . 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... *(page 10)* button to display the View Definitions page.

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 9)* panel and clicking the green arrow

➡ icon.

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 main page 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.
- Show/Hide members of collection - 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 collection *(page 447)*.

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 template accounts, because these accounts never check in.
- Connection gateway filter - Check to only list machines that have a connection gateway *(page 36)* matching the specified filter. Use * for a wildcard if necessary. 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. Use * for a wildcard if necessary. 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 35)* function page.
- OS Version - Check to only list machines that match the OS version string as reported using Audit > Name/OS Info *(page 35)* function page. 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/Patch Update

- Contains/Missing application - Check to only list machines that have, or don't have, an application installed using the specified filter. Use * for a wildcard if necessary.
- 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 Agent Data

- Machines missing greater than or equal to N patches - Check to list machines missing a specified number of Microsoft patches.
- Advanced Agent Data Filter - Check and click the Define Filter... button to further refine the view using the Filter Aggregate Table *(page 12)*.

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 10)*.

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 the 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".

> 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 greater than "G".

Machine Summary

Audit > Machine Summary

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

Agent has checked in

Agent has not recently checked in

Agent has never checked in

Online but waiting for first audit to complete

Agent has been disabled

Alternatively, you can navigate to the Audit > Machine Summary page, which lists all machine IDs currently matching the Machine ID / Group ID filter *(page 9)*, and click any machine ID to display the Machine Summary page.

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.

The following elements are displayed in the single-user interface:

- Machine Info - 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.
- Installed Applications - Lists all the applications installed on the managed machine. Provides the same functionality as the Installed Apps *(page 33)* function in the Audit feature tab. 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 the PCI & Disk H/W *(page 39)* function in the Audit tab.
- 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, Application Log, Security Event Log, System Event Log, Script Log, Remote Control Log.
- Alerts - Defines alerts for a machine: Agent Status, Application Status, Get File Changes, Hardware Changes, Low Disk Space, Application Event, Security Event Log, System Event Log, LAN Watch, Script Execution Failure, Protection Violations, Patch Alert.
- Patch Status - Displays `Missing` and `Pending` Microsoft patches and schedules missing patches. If a machine belongs to a collection, missing patches may be further identified as `Denied (Pending Patch Approval)`. The user can manually override the denied Patch Approval *(page 188)* 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, Collection membership, Temp Directory, Check-In Control, Edit Profile, Set Days to Keep Log Entries, Capture Event Logging.

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 Virtual System Administrator.

Notes

Administrator Notes Database provides a place to record and retrieve what previous administrator actions were performed on each machine. Learn more... *(page 17)*

Status

Brings up the status monitor window. The status monitor continuously monitors selected machines, notifying you when they go online or offline. Learn more... *(page 16)*

Help

Displays context-sensitive help for the currently selected function.

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 15)*.

> Note: You can print Administrator Notes using Reports > Logs *(page 321)* and selecting `Admin Notes` in the Choose a log to display field.

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*. 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

Login 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 449)*.

The Home tab also provides a quick start guide to the main features of Virtual System Administrator.

> Note: You can completely customize the menu options displayed on the Home page using System > Customize *(page 407)*.

Functions	Description
View Dashboard *(page 20)*	Displays system summary information at a glance.
Layout Dashboard *(page 21)*	Specify which items appear in the dashboard and the order the items appear.
View Console *(page 22)*	Multiple monitoring views to display summary of monitoring status.
Layout Console *(page 25)*	Administrators can customize the View Console page.

View Dashboard

Home >
View Dashboard

The dashboard 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 449)*. You can manage tasks and send messages to other administrators using the dashboard. Customize the dashboard display using the Layout Dashboard *(page 21)* function.

Alerts

Displays all alerts relating to all machine IDs matching the current machine ID / group ID filter *(page 9)*. 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 the Patch Approval policy.

- Click the Use Policy button to apply the Patch Approval *(page 188)* policy when generating the pie chart.

> Note: The Patch Approval 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 approval policy.

- Click the Hide Policy button to generate the pie chart without the patch approval policy. This shows all missing patches including those denied by patch approval.
- 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 377)* page.

Layout Dashboard

Home > Layout

Each dashboard *(page 20)* item appears as a vertical section. Layout control lets you view/hide each item and set the order, from top to bottom, they appear. 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.

View Console

Home > View Console
Monitor > View Console

The View Console page gives you a quick view of monitoring health, highlighting the alarms and items you need to work on first. Alarm icons display the current alarm status. By default:

- A machine with any open alarms displays a red monitoring icon 🔴.
- A machine with no open alarms displays a green monitoring icon 🟢.
- A machine with no open alarms but with a trending alarm displays an orange monitoring icon 🟠.

You can put each monitoring pane in its own browser window and customize the window position. Customize the console display using the Layout Console *(page 25)* function page.

Alarm Status

Displays all alarms for all machine IDs matching the current machine ID / group ID filter *(page 9)*. 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 Layout Console *(page 25)*.

Each alarm contains:

- A link to Close an alarm or Open an alarm.
- A link to create or display a Ticket associated with the alarm.
- A monitoring log icon 📊 to display the monitoring log *(page 122)* for a single alarm for that machine ID, if applicable.
- An expand icon ⊞ to display alarm information.

Group Alarm Status

Summarizes the alarm status of all group IDs, using the current machine ID / 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 23)* window for the machine ID and any SNMP devices linked to it.

> Note: User defined group alarm column names are maintained using the Monitor Lists *(page 105)* page. Group alarm column names are assigned to monitor sets using Define Monitor Set *(page 109)*

Monitor Set Status

Displays all alarms assigned to all machine IDs matching the current machine ID / group ID filter *(page 9)*. See Monitor Set Status *(page 23)* for a complete description of the information available for a single machine ID.

Monitoring Status

This bar chart shows the number of alarms created for the selected time interval, for all machines matching the current machine ID / group ID filter.

Machines Online

This chart shows the percentage of servers and workstations online, for all machines matching the current machine ID / group ID filter.

Top N Daily Monitor Alarm Chart

This bar chart shows which machines have the most alarms for the selected time interval, for all machines matching the current machine ID / group ID filter. The chart shows up to 10 machines.

Monitor Set Status

The Monitor Set Status pane is part of the Home > View Console *(page 22)* page.

You can also display a Monitor Set Status popup window using the Group Alarm pane of the View Console page, by clicking a group ID link, then a machine ID.group ID link.

The Monitor Set Status popup window displays all alarms assigned to a machine ID, whether created by a monitor set *(page 450)*, alert *(page 446)*, system check *(page 451)* or SNMP set *(page 128)*. The first row of information displays:

- The check-in status (on page 447) icon - Click to display the Machine Summary *(page 14)* popup window.
- The machine status icon ▦ - Click to display the Machine Status *(page 25)* 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 449)*.

Monitor Sets

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

- The open 🔴 or closed 🟢 status of the alarm.

- 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 25)* icon to permanently save chart display selections.
- The monitoring log icon - Click to display the monitoring log *(page 122)* for this single alarm counter in a popup window.
- The Live Connect *(page 96)* icon LIVE - Click to display current, ongoing counter log information in a popup window.
- The monitor set object name.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 open 🔴 or closed 🟢 status of the alarm.
- The alert alarm type.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 open 🔴 or closed 🟢 status of the alarm.
- The system check alarm type.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 25)* 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 open 🔴 or closed 🟢 status of the alarm.

- ➢ The expand icon ⊞ - Click to display collection and threshold information.
- ➢ The monitoring log icon 📊 - Click to display the monitoring log *(page 122)* for this single alarm counter in a popup window.
- ➢ The SNMP set object name.
- ➢ For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just alarms for the selected SNMP set object and SNMP device.

Machine Status

The Machine Status icon displays inside the Monitor Set Status *(page 23)* window.

Clicking the machine status icon ▦ displays the Machine Status popup window. The Machine Status popup window selects and displays charts or tables for monitor set *(page 450)* objects. The setup is specific for each machine ID and can be saved permanently. Applies to monitor set objects only, not alerts *(page 446)*. 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

The Device Status icon displays inside the Monitor Set Status *(page 23)* window.

Clicking the device status icon ▦ displays the Device Status popup window. The Device Status popup window selects and displays charts or tables for SNMP devices *(page 451)*. 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.

Layout Console

Home > Layout Console
Monitor > Layout Console

The Layout Console function lets you display or hide each View Console *(page 22)* section and sets the order they appear, from top to bottom.

- To display an item, check the box next to the item.
- To re-order an item, click the up and down arrows ▲▼ to raise or lower it in the list.

Four items have additional customization controls: Monitor Set Status, Alarm Status, Chart Total Monitor Alarms and Chart Top N Monitor Alarms.

- Alarm sounds can be turned on for Monitor Set Status and Alarm Status.
- 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 in the Top N Monitor Alarms chart.

- The Alarm Status display has time dependent data for monitor alarms. To make it easy to quickly distinguish new items from old items, you can specify different highlight colors from data rows depending on how recently the data item was generated. For example:
  - All items created in the last N days are highlighted in red.
  - All items that are older than the red highlight date but more recent than the number entered here are highlighted in yellow.
  - Disable highlighting by setting the number of days to zero.
- The number of rows shows for Alarms may also be customized.

Chapter 4

Audit

In This Chapter

Audit Tab

Audit

Agents *(page 445)* 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 server so you can access it 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 KServer 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 292)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 97)* 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 39)*, 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.

Functions	Description
Run Audit *(page 29)*	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 32)*	Shows DMI / SMBIOS data collected
Insalled Apps *(page 33)*	Shows a list of executable (.exe) files on selected managed machines.
Add/Remove *(page 34)*	Shows the Add or Remove Programs list from a managed machine.
SW Licenses *(page 34)*	Shows a list of vendor license codes found on selected managed machines.

Name/OS Info *(page 35)*	Shows the Windows Networking computer name, operating system, and operating system version in use on the managed machine(s).
IP Info *(page 36)*	Shows the Machine.Group ID, IP address, subnet mask, default gateway, and connection gateway in use on the managed machine(s).
DNS/DHCP *(page 37)*	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 38)*	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 machine(s).
PCI & Disk H/W *(page 39)*	Shows information about PCI, disk drives, and disk controller cards installed on managed machines.
CPU/RAM *(page 40)*	Shows the Machine.Group ID, CPU, quantity and speed of CPUs, and RAM as reported in use on the managed machine(s)
Printers *(page 42)*	Lists all printers available to the managed machine.
Documents *(page 43)*	Stores files associated with a managed machine.
Machine Summary	Displays detailed information about a single managed machine.
File Access *(page 45)*	Prevents unauthorized access to files on managed machines by rogue applications or users.
Network Access *(page 47)*	Lets you approve or deny network access on a per application basis.
Application Blocker *(page 49)*	Application blocker prevents any application from running on a managed machine.

Run Audit

Audit > Run Audit

Agents *(page 445)* 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 server so you can access it 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 KServer 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 292)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 97)* types specifically address changes between a baseline audit and the latest audit: Application Changes and Hardware Changes.

Latest Audit

Runs a 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 32)* 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 perform an audit of selected machine IDs at the specified time, based on the date/time options selected.

Date/Time

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

Run Now

Click Run Now to perform an audit of selected machine IDs immediately.

Cancel

Click Cancel to stop the recurring audit on all selected machine IDs. To cancel a previously scheduled audit, select the managed machine whose audit you wish to cancel, then press the Cancel button. Cancel removes Next Audit column information for selected machine IDs.

Run recurring

Executes a script indefinitely at a regular interval. Enter the interval time in day(s) or hour(s).

> Note: If the interval is at least one day, then the recurring script runs at the scheduled time every interval. If the interval is less than one day, the interval is added to the last execution time of the script.

Stagger by

The Stagger by setting lets you spread the audit time out when running several machines. Scheduling the same script to run at the same time on multiple machines may excessively load your server and/or internet connection. To automatically spread out the execution times, enter the number of minutes to stagger the start time of each script. When multiple machine IDs are selected, clicking Schedule starts the script for the first machine at the scheduled time. The script for the second machine starts later, based on the number of stagger minutes you specified, and so on.

Skip if offline

Forces the script to run only at the scheduled time of day, within a 15 minute window. If a 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.

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 the Run Audit function.

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:

- OK Agent has checked in
- ⚑ 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

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

System Info displays all DMI / SMBIOS data collected by the system info audit *(page 447)* 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 - 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
- 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 by clicking the edit value icon . The edit value icon displays for items set to Manual Collection.

Installed Apps

Audit > Installed Apps

Installed Apps lists all applications found during the latest audit *(page 447)* for a selected machine ID. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*. The following information is displayed by default:

- Application - Lists the filename of the application.
- Version - Lists the version number of the application.
- Product Name - Lists the product name of the application.
- Description - Lists a brief description of the application as reported in the Properties dialog box of the executable file.
- Directory Path - Lists the absolute directory path where the application file is located.
- File Size - Lists the size (Kbytes) of the application file.
- Last Modified - Lists 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. 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 300)* 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

Click a machine ID to show the Add or Remove Programs list from a managed machine. Information shown on this page is collected when a Latest Audit *(page 29)* is performed. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*.

SW Licenses

Audit > SW Licenses

The SW Licences page displays all software licenses found for a selected machine ID. The list of machine IDs you can choose from on this page depends on the Machine ID / Group ID filter *(page 9)* and machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Information shown on this page is collected when a Latest Audit *(page 29)* is performed. Each vendor stores an application's license key differently so all application software licenses may not be collected. The VSA displays duplicate license keys found on more than one machine in red text.

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

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 29)* is performed.

Check-in status

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

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 9)*. Information shown in this function is collected when a Latest Audit *(page 29)* 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:

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 29)* 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
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

Disk Volumes 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 29)* is performed.

Check-in status

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

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

PCI & Disk H/W 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 29)* 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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

CPU/RAM 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 29)* 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:

- OK Agent has checked in
- 🟨 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

Printers list 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 29)* 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
- ◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Printers

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

> Note: Printers are mounted on a per users 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 in, 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 9)*.

   Documents associated with the selected machine ID and previously stored on the KServer 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

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

OK Agent has checked in

⚑ Agent has not recently checked in

⚑ Agent has never checked in

OK Online but waiting for first audit to complete

⊘ Agent has been disabled

Alternatively, you can navigate to the Audit > Machine Summary page, which lists all machine IDs currently matching the Machine ID / Group ID filter *(page 9)*, and click any machine ID to display the Machine Summary page.

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.

The following elements are displayed in the single-user interface:

- Machine Info - 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.
- Installed Applications - Lists all the applications installed on the managed machine. Provides the same functionality as the Installed Apps *(page 33)* function in the Audit feature tab. 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 the PCI & Disk H/W *(page 39)* function in the Audit tab.
- 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, Application Log, Security Event Log, System Event Log, Script Log, Remote Control Log.
- Alerts - Defines alerts for a machine: Agent Status, Application Status, Get File Changes, Hardware Changes, Low Disk Space, Application Event, Security Event Log, System Event Log, LAN Watch, Script Execution Failure, Protection Violations, Patch Alert.
- Patch Status - Displays `Missing` and `Pending` Microsoft patches and schedules missing patches. If a machine belongs to a collection, missing patches may be further identified as `Denied (Pending Patch Approval)`. The user can manually override the denied Patch Approval *(page 188)* 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, Collection membership, Temp Directory, Check-In Control, Edit Profile, Set Days to Keep Log Entries, Capture Event Logging.

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 last 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

◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 function lets you approve or deny 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.

> Note: To determine which applications should be approved or denied network access, use the Network Statistics 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. The agent can not monitor network statistics or block network access if this driver is disabled.

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 an application attempts to access the network that has been denied access to the network. Us 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Notify User

A green checkmark ✓ in the Notify User column indicates that the managed machine user will be 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

Application blocker prevents any application from running on a machine ID.

> Note: 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 9)* 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

◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

Installations

You can schedule the installation of Microsoft and non-Microsoft applications and patches using Patch Deploy *(page 55)* and Application Deploy *(page 56)*.

> Note: See Patch Management *(page 174)* to install Microsoft patches on managed machines.

When a pre-defined install solution cannot be used, use Packager *(page 59)* to create a self-extracting file ready for automated distribution. Transfer files to and from managed machines using Get File *(page 60)* and Distribute File *(page 62)*.

Script Analysis

You can view the status of all scripts run on a managed machine using Scripts Status *(page 63)*. You can also spread out the impact scripts have on network traffic and server loading using Distribute *(page 64)*.

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 66)* for an introduction to managing scripts.
- See Script Editor *(page 70)* for an introduction to creating and editing scripts.
- See IF/THEN/ELSE *(page 75)* for a list of script commands available to you.

Functions	Description
Patch Deploy *(page 55)*	Use this wizard tool to create scripts to deploy patches to managed machines.
Application Deploy *(page 56)*	Use this wizard tool to create scripts to deploy third party install packages (setup.exe) to managed machines.
Packager *(page 59)*	An external application that allows administrators to create installation packages deployable on administered managed machines.
Get File *(page 60)*	View and manage files uploaded to the VSA from managed machines by a Get File script command.
Distribute File *(page 62)*	Write files to all selected managed machines and maintain them.
Scripts Status *(page 63)*	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 64)*	Minimize network traffic and server loading by executing scripts evenly throughout the day

Patch Deploy

Scripts >
Patch Deploy

Patch Deploy is a wizard 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 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* for a general description of patch management.

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 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 a 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 451)*. 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

Application Deploy 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 - used to deploy MSI file types
- Wise Installer
- Installshield - Package For The Web
- Installshield - Multiple Files

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 451)*.

Silent Installs with InstallShield

InstallShield has a record mode that captures answers to all dialog boxes in the installation script. The Acrobat 4.05 script under the Scripts Tab is an example of this technique. Define a Managed Variable *(page 70)* called <FileServer> to point to the location of the Acrobat `setup.exe` file. InstallShield requires the recorded `iis` file to be on the same machine as the local machine. The first step in the script writes out the `record.iis` file from VSA server to the local machine.

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 66)* 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 OS's, 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, the 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 function page accesses files previously uploaded from a managed machine. Files can be uploaded to the server manually using Manage Files Stored on Server *(page 72)* or by a script using the `Get File` or `Get File In Directory Path` commands. The VSA 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 collection of files is machine-specific. Use Manage Files Stored on Server *(page 72)* to access files stored on the server 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 235)* 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 function.
2. Execute the utility using either the script command Execute DOS Command or Execute File and pipe the output to a text file, such as `results.txt`.
3. Upload the file to the server 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 70)* page:

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

`Parameter 3 : 2` indicates Save existing version, get file, and send alert if file changed. The first time the above script statement executes on a managed machine the agent sends `c:\temp\info.txt` to the server and the VSA stores it. The second time the above statement executes, the VSA 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 97)*. 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. 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 will not see it.

Specify full path and filename to store file on remote machine

Enter a location to write the file for the selected machine ID. The Browse... button is there as a convenience to more easily locate correct paths. Click it to get the standard Windows file browser dialog box.

> Warning:: Clicking the Browse... button allows you to browse directories on your own machine, *not* managed machines.

Manage Files...

Click the Manage Files... *(page 70)* link to open the Manage Files Stored on Server popup window. Use this window to add, update, or remove files stored on the VSA server. This same window displays when you select Managed Files... using the Script Editor *(page 70)*. 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 server. 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 9)*. Administrators can, at a glance, find out what time a script was executed and whether it was successfully executed. See Using Scripts *(page 66)* for more information about scripts.

Check-in status

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

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

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

Use the Distribution function page to spread 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 66)* for more information.

> Note: Recurring scripts listed here include function-specific scripts that are not visible in your Script Browser *(page 66)*, such as scripts created using a Patch Management wizard.

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. 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 9)*.

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. Within the script browser:

- Clicking a folder displays the Script Manager *(page 66)*.
- Clicking a script displays the Script Scheduler *(page 68)*.

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 55)* wizard, are not displayed in the Script Browser and cannot be changed using the Script Editor *(page 70)*.

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 70)*.

> 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 72)* popup window.

Script Manager

**Scripts >
Script Browser >
*script folder***

Click any script *folder* in the Script Browser *(page 66)* 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 70)*.

> 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 70)* 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 66)* or from a Script Manager *(page 66)* page to display the Script Scheduler page. The Script Scheduler page schedules or immediately runs an existing script. If necessary, click the Edit *(page 70)* 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 9)* and machine groups the administrator is authorized to see using System > Group Access *(page 387)*.
3. Press either the Schedule or Run Now button.

Edit

Click Edit to edit the script using Script Editor *(page 70)*.

Schedule

Click Schedule to schedule a script to run on selected machine IDs. The scripts runs at the specified date and time.

Specify time to execute

Using the drop-down menus, enter the date and time to execute the script. After entering a date and time, press Schedule to schedule the script on the selected machine IDs.

Cancel

Click Cancel to cancel the scheduled scripts from executing on the selected managed machines.

Run Now

Click Run Now to run the script on selected machine IDs immediately.

Run recurring every <N> <period>

To execute a script indefinitely at a regular interval, check the Run recurring checkbox and enter the number of periods in days or hours.

- If the interval is at least one day, then the recurring script runs at the scheduled time every interval. If the interval is less than one day, the interval is added to the last execution time of the script.
- If the managed machine is offline at the scheduled time, the managed machine runs the script the next time it goes online. If the interval is at least one day, then the recurring script runs at the scheduled time every interval.
- Recurring scripts can be scheduled for a specified range of time using the Scripts > Distribution *(page 64)* page.

Stagger by

Scheduling the same script to run at the same time on multiple machines may excessively load your server and/or internet connection. To automatically spread out the execution times, enter the number of minutes to stagger the script start time by. Clicking Schedule with multiple machine IDs selected sets the execution time for the first machine at the scheduled time. It schedules the second machine at that time plus the number of stagger minutes, and so on.

Skip if offline

Check this box to only 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.

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 Table

Selecting this checkbox automatically updates the machine ID table on this page every five seconds. This checkbox is automatically selected and activated whenever Schedule is clicked.

Script Editor

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

The Script Editor creates and maintains customizable scripts used to 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 75)* appropriate for each statement.

Operating System Detect

When writing a THEN/ELSE function, you can select on which operating system the function will execute. This function is useful when you want to write one script that can be executed on different operating systems. For example, directory paths in Windows 95 and Windows NT can differ and require different directory path syntax in order to work correctly. Creating two separate script steps within the same script and labeling them Windows 95 and Windows NT, respectively, 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 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 73)* 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 418)* 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 72)* popup window.

Manage Variables...

Click the Manage Variables... link to display the Variable Manager *(page 73)* 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 390)*, administrator roles *(page 385)*, 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 server can be distributed to managed machines. Scripts distribute files stored on the server to managed machines using the Write File or Write File in Directory Path commands.

> Note: This collection of files is not machine specific. Use Get File *(page 60)* to access machine-specific files stored on the server.

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

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 server.

To delete a file stored on the server:

- 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 server.

> 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 381)*, 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 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 73)* 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 418)* 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.
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 VSA server.
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 VSA server.
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	Display 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 login 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 VSA to the managed machine.
Write File in Directory Path	Write a file stored on the VSA to the managed machine at into 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\Current Version\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 at the 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\Current Version\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.

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 login 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 elapsed (timeout). 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 function, you can select on which operating system the function will execute. This function is useful when you want to write one script that needs to be executed on different operating systems. For example, directory paths in Windows 95 and Windows NT can differ; create two separate script steps and label them Windows 95 and Windows NT, respectively.

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 path 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 server, an error message will appear 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 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, including the filename, that you want to upload. The file is stored on the VSA in a private directory for each managed machine. Access the uploaded file using Scripts > Get File *(page 60)*.

As an option, existing copies of uploaded files will 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.

Another 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.

Get File in Directory Path

Just like Get File 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 60)* 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 73)* 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.
- 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 418)* for a list of the SQL views and columns that are available.

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 (string value, DWORD value, binary value).

Use Credential

Use the credentials set for the machine ID in Set Credential *(page 370)* 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 72)* 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 72)* 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 enables you to 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, Monitoring 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.

In addition to generating alert notifications when event log entries are generated, event log entries collected from your managed machines are stored on the server. 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 332)* page, as well as the Logs *(page 321)* reports.

Function	Description
View Console *(page 22)*	Multiple monitoring views to display summary of monitoring status.
Layout Console *(page 25)*	Administrators can customize the View Console page.
Alarm Summary *(page 93)*	List of alarms for monitored machines.
Suspend Alarms *(page 94)*	Suspend alarm notifications for specific machine IDs.
Live Connect *(page 96)*	Real time view of monitor counter objects.
Monitor Lists *(page 105)*	Configure the monitor list objects for monitoring.
Update Lists By Scan *(page 107)*	Scan machines for monitor counters and services.
Monitor Sets *(page 108)*	Configure monitor sets.
SNMP Sets *(page 128)*	Configure SNMP monitor sets.
Add SNMP Object *(page 133)*	Manage SNMP MIB objects.
Alerts *(page 97)*	Configure monitor alerts for machines.
Assign Monitoring *(page 119)*	Assign, remove and manage alarms of monitor sets on machines.

Monitor Log *(page 122)*	View monitor log data in chart and table format.
System Check *(page 114)*	Assign, remove and manage alarms for system checks on machines.
SNMP Community *(page 136)*	Install and remove SNMP community settings for machines. Enables SNMP device monitoring.
LAN Watch *(page 137)*	Scan network range for specifice SNMP enabled devices.
Assign SNMP *(page 141)*	Assign, remove and manage alarms of SNMP monitor sets on devices.
SNMP Log *(page 144)*	View SNMP log data in chart and table format.
Set SNMP Values *(page 147)*	Set SNMP values on the specified device.
SNMP Type *(page 148)*	Assign SNMP types to SNMP devices.

View Console

Home > View Console
Monitor > View Console

The View Console page gives you a quick view of monitoring health, highlighting the alarms and items you need to work on first. Alarm icons display the current alarm status. By default:

- A machine with any open alarms displays a red monitoring icon 🔴.
- A machine with no open alarms displays a green monitoring icon 🟢.
- A machine with no open alarms but with a trending alarm displays an orange monitoring icon 🟠.

You can put each monitoring pane in its own browser window and customize the window position. Customize the console display using the Layout Console *(page 25)* function page.

Alarm Status

Displays all alarms for all machine IDs matching the current machine ID / group ID filter *(page 9)*. 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 Layout Console *(page 25)*.

Each alarm contains:

- A link to Close an alarm or Open an alarm.
- A link to create or display a Ticket associated with the alarm.
- A monitoring log icon 📊 to display the monitoring log *(page 122)* for a single alarm for that machine ID, if applicable.
- An expand icon ⊞ to display alarm information.

Group Alarm Status

Summarizes the alarm status of all group IDs, using the current machine ID / 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 23)* window for the machine ID and any SNMP devices linked to it.

> Note: User defined group alarm column names are maintained using the Monitor Lists *(page 105)* page. Group alarm column names are assigned to monitor sets using Define Monitor Set *(page 109)*

Monitor Set Status

Displays all alarms assigned to all machine IDs matching the current machine ID / group ID filter *(page 9)*. See Monitor Set Status *(page 23)* for a complete description of the information available for a single machine ID.

Monitoring Status

This bar chart shows the number of alarms created for the selected time interval, for all machines matching the current machine ID / group ID filter.

Machines Online

This chart shows the percentage of servers and workstations online, for all machines matching the current machine ID / group ID filter.

Top N Daily Monitor Alarm Chart

This bar chart shows which machines have the most alarms for the selected time interval, for all machines matching the current machine ID / group ID filter. The chart shows up to 10 machines.

Layout Console

Home > Layout Console
Monitor > Layout Console

The Layout Console function lets you display or hide each View Console *(page 22)* section and sets the order they appear, from top to bottom.

- To display an item, check the box next to the item.
- To re-order an item, click the up and down arrows ▲▼ to raise or lower it in the list.

Four items have additional customization controls: Monitor Set Status, Alarm Status, Chart Total Monitor Alarms and Chart Top N Monitor Alarms.

- Alarm sounds can be turned on for Monitor Set Status and Alarm Status.

- 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 in the Top N Monitor Alarms chart.
- The Alarm Status display has time dependent data for monitor alarms. To make it easy to quickly distinguish new items from old items, you can specify different highlight colors from data rows depending on how recently the data item was generated. For example:
  - ➢ All items created in the last N days are highlighted in red.
  - ➢ All items that are older than the red highlight date but more recent than the number entered here are highlighted in yellow.
  - ➢ Disable highlighting by setting the number of days to zero.
- The number of rows shows for Alarms may also be customized.

Monitor Set Status

The Monitor Set Status pane is part of the Home > View Console *(page 22)* page.

You can also display a Monitor Set Status popup window using the Group Alarm pane of the View Console page, by clicking a group ID link, then a machine ID.group ID link.

The Monitor Set Status popup window displays all alarms assigned to a machine ID, whether created by a monitor set *(page 450)*, alert *(page 446)*, system check *(page 451)* or SNMP set *(page 128)*. The first row of information displays:

- The check-in status (on page 447) icon - Click to display the Machine Summary *(page 14)* popup window.
- The machine status icon ▦ - Click to display the Machine Status *(page 25)* 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 449)*.

Monitor Sets

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

- The open 🔴 or closed 🟢 status of the alarm.
- 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 25)* icon ▦ to permanently save chart display selections.
- The monitoring log icon 📊 - Click to display the monitoring log *(page 122)* for this single alarm counter in a popup window.

- The Live Connect *(page 96)* icon - Click to display current, ongoing counter log information in a popup window.
- The monitor set object name.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 open 🔴 or closed 🟢 status of the alarm.
- The alert alarm type.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 open 🔴 or closed 🟢 status of the alarm.
- The system check alarm type.
- For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just 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 25)* 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 open 🔴 or closed 🟢 status of the alarm.
    - The expand icon ⊞ - Click to display collection and threshold information.
    - The monitoring log icon - Click to display the monitoring log *(page 122)* for this single alarm counter in a popup window.
    - The SNMP set object name.
    - For open alarms, the Alarm hyperlink displays. Click to display the Alarm Summary *(page 93)* popup window. The alarm summary popup window is restricted to just alarms for the selected SNMP set object and SNMP device.

Alarm Summary

Monitor > Alarm Summary

The Alarm Summary page displays alarms *(page 445)* for all machine IDs that match the current machine ID / group ID filter *(page 9)*. You can include additional filtering for listed alarms using fields in the Alarm Filters panel.

- Alarm ID - A specific alarm ID can be searched for.
- Monitor Type - Alarms for monitor types of `Counter`, `Process`, `Service`, `SNMP`, `Alert` or `System Check` can be searched for.
- Alarm State - Alarms of state `Open` or `Closed` can be searched for.
- Alarm Type - Alarms of type `Alarm` or `Trending` can be searched for.
- Alarm Text - Text contained in the alarm can be searched for.

Each row displays summary data for a single alarm. The alarms are sorted by the alarm timestamp with the most current alarms displaying first.

Update

Clicking the Update button applies the selected alarm status and notes to the selected alarms. Click the ⊞ icon next to the alarm ID to see the applied note.

Deleting...

Clicking the Delete button deletes the selected alarms.

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.

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.

ID

Lists system generated unique IDs for each alarm. The expand icon ⊞ can be clicked to display specific alarm information.

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

State

The current state of the alarm. Clicking an Open link closes the alarm. Clicking an Closed link re-opens the alarm.

Alarm Date

The date and time the alarm was created.

Type

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

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 155)* 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 445)* 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 9)*.

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 a time period when alarms will be suppressed 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

Enter date and time parameters that match the scheduled start time to suspend alarms for selected machine IDs. Click Cancel to cancel these scheduled time periods.

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
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 119)* are listed on this page. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*.

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:

Agent has checked in

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

Machine ID.Group ID

Lists the Machine.Group IDs *(page 449)* currently matching the Machine ID / Group ID filter *(page 9)* 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 creates "alert type" alarms for managed machines. The Alerts page provides a simple set of typical parameters for setting up alarms *(page 445)* and their corresponding alerts quickly on a managed machine. 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 type of alert response to the alarm.

> Note: Monitor Sets *(page 450)* represent a more complex method for triggering alarms. Typical alarm conditions should be defined using the Alerts page.
>
> Note: Alerts also have a generic meaning. See Alert *(page 446)* in the Glossary.

Group Alarms

Alerts are automatically assigned to a Group Alarm category. If an alert alarm is triggered, the group alarm it belongs to is triggered as well. Group alarms display in the Group Alarm Status pane of the View Console *(page 22)* page.

To Create An Alert

1. Select an alert function from the Select Alert Function drop down list.
2. Check any of the last three checkboxes to perform their corresponding actions when an alarm is triggered for a machine ID.
   - Create Alarm - This is always checked. "Alert type" alarms are enabled when an alert is defined on this page.
   - Create Ticket
   - Run Script after alarm.
   - Email Recipients

1. Set additional email parameters.
2. Set additional alert-specific parameters. These display when you select an alert function.
3. Check the machine IDs to apply the alert to.
4. Click the Apply button.

To Cancel an Alert

1. Select the machine ID checkbox.
2. Click the Clear button.

The alert information listed next to the machine ID is removed.

Creating Event Based Alerts

You can activate alerts for different types of events recorded in Application, Security, and System event logs stored on managed machines.

> 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.

1. Check the box next to any of the following event types:
   - Error
   - Warning
   - Information
   - Success Audit
   - Failure Audit
2. Click the Add or Replace radio options, then click Apply to assign selected event type alerts to selected machine IDs.
3. Click Remove to remove all event based alerts from selected machine IDs.
4. Optionally filter the triggering of event based alerts using Event Sets *(page 103)*.

Passing Alert Information to Emails and Scripts

The following variables are populated with information when an alert is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alert.

> Note: Changing this email format changes the format for *all alert* emails. You may need to greatly restrict the size of an email alert message if the destination email address is a pager or some hand-held device.
>
> Note: The table below shows, as an example, the set of variables available for an event based alert. Each alert function provides a different set of variables.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<cg>	#cg#	Event category
<cn>	#cn#	computer name
<ed>	#ed#	event description
<ei>	#ei#	event id
<es>	#es#	event source
<et>	#et#	event time

<eu>	#eu#	event user
<gr>	#gr#	group ID
<id>	#id#	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

Alert Processing Time Delays

Some alerts are processed immediately and some are processed at the next audit. Event log alerts are processed immediately as follows:

- If alerting is turned on the agent reports new event log entries at the next check-in period. If alerting is turned off (for that log) then the events are not reported up until the next time the agent performs a full check-in *(page 447)*. Once reported up to the server, a background task on the server processes them in a batch mode. The server background task runs every two minutes. So if you have alerts activated, the longest delay you incur is 2 minutes plus the quick check-in *(page 447)* period, plus what ever processing lag your external email system may have.
- Application changes, HW Changes, and Low Disk alerts are processed with each audit. The alerts get issued when the latest audit data shows a change from the last audit run.

Get Files, LAN Watch, and Script Fail alerts are all generated when the script executes on the machine. Alerts are processed as a batch by the system background task that runs every two minutes.

Select Alert Function

Depending on the alert selected, the information provided changes. Some alerts require you to enter a number or select a checkbox. After selecting an alert function, make sure you enter the necessary criteria in the field, if necessary.

Summary - The quick view summary shows what alerts are active on each machine. The email recipients list for each alert time appears if the alert is active on that machine ID. The alert type label becomes a link for active alerts. Clicking the link automatically selects the specific alert type and populates the form with the settings active in that alert.

Agent status - Generates an alert when the agent is offline, first goes online, or someone has disabled remote control on the selected machine. Check the box and enter the amount of time the agent can be offline before the alert is sent. Checking the box to alert when an agent goes online triggers an alarm every time the agent first goes online. Checking the box to disable remote control triggers an alarm at the next check-in from the agent on the machine where remote control was disabled.

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.

Application Changes - Triggers an alarm when a new application is installed or removed on selected machines.You can exclude directories from triggering an alarm. The exclude path may contain wildcards. You can add to the current list of applications, replace the current application list or remove the existing application list. Excluding a folder excludes all subfolders. For example, if you exclude `*\windows\*`, `c:\Windows` and all subfolders are excluded.

Get File Changes - Triggers an alarm 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 triggered. The VSA issues the alert only if send alert if file changed option has been selected in the script.

Hardware Changes - Triggers an alarm when a hardware configuration changes on the selected machines. Detected hardware changes include the addition or removal of RAM, PCI devices, and disk drives.

Low disk space - Triggers an alarm when available disk space falls below the entered percentage of free disk space. When Low disk space is selected, the % free space field displays.

Application Event, Security Event or System Event - Triggers an alarm when selected machines write an event to Windows event logs. See Creating Event Based Alerts above.

LAN Watch - Triggers an alarm when the LAN Watch *(page 137)* scan detects a new device connected to the machine's LAN.

Script Failure - Triggers an alarm when a script fails to execute on a managed machine.

Protection Violations - Triggers an alarm when selected security breaches occur on a managed machine: Distributed file changed on agent and was updated, File access violation detected, and Network access violation detected.

New Agent installed - Triggers an alarm when a new agent is installed on a managed machine in the selected groups.

Patch Alert - This same alert can be set using Patch Mgmt > Patch Alert *(page 205)*. The system sends the selected administrator an email alert whenever Scan Machine *(page 179)* discovers one of four different patch alert cases.

- 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.

Backup Alerts - This same alert can be set using Backup > Backup Alert *(page 282)*. Triggers an alert when a backup succeeds, fails, or is skipped.

System Alerts - Triggers an alarm when selected events occur on the KServer: the administrator account is disabled or the KServer stopped. Selecting System Alerts does not display a managed machine list. The events listed only apply to the KServer. This option only displays for master administrators *(page 445)*.

Add/Replace/Remove

Some alert functions include Add and Replace options and a Remove button.

- 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.

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.

Copy

Only active when Summary is selected. Copy takes all the alerts settings for a single machine ID, selected by clicking the this machine ID link, and applies these same settings to all other checked machine IDs.

Create Alarm

The Create Alarm check box is always checked. This creates an alarm for the selected alert function.

Create Ticket

If checked a new ticket is generated at the same time the alarm is created and associated with the alarm.

Run Script after alert

If checked, a script is run when an alert is triggered. 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 alert.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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

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

Edit

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

> Note: Selecting System Alerts does not display a managed machine list. The events listed only apply to the KServer.

Email Address

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

Edit Event Sets

Monitor > Alerts

On the Alerts page, select Application Events, Security Events or System Events 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 let you filter the monitoring of events in Application, Security, and System event logs maintained by the Windows OS of a managed machine. Events matching an event set can trigger an alert or suppress the triggering of an alert when the Ignore checkbox is checked. You can assign multiple event sets to a machine ID.

If any one of a multiple number of event set rows are detected, then the event is included. Any one of a multiple number of Ignore event set rows override ALL included event set rows, if applicable.

> 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.

Event sets are specified using one or more of the following event properties.

- Source
- Category
- Event ID
- User
- Description

To Create a New Event Set

1. On the Alerts page, select Application Events, Security Events or System Events from the Select Alert Function drop down list.
2. 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

The Ignore checkbox enables you to trigger an alert for all events *except* for the events you want to ignore. Ignore events always take precedence over other event sets. You must assign multiple event sets to the same machine ID to make use of of the Ignore feature. Example:

1. On the Alerts page, select Application Events, Security Events or System Events from the Select Alert Function drop down list.
2. Check the Errors 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.
3. Assign an event set to these same machine IDs that specifies all the events you wish to ignore.

If any *one* of a multiple number of *include* event set rows are detected, then the event is included. If any *one* of a multiple number of *Ignore* event set rows are detected, it overrides *all included* event set rows, if applicable.

Using the Asterisk (*) Wildcard

Using the asterisk (*) wildcard you can create a filter for multiple events. 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>
```

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 108)* and SNMP Sets *(page 128)*. 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 107)* page. Additionally these lists, as well as Services and Processes, can be populated with the import of a Monitor Set *(page 108)*. MIB OIDs can be populated by using the Add SNMP Object *(page 133)* page or by the import of a SNMP Set *(page 128)*.

Counter Objects

This tab lists counter objects required to create a Monitor Set *(page 108)*. 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 108)*. 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 108)*. 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 108)* feature to monitor the activity of Windows Services. This list can also be populated with the execution of the Update Lists By Scan *(page 107)* page *or* the import of a Monitor Set *(page 108)*.

Processes

This tab lists Windows processes required by the edit Monitor Set *(page 108)* 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 107)* feature.

MIB OIDs

This tab lists SNMP MIB objects required to create SNMP Sets *(page 128)*. SNMP sets monitor the activity of SNMP devices. This list can be populated with the import of a SNMP Set *(page 128) or* the execution of the Add SNMP Object *(page 133)* 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 148)*. This enables the convenient assignment of SNMP sets to large collections of 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 129)*. During a LAN Watch *(page 137)* 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 108)* and Define Monitor Sets *(page 109)* to assign a monitor set to any group alarm column name. Group alarms are displayed using the View Console *(page 22)* 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. 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:

- Agent has checked in
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 397)* page.

A monitor set is a collection of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/counter/instance, 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 collection of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. Monitor sets are maintained using Monitor > Monitor Sets *(page 108)*. and are assigned to machine IDs using Monitor > Assign Monitoring *(page 119)*. You can assign monitoring to any machine that has an operating system of Windows 2000 or newer. The results of monitoring can be displayed using Monitor > Monitor Log *(page 122)* or View Console *(page 22)*.

> Note: Monitor sets represent a more complex method for triggering alarms. Typical alarms should be defined using the Alerts *(page 97)* page.
>
> 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.

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 105)* page. Group alarms display on the View Console *(page 22)* page.

Import

Click Import to upload a monitor set XML file to your server. Monitor sets can be exported using Define Monitor Set *(page 109)*.

Edit

Click Edit to display the Define Monitor Set *(page 109)* window and edit a monitor set.

Define Monitor Sets

Monitor > Monitor Sets > Edit

The Define Monitor Sets window maintains a collection 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 105)*. Sample monitor sets can be loaded using the System > Configure *(page 397)* page.

A monitor set is a collection of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/counter/instance, 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 collection of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. Monitor sets are maintained using Monitor > Monitor Sets *(page 108)*. and are assigned to machine IDs using Monitor > Assign Monitoring *(page 119)*. You can assign monitoring to any machine that has an operating system of Windows 2000 or newer. The results of monitoring can be displayed using Monitor > Monitor Log *(page 122)* or View Console *(page 22)*.

> Note: Monitor sets represent a more complex method for triggering alarms. Typical alarms should be defined using the Alerts *(page 97)* page.

Click the following tabs to define monitor set details.

- Counter Thresholds *(page 110)*
- Services Check *(page 112)*
- Process Status *(page 113)*
- Monitor Icons *(page 114)*

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 to 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 108)* 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 pane of the View Console *(page 22)* page.

Counter Thresholds

Monitor >
Monitor Sets >
Edit >
Counter Thresholds

The Counter Thresholds tab enables you to maintain all counter objects/counters/instances associated with a monitor set. These are the same counter objects, counters and instances displayed when you run `PerfMon.exe` on a Windows machine.

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 counter.

1. Select a counter Object, Counter and, if necessary, a counter Instance using their respective drop down lists.
   - Not all counters have related instances.
   - The drop down lists used to select counter objects, counters,

    and instances are based on the "master list" maintained using the Monitor Lists *(page 105)* page. If a counter object/counter/instance 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" by scanning specific machine IDs using Update Lists By Scan *(page 107)*.

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 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.
    - Sample Interval - Defines how frequently the data is sent by the agent to the server.
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 compare 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 in the View Console *(page 22)* 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 Monitor Icons *(page 114)*.
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: a 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 a orange icon ● in the View Console *(page 22)* page. You can change this icon using the Monitor Icons *(page 114)* tab.

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

Services Check triggers an alarm if a 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 Service Check record.

- 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 105)* 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 107)*.
- Description - Describes the service and the reason for monitoring.

- Restart Attempts - The number of times the system should attempt to restart the service.
- 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 Service 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

Process Status triggers an alarm 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.

- 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 105)* 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 107)*.
- Description - Describes the process and the reason for monitoring.
- Alarm on Transition - Triggers an alarm when a process (application) is started or stopped.
- 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 View Console *(page 22)* 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 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.

System Check

Monitor > System Check

The System Check page creates system check alerts for managed machines. An alert is a response to an alarm condition. System checks are performed on managed machines that don't have agents installed on them. Such machines 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 the last three checkboxes to perform their corresponding actions when an alarm is triggered for a system check.

- Create Alarm - This is always checked. System check alarms are enabled when an system check alert is defined on this page.
- Create Ticket
- Run Script after alarm.
- 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 System Check Alert Information to Emails and Scripts

The following variables are populated with information when a system check alarm is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of a system check alarm.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<gr>	#gr#	group ID
<id>	#id#	machine ID
<p1>	#p1#	address checked
<p2>	#p2#	additional parameter
<sc>	#sc#	system check type
	#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 alarm parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all alarm parameters from selected machine IDs.

Create Alarm

The Create Alarm check box is always checked. This creates an alarm for any external system that exceeds its alarm threshold.

Create Ticket

If checked a new ticket is generated at the same time the alarm is created and associated with the alarm.

Run Script after alarm

If checked, a script is run when an alarm is triggered. 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, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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 with parameters to run at a selected time interval.

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.
- 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

⚑ 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

Delete

Click the delete icon ✕ to delete a system check.

Edit

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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.

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. A monitor set is a collection of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/counter/instance, 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 collection of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. Monitor sets are maintained using Monitor > Monitor Sets *(page 108)*. and are assigned to machine IDs using Monitor > Assign Monitoring *(page 119)*. You can assign monitoring to any machine that has an operating system of Windows 2000 or newer. The results of monitoring can be displayed using Monitor > Monitor Log *(page 122)* or View Console *(page 22)*.

> Note: Monitor sets represent a more complex method for triggering alarms. Typical alarms should be defined using the Alerts *(page 97)* page.

To Create a Monitor Set Alert

1. Check any of the last three checkboxes to perform their corresponding actions when an alarm is triggered for a monitor set.
   - Create Alarm - This is always checked. Monitor set alarms are defined using Monitor > Monitor Sets.
   - Create Ticket
   - Run Script after alarm.
   - 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 variables are populated with information when an alarm is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alarm.

> Note: Changing this email alarm format changes the format for *all* monitor set and SNMP set emails.

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
<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

The Create Alarm check box is always checked. This creates an alarm for any monitor set object that exceeds its alarm threshold.

Create Ticket

If checked a new ticket is generated at the same time the alarm is created and associated with the alarm.

Run Script after alarm

If checked, you must click select script 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. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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 the Monitor > Monitor Sets *(page 108)* page.

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:

OK Agent has checked in

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Monitor Sets

The list all monitor sets assigned to machine IDs.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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.

Monitor Log

Monitor > Monitor Log

Clicking the monitoring log icon 📊 next to a single alarm for a specific machine ID in the View Console *(page 22)* 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 9)*. If no machine IDs display use the Monitor > Assign Monitoring *(page 119)* page 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 110)* 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 107)* 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`.

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 129)* 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 System Check page creates system check alerts for managed machines. An alert is a response to an alarm condition. System checks are performed on managed machines that don't have agents installed on them. Such machines 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 the last three checkboxes to perform their corresponding actions when an alarm is triggered for a system check.
   - Create Alarm - This is always checked. System check alarms are enabled when an system check alert is defined on this page.
   - Create Ticket
   - Run Script after alarm.
   - 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 System Check Alert Information to Emails and Scripts

The following variables are populated with information when a system check alarm is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of a system check alarm.

Within an Email	Within a Script	Description
<at>	#at#	alert time
<gr>	#gr#	group ID
<id>	#id#	machine ID
<p1>	#p1#	address checked
<p2>	#p2#	additional parameter
<sc>	#sc#	system check type
	#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 alarm parameters to selected machine IDs. Confirm the information has been applied correctly in the machine ID list.

Clear

Click Clear to remove all alarm parameters from selected machine IDs.

Create Alarm

The Create Alarm check box is always checked. This creates an alarm for any external system that exceeds its alarm threshold.

Create Ticket

If checked a new ticket is generated at the same time the alarm is created and associated with the alarm.

Run Script after alarm

If checked, a script is run when an alarm is triggered. 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, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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 with parameters to run at a selected time interval.

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.
- 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

⚑ 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

Delete

Click the delete icon ✕ to delete a system check.

Edit

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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 collection of MIB objects *(page 450)* used to monitor the performance of SNMP enabled network devices *(page 451)*. Typically, a threshold is assigned to each MIB object in a SNMP set. Alarms can be set to trigger if any of the thresholds in the SNMP set are exceeded. A SNMP set should be defined as a logical collection of things to monitor. SNMP sets are maintained using Monitor > SNMP Sets *(page 128)*. SNMP sets can be manually assigned to monitor a SNMP device using Monitor > Assign SNMP *(page 141)* or Monitor > SNMP Type *(page 148)*. SNMP Sets also provides a method of automatically assigning SNMP monitoring to an SNMP device. All SNMP Sets assigned to an SNMP device are displayed in Assign SNMP. SNMP alarms can be displayed using Monitor > SNMP Log *(page 144)* or View Console *(page 22)*.

> 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 105)* page. Group alarms display on the View Console *(page 22)* page.

Import

Click Import to upload a SNMP set XML file to your server. SNMP sets can be exported using Define SNMP Sets *(page 129)*.

Edit

Click Edit to display Define SNMP Set *(page 129)* 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 collection of MIB objects *(page 450)* used to monitor the performance of SNMP enabled network devices *(page 451)*. Typically, a threshold is assigned to each MIB object in a SNMP set. Alarms can be set to trigger if any of the thresholds in the SNMP set are exceeded. A SNMP set should be defined as a logical collection of things to monitor. SNMP sets are maintained using Monitor > SNMP Sets *(page 128)*. SNMP sets can be manually assigned to monitor a SNMP device using Monitor > Assign SNMP *(page 141)* or Monitor > SNMP Type *(page 148)*. SNMP Sets also provides a method of automatically assigning SNMP monitoring to an SNMP device. All SNMP Sets assigned to an SNMP device are displayed in Assign SNMP. SNMP alarms can be displayed using Monitor > SNMP Log *(page 144)* or View Console *(page 22)*.

> 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 397)* page.

Click the following tabs to define SNMP set details.

- SNMP Sets *(page 131)*
- SNMP Icons *(page 135)*

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 128)* 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 148)* when performing a LAN Watch *(page 137)* 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 View Console *(page 22)* 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. Click Add Object *(page 133)* to add a MIB object that currently does not exist on the Monitor Lists *(page 105)* 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 `111,113,115`.

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 141)*. Click the SNMP Info hyperlink for the device you're interested in. This displays all MIB object IDs and the SNMP instance values 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` or `Under`.
    - Alarm Threshold - Set a fixed value that the returned value is compare 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 in the View Console *(page 22)* 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 135)*.
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 a orange icon ● in the View Console *(page 22)* page. You can change this icon using the SNMP Icons *(page 135)* tab.

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

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 are classified by their location on the MIB tree. Once loaded you can select the MIB objects you want to install on your KServer. 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 105)*. 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. Go to the Define SNMP Set page and create a new SNMP set with the newly added MIB objects.
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 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*.

Add MIB Objects

Click Add MIB Objects to add selected objects to the KServer's list of MIB objects that can be monitored using Define SNMP Set *(page 129)*.

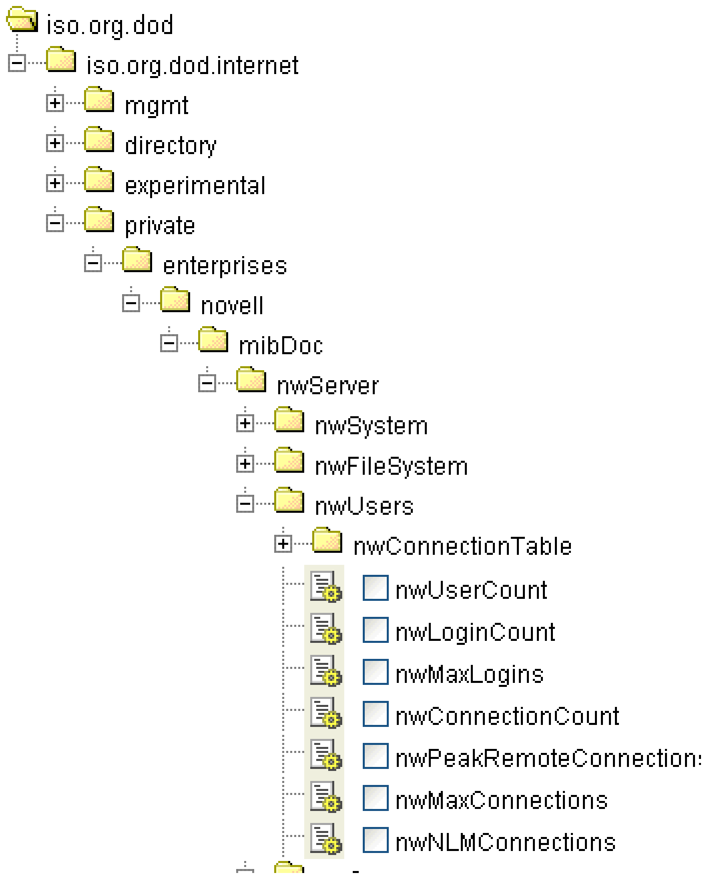
Remove MIB

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.

> 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.



SNMP Icons

Monitor >
SNMP Sets >
Edit >
SNMP Icons

The SNMP Icons tab selects the SNMP icons that display in the View Console *(page 22)* 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.

SNMP Community

Monitor > SNMP Community

The SNMP Community page sets the Read Community password for selected machine IDs. This enables machine IDs to collect data during a LAN Watch *(page 137)* from SNMP devices using the same read community name.

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

This is the first step in collecting SNMP monitor data, the next step is to schedule a LAN Watch *(page 137)* to discover SNMP devices within an IP address range.

> Note: If there are multiple read community names, different machine IDs must be used, one for each community name.

Set Community

Click Set Community to apply the value the user has set in the Read Community Name field to selected machine IDs.

Remove

Click Remove to remove the Read Community Name from selected machine IDs.

Read Community Name

Enter the value of the SNMP Community read password.

Confirm

Enter the SNMP Community read password again for confirmation.

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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Machine Group ID

The name and group of the machine that can be selected

Community Set

Displays one of the following:

- If checked, the machine ID has a read community value applied.
- If an Update Agent link displays, the machine ID's agent needs to be updated before a LAN Watch can be performed.
- If blank, the machine ID does not have read community value applied.

LAN Watch

Monitor > LAN Watch
Agent > LAN Watch

LAN Watch uses an existing agent *(page 445)* 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 451)*. Optionally, the VSA can send an alert *(page 446)* 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.

> Note: LAN Watch can only identify SNMP devices that share the same SNMP Community Read *(page 136)* value as the managed machine performing the LAN Watch.

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.

Alert on new device

If Alert on new device 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 97)* 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.

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.

Scan

Click Scan 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.

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.

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.

Every N periods

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

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 the System > Configure *(page 397)* page.

Scan 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.

After alert run select script on this machine ID

If checked, a script is run when an alert is triggered. 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 alert.

Check-in status

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

- Agent has checked in
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

Recurring Interval

The time interval used to determine how often LAN Watch runs.

Alert Active

If checked, LAN Watch alerts are enabled for this scan.

Days Off

Suppresses alerts for new devices for this number of days.

Skip MAC

If checked, 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.

SNMP Deep Dive

An SNMP Deep Dive is performed the first time you select a LAN Watch *(page 137)* to be performed on a machine. The dive consists of the machine scanning the selecting IP Address range normally, and then performing a limited SNMP "walk" on all discovered SNMP devices and storing the results. These results are updated every time a LAN Watch is performed.

Displaying the Results of a SNMP Deep Dive

The results of a SNMP deep dive on a particular SNMP device can be viewed by:

1. Selecting the Monitor > Assign SNMP *(page 141)* page.
2. Selecting a machine ID that has performed a LAN Watch on that SNMP device.
3. Clicking the SNMP device name.

The results are presented in the following way:

`<MIBObject>.<Instance> : <Result>`

- MIBObject - The name of the MIB object. This is the same name that displays when selecting MIB Objects to add to an SNMP set in Define SNMP Set *(page 129)*. If the correct MIB is loaded, using Add SNMP Object *(page 133)*, then the MIB object is represented as a name such as `ifSpeed`. If SNMP cannot find the MIB that corresponds to the object it translates as much as it can, but the rest may be numbers; such as `enterprises.11.2.3.9.4.2.1.1.4.1.2.4.0`.

- Instance - The instance of the MIB 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. These also correspond directly with the Instance field when adding an object to an SNMP set.
- Result - This is the value of a particular instance of the object at the time the deep dive was performed. It is a good indication of the type of data this object returns and the approximate magnitude of that instance.

Assign SNMP

Monitor > Assign SNMP

The Assign SNMP page creates SNMP alerts for managed machines. An alert *(page 446)* is a response to an alarm condition. A SNMP set is a collection of MIB objects *(page 450)* used to monitor the performance of SNMP enabled network devices *(page 451)*. Typically, a threshold is assigned to each MIB object in a SNMP set. Alarms can be set to trigger if any of the thresholds in the SNMP set are exceeded. A SNMP set should be defined as a logical collection of things to monitor. SNMP sets are maintained using Monitor > SNMP Sets *(page 128)*. SNMP sets can be manually assigned to monitor a SNMP device using Monitor > Assign SNMP *(page 141)* or Monitor > SNMP Type *(page 148)*. SNMP Sets also provides a method of automatically assigning SNMP monitoring to an SNMP device. All SNMP Sets assigned to an SNMP device are displayed in Assign SNMP. SNMP alarms can be displayed using Monitor > SNMP Log *(page 144)* or View Console *(page 22)*.

To Create a SNMP Alert

1. Check any of the last three checkboxes to perform their corresponding actions when an alarm is triggered for a SNMP device.
   - Create Alarm - This is always checked. SNMP alarms are defined using Monitor > SNMP Sets.
   - Create Ticket
   - Run Script after alarm.
   - 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 variables are populated with information when an alarm is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alarm.

Note: Changing this email alarm format changes the format for *all* monitor set and SNMP set emails.

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
<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

The Create Alarm check box is always checked. This creates an alarm for any SNMP set object that exceeds its alarm threshold.

Create Ticket

If checked a new ticket is generated at the same time the alarm is triggered and associated with the alarm.

Run Script after alarm

If checked, you must click select script 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. These specified machine IDs do not have to match the machine ID that triggered the alarm.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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 the Monitor > SNMP Sets page.

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 137)* is performed.

Device IP

The IP address of the SNMP device.

MAC Address

The MAC address of the SNMP device.

SNMP Info

The name returned by the SNMP protocol when a LAN Watch is performed. Clicking the SNMP Info link displays the results of the Deep Dive *(page 140)* function.

SNMP Sets

The list of SNMP sets assigned to a SNMP device.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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 Log

Monitor > SNMP Log

The SNMP Log page displays SNMP log data of MIB objects *(page 450)* in a SNMP Set *(page 128)* 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 9)* 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 129)* 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 SNMP Community *(page 136)* and LAN Watch *(page 137)*.

Check-in status

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

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

Lists Machine ID.Group IDs *(page 449)* currently matching the Machine ID / Group ID filter *(page 9)* and assigned a SNMP Community *(page 136)* 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 133)* to add a MIB object that currently does not exist on the Monitor Lists *(page 105)* 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.

Using SNMP Types

1. Add or edit SNMP types using the SNMP Device tab in Monitor > Monitor Lists *(page 105)*.
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 129)*.
4. Perform a LAN Watch *(page 137)*. 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 148)*. 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 137)*.

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.

Chapter 7

Ticketing

In This Chapter

Ticketing Tab

The Ticketing tab contains functions related to the built in trouble ticketing system. The trouble ticketing system sends email alerts to designated administrators and users on ticket creation, changes, and resolutions. The system organized trouble tickets by machine ID. All trouble tickets must be assigned to a machine ID. You may wish to create extra machine accounts to hold trouble tickets of a global nature, such as general network problems.

Functions	Description
View Summary *(page 152)*	Define email alerts on a per machine basis.
View Ticket *(page 155)*	View and manage files uploaded to the VSA from managed machines by a Get File script command.
Delete/Archive *(page 159)*	Permanently delete tickets or move tickets into archival storage.
Notify Policy *(page 160)*	Write files to all selected managed machines and maintain them.
Access Policy *(page 161)*	Automates execution of and collection of information from Microsoft's Hotfix Checker tool.
Due Date Policy *(page 162)*	Define default due date for new tickets based on field values and email subject lines.
Edit Fields *(page 163)*	Define, modify, or create trouble ticket categories. Each ticket is assigned to a particular category.
Email Reader *(page 164)*	Setup automatic polling of email to generate new ticket entries.
Email Mapping *(page 166)*	Defines default field values for new tickets received via email. Separate email maps may be defined for email addresses or domains.
User Profiles *(page 167)*	Allows administrators to edit machine account information.
User Access *(page 169)*	Set up accounts to allow users remote control access to their own machines

View Summary

Ticketing > View Summary

View Summary lists all the trouble tickets assigned to machine IDs selected in Specify Accounts *(page 9)*. Each row displays summary data for a single ticket. You can further sort and filter listed tickets with any field list type drop down control.

The View Summary page gives you a quick view of all the tickets you are currently working on. New tickets, or new notes in existing tickets, are clearly highlighted in one of two way.

- 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 Change Highlight link *(page 152)*.
- 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 with 📝. If another administrator or user adds or modifies a note, the flag for you is switched back to unread showing 🟨.

Why don't I see a particular trouble ticket?

Standard administrators only have access to trouble tickets of machine IDs that are in group IDs they have access rights to. Users only have access to trouble tickets for their machine ID.

The View Summary function only displays trouble tickets belonging to machine IDs that match the Specify Accounts *(page 9)* filter.

The View Summary function can filter the list of trouble tickets to only those that match the Category, Status, and Priority drop down control.

The Search function will not display a ticket if none of the notes contain the words being searched for.

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 table.

Open Tickets, Past Due, Hold Tickets, Total Tickets

Shows the number of tickets open, past due, and on hold for all tickets matching the Specify Accounts filter.

Note: Ticket counts are not effected by the Category, Status, or Priority controls.

Fields...

Allows each administrator or users to organize the columns displayed in the table. Clicking the Fields... button 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 trouble ticket.
- Machine ID - trouble ticket applies to this machine.
- Category - type of problem this trouble ticket discusses
- Assignee - Name of the administrator responsible for solving this problem.
- Status - Open, Hold, Closed
- Priority - High, Normal, Low

- Creator - person who created this trouble ticket (administrator, user name, or machine ID).
- 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

List Fields

Each field of type list, such as category, status, or priority, are shown as drop down controls. Selecting any value from the drop down displays only those tickets matching the selected field value.

Sort

Changes the display order of the table to ascending or descending.

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. Use the * character as a wildcard in the search string.

The drop down control below the search box list the last 10 searches you have made. Selecting any item from the list automatically re-searches for those words.

Clicking any of the ticket summary lines returned by search jumps to that ticket. Words in the ticket notes matching any search word are highlighted with a green background.

Mark All Read

Click to mark all tickets as read. New any changes or note additions inserted by other administrators reset the ticket to unread.

Merge

Merge lets you combine two tickets into one. Use Merge to combine related tickets. The resulting merged ticket contains all the notes and attachments from both tickets. Merge asks you which field values you wish to use in the ticket for all field values that are different between the two tickets. To merge ticket, check the box for any two tickets listed. Then click the Merge... button.

Change Highlight

Click to set and/or modify row highlighting based on date. Highlight tickets based on date 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 resorts the table using that column as the sort criteria.

Data Table

Each row of the table lists summary data for a single ticket. To access the entire ticket click the ticket summary line. To toggle the state to read click 📒. To toggle the state to unread click 🗒. To completely delete a ticket from the system click ✗.

> Note: Prevent standard administrators and users from deleting trouble tickets in Access Policy *(page 161)*.

View Ticket

Ticketing > View Ticket

Create new trouble tickets, add notes to existing tickets, or modify notes in existing tickets with the View Ticket function. Select the ticket of interest from the Ticket ID drop down control. Edit any existing data by clicking the 🗒 next to the data you wish to edit. Delete notes by clicking ✗ next to the note.

> Note: Prevent standard administrators and users from deleting trouble tickets in Access Policy *(page 161)*.

How do I create a new ticket?

Creating a new trouble ticket requires filling out all fields of the trouble ticket. Perform all the following steps to create a new ticket.

1. Enter a short description of the problem.
2. Specify a machine ID or a machine group ID to submit a trouble ticket for. All trouble tickets must be assigned to either a machine ID or a machine group ID. Pick the appropriate radio button to indicate if the ticket is to be associated with a machine ID or group ID. Next, click 🗒 to enter a selection. A window will pop up with a list of machine Ids or group Ids and then select the radio button next to the choice desired.
3. Select a category from the Category *(page 163)* drop down control to assign to this trouble ticket.
4. 5elect a status (Open, Hold, Closed) from the Status drop down control.
5. Select an administrator from the Assignee drop down control to assign to this trouble ticket
6. Select a priority (High, Normal, or Low) from the Priority drop down control.

7. The submitter field defaults to the email sender (if received from an email) or the administrator's email. This information can be updated if need be.
8. User name, user email and user phone will default from the user information of the user associated with the machine assigned to the ticket. This information can be updated if appropriate.

   The creation date is automatically assigned. This will be set to the date the ticket is created.
9. Enter a due date for this trouble ticket by clicking 🗒 next to Due Date. The default due date one week from the creation date.
10. Enter details of the problem in the Notes edit box. Click the Submit button to complete the ticket.

Why can't I edit a ticket?

Master administrators may disable ticket delete and edit privileges for users and standard administrators. See Access Policy *(page 161)*.

How do I attach a file, such as a screen shot, to the trouble ticket?

Click the Browse... button below the note entry area. Locate the file you wish to attach on your local computer. Click the Open button 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 the notes listing for the ticket. Display/download the file at any time by clicking that link.

Ticket ID

Enter the ticket ID to view/edit an existing ticket. Leave blank to create a new trouble ticket.

Machine or ID

Each trouble ticket must be assigned to either a machine ID or group ID. Click 🗒 to enter or change the ID. Clicking 🗒 opens a new window with a list of available machine IDs to choose from. To choose a machine ID select group from the drop down control. Click the radio button to the left of the machine or group ID of interest.

Assignee

Name of the administrator responsible for solving this problem.

Fields

Master administrators can define any number of customer fields associated with each ticket (see the Edit Fields *(page 163)* function). When you modify any field, the system automatically inserts a note recording the change. The note may be standard or hidden depending on the access policy *(page 161)* set for this administrator. Automatic notes may also be disabled. Three fields are mandatory and may not be deleted

Note: Master administrators can add, delete, or edit filed labels with the Edit Fields *(page 163)* function. Master administrators can also define who can view and/or edit fields on a per administrator group using the Access Policy *(page 161)* function.

Category

Assign the trouble ticket to a category with this drop down control.

Status

Drop down control specifies the status of this ticket.

- Open - Indicates ticket has not been resolved and is actively under investigation
- Hold - Indicates ticket has not been resolved but is not being worked on. Use hold tickets for non- critical problems whose resolution can be postponed.
- Closed - The ticket has been completely resolved.

Priority

Drop down control specifies the status of this ticket.

- High - Set to high for critical trouble tickets that need immediate attention
- Normal - This ticket requires normal response time.
- Low - Indicates this trouble ticket does not impact current operations and may be postponed until time permits.

Submitter Information

Displays the Name, Email address, and phone number associated with the machine ID for this ticket. Typically, this information corresponds to contact information for a person using that machine. Enter user information in User Profiles *(page 167)*.

Update

This button applies any changes to text fields such as submitter information, non-list fields (strings, integers, numbers).

Note: All list fields are immediately saved in the ticket.

Last Search

This button returns you to the View Summary screen using the last search string entered. Use last search to quickly browse through multiple tickets returned by a key word search. Words matching any of the search words are highlighted with a green background in the displayed notes. For example, if you are searching for all tickets that dealt with DHCP:

Search for DHCP in View Summary.

1. Click on a ticket summary to view one of the tickets returned.
2. Quickly scan the ticket notes looking for DHCP and scan the surrounding notes.
3. If the ticket is not of interest, click the Last Search button to return to the search results.
4. Repeat the above steps until the ticket of interest is found.

Created

Time stamp indicating the date and time this trouble ticket was first created.

Age / Closed

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 replace with Closed and lists the time stamp indicating the date and time this trouble ticket was closed.

Due

Desired resolution date for this ticket. Click 📝 to edit the due date. If the due date does not match one of the defined due date policies *(page 162)*, then the Due Date label is hilighed. Click the Apply button to reset the due date to the policy. If no policy matches then the system default due date is used.

Summary

Short summary description of the problem reported in this trouble ticket. Click 📝 to edit the summary.

Submit/Add

Add details about the problem here. Use this space to describe the initial problem in detail and also to add notes discussing problem investigation or resolution. Notes may be edited by clicking 📝 and/or deleted by clicking ❌ next to each note listed for this trouble ticket

Add Hidden

You can also add hidden notes, not viewable by users, to tickets. Use hidden note to record data or analysis that may be too detailed or confusing to users by useful to other administrators.

> Note: Hidden notes are NEVER included in email notifications.

Browse... Click to attach file (such as screen shots of problem).

Click the Browse... button below the note entry area. Locate the file you wish to attach on your local computer. Click the Open button 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 the notes listing for the ticket. Display/download the file at any time by clicking that link.

Notes Table

Lists all notes relating to this trouble ticket in ascending or descending time order. Each note is time stamped and labeled with the login 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 169)* for details.

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. Use the Delete/Archive function to eliminate old tickets, tickets in a particular category, or of a particular status.

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.

> Note: You can always move tickets back and forth between into the active database table and the archive database table.

Why can't I delete a ticket?

Master administrators may disable ticket delete and edit privileges for users and standard administrators. See Access Policy *(page 161)*.

Filter

Select the tickets to view using the same technique described in View Summary *(page 152)*. The filter settings restrict the tickets displayed in the list.

Hide tickets last modified after

Use this date control to list only tickets last modified after the specified date. If you want to archive Closed tickets older than 6 months perform the following steps:

1. Select Closed from the Status control.
2. Set the date control to 6 months ago.
3. Click the Set button.
4. Click the Select All link.
5. Click the Archive... button.

6. Display archived tickets instead of active tickets.
7. Check this box 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

Notify Policy defines when the trouble ticketing system sends out email notifications. Multiple independent policies may be set for each group ID. This lets you specify different email lists for different 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 enter a policy to get email notifications from the trouble ticketing system. To set a policy perform the following steps:

1. Check the box to the left of each notification event you need email notification of
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 button.

> Note: You can NOT send notifications to the email address used to receive tickets (set in Email Reader *(page 164)*).

Email List

Comma separated list of valid email addresses to send notification emails to.

Notification Type Checkbox

The list below describes when the trouble ticketing system sends an email notification to all addresses in the email list.

- Ticket Creation - Email sent at time of ticket creation.
- Modify/Add Note - Email sent when any note is added or changed to a ticket.
- Overdue Ticket - Email sent when a ticket passes its due date without being closed.
- Assignee Change - Email sent when a ticket is assigned to a different admin
- Field Change - Email sent when anyone changes any custom field in a ticket.
- Edit Summary - Email sent when anyone changes the summary line for a ticket.
- Due Date Change - Email sent when anyone changes the due date of a ticket.

- Notify Ticket Submitter when note added - Send alert 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 - Selecting this option will include all the notes for a ticket when a Modify/Add Note message is sent out.
- Received email alerts always sent to assignee - This option sends an email to the ticket assignee, when ever a new note is created from a received email, even if the assignee is not on the notification email list for this group ID.
- Send auto response to emails creating new tickets - This sends an automated reply message out to the person that send in an email that generated a new ticket. Automated response emails give your users an acknowledgement that there request has been received and processed by the system. Master administrators can specify the canned message sent in reply to these emails.

Access Policy

Ticketing > Access Policy

Access Policy determines who can edit and/or view fields in trouble tickets. Only Master Administrators can set this policy. Independent policies may be set for each Administrator Group and Users. Users only see trouble tickets assigned to their machine ID. Standard administrators only see tickets assigned to machine IDs that are part of group IDs they have rights to access.

Select user or administrator Group

This drop down control lists < Users > and all administrator groups. Select the group you wish to set a policy for here.

Enable ticket delete from the view summary table

Checking this box lets the selected administrator group delete entire tickets by clicking the ✖ icon on the view summary page.

Enable ticket edit to modify or remove notes.

Checking this box lets the selected administrator group edit existing notes.

Note: *Adding new notes is always enabled for all administrator groups*

Enable due date edit when editing trouble tickets

Checking this box lets the selected administrator group modify the ticket due date.

Enable suppress email notifications when editing trouble tickets.

Checking this box lets the selected administrator group suppress email notifications when he modifies an existing ticket.

View hidden notes.

This checkbox specifies whether or not hidden notes may be viewed by this administrator group.

Note: Hidden notes are never viewable by users.

Change hidden notes status checkbox.

This checkbox enabled the Hide checkbox at the far right edge of each ticket note. Toggling the hidden checkbox makes a note hidden or not.

Automatically insert new note with every field change

Check this box to enable automatic note insertion to record all ticket field changes.

As hidden note

Check this box to make all automatic notes added as hidden. This policy only has an effect if "Automatically insert new note with every field change" is checked.

Define access to each ticket field

Access to each field, created in Edit Fields *(page 163)*, may be defined here. Three levels of access may be specified.

- 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 to the selected administrator group.

Due Date Policy

Ticketing > Due Date Policy

Set 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 hr 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

When new tickets are created that do not match any policy, then the due date is set to this number of hours plus the current time.

Policy Name

Give the policy any name you wish

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 plus the current time.

Fields

A column for each defined list field contains the value for the associated policy.

Edit Labels

Ticketing > Edit Fields

Edit Fields lets you create and/or edit fields shown on tickets. Seven field types are available. Fields are associated with the entire ticket (as opposed to each note of the ticket). Use field to hold data items you need to collect for all tickets. Three mandatory fields exist that may not be removed from the system. They are:

- Category - A customizable list of trouble ticket categories (such as Printer Problem).
- Status - State of the current ticket (Open, Hold, Closed)
- Priority - High, Normal, Low

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 155)*.

Field Label

You may modify the label for any field here. Click the Update button to apply the change

Type

- String - May 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 - May contain any positive or negative integer value

- List - Lets you create a drop down list of choices
- Number (nn.d) - Number that always shows one digit to the right of the decimal point.
- Number (nn.dd) - Number that always shows two digits to the right of the decimal point.
- Number (nn.ddd) - Number that always shows three digits to the right of the decimal point.
- Number (nn.dddd) - 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 groups.

< Edit List >

Edit any label. Click update to have the changes take effect.

Email Reader

Ticketing > Email Reader

The Email Reader function provides a means to set-up the needed parameters to use Kaseya's automated Email Reader. The Email Reader will poll a specified email account periodically and move the contents of the email into the ticketing system. The information needed to set this up is as follows:

Email Address

Enter the email address you wish to send ticketing related notifications from here. Replies to this email address are in turn processed by the ticketing system as added notes to the relevant ticket.

Disable email reader

Check this box to prevent the email reader component from polling a server.

Host Name

The name of the Pop3 host service is needed. Pop3 is the only email protocol supported.

Port

Provide the port number used by the Pop3 service. This is normally 110.

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 POP uses port 995.

Login

Provide the email account name.

Password

Provide 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.

Apply

Click this button to load the new parameters into the ticketing system.

Connect Now

Click this button to connect to the POP3 server now instead of waiting for the next polling time.

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'` – This tag will cause the email to have its body appended to an existing ticket rather than cause a new ticket to be created.
- `~username=’xxx’` – Automatically insert the value given as xxx into the Submitter Information Name field.
- `~useremail=’xxx’` – Automatically insert the value given as xxx into the Submitter Information Email field.
- ~userphone=’xxx’ – Automatically insert the value given as xxx into the Submitter Information Phone field.
- ~category=’xxx’ - This tag will cause the ticket created to get a specific category. The category must exist.
- ~priority=’xxx’ – This tag will cause the ticket created to get a specific priority. The priority must exist.
- ~status=’xxx’ – This tag will cause the ticket created to get a specific priority. The status must exist.

- ~assignee='xxx' – This tag will cause the ticket created to get a specific administrator assigned. The administrator must exist.
- ~machineid='xxx.xxx' – This tag will cause the ticket to have a machine id set immediately. The machine id must exist. The inclusion of this tag will cause the ticket to bypass the pending stage and go directly to the View Summary.
- ~fieldName='xxx' – An initial value for any defined field can be assigned a value. If the field is a list type, then the value must exist in the list.

Email Mapping

Ticketing >
Email Mapping

The Email Mapping function provides a means to set-up defaults for emails that are received and turned into tickets. A map can be created for either an individual email address or a domain (a client's domain). The email reader to build a ticket uses this information. This information will override the defaults provided in the configuration set-up. The fields entered are:

Email Map

The email address or domain to be mapped. Examples would be support@kaseya.com or kaseya.com.

Set map for unassigned emails

Check this box to specify an email map for a messages received by the ticketing system from email address not covered by any other email map.

Associate map with a machine or group

Tickets can be associated with an individual machine or a machine group. By making this selection the user is then allowed to pick a machine id or a group id..

Assignee

Name of the administrator responsible for solving this problem.

Fields

Specify the default field values entered for new tickets created when an email is received by the ticketing system.

Create

This button will create a new map.

Delete icon

Click the ✗ icon to the left of each email map to remove that map from the ticketing system.

Edit Icon

Click the 📝 icon to the left of each email map to modify the current settings for that map.

Edit Profile

Agent >
Edit Profile
Ticketing >
User Profile

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 14)* page.
- The contact information in the Edit Profile page can be automatically populated when a new account is created using the Agent > Create *(page 342)* 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 447).

Auto assign tickets

Auto assign a trouble ticket to this machine ID if the Ticketing email reader *(page 164)* 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 166)*

> 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 452)*. See Agent > User Access *(page 169)* 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 358)* on a managed machine. The languages available are determined by the language packages installed using System > Preferences *(page 377)*.

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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 452)*:

- 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 238)* session with a user regardless of this setting.

- Create or display trouble 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.

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 Login Policy *(page 406)* 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 167)*.

Customizing the User Access Welcome Page

Master administrators can customize the web page seen by users using System > Customize *(page 407)*, adding their company's logo, look, and feel to the web experience for their users.

Login Name

Enter the Login Name the user must use to log into the KServer to initiate chat sessions, enter or view trouble tickets and/or get remote access to their machine. Login names and passwords are case sensitive. Passwords must be at least six characters long.

> Note: All login names must be unique in the system. Since users may also login using their machine ID, login names, machine IDs, and administrator names *must all be unique.*

Create Password, Confirm Password

Define a password for the user login. 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 login name and password to the selected machine ID.

Clear

Permanently remove the login credential *(page 448)* from the selected machine ID.

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Login Name

The login name assigned to this machine ID. Users that have been granted remote access to their machine may login using either their machine ID or login name.

User Web Logon

Displays `Enabled` if a login 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 445)*.

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 trouble tickets for their own machines. Users can only see trouble 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 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* for a general description of patch management.

Functions	Description
Scan Machine *(page 179)*	Determine what patches are missing on manage machines.
Patch Status *(page 181)*	Display a summary view of installed, missing and denied patches for each managed machine.
Initial Update *(page 183)*	Perform *one-time* processing of *all* approved patches on managed machines.
Pre/Post Script *(page 185)*	Run scripts before and/or after patch Initial Update.
Automatic Update *(page 186)*	Update missing approved patches on managed machines automatically on a *recurring* basis.
Machine History *(page 188)*	Display a detailed view of patch scan results for each managed machine.
Patch Approval *(page 188)*	Define a collections based policy for approving patches for automatic update.
Machine Update *(page 190)*	Schedule the installation of missing patches for an individual machine.
Patch Update *(page 191)*	Apply individual patches to multiple machines.
Rollback *(page 194)*	Uninstall patches from managed machines.
Cancel Updates *(page 195)*	Cancel pending patch installations.
Windows Auto Update *(page 196)*	Remotely set the Windows Automatic Updates settings on selected machines.
Reboot Action *(page 199)*	Determines whether or not to reboot the machine automatically after installing new patches.
File Source *(page 202)*	Specifies where each machines gets new patch installation files from.
Patch Alert *(page 205)*	Configure alerts for patch-related events, such as when a new patch becomes available for a managed machine.
Office Source *(page 208)*	Specify an alternate source location for MS Office installation files.
Command Line *(page 211)*	Set the command line parameters used to install patches.
Patch Location *(page 214)*	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 the Patch Approval *(page 188)* policy. Initial Update ignores the Reboot Action *(page 199)* 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 Approval 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 Approval 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 Approval 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 55)*.

> Note: You can install non-Microsoft applications using Scripts > Application Deploy *(page 56)*. When a pre-defined install solution cannot be used, use Scripts > Packager *(page 59)* 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 195)*.
- Use the Patch Update *(page 191)* page to cancel the pending update of a specific patch on all machines.
- Remove patches from managed machines using Rollback *(page 194)*.

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 179)*.
- Display a summary view of installed, missing and denied patches for each managed machine using Patch Status *(page 181)*.
- Display a detailed view of patch scan results for each managed machine using Patch History *(page 188)*.

Configuring Patch Management

The following configuration pages apply to Initial Update, Automatic Update, Patch Update, and Machine Update unless indicated otherwise.

- Optionally assign machine IDs to a collection *(page 447)* of machine IDs using Agent > Create/Delete *(page 334)*. This is required to set patch approval policies for individual patches by machine collection.
- Optionally set patch approval policies for individual patches by machine collection using Patch Approval *(page 188)*.
- Optionally change the reboot policy for machine IDs using Reboot Action *(page 199)*. Applies to Automatic Update, Patch Update and Machine Update.
- Optionally change the File Source *(page 202)* location machines use to download patches.
- Optionally change command line parameters for installing selected patches using the Command Line *(page 211)* page.
- Optionally change the URL patches are downloaded from using Patch Location *(page 214)*.
- Optionally configure alerts for patch-related events using Patch Alert *(page 205)*.
- Optionally enable or disable Windows Auto Update *(page 196)* on managed machines.
- If a credential *(page 370)* 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 208)*.
- Optionally run scripts before or after Initial Update *(page 183)*. Applies to Initial Update only.

Patch Processing

When you schedule a patch the following occurs:

- The agent on the managed machine is told to start the update process at the scheduled time.
- The patch executable is downloaded to the managed machine from where ever the File Source *(page 202)* is set for that machine ID.
- The patch file is executed on the managed machine using the parameters specified in Command Line *(page 211)*. You should never have to set these switches yourself, but just in case, this capability is there.
- 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 199)* assigned to that machine ID. Applies to Machine Update *(page 190)*, Patch Update *(page 191)* and Automatic Update *(page 186)*. Reboots in response to an Initial Update *(page 183)* always occur immediately and without warning the user.
- 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 452)*.

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 321)* 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 214)* page.
- No Reboot - Several patches require a system reboot before they take effect. If your Reboot Action *(page 199)* 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 211)* 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.

  > Note: *If `/Q` is not specified, the Microsoft Office 2000, Microsoft Office XP and 2003 command line parameters are automatically reset to `/INSTALL-AS-USER /DELAY-AFTER=60`. These settings are enforced by the application.*

- Patch Download Blocked - The patch file was never delivered to the machine. The system downloads the patch directly from the internet to either the server, a file share, or directly to the managed machine, depending on your File Source *(page 202)* 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 - Some patches and service packs require passwords or knowledge of a customized setup that the VSA can not know. 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 VSA server'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 accounts need 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 9)* and machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Schedule

Click Schedule to schedule a scan 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 scan.

Run Now

Click Run Now to perform the scan 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 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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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
- ◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

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 202)* or Set Credential *(page 370)* changes.

Warning: Test cancels any pending patch installs except Initial Updates *(page 183)*.

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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 186)* or Initial Update *(page 183)*.

Pending Patches

The number of patches scheduled to be installed.

User Not Logged In

The number of users not logged in, for patches that require this.

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 the Patch Approval *(page 188)* policy. Initial Update ignores the Reboot Action *(page 199)* 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 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* 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 185)* to configure these scripts on a per-machine basis.

Schedule

Click Schedule to schedule a update of selected machine IDs using the schedule options previously selected.

Cancel

Click Cancel to clear a scheduled update.

Stagger by

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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Scheduled

This timestamp shows the scheduled Initial Update.

Updated

If checked, an Initial Update has been performed successfully on the machine ID.

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 190)* 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 183)*. 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.

Schedule

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
- ◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 *(page 188)* policy and the Reboot Action *(page 199)* policy. Use Initial Update *(page 183)* if you are installing patches for the first time on a managed machine. See Methods of Updating Patches *(page 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* 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 181)* page and on the individual Machine Update *(page 190)* page.
- Patch installation only occurs when a new missing patch is found by Scan Machine *(page 179)*.
- 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.

Every day / <day of week>

Perform this task every day or once a week on the specified weekday.

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 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, ...

Cancel

Click Cancel to clear a scheduled update.

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Auto Update Time

The day and time this task is scheduled to recur.

Machine History

Patch Mgmt > Machine History

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 451)* first and knowledge base article number second.
- Click the knowledge base 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.
- Some patches have a corresponding security bulletin number. Security bulletins are being phased out. Click the security bulletin link to display the security bulletin.

> 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 214)* to remedy this.

Patch Approval

Patch Mgmt > Patch Approval

The Patch Approval page approves or denies the installation of Microsoft patches on managed machines. 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. Initial Update *(page 183)* and Automatic Update *(page 186)* require patches be approved before they are installed. Patch Update *(page 191)* and Machine Update *(page 190)* can override a Patch Approval policy and install denied patches. See Methods of Updating Patches *(page 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* for a general description of patch management.

Setting Patch Approval Policies

Patch approval policies are defined by machine collection *(page 447)* using Agent > Create/Delete Collection *(page 334)*. For example, by setting up a separate approval policy for each collection, you can automatically deploy a patch to all your workstations while blocking deployment to servers.

- The patches of machines that are not a member of any collection are *automatically approved*.
- If no approval policy is defined for a collection—for example, when a new collection is created—the patch approval policy is *approved by default* for all patches of machines in that collection.
- If you click the Set Policy button to approve patches individually in a collection, then existing patches are *approved by default*.
- Clicking the Remove Policy button clears the approval policy for that collection.
- If a machine is a member of two collections and each collection has a separate policy, and if a patch is denied by either collection then the patch is denied for that machine. Note that if one collection does not have any policy set, then only the policy that is set is used.

Collection

Select a collection by name from the drop down list.

Set Policy

Available only when the selected collection does not have a defined policy. Click Set Policy to create a new patch approval policy for this collection.

> Note: The following options are only available when the selected collection has a set approval policy.

Default Approval Status

Select a default approval status for this collection. Newly identified patches for this collection are automatically set to this default value.

Remove Policy

Click Remove Policy to delete the current policy and automatically approve all current and future patches for this collection.

> Note: Clicking this button permanently deletes the approval policy. To enable an approval policy, you must recreate the policy by clicking the Set Policy button.

Patch Approval Policy Status

This table displays the approval status of patches by update classification *(page 451)* group. Approved, Denied and Pending Approval summary statistics are provided for each update classification group.

Click any link in this table to display a Patch Approval Details page listing individual patches and their approval status. The list is filtered by the type of link clicked:

- Update classification
- Approval status
- Summary statistic

In the Patch Approval Details page you can:

- Approve or deny approval of patches individually.
- Click the knowledge base 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 patch file name on the Details page 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`).
- Display the title of each patch.

Machine Update

Patch Mgmt > Machine Update

The Machine Update page manually installs Microsoft patches on individual machines. Machine Update overrides the Patch Approval *(page 188)* policy but obeys the Reboot Action *(page 199)* 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 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* 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 451)* first and knowledge base article number second.
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 clear a scheduled update.

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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 approval using Patch Approval *(page 188)*. 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

The Patch Update page updates missing Microsoft patches on all machines displayed in the paging area. Patch Update overrides the Patch Approval *(page 188)* policy but obeys the Reboot Action *(page 199)* 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 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch

Failure *(page 177)* 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 449)*.
- The patches reported using Scan Machine *(page 179)*. Managed machines should be scanned daily.
- The patches of machines using Automatic Update *(page 186)*. 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.
- The patches of machines being processed by Initial Update *(page 183)*. 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 Management displays patches sorted by update classification first and knowledge base article number second. Check the patch file name 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. An ignore setting only affects Patch Update.

> 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 186)*.

Hide patches denied by Patch Approval

If checked, hides patches denied by Patch Approval *(page 188)*.

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 clear a scheduled update.

Stagger by

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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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.

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 knowledge base 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.

Ignore

The number of machine set to ignore s patch using the Check Status button. An ignore setting only affects Patch Update.

Show Titles

If checked, lists the titles of patches.

Patch

The install filename of the patch.

Rollback

Patch > 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 451)* 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.

Rollback

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.

Schedule

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. If the machine is offline, skip and reschedule for the next day at the same 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 knowledge base 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 191)* page to cancel the pending update of a specific patch on all machines.

Warning: This page also cancels initial updates *(page 183)*.

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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 196)* can enable or disable this feature on managed machines. See Update Classification *(page 451)*.

Windows Automatic Update Cannot Use Template Accounts

Windows Automatic Updates is one feature that cannot be preconfigured in a machine ID template *(page 450)*. 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 179)* 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 199)* 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:

◆ Agent has checked in

◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 190)*, Patch Update *(page 191)* and Automatic Update *(page 186)*. It does *not* apply to Initial Update *(page 183)*. See Methods of Updating Patches *(page 175)*, Configuring Patch Management *(page 175)*, Patch Processing *(page 176)* and Patch Failure *(page 177)* 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.

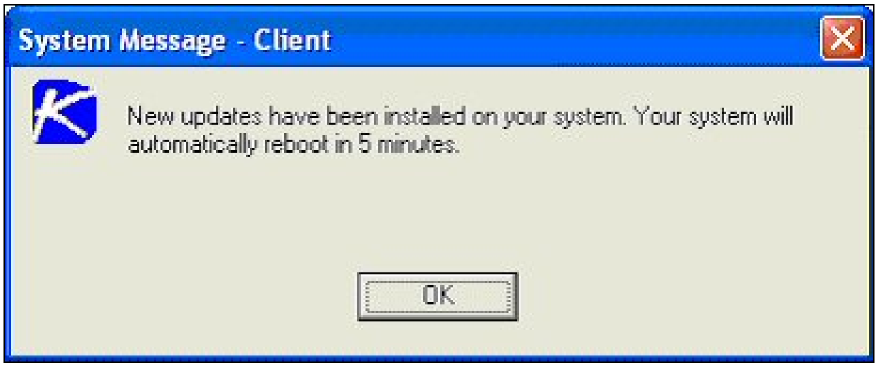
Reboots the computer immediately after the install completes.

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.



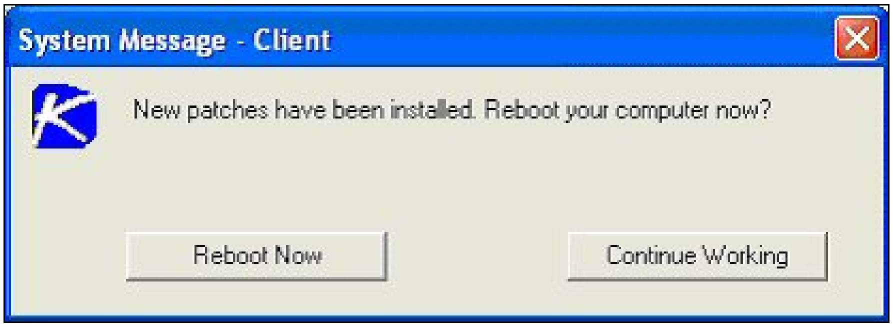
New updates have been installed on your system. Your system will automatically reboot in 5 minutes.

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.

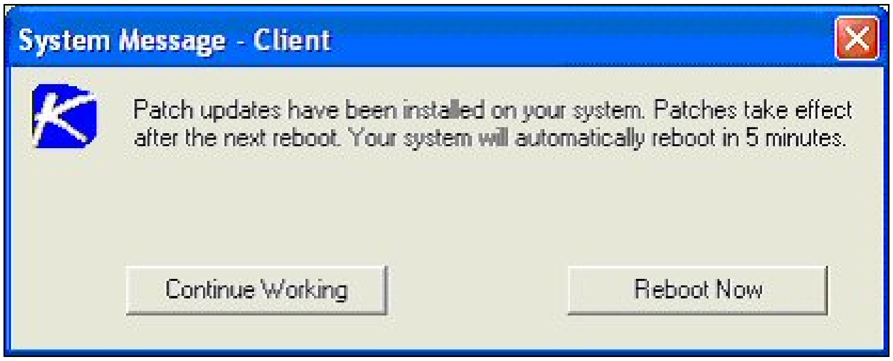
This setting displays the message below, asking the user if it is OK to reboot now. If no one is at the computer or they answer no, the same message appears every N minutes repeatedly, until the system has been rebooted. If no one is currently logged in, the system reboots immediately.



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.

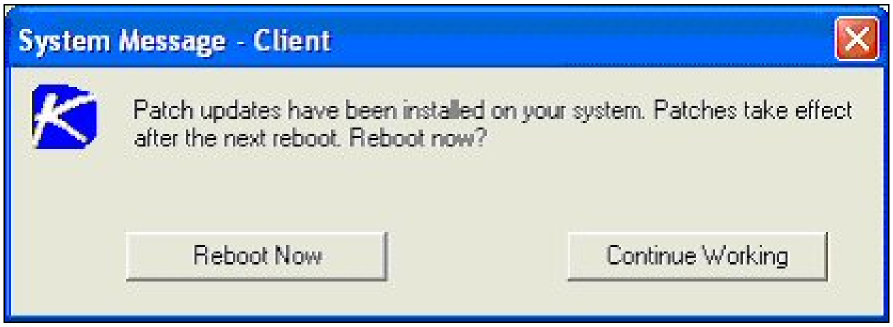


System Message - Client

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. Use this if your users typically shut down their computer every night. You can rely on this behavior to reboot the machine for you. If the machine is a server that you do not want to 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 273)*.
>
> 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 364)*, 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 211)* 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 214)*.

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\KaWeb\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 specified path to the file must be in UNC format such as `\\computername\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.
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 370)* 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Patch Source

Lists the patch source selected for each machine ID.

Patch Alert

Patch Mgmt > Patch Alert

This same alert can be set using Monitor > Alerts *(page 97)*.

The Patch Alerts page creates alerts for patch management events on managed machines. Alerts provide a simple set of typical parameters for setting up alarms *(page 445)* quickly on a managed machine. Once defined, you can apply this alert immediately to any machine ID displayed on this page.

To Create a Patch Alert

1. Check any of the last three checkboxes to perform their corresponding actions when a patch alarm is triggered for a machine ID.
   - Create Alarm - This is always checked. Patch alarms are enabled when a patch alert is defined on this page.
   - Create Ticket
   - Run Script after alarm.
   - 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 variables are populated with information when an alert is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alert.

> Note: *Changing this email alarm format changes the format for* ***all*** *patch alert emails.*

Within an Email	Within a Script	Description
<at>	#at#	alert time
<bi>	#bi#	bulletin ID
<bl>	#bl#	new bulletin list
<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

The Create Alarm check box is always checked. This creates an alarm for the selected alert function.

Create Ticket

If checked a new ticket is generated at the same time the alarm is created and associated with the alarm.

After alert run select script on this machine ID

If checked, a script is run when an alert is triggered. 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 alert.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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

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
⚑	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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Path Missing

An alert is generated if the system discovers the Patch Location *(page 214)* path for a patch is missing or incorrect.

Approval Policy Updated

An alert is generated if a new pending patch is added to one or more collections with an approval policy set and the new pending patch requires approval or denial from an administrator. See Patch Approval *(page 188)*.

ATSE

The ATSE alarm / 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.

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 179)* 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 9)*.
- 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 370)* to use the Office Source page. 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.

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 211)*. 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:

Agent has checked in

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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 199)*. `/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 449)*.

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 knowledge base 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.

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 9)* 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 179)*. 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 knowledge base article link to display a Details page about the patch. The Details page contains a link to display the knowledge base article.

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.

Functions	Description
Control Machine *(page 219)*	Allows administrators to view and/or take control of a managed machine's desktop remotely for troubleshooting and/or instructional purposes.
Video Streaming *(page 222)*	Remote control machines that do not have an agent installed.
Reset Password *(page 224)*	Reset the password for an local account on a managed machine.
Select RC Type *(page 225)*	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 227)*	Specify the remote control settings to use with each remote control package.
Preinstall RC *(page 228)*	Install the remote control service
Uninstall RC *(page 230)*	Uninstall the remote control service
FTP *(page 235)*	Initiate an FTP session with any remote managed machine.
Chat *(page 238)*	Start a chat session between an administrator and any remote machine.
Send Message *(page 240)*	Allows administrators to send network messages to selected managed machines.
Task Manager *(page 241)*	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 225)*. Set parameters for remote control sessions using Set Parameters *(page 227)*.

> Note: Use Video Streaming *(page 222)* 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 219)* or Video Streaming *(page 222)*, 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 228)*.

> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 230)* 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 icon can be connected to target machines and have live links; all others will be inactive.

Agent has checked in

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

> 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 358)*.

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.

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 169)*.

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 361)*.
- XP supports only one RDP/Terminal Service session on the target machine and logs off other users. Starting a remote login session from a second machine logs off the first remote login 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 localhost. Using the credential of a currently logged on user this way 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 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

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 225)*.

WinVNC

K-VNC

Remote Administrator

pcAnywhere

RDP/Terminal Server

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the

administrator is authorized to see using System > Group Access *(page 387)*. Only machine IDs with an 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 227)*. See Select Type *(page 225)* for a description of the different types of remote control packages.

> Note: Use Control Machine *(page 219)* 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 219)* or Video Streaming *(page 222)*, 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.

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 361)*.

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 225)* 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:

- Agent has checked in
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Status

The status of pending password changes and user account creations.

Select Type

Remote Ctnl > Select RC Type

The Select Type page specifies which remote control package is used by Control Machine *(page 219)* 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 the only remote control option available for Vista and can only be used with Vista machines. 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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 225)* 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 225)*. 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 219)* or Video Streaming *(page 222)*, 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 228)*.

> Note: Uninstalling an agent does not remove the installed remote control package. Before you delete the agent, use Remote Control > Uninstall RC *(page 230)* 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:

Agent has checked in

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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 225)*.

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 225)*. 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 228)*.

> 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 230)* 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 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

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 225)*.

- 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 385)*.

> Note: See Machine Policy *(page 233)* 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

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 385)*.

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 231)* 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

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the

administrator is authorized to see using System > Group Access *(page 387)*.

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 🟢 icon can be connected to target machines and have live links; all others will be inactive.

- 🟢 Agent has checked in
- 🟡 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

> 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 358)*.

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.

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

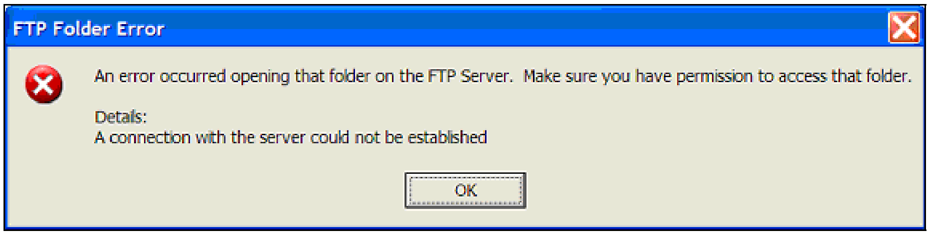
Administrators can provide users with the same remote control and FTP access that administrators have using Agent > User Access *(page 169)*.

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 361)*.
- 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:



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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 29)*.

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 387)* 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 169)*.

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.

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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

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 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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
Schedule Volumes *(page 245)*	Schedules backups for selected hard disk volumes on any managed machine.
Pre/Post Script *(page 250)*	Specify a script to run before and/or after Volume Backup
Schedule Folders *(page 251)*	Can independently schedule backups for individual folders.
Backup Status *(page 255)*	Review the status of scheduled backups for any machine.
Backup Logs *(page 256)*	Review the logs generated by every backup action.
Explore Volumes *(page 256)*	Mounts a backup as a new drive letter on the managed machine.
Explore Folders *(page 257)*	Copies the .zip archive back to the managed machine.
Verify Images *(page 258)*	Verify any volume or folder backup image
Auto Recovery *(page 258)*	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 261)*	Boot the managed machine from a CD and then automatically restore a selected volume backup image.
Universal Restore *(page 263)*	Provides instructions for creating a boot CD and restoring a backup image manually by walking through a wizard.
Offsite Servers *(page 263)*	Specify a machine to act as an offsite server and receive files from a local server.
Local Servers *(page 266)*	Specify a machine to act as a local server and send files to an offsite server.
Offsite Alert *(page 269)*	Generate alerts when a local server fails to connect to an offsite server.
Schedule Transfer *(page 272)*	Set up a day by day schedule for each local server to push files to an offsite server.
Install/Remove *(page 273)*	Install and uninstall the backup driver and software on any managed machine.
Image Location *(page 277)*	Set the path to the backup storage location.
Image Password *(page 279)*	Look up the password used to protect backup images.
Folder Backup *(page 281)*	Specify a list of folders to backup during Schedule Folders
Backup Alert *(page 282)*	Activate/deactivate alerts associated with backup events.

Compression *(page 286)*	Set compression level used by both volume and folder backups
Max File Size *(page 287)*	Set a maximum file size used for backup images. Images larger than this maximum are broken into multiple files.
Max Log Age *(page 288)*	Set the maximum number of days to save backup log data.
Secure Zone *(page 289)*	Install a secure zone to support Auto Recovery

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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

Volume Backups vs Folder Backups

When you perform a backup using Schedule Folders *(page 251)*, 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.

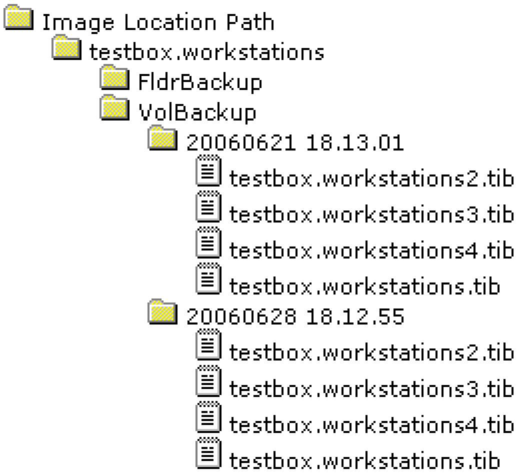
- A partition image includes all files and folders independent of their attributes (including hidden and system files), boot record, FAT (file allocation table), root and the zero track of the hard disk with master boot record (MBR).
- A disk image includes images of all disk partitions as well as the 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 associated with the full backup and all incremental or differential backups are saved together in a full backup set. You may save any number of full backup sets you wish.

Backup Folder Structure

Separate Image Location *(page 277)* 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 data gets saved using 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
```

> Note: *If a network connection is dropped, the system retries for up to 10 seconds before giving up.*

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 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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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.

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.

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 258)* 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 245)* backup starts or after it completes. Does not apply to Schedule Folders *(page 251)* 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 281)*. The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

Sector Level Backups

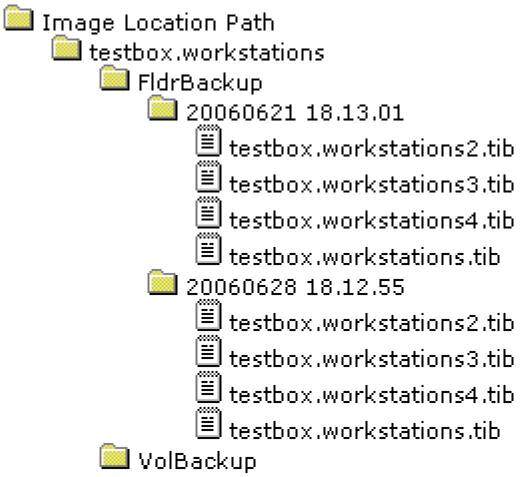
Folder backups perform sector level backups of selected folders. Sector level copying allows the system to backup locked and in-use files so you can safely backup at any time of the day.

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 associated with the full backup and all incremental or differential backups are saved together in a full backup set. You may save any number of full backup sets you wish.

Backup Folder Structure

Separate Image Location *(page 277)* 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 data gets saved using the following directory structure:



```
Image Location Path
    testbox.workstations
        FldrBackup
            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
        VolBackup
```

> Note: If a network connection is dropped, the system retries for up to 10 seconds before giving up.

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 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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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.

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.

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 258)* 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
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 Status

Backup > Backup Status

The Backup Status page displays the status of currently available backups for a selected machine ID.

Click a machine ID to display a list of volume backups and a list of folder backups currently available. Each list displays the time each backup was completed, the disk number or volume drive letter of the backup, the backup duration, the backup size and the success or failure status of a backup attempt.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

View last backup log

Click the View last backup log link to display the raw log file returned by the backup subsystem running on a managed machine. Backup Status processes this log when each volume or folder backup completes. 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.

Backup Logs

Backup > Backup Logs

The Backup Logs page displays the backup log for a selected machine ID. Click a machine ID to display a log containing the date, type, duration, result and description of each backup operation performed. The maximum number of days included in the log is specified using Backup > Max Log Age *(page 288)*.

The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

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 277)* 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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 256)*, 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 277)* 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 277)* path. This problem typically only occurs in slow or unreliable networks. On slow networks, consider selecting the Verify Backup option in Schedule Volumes *(page 245)* and Schedule Folders *(page 251)* 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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 289)* be installed on the target machine ID.

> Note: Folder backups are restored using Explore Folders *(page 257)*. To restore a target machine that cannot communicate with the KServer see CD Recovery *(page 261)* or Universal Restore *(page 263)*.

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 277)* 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 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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 448)* 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 277)* 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 263)*, 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 448)* 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 277)* 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 277)* path and the Image Password *(page 279)* 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 272)*. Image Location *(page 277)* directories should be defined as subdirectories of a Local Server directory to be included in these transfers.

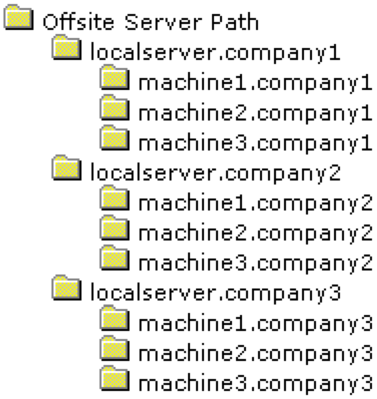
Offsite Server Configuration

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.

File Structure

The offsite server stores data received from local servers in the directory specified. Data from each individual local server should be stored in a sub-directory named after the machine ID of the local server. The offsite server directory can be a UNC path pointing to a directory on a network file share. The following diagram illustrates a typical offsite server directory structure.



```
Offsite Server Path
    localserver.company1
        machine1.company1
        machine2.company1
        machine3.company1
    localserver.company2
        machine1.company2
        machine2.company2
        machine3.company2
    localserver.company3
        machine1.company3
        machine2.company3
        machine3.company3
```

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 370)* 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 machine:

1. Click the OK icon.
2. Click the Pending Scripts tab on the Machine Summary *(page 14)* 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
- ⚑ 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

Delete

Click the delete icon ✕ to delete an offsite server record.

Edit

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 263)*. 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 272)*. Image Location *(page 277)* directories should be defined as subdirectories of a Local Server directory to be included in these transfers.

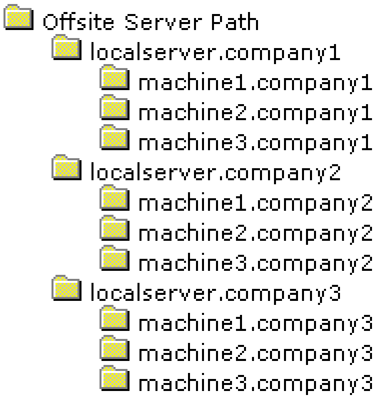
For each local server specify:

- 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 370)* set in order to access the network.

File Structure

The offsite server stores data received from local servers in the directory specified. Data from each individual local server should be stored in a subdirectory named after the machine ID of the local server. The offsite server directory can be a UNC path pointing to a directory on a network file share. The following diagram illustrates a typical offsite server directory structure.



```
Offsite Server Path
    localserver.company1
        machine1.company1
        machine2.company1
        machine3.company1
    localserver.company2
        machine1.company2
        machine2.company2
        machine3.company2
    localserver.company3
        machine1.company3
        machine2.company3
        machine3.company3
```

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 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

Delete

Click the delete icon ✕ to delete a local server record.

Edit

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 272)*.
- 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 272)* 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 9)*. To display on this page, machine IDs must be defined as a local server using Backup > Local Servers *(page 266)*.

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 variables are populated with information when an alert is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alert.

> Note: *Changing this email alarm format changes the format for all offsite alert emails.*

Within an Email	Within a Script	Description
<at>	#at#	alert time

<gr>	#gr#	group ID
<id>	#id#	machine ID
<op>	#op#	offsite replication server ip:port

Create Alarm

The Create Alarm check box is always checked.

Create Ticket

If checked, a new ticket is generated when an alarm is triggered.

Run script after alert

If checked, a script is run when an alert is triggered. 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 alert.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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 alarm.

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 9)*. To display on this page, machine IDs must be defined as a local server using Backup > Local Servers *(page 266)*.

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
- ⚑ 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

Edit

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 402)*. 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

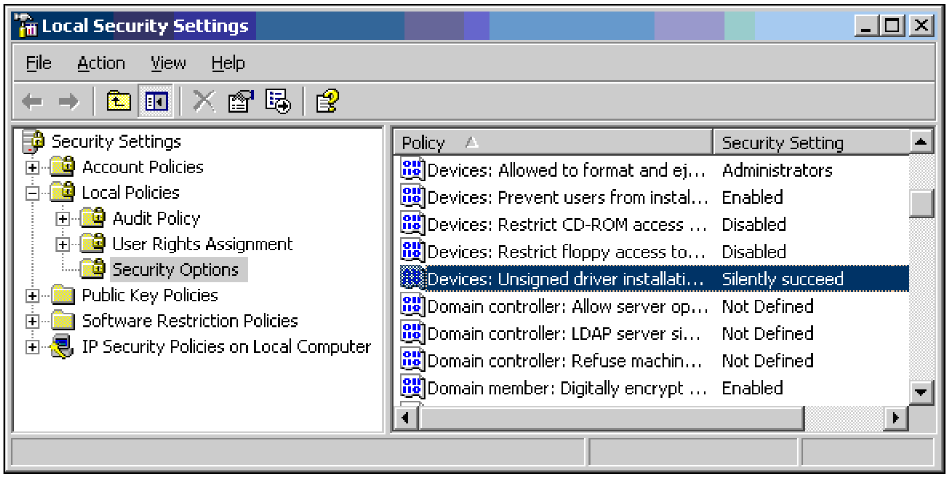
Backup can backup all volumes, including the boot volume, while in use. Backup accomplishes this through the use of a low level driver. As such, backup require a reboot to complete its installation.

- 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).



- Security Settings
  - Account Policies
  - Local Policies
    - Audit Policy
    - User Rights Assignment
    - Security Options
  - Public Key Policies
  - Software Restriction Policies
  - IP Security Policies on Local Computer

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 clear a scheduled installation.

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 202)*. 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 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, ...

Skip if Machine Offline

Check to perform this task only at the scheduled time. If the machine is offline, skip and reschedule for the next day at the same 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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 370)* 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.

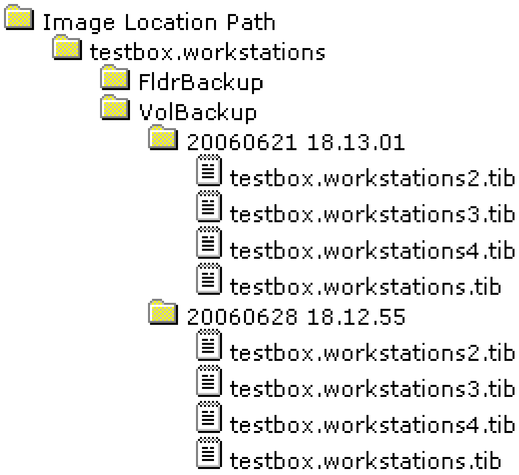
The list of machine IDs you can select depends on the Machine ID / Group ID filter *(page 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

Local Servers and Image Locations

If you are going to configure replication using Offsite Servers *(page 263)*, then Image Location *(page 277)* directories should be defined as subdirectories of a Local Server *(page 263)* 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 251)* 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

Include Directories

Click Include Directories to apply Include File or Folder settings to selected machine IDs.

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.

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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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

This same alert can be set using Monitor > Alerts *(page 97)*.

The Backup Alerts page creates alerts for backups of managed machines. Alerts provide a simple set of typical parameters for setting up alarms *(page 445)* quickly on a managed machine. 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* page.

To Create a Backup Alert

1. Check any of the last three checkboxes to perform their corresponding actions when a backup alarm is triggered for a machine ID.
   - Create Alarm - This is always checked. Backup alarms are enabled when a backup alert is defined on this page.
   - Create Ticket
   - Run Script after alarm.
   - 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 variables are populated with information when an alert is triggered. These variables can be referenced by any email you send or script you run in response to the triggering of an alert.

> Note: *Changing this email alarm format changes the format for all backup alert emails.*

Within an Email	Within a Script	Description
<at>	#at#	alert time
<be>	#be#	backup failed error message
<gr>	#gr#	group ID
<id>	#id#	machine ID

Create Alarm

The Create Alarm check box is always checked. Backup alarms are enabled when a backup alert is defined.

Create Ticket

If checked, a new ticket is generated when an alarm is triggered.

Run script after alert

If checked, a script is run when an alert is triggered. 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 alert.

Email Recipients

If checked, alert emails are sent to the specified email addresses.

- The email address of the currently logged in administrator displays in this field. It defaults from the System > Preferences *(page 377)*.
- 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 is triggered.
- 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 the System > Configure *(page 397)*te page.

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 277)* is lost.
- Recurring backup skipped - machine offline - This alert gets issued when Skip if machine offline is set in Schedule Volumes *(page 245)* and the backup is rescheduled 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 schedule volume backup time.

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 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

ATSE

The ATSE alarm / response code assigned to machine IDs or SNMP devices *(page 451)*:

- 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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

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- OK Agent has checked in
- ⚑ Agent has not recently checked in
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- OK Online but waiting for first audit to complete
- ⊘ The agent is online but remote control is disabled

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 245)* 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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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:

- Agent has checked in
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 9)*. To display on this page, machine IDs must have backup software installed on the managed machine using the Backup > Install/Remove *(page 273)* 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:

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 258)* 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 KServer.

- 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.

Functions	Description
Set Logo *(page 293)*	Allows custom logos to be placed on generated reports.
Schedule Reports *(page 293)*	Automatically run reports at a scheduled time. Reports may be posted or delivered via email.
Executive Summary *(page 295)*	Create a concise summary report reflecting the system health of a selected group of machines.
Aggregate Table *(page 301)*	Create a single table with one row per machine and using any data as columns.
Machine Summary *(page 303)*	Generate reports on deployed Agents and the machines they reside on.
Machine Changes *(page 306)*	Run a difference report between each machine's latest audit and either the baseline or latest audit from a selected machine.
Patch Management *(page 306)*	Displays composite and individual patch status reports
Inventory *(page 309)*	Inventory summary for the selected audit category.
Software *(page 311)*	Get detailed information regarding the software installed and used by managed machines.
Disk Utilization *(page 315)*	Generate graphical report on capacity and usage of all fixed disks.
Network Statistics *(page 317)*	View detailed network usage information, from the entire network down to a managed machine.
Uptime History *(page 319)*	Chart the powered up, online, and abnormal shutdown history of each machine vs. time.
Logs *(page 321)*	Generate reports on all logged information collected by the VSA.
Ticketing *(page 322)*	Report status of all trouble tickets.
Backup *(page 324)*	Report on the backup log and status

Set Logo

Reports > Set Logo

The Set Logo page customizes the header of reports generated by an administrator. The system places any HTML you enter here at the top of every report. Make the header as simple or as complex as you want. You have full control over the HTML entered. When an administrator runs a report, the report displays the unique header for that administrator.

> Note: If you do not want other administrators to change the custom header, block them from seeing the Set Logo using System > Function Access *(page 389)*.
>
> Note: The master administrator can customize the default report header seen by all administrators. Click System > Customize *(page 407)* and enter the custom header in the field labeled Header HTML shown on all reports.

Modify the HTML used for the header here

Enter the HTML you want to use in the header of 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

Use Schedule Reports to automatically export reports to a URL on the VSA web site that does not require a login to access. Schedule Reports gives you a method to post reports accessible to non-administrators. Schedule recurring reports to post up to date data your users can access.

Set unique "Specify Accounts" 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.

You can optionally email a copy of the report or a short message with the URL to the report. Customize the message content by clicking the Format Email button.

> Note: Only master administrators can change the format of the scheduled reports email.

Reports are posted to the dataReports directory, on the VSA's website, in a sub directory named after the administrator login that scheduled the report and a sub directory for the specify accounts 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
```

Since the system runs these reports without the administrator logging in, only saved reports that specify all saved parameters may be scheduled.

> Note: Standard administrators can not schedule reports that use < All Groups >. Only master administrators can schedule < All Groups > reports.

Show reports from all administrators

Checking this box displays reports (shared and private) for all administrators on the VSA server. 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 control lists 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 control resets the specify account settings to those saved with the report. The VSA displays the report type below this control.

Schedule

Click Schedule to run the report at the specified time and save the file in the dataReports directory.

Recurring

Check Recurring to repeatedly run the report at the specified interval. The report runs the first time at the time specified with the Run At control.

Enter email address to notify when report is ready

List of email addresses to send the report to. Depending on how the notification is formatted, either the entire report is sent or a short message with a link to the report is sent. Leave this list bank to disable email notification. Comma separate each email address to send multiple notifications/reports.

Format Email

Click this button to change the subject and body of the email sent when a report runs. Enter any text you like for either the subject line or body of the email. 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
- <id> Specify accounts filter used to run the report
- <rt> Report title
- <ru> URL to the report stored on your VSA web site.

Filename

List of reports that have run and are scheduled to run. If the report has already run, the filename appears as a link to the report.

Last Run

Time when the report was last produced.

Next Run

Time the report is schedule to run next. If this field is blank, the report is not scheduled to run again.

Recurring

Recurring interval at which the report runs.

Report Type

Type of report that has been scheduled. For example, Disk Utilization.

Account Filter

Values of the specify account filter used to run each scheduled report.

Email Address

Comma separated list of addresses to email the report or notification to. Leave blank to disable email notification.

Executive Summary

Reports >
Executive Summary

This report summarizes the status and health of all selected machines in one quick view. The report computes an overall score projecting the over all health of the managed group of machines.

The Executive Summary report shows the following sections:

- Client Information - Displays number of machines (servers and workstations) and the names of the primary points of contact for this group.

- System Activity - Quick view enumerating number of times machines were audited and scanned for missing patches. This section also shows the total number of patches installed during the specified number of days. Click Change Rows... to fully customize this section.
- Ticket Status - Summary of tickets status over the specified number of days.
- Disk Space Used - Graph presents the percent of free disk space on all selected machines. Restrict this chart to servers only by checking the "Only list servers in Disk Space Used" box.
- Network Health Score - Displays individual component scores and overall health score for all the selected machines as a group. (see Network Health Score section below for details) Click Change Score... to fully customize this section.
- Operating Systems - Pie chart showing the break down of operating systems in the selected group.
- Patch Status - Pie chart summarizing the state of missing patches for all selected machines.
- Alert Notifications - Summarizes alerts issued in the specified number of days. This section breaks the alert count down by category of alert.
- License Summary - Summarizes the OS and MS Office licenses found by audit.
- Endpoint Security Last N Days - Lists statistics for untreated security protection threats.

> Note: The Endpoint Security Last N Days section only displays if you have separately purchased the Kaseya Endpoint Security addon module.

Network Health Score

The overall network health score gives you an at a glance view of the health and usability of the selected machines. The score is broken into 5 components and scored from 0 to 4 (4 is the highest) as follows:

- Patch - The average score for each machine gives the patch score. 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 - Modern operating systems score higher than older operating systems. The overall OS score is an average of each machine's score calculated as follows:

2003 and XP	100%
2000	75%
NT4	50%
98 and ME	25%

95	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. Place Vista in the 100% column, 2003 in the 75% column, and so on. All legacy OSs are given a zero. If you have a large number of legacy OSs deployed, considered turning off the OS score.

- Disk - 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 - 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%
more than 5 past due	25%

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 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%
more than 10	25%

- Backup Score - Counts days since the backup last ran. The older the backup is, the lower the score.
- Alarm Score - The fewer alarms generated, the lower the score.
- 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 2 days since script ran	100%
2	2 to 3 days since script ran	75%
3	3 to 4 days since script ran	50%
4	4 or more days since script ran	25%

- Endpoint 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%
more than 10 untreated threats	25%

> Note: The Endpoint Score only displays if you have separately purchased the Kaseya Endpoint Security addon module.

You can adjust how heavily each category effects the final score by adjusting the weight value for each category. Weights range from 0 to 100. Set the weight to 0 to turn off that category.

The final network health score computes the weighted average of the above scores and normalizes them providing the final percentage score, 100% representing perfect.

Contact Person

The contact person displayed in the Client Information section represents the point of contact inside the organization receiving IT service.

IT Manager

The person listed as the IT Manager represents the person responsible for delivering IT services to the client organization.

Summarize data collected in the last N days

Patch, ticket, alert, and status information is time dependent. Only data collected in the specified number of days contributes to this report.

Only list servers in Disk Space Used section

Check this box to only display used disk space for servers. This box is valuable to highlight file server space as a function of network health.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Select the columns of data to display.

   Select any number of columns to display. Each selection creates an additional column of data in the table. There is always one row for each machine that matches the Specify Accounts filter.

2. Run the Report
   a. Enter Title Displayed On Report Header
   b. Enter a title to display in the resulting report page header. This title is saved with the report.
3. Run the Report

   Pressing run displays the result of the report in a new browser window.

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 the 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".

> 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 greater than "G".

Aggregate Table

Reports > Aggregate Table

Create a table mixing any data collected by the VSA with an Aggregate Table report. Each report generates a single table with a row for each machine and a column for each piece of data specified.

Advanced Filter

Click Advanced Filter *(page 300)* to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Select the columns of data to display

   Select any number of columns to display. Each selection creates an additional column of data in the table. There is always one row for each machine that matches the Specify Accounts filter. Data columns are the same columns you can specify in Agent Status *(page 329)*.

2. Run the Report

    a. Enter Title Displayed On Report Header

    b. Enter a title to display in the resulting report page header. This title is saved with the report.

3. Run the Report

    Pressing run displays the result of the report in a new browser window.

Machine Summary Report

Reports > Machine Summary

Machine Summary produces a detailed report for each machine ID matching the filter. Use the Machine Summary report to generate comprehensive reports for individual machines.

To Define an Agent Report

1. In the Specify Accounts filter, select the machines you want an Agent report on.
2. Select the information you want displayed in the Agent report. To have an item display in the report, select it from the Not Displayed list and press Add>>. It is moved to the Displayed list. You can change the order of items displayed in the report by selecting the item in the Displayed list and pressing the Up or Down arrows:
    - Computer/Network - Displays the managed machine Windows network name, operating system, CPU, RAM, IP address, gateway, DNS/DHCP server, and WINS server information.
    - Printers - Lists the printers found by the audit for this machine.
    - Logical Disk - Lists the logical volumes on the managed machines, including removable, fixed, and CD-ROM drives.
    - Physical Disk - Lists physical disk information for the managed machine, such as hard disks, DVD, and CD-ROM drives.
    - PCI Devices - Lists installed PCI devices on the managed machine.
    - System Info - All items collected by the System Info *(page 32)* function under the Audit Tab.
    - Registered Apps - All registered applications for the selected machine.
    - Unregistered Apps - All unregistered applications (.exe files) for the selected machine.

    > Note: 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.

- Baseline - Added Apps All new applications detected by Latest Audit *(page 29)* that have appeared on the machine since the Baseline Audit *(page 29)* was run.
- Baseline - Removed Apps All applications that were present when the Baseline Audit *(page 29)* was ran but are missing when Latest Audit *(page 29)* last ran.
- User Profile - Lists out user contact information associated with this machine ID
- 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.
- Pending Scripts - Lists scheduled scripts on the managed machine.
- Recurring Scripts - Lists scripts that are executed on a scheduled basis on the managed machine.
- File Integrity - Lists files that are integrity-protected.
- File Access - Lists protected files.
- Network Access - Lists applications that have restricted network access.
- Miscellaneous - Lists miscellaneous Agent settings, such as WinVNC and user logs status.

1. Enter a title you want displayed in the report header.
2. Press run. The report is generated and shown in a new browser window.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Select Display Settings

   Move the items you want displayed in the report from the Not Displayed to the Displayed box by selecting the item and pressing Add>>. You can remove items by selecting the item in the Displayed box and pressing <<Remove. It is then displayed in the Not Displayed box.
   You can change the order of the items displayed in the report by selecting the item you want to move in the Displayed box and clicking the up or down buttons.

2. Enter Title Displayed On Report Header

   a. Enter a title to display in the resulting report page header. This title is saved with the report.

   b. Machine ID/Group ID/Update

   These fields and the button are active only when a saved report is selected from the left-hand navigation bar. The Machine ID and Group ID fields populate with the settings of the saved report. The settings can be changed by entering new filter criteria in the Specify Accounts field, pressing Update, and re- saving the report.

3. Run the Report

   Pressing run displays the result of the report in a new browser window.

Machine Changes

Reports > Machine Changes

Run a difference report between each machine's latest audit and its own baseline or either the baseline or latest audit from a selected machine.

Compare with machine's own baseline audit

Displays all changes, both hardware and software, 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 changes, both hardware and software, found on each machine by comparing the information from the latest audit against the audit from a specific machine ID. Use this function to identify differences in a group of machines when compared against the standard for the group. Check use baseline to compare with the baseline audit information from the specific machine ID.

Patch Management

Reports > Patch Management

This report lists the patch state for all selected machines. There are both group composite reports and individual machines reports available.

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 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 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 that 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 xx 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

Bulletin ID Filter – Enter a bulletin filter by using the asterisk (*) as a wild card for multiple characters and/or the underscore (_) as a wild card for a single character.

Ignore machines without data – Check the checkbox to exclude all machines without patch scan data (default).

Show patches denied by Patch Approval Policy – By default, only missing patches that have been approved for installation in the Patch Approval Policy are included in the report. Check the checkbox to ignore the Patch Approval Policy and include all patches whether approved or denied by the Patch Approval Policy.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Select the columns of data to display

   Select any number of columns to display. Each selection creates an additional column of data in the table. There is always one row for each machine that matches the Specify Accounts filter.

2. Run the Report

   a. Enter Title Displayed On Report Header

   b. Enter a title to display in the resulting report page header. This title is saved with the report.

3. Run the Report

   a. Pressing run displays the result of the report in a new browser window.

   b. Pressing Export will create the report and then allow you to save the report as either an HTML file, a MS Excel file, or as a MS Word file.

Inventory

Reports > Inventory

What does the Inventory report show me?

Inventory lists all unique items collected during an audit and identifies the machines containing that item. Any item in System Info or PCI & Disk HW may be selected to run an inventory report on.

What does a filter do?

The filter restricts the items listed in the inventory 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.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Enter Title Displayed On Report Header

   - Enter a title to display in the resulting report page header. This title is saved with the report.

   Machine ID/Group ID/Update

   - These fields and the button are active only when a saved report is selected from the left-hand navigation bar. The Machine ID and Group ID fields populate with the settings of the saved report. The settings can be changed by entering new filter criteria in the Specify Accounts field, pressing Update, and re-saving the report.

   Chart Type

   - Bar - Displays a stacked bar chart with a bar for each fixed disk on each selected machine. Blue region displays the amount of used disk space. Gray displays the amount of free disk space. Total length of the bar represents total disk size.
   - Table - All the same data as the Bar display in numeric form.

1. Run the Report

   - Pressing run displays the result of the report in a new browser window.

Software

Reports > Software

The Software Report displays summaries of applications present on all selected machines. Each reports uses data collected from audit to display the state of each group's software installed base. There are four primary report types: All Applications, Software Licenses, Summary Licenses, and 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: To locate specific applications use the Advanced Filter *(page 300)* option by clicking the Advanced... link.

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 that contain each application is checked then the machine ID of each machine containing the application is listed.

Note: To locate specific applications use the Advanced Filter *(page 300)* option by clicking the Advanced... link.

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.

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

Advanced Filter

Click Advanced Filter *(page 300)* to restrict the amount of data displayed. You can specify a different advanced filter for each column of data displayed.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The named report will be listed in the left-hand navigation bar along with a corresponding icon, depending on whether it is labeled as a private or shared report.

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name is listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Choose a Report Type

   - All Applications - Displays a list of applications installed on the managed machine(s) selected in the Specify Accounts filter. The list of applications can be filtered by pressing filter, which brings up the application filter *(page 16)* control.

   - ➢ Software Licenses - Lists all licenses found for all applications
   - ➢ License Summary - Summarizes all the licenses found.
   - ➢ Operating Systems - Displays a list of the operating systems installed on the managed machine(s) selected in the Specify Accounts filter.

2. Enter Title Displayed On Report Header

   - ➢ Enter a title to display in the resulting report page header. This title is saved with the report.
   - ➢ Choose the Sort Order
     - ✓ group.machine The report results are displayed alphabetically by group ID.
     - ✓ machine.group The report results are displayed alphabetically by machine ID.
   - ➢ Chart Type
     - ✓ Pie - Results are displayed in a standard pie chart. Clicking on a pie slice displays a table with a more detailed view of the information that comprises the slice.
     - ✓ Bar - Results are displayed in a standard bar chart. Clicking on a bar segment displays a table with a more detailed view of the information that comprises the bar.
     - ✓ Table - The table view provides an alphabetical (either by group or machine ID, as selected in the sort order) list of all the results of the selected report. The Table view provides the entire set of information gathered in the report; using the Pie and Bar chart types provides the administrator with a subset of the information when a pie slice or bar segment is selected. The Table view is useful for printing purposes.

       > Note: After running the Operating Systems report, you can select from Pie, Bar, or Table in the drop-down list provided in the report window.

   - ➢ Machine ID/Group ID/Update

     These fields and the button are active only when a saved report is selected from the left-hand navigation bar. The Machine ID and Group ID fields populate with the settings of the saved report. The settings can be changed by entering new filter criteria in the Specify Accounts field, pressing Update, and resaving the report.

   - ➢ Filter

     Pressing filter brings up the application filter control, which provides a way to control the list of applications shown in the applications list.

3. Run the Report

   Pressing run displays the result of the report in a new browser window.

Disk Utilization

Reports >
Disk Utilization

Disk Utilization presents a graphical representation of the free space, used space and total space on each disk drive. Hovering the mouse over any segment on the chart presents a tool tip that reads out the exact number of MBytes in that segment.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Enter Title Displayed On Report Header

   Enter a title to display in the resulting report page header. This title is saved with the report.

   Machine ID/Group ID/Update

   These fields and the button are active only when a saved report is selected from the left-hand navigation bar. The Machine ID and Group ID fields populate with the settings of the saved report. The settings can be changed by entering new filter criteria in the Specify Accounts field, pressing Update, and re- saving the report.

   Chart Type

   Bar Displays a stacked bar chart with a bar for each fixed disk on each selected machine. Blue region displays the amount of used disk space. Gray displays the amount of free disk space. Total length of the bar represents total disk size.

   Table All the same data as the Bar display in numeric form.

2. Run the Report

   Pressing run displays the result of the report in a new browser window.

To Generate a Disk Utilization Report

1. Enter a title you want displayed in the report header.
2. Choose the order of the displayed results:
   - machine.group Listed alphabetically by machine name.
   - group.machine Listed alphabetically by group name.
3. Select the chart type. These options may be disabled depending on the type of report selected.
4. Verify that the Machine ID and Group ID parameter match the parameters specified in the Specify Accounts filter. This only applies if you running a previously saved report.
5. Press run. The report is generated and shown in a new browser window.

Network Statistics

Reports >
Network Statistics

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Choose a Report Type

   Applications Displays a graph outlining each application and corresponding network bandwidth consumption over the time period entered in the Specify Period of Time setting. The number of applications displayed can be selected in the drop-down list, up to a maximum of 20.

   Machines Displays a graph outlining the machine(s) selected in the Specify Accounts filter and their corresponding network bandwidth consumption over the time period entered in the Specify Period of Time setting. The number of machines displayed can be selected in the drop-down list, up to a maximum of 20.

2. Enter Title Displayed On Report Header

   Enter a title to display in the resulting report page header. This title is saved with the report.

   Specify Period of Time

   Sets how far back, in days or hours, the report retrieves information.

   Machine ID/Group ID/Update

   These fields and the button are active only when a saved report is selected from the left-hand navigation bar. The Machine ID and Group ID fields populate with the settings of the saved report. The settings can be changed by entering new filter criteria in the Specify Accounts field, pressing Update, and re- saving the report.

3. Run the Report

   Pressing run displays the result of the report in a new browser window.

To Generate a Network Statistics Report

1. Select the type of report you want to generate:

   - Applications - Displays a graph outlining each application and corresponding network bandwidth consumption over the time period entered in the Specify Period of Time setting. The number of applications displayed can be selected in the drop-down list, up to a maximum of 20.
   - Machines - Displays a graph outlining the machine(s) selected in the Specify Accounts filter and corresponding network bandwidth consumption over the time period entered in the Specify Period of Time setting. The number of machines displayed can be selected in the drop-down list, up to a maximum of 20.

2. Enter a title you want displayed in the report header.
3. Specify the number of days you want the report to cover.

4. Verify that the Machine ID and Group ID parameter match the parameters specified in the Specify Accounts filter. This only applies if you running a previously saved report.
5. Press run. The report is generated and shown in a new browser window.

> Note: This report requires the Network Access *(page 47)* driver be enabled. This driver hooks the TCP/IP stack to measure network traffic by application. The driver is disabled by default.

Uptime History

Reports > Uptime History

What does this report show me?

Uptime History presents a graphical representation of:

- 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.

How do I generate an Uptime History report?

To generate a Uptime History report:

1. Enter a title you want displayed in the report header.
2. Choose the number of days worth of data to display
3. Verify that the Machine ID and Group ID parameter match the parameters specified in the Specify Accounts filter. This only applies if you running a previously saved report.
4. Press run. The report is generated and shown in a new browser window.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

Selecting a saved report from the left- hand navigation bar displays the settings of the report, and also gives the administrator the ability to edit, rename, or delete the report. Some of the functions below appear only when a saved report is selected from the left-hand navigation bar.

Report Name

Lists the name of the report as entered by the administrator.

Save

After making changes to the report, press Save to save the current settings.

Save As...

To make a copy of the current report, press save as... and give the report a new name. Before saving as, give the new report a permission by selecting either the Private or Shared radio button.

Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Enter Title Displayed On Report Header

   Enter a title to display in the resulting report page header. This title is saved with the report.

   Select number of days worth of data to display

   The last N days (from the time the report was generated) are displayed.

   Specify Accounts

   Verify that the correct set of machines you want in the report are addressed in the Specify Accounts filter.

2. Run the Report

Pressing run displays the result of the report in a new browser window.

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
- All Event Logs
- Application Event Log
- Remote Control Log
- Security Event Log
- Script Log
- EPS Log

> Note: The EPS Log only displays if you have separately purchased the Kaseya Endpoint Security addon module.

To Create a Log Report

1. Select Log to Display - Select the type of log you want in the report. Additional fields display, depending on the type of log selected. These additional fields filter the log data generated. For example:
   - 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. Uses the asterisk (*) wildcard.
   - Ignore machines without data - Check this box to only display machine IDs that have data matching the other filter parameters.
2. Enter Title Displayed On Report Header - Enter a title to display in the resulting report page header. This title is saved with the report. Additional fields display if a saved report is selected from the left-hand navigation bar.
   - Update / Machine ID / Group / View - Machine ID / Group ID filter *(page 9)* settings are saved when a report is saved. A report uses these *saved* machine ID / Group ID filter settings until you click Update to select the *current* Machine ID / Group ID filter settings. Click Save to store the *current* machine ID / Group ID filter settings with the report.
3. Run the Report - Click Run to generate the report in a new browser window.

Private / Shared

Select Shared or Private to assign a permission to the report. By default, the Private setting 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. Reports in the left-hand navigation bar display two different permission icons, depending on whether they are private or shared .

Save

Click Save to save the currently selected report.

Save As...

Click Save As... to save the currently selected report to a new name. The report displays with its new name in the left-hand navigation bar.

Rename...

Click Rename... to change the name of the currently selected report. The report displays with its new name in the left-hand navigation bar.

Delete...

Click Delete... to delete the currently selected report. The report is removed from the left-hand navigation bar.

Ticketing

Reports > Ticketing

A ticket report creates a table listing all trouble tickets assigned to the selected machine IDs. In Step 1 specify the subset of tickets you wish to display. Check the Display notes with each ticket checkbox to include all the detail notes with each ticket.

Create a table listing all trouble tickets assigned to the selected machine IDs. In Step 1 specify the subset of tickets you wish to display. Check the Display notes with each ticket checkbox to include all the detail notes with each ticket.

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.

Report Permission

Select Shared or Private to assign a permission to the report. By default, the Private setting will be 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.

Save As...

The settings of the report can be saved for later use. Pressing Save As... brings up a dialog box where the report can be named. The report will be listed in the left-hand navigation bar along with the corresponding permission icon, depending on whether it is labeled as private or shared .

Choosing a Report

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Rename...

To rename the report, press Rename... A dialog box will appear and a new name can be entered. Pressing OK confirms the new name and saves the report. The new name will shortly be listed in the left-hand navigation bar.

Delete...

To delete the report, press delete...

Update

Pressing Update synchronizes the information shown in the Group ID/Machine ID field with the information specified in the Specify Accounts *(page 9)* filter.

Running the Report

1. Define the Report
    a. Select column to sort on

       The report engine uses this column to sort the ticket data displayed. Combine with ascending / descending radio buttons to specify the direction of the sort.

b. Display notes with each ticket

Check this box to include all the detail notes with each ticket.

c. Category, Status, Priority

Filter displayed notes based on these selections. For instance, to only report on Open tickets, select Open from the Status drop down control.

d. Select Fields...

Specify which ticket fields to display in the report.

2. Enter a Title

- Enter Title Displayed On Report Header
- Enter a title to display in the resulting report page header. This title is saved with the report.

3. Run the Report

- Pressing run displays the result of the report in a new browser window.
- Save the report as HTML, Word, or Excel
- Pressing Export generates the report and then allows you to select on export format.

Backup

Reports > Backup

Generate a report summarizing data retrieved from the backup logs.

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

Include a summary table totaling backup event found in the last N days.

- Machines with Backup - counts number of backup licenses used.
- Successful backups last N days - Total number of successful backups for all machines in the last N days.
- Failed backups last N days - Total number of failed backups for all machines in the last N days.
- Total backup attempts last N days - Total number of backup processes run for all machines in the last N days.

Show backup log status by machine and event

List the backup log information collected in the last N days for each machine.

- Type - Full backup or Incremental Backup.
- Backup Completed - Date/Time when the backup completed.
- Duration - Amount of time the backup took to complete.
- Result - Success or Failed.

Assist Export

When should I export a report?

When you run a report and want to archive it, send it to someone else, or further manipulate the data outside of the VSA.

When I click the MS Excel or MS Word Format links the HTML document opens. Why?

Since the VSA is a web based tool, clicking the link sends the data to your browser. If you do not have Excel or Word loaded on your local machine, the page displays as plain HTML.

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, control agent check-in frequency, and update the version of agent software that resides on managed machines.

Functions	Description
Agent Status *(page 329)*	Displays active user accounts, IP addresses and last check-in times.
Agent Logs *(page 332)*	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 Settings *(page 332)*	Allows administrators to activate/deactivate Agent Logs on Agent machines.
Create/Delete Collection *(page 334)*	Create, delete, or rename machine collections
Collection Membership *(page 335)*	Defines which machines are members of which collections
Deploy Agents *(page 336)*	Create Agent install packages
Create *(page 342)*	Allows administrators to create new machine accounts.
Delete *(page 345)*	Allows administrators to delete machine accounts.
Rename *(page 346)*	Rename existing machine account.
Change Group *(page 348)*	Reassign any number of machines to a new group ID at once
LAN Watch *(page 350)*	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 353)*	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 357)*	Displays the results of the latest LAN Watch scan.
Copy Settings *(page 357)*	Mass copy settings from one machine to many.
Agent Menu *(page 358)*	Allows administrators to customize the appearance of the Agent system tray icon settings.
Check-In Control *(page 361)*	Allows administrators to control Agent check-in frequency on Agent machines.
Temp Directory *(page 364)*	Sets the path to a directory used by the agent to store temporary files
Edit Profile *(page 167)*	Allows administrators to edit machine account information.
User Access *(page 169)*	Set up accounts to allow users remote control access to their own machines
Set Credential *(page 370)*	Set a login credential for the Agent to use in Patch Management and the Use Credential script command.
Update Agent *(page 372)*	Allows administrators to remotely update Agents on Agent machines.

Agent Status

Agent > Agent Status

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 301)* 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.

Search...

Click Search... 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. Use the asterisk (*) wildcard to match entries in multiple rows.

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 - Login name of the user currently logged into the machine (if any).
- Last Logged In User - Login name of the last person to log into the machine.
- User Access Logon - Login name given to a user for logging into the KServer.
- Computer Name - Computer name assigned to the machine.
- 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 447)* time setting in seconds.
- Contact Name - User name entered in Edit Profile *(page 167)*.
- 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

⚑ 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

Agent Logs

Agent >
Agent Logs

The Agent Logs page collects event information on or relating to managed machines.

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 Log - Displays a log of send/receive data for network applications.
- Application Event Log, Security Event Log, System Event Log - Displays event log data collected by Windows. Not available for Win9x.
- Script Log - Displays a log of successful/failed scripts.
- Remote Control Log - Displays a log of successful/failed remote control sessions.

Events Per Page

Select the number of rows displayed per 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.

Log Settings: Agent

Agent >
Log Settings

The Log Settings page determines how much log data to save in the database on a per log basis for each machine ID. Logs are displayed using Agent Logs *(page 332)*. Defaults from the agent install package. Agent install packages are created using Agent > Deploy Agent *(page 336)*. 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 14)* page.

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:

- Alarms Log - The log of all alarms issued.
- 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 332)* > Network Statistics.
- Script Log - Displays a log of successful/failed scripts.
- Remote Control Log - Displays a log of remote control events.

> Note: System > Check-in Policy *(page 383)* 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:

OK Agent has checked in

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Create/Delete: Collections

Agent > Collections: Create/Delete

The Create/Delete page creates or deletes machine collections. Machine collections let you group any number of arbitrary machines together. Any machine can be made a member *(page 335)* of one or more collections.

- Collections work together with group ID and machine ID filters to sort and list various machines. For example, you can create a collection named servers and assign all your servers to be members of this collection. Then if you want to see all the servers in the accounting machine group, define a view that shows the servers collection and the accounting machine group.
- Patch Approvals *(page 188)* are defined by machine collection.

Machine collections are defined using Agent > Create/Delete *(page 334)*. Machine IDs are assigned to machine collections using Agent > Membership *(page 335)*.

Create

Click Create to to define a new collection, after entering a new machine collection name in the edit field.

Delete

Click Delete to delete selected collections.

Enter name for new machine collection

Enter the name for a new machine collection.

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 collection to rename it.

Collection Name

Lists all machine collections defined for the entire system.

Member Count

Lists the number of machines that are members of each collection.

Show Machines

Click Show Machines to list the members of a collection.

Membership: Collections

Agent > Collections: Membership

The Membership page assigns machine IDs as members of one or more collections. Machine collections let you group any number of arbitrary machines together. Any machine can be made a member *(page 335)* of one or more collections.

- Collections work together with group ID and machine ID filters to sort and list various machines. For example, you can create a collection named servers and assign all your servers to be members of this collection. Then if you want to see all the servers in the accounting machine group, define a view that shows the servers collection and the accounting machine group.
- Patch Approvals *(page 188)* are defined by machine collection.

Machine collections are defined using Agent > Create/Delete *(page 334)*. Machine IDs are assigned to machine collections using Agent > Membership *(page 335)*.

Add

Click Add to add selected machine IDs to selected collections.

Remove

Click Remove to remove selected machine IDs from selected collections.

Assign machines to a collection

Click one or more machine collection names to mark them for adding or removing selected machine IDs.

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Member of Collection

Displays a comma separated list of collections that each machine ID is a member of.

Deploy Agents

Agent > Deploy Agents

The Deploy Agent page creates and distributes an agent install package to *multiple* machines.

> Note: Use Agent > Create *(page 342)* to create a machine ID account and agent install package in two separate steps and apply them to a *single* machine. Use Create to re-install an agent for an *existing* machine ID.
>
> Note: Use Install Agent *(page 353)* 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 449)* and the agent *(page 445)*. The machine ID / group ID is the KServer'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 client agent on a managed machine and its machine ID / group ID account name on the KServer. Tasks assigned to a machine ID by a KServer 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 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 383)* to automatically create a machine ID account when a Deploy Agents package is installed.

Machine ID Templates

Agent install packages can be based on machine ID templates. A machine ID template is *a machine ID record without an agent*. Since an agent never checks into a machine IT template account, it is not counted against your total license count. When an agent install package is created, the package's settings are copied from the 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 is created based on each machine ID template you define.

Including Credentials in Agent Install Packages

If necessary, an agent install package can be created that includes an administrator credential *(page 448)* 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 login 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 login 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 350)* and subsequently install agents *remotely* using the Agent > Install Agents *(page 353)* 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 340)*.
  - ➢ Select Run... from the Windows Start menu and type `KcsSetup.exe` followed by any desired command line switches.

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 381)* assigns it to the correct group ID and/or sub-group ID.

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 6 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.
   - 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.
3. Specify agent install package command line switches *(page 340)* including the ability to install silently without any task bars or dialog boxes *(page 451)*.
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. 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.

6. 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`.

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.`”

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 secured environments that require each machine to 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 336)* 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.
>
> Note: Use Install Agent *(page 353)* 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 449)* and the agent *(page 445)*. The machine ID / group ID is the KServer'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 client agent on a managed machine and its machine ID / group ID account name on the KServer. Tasks assigned to a machine ID by a KServer 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 448)* 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.

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 357)*.

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 a master administrator using the System > Admin Accounts: Create / Delete *(page 390)* 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 167)* page. Contact information includes:

- Contact Email - Enter the phone number 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 169)* page.

- Contact Phone - Enter the email address 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

⚑ 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

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 Agent Deploy to create install packages for *multiple* machines.

1. 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.

2. 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.

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 449)* and the agent *(page 445)*. The machine ID / group ID is the KServer'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 client agent on a managed machine and its machine ID / group ID account name on the KServer. Tasks assigned to a machine ID by a KServer 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 230)* 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
- 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

> Note: See Alert > Change Group *(page 348)* 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 Agent at next check-in then rename account on the VSA server - Select this option to dynamically change the machine ID name for an actively checking-in agent. This option guarantees that the agent and KServer remain in sync.
   - ➢ Rename account on VSA immediately - Select this option for machine ID accounts you wish to rename *prior to deploying the agent*.

     > Warning: If an account has an actively checking-in agent, renaming an account immediately prevents that agent from successfully checking-in again until the new account name is entered on the managed machine. *(Right click the agent icon on the managed machine, select the Set Account... option and enter a new account name.)*
     >
     > Warning: If a machine ID account is renamed and has an actively checking-in agent and auto account creation is enabled for a group using System > Check-in Policy *(page 383)*, a new machine account will be created at the client's next check in using the original machine ID name.

   - ➢ Merge offline account <Offline Machine ID> into <Select Machine ID> - 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. Also, loading a new agent onto a machine that has had an agent before may create a duplicate account for the same machine. Merge combines the accounts as follows:
     - ✓ Log data from both accounts are combined.
     - ✓ Baseline Audit *(page 447)* 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
- ◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*. 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.

Procedure

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 one of the following radio buttons:
   - Move agent at next check-in then rename account on the KServer - Select this option to assign multiple machine IDs to a different group ID at the next check-in for each agent. This option guarantees that the agents and KServer remain in sync.

- Move account on KServer immediately - Select this option to re-assign machine IDs immediately to a different group ID.

> Warning: If a machine ID account is re-assigned immediately to a different group ID and has an actively checking-in agent and auto account creation is enabled for a group using System > Check-in Policy *(page 383)*, a new machine account will be created at the client's next check in using the original machine ID / group ID.

4. Click the Move button.

Move

Assigns selected machine IDs to the selected group ID.

Cancel

Cancels pending assignments of selected machine IDs to a different group ID. You will only be able to cancel pending assignments of machines scheduled to Move agent at next check-in... that have not already executed the move.

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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

LAN Watch

Monitor > LAN Watch
Agent > LAN Watch

LAN Watch uses an existing agent *(page 445)* 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 451)*. Optionally, the VSA can send an alert *(page 446)* 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.

> Note: LAN Watch can only identify SNMP devices that share the same SNMP Community Read *(page 136)* value as the managed machine performing the LAN Watch.

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.

Alert on new device

If Alert on new device 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 97)* 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.

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.

Scan

Click Scan 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.

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.

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.

Every N periods

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

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 the System > Configure *(page 397)* page.

Scan 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.

After alert run select script on this machine ID

If checked, a script is run when an alert is triggered. 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 alert.

Check-in status

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

- OK Agent has checked in
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

Recurring Interval

The time interval used to determine how often LAN Watch runs.

Alert Active

If checked, LAN Watch alerts are enabled for this scan.

Days Off

Suppresses alerts for new devices for this number of days.

Skip MAC

If checked, 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.

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 350)*. Install Agent remotely installs the packages created using Deploy Agents *(page 336)*. 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 448). 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 353)* to install agents *on remote systems* after a LAN Watch *(page 449)*.

A valid login 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 login. Some anti-virus programs classify PSEXEC.EXE as a security threat and may block its execution.
- Username/Password Does Not Have Administrator - The credential *(page 448)* 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 login 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 448)* for that machine.

Cancel

Click Cancel to clear a scheduled installation.

Select an Agent Package to Install

Select the agent package to remotely install on selected machines. These packages are created using Deploy Agents *(page 336)*.

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 449) matching the MAC address of an existing machine ID / group ID account.

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 449) 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 350)* 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 448). 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 449) 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.

Copy Settings

Agent >
Copy Settings

The Copy Settings page copies settings from a single machine ID to any number of selected machine IDs. Use this page to quickly re-configure a group of machines to match the settings from a machine you know to be set up correctly. The following settings are copied:

- Check-in Control *(page 361)*
- User Access *(page 169)* rights (Remote Control, Ticketing, Chat)
- Agent Menu *(page 358)* setup
- Agent Log Settings *(page 332)*
- Script schedules (including Audit and patch scan)
- Alerts
- Patch Management configuration, except for Initial Update *(page 183)* and Windows Auto Update *(page 196)*
- Remote Control configuration

Copy

Click Copy to transfer the settings from the selected machine ID to all checked machine IDs.

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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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.

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 K in the system tray (on page 451) of the managed machine. This page can also prevent the agent icon K 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 3)* for a general explanation of how agent icons display on the user's machine.

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 452)*. 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 change the machine ID / group ID and/or the KServer address the agent checks into.

  > Best Practices: Kaseya recommends you disable this option. If the user modifies this account information, then the agent will fail to check-in to the KServer. Machine ID/group ID accounts should be renamed by the

> administrator using Agent > Rename *(page 346)*.

- Refresh - Check to enable the user to initiate an immediate full check-in *(page 447)*.
- 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:

Agent has checked in

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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

ACObSRx

This column summarizes the agent menu options enabled for a machine ID. ACObSRx applies to the Windows-style 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 Login 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 383)*. 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 14)* page.

Migrating Agents from one KServer to Another

You may decide for performance or logistical reasons to support a collection of desktop machines from a new KServer. Migrating *(page 412)* agents to a new KServer 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.

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 397)* 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 448) 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 448) 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 447)* 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 383)*.

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 397)*. 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 361)* 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
- 🟨 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

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 ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 14)* 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
- ⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Temp Path

The path of the temporary directory assigned to this machine ID.

Edit Profile

Agent >
Edit Profile
Ticketing >
User Profile

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 14)* page.
- The contact information in the Edit Profile page can be automatically populated when a new account is created using the Agent > Create *(page 342)* 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 447).

Auto assign tickets

Auto assign a trouble ticket to this machine ID if the Ticketing email reader *(page 164)* 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 166)*

> 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 452)*. See Agent > User Access *(page 169)* 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 358)* on a managed machine. The languages available are determined by the language packages installed using System > Preferences *(page 377)*.

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

⚑ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

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 452)*:

- 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 238)* session with a user regardless of this setting.

- Create or display trouble 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.

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 Login Policy *(page 406)* 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 167)*.

Customizing the User Access Welcome Page

Master administrators can customize the web page seen by users using System > Customize *(page 407)*, adding their company's logo, look, and feel to the web experience for their users.

Login Name

Enter the Login Name the user must use to log into the KServer to initiate chat sessions, enter or view trouble tickets and/or get remote access to their machine. Login names and passwords are case sensitive. Passwords must be at least six characters long.

> Note: All login names must be unique in the system. Since users may also login using their machine ID, login names, machine IDs, and administrator names *must all be unique.*

Create Password, Confirm Password

Define a password for the user login. 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 login name and password to the selected machine ID.

Clear

Permanently remove the login credential *(page 448)* from the selected machine ID.

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the administrator is authorized to see using System > Group Access *(page 387)*.

Login Name

The login name assigned to this machine ID. Users that have been granted remote access to their machine may login using either their machine ID or login name.

User Web Logon

Displays `Enabled` if a login 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 445)*.

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 trouble tickets for their own machines. Users can only see trouble 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 login 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 181)* - Patch Status resets test results every time a machine ID's Set Credential changes.
- Office Source *(page 208)* - 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 75)* - 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 277)* - 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.

Username

Enter the username for the credential. Typically this an administrator account.

Password

Enter the password associated with the username above.

Domain

The domain name to log into. Leave this field blank to log into a local machine account.

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.

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 login 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 login 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
- ◆ 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

Machine ID.Group ID

The list of Machine ID.Group IDs *(page 449)* displayed is based on the Machine ID / Group ID filter *(page 9)* and the machine groups the

administrator is authorized to see using System > Group Access *(page 387)*.

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 361)*, `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 377)*	Set email where alerts are sent to and to change administrator passwords.
Machine Group Create / Delete *(page 379)*	Create, edit, and delete Machine Group IDs.
Naming Policy *(page 381)*	Automatically enforce naming policy based on each machines IP address, network, and computer name
Check-in Policy *(page 383)*	Set limits on a variety of agent check-in parameters.
Admin Roles Create / Delete *(page 379)*	Create and delete administrator roles. Assign administrators to roles to inherit administrator rights.
Membership *(page 386)*	Define which administrators belong to which administrator roles
Group Access *(page 387)*	Define which Machine groups each Administrator role gets access to.
Function Access *(page 389)*	Defines the functions available to an administrator role
Login Hours *(page 389)*	Specifies when administrators can login into the KServer.
Admin Account Create / Delete *(page 390)*	Create and delete standard or master administrators.
Enable/Disable *(page 392)*	Enable or disable standard or master administrator accounts.
Set Password *(page 394)*	Change administrator account passwords.
Admin History *(page 396)*	Display the functions visited in the last 30 days for each administrator.
Request Support *(page 396)*	Access Kaseya support and/or give Kaseya support access to your server.
Configure *(page 397)*	View server information, license code and subscription information, obtain latest server updates, and server IP information.
License Manager *(page 402)*	Allocates available agent licenses to group IDs.
System Log *(page 403)*	Logs events that can not be tracked by machine ID for 60 days.
Statistics *(page 404)*	Display VSA server performance statistics

Login Policy *(page 406)*	Set login policies.
Customize *(page 407)*	Customize the login page and graphical user interface for the system.
Migrate VSA *(page 412)*	Distribute the server load across multiple servers. Groups can be located across several servers but still be administered from the same console.
Database Views *(page 418)*	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 login 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 Login Name and/or Password

To change your login name and password:

1. Enter a new name in the Change Login Name field.
2. 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.

3. Confirm the password by re-typing it in the Confirm Password field.
4. Click Change.

> Note: Your login name, password and email address can also be changed by other administrators using System > Create/Delete *(page 390)*.
>
> Note: The login policy for failed logins and password strength for all administrators is set using System > Login Policy *(page 406)*.

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 Login Name

If changing the administrator login name, enter a new administrator login name in the Change Login Name field. Login names and passwords are both case sensitive.

New Password

If changing the administrator password, enter the new password in the New Password field. Login names and passwords are both case sensitive.

Confirm Password

If changing the administrator password, confirm the new password by re-typing it in the Confirm Password field.

Change

After entering a new administrator login 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 445)*.

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 445)*.

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 20)* 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 445)* installed on a managed machine is assigned a unique machine ID/group ID combination. 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 the master administrator *(page 445)*, 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 445)*.

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.

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 73)*, 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 336)*, 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 447)*. The quick check-in *(page 447)* 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 66)*.

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 332)*. 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 361)*. 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 445)*. 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 386)*.

Administrators *(page 445)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to group IDs using System > Group Access *(page 387)*
- Access to VSA modules and functions using System > Function Access *(page 389)*
- Access to the entire VSA by weekday and hour using System > Login Hours *(page 389)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 231)*

In addition, scripts and agent installation packages can be shared by administrator role.

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 445)* role only. See System > Function Access *(page 389)* 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 445)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to group IDs using System > Group Access *(page 387)*
- Access to VSA modules and functions using System > Function Access *(page 389)*
- Access to the entire VSA by weekday and hour using System > Login Hours *(page 389)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 231)*

In addition, scripts and agent installation packages can be shared by administrator role.

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 445)*.

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.

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 445)*.

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. 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 97)*
- Ticketing > Email Reader *(page 164)*
- System > Request Support *(page 396)*
- System > Configure *(page 397)*
- System > License Manager *(page 402)*
- System > Statistics *(page 404)*
- System > Login Policy *(page 406)*
- System > Customize *(page 407)*
- System > Migrate *(page 412)*

All other functions can be delegated to standard administrators *(page 445)*.

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.

Login Hours

System > Login Hours

The Login Hours page determines *when* administrators can login 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.

Select administrator role

Select an administrator role to display and maintain its login hours settings.

No Hours Restrictions

If checked, administrators can login into the VSA at any time and day of the week. Uncheck to enable all other settings.

Deny

Denies login access for the entire weekday.

or allow between <12:00 am> and <12:00 am>

Specify the range of time logins 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 386)* when the administrator account is created.

> Note: Each administrator can change their own login name, password and email address using System > Preferences *(page 377)*. Administrator role membership can be maintained using System > Membership *(page 386)*. Passwords can be reset using System > Set Password *(page 394)*. The login policy for failed logins and password strength for all administrators is set using System > Login Policy *(page 406)*.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 450)* by the KServer and its agents *(page 445)*. KServer management configuration and other specialized functions *(page 389)* 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. Certain policies are assigned by administrator role *(page 445)*.

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.

Deleting Administrators

You cannot delete the currently logged in administrator account. Deleting an administrator transfers ownership of all private scripts, agent install packages 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 386)*.

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 login

If checked, selected administrators are forced to change their password using System > Preferences *(page 377)* 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 Login

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 Login 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.

Enabling Accounts Disabled During Logon

The system automatically locks out an administrator account if they exceed the number of failed login attempts, as specified in System > Login Policy (file:///C:/Documents%20and%20Settings/Don/Documents%20and%20Settings/pleal.KASEYA-CA/My%20Documents/WebHelp/System/Login_Policy.htm). Normally, the administrator has to wait the time specified in Login 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 Login 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 Login 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 Login

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 login.

> Note: The login policy for failed logins and password strength for all administrators is set using System > Login Policy *(page 406)*.

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 Logins 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 Logins in a Row

Lists the number of failed logins in a row. This information is helpful in monitoring possible system security attacks. If the number of failed logins in a row exceeds the number specified in Login Policy *(page 406)*, 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 Logins

Lists the total number of failed logins attempted by an administrator.

Change Password At Next Login

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 (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 377)*.

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 403)* 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.

Request Support

The Request Support page provides multiple ways of contacting Kaseya support.

- Support Forum - Answers to common questions are posted to the Support Forum at http://www.kaseya.com/kforum. 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.
- Enable Kaseya Support to Login - 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 login, your system creates a secure login. 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 Login button.

  > Note:You can track any and all tickets you submit through the Login system. 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

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 login. 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 448)* 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 448)* 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.
- Check for Hotfixes - 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 404)* 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.

Reload Samples

- Check the Reload sample scripts with every update and database maintenance cycle box to update the set of samples script with every update.
- Check the Reload sample monitor sets with every update and database maintenance cycle box to update the set of sample scripts with every update.
- Click Reload Samples to reload all sample sets, sample scripts, sample monitor sets, and sample administrator roles.

Enable / Disable Notifications

- Click Enable Notification to *start* sending notifications when an alarm condition is *reversed*.
- Click Disable Notification to *stop* sending notifications when an alarm condition is *reversed*.

Backups

- Run database backup / maintenance every N Days @ 2:00 am - 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 login name. The default login name is `sa`.

     > Note: This login is only used to configure the database. The system creates its own database login to use going forward.

  8. Enter the password associated with this login 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.

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 361)*.

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. Typically, a group ID represents a single customer. 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

> Note: Endpoint Security licenses only display on this page if you have separately purchased the Kaseya Endpoint Security 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

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 login 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 function may only be viewed by a master administrator.

Note: This log data does not appear in any reports. Reports are only available for data associated with a machine ID.

Statistics

System > Statistics

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 449)* 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 450)* 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.

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.

Login Policy

System > Login Policy

The Login Policy page sets login policies that apply to all administrators. Login policies prevent a brute force break-in to the system. By limiting the successive number of bad login attempts and disabling rogue accounts for a set amount of time, you can prevent unauthorized users from gaining entry into the system by repeatedly entering random passwords.

To Set Login Policy

1. Specify the number of consecutive bad logins an administrator is allowed before their account is disabled in the Number of consecutive failed login attempts allowed before disabling account field. The count is reset to zero after a successful login.
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 login failures exceeded field.
3. Specify the time period of administrator 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 392)* page.

4. Prevent administrators from changing their login policy by checking the box beside Prevent administrators from changing their login.
5. 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
6. Press Update to apply the settings

Customize

System > Customize

The Customize page provides three different methods of customizing the user interface that administrators and users see.

- Customize the header on the logon page (both users and administrators) and 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) and 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 452)*. This option also selects the URL of the top frame seen *by both administrators and users*. 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 Login / 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
- 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 410)* 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 240)*.

- `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 407)*.
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 labeled:
   - 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)

   The agent displays the default Kaseya icons if any of the custom icons are omitted.

If the Custom Agent Icons Fail to Display in the System Tray of Managed Machines

The custom icon will fail to load if it is not properly formatted. Reasons include:

- The color depth exceeds 256 colors.
- The format is not the Windows icon format (e.g. a simple bitmap file was renamed to .ico extension).
- The size is larger than 32x32 pixels.

Updating Existing Managed Machines with Custom Agent Icons

Schedule an agent update using Agent > Update Agent *(page 372)*. You will need to check the Force update check box to update agents that are already at the current version.

Deploying Custom Agent Icons

The custom icons are automatically deployed with all new agent installation packages *(page 336)*. If you have an agent installation package deployed using a domain login script, then you must download and replace the `KcsSetup.exe` file residing on the domain server.

Migrate

System > Migrate

The Migrate page copies machine ID accounts from an *old* KServer to the *new* KServer you are currently logged into. Administrators can switch KServers without the need for downtime.

> Note: Use this function if the *new* KServer is using a *different* external hostname / IP address than the *old* KServer. If the *new* KServer is replacing the *old* Kserver and using the *same* external hostname / IP address as the *old* KServer, use the procedure described in Migrating the KServer *(page 415)*.

To ensure that the deployed agents can find the new KServer, agents checking into the *old* KServer must be redirected to use the *new* KServer. This procedure is described below.

Since accounts are copied and not moved, the administrator must manually delete the accounts from the *old* KServer if the *old* KServer is going to continue to be used.

Copying Machine ID Accounts

Begin by copying machine ID accounts from the *old* KServer to the *new* KServer using this page.

1. Enter the IP address or hostname of the *old* KServer in the Remote Web Server field.
2. Enter a master administrator login name in the Master Admin field.
3. Enter the master administrator password in the Password field.
4. Select the number of managed machine accounts and administrators you would like to view after the accounts are obtained from the *old* KServer by using the Rows/Page dropdown menu. The choices are `10`, `30`, and `100`.
5. Click Connect.

   > Note: The KServer you are currently logged into connects directly to the *old* MS-SQL server on the *old* Window server. The MS-SQL port on the *old* Windows server must be open. Microsoft uses port 1433 as the default for MS-SQL.

6. The Group ID list box, Machine.Group ID and Assigned Admin columns populate with the groups, managed machines, and administrators, respectively, from the *old* KServer.
   - ➢ In the Group ID list box, select the group whose machine ID accounts you would like to view. The machine ID accounts of the group are displayed in the Settings column. If `<All Groups>` is displayed, all machine ID accounts are displayed in the Settings column.

- In the Machine.Group ID column, select the checkboxes next to the machine ID accounts you would like to copy to the *new* KServer. To select all available machine ID accounts, click Select All.
- In the Assigned Admin column, select the administrator accounts you would like to copy to the *new* KServer. All administrators, master and standard, with an account on the *old* KServer are displayed. To select all available administrator accounts, click Select All.

7. Select Overwrite Duplicate Data if you would like to overwrite the machine ID accounts on the *new* KServer with matching machine ID accounts and administrators from the *old* KServer.
8. Select Copy Public Scripts and Reports if you would like to copy all public scripts and reports from the *old* KServer to the *new* KServer. If blank, only private scripts and reports are copied from the *old* KServer, assuming that the corresponding administrator accounts are also copied.
9. Click Copy.

Configuring Agents On the *New* KServer

After the machine ID accounts have been copied from the *old* KServer to the *new* KServer, the machine ID accounts on the *new* KServer must be updated with the hostname / IP address of the *new* KServer.

1. On the *new* KServer, select Agent > Check-in Control.
2. Enter the hostname or IP address of the *new* KServer in the Primary KServer text edit field.
3. Enter the hostname or IP address of the *new* KServer in the Secondary KServer text edit field.
4. Select `<All Groups>` in the Machine ID / Group ID filter *(page 449)*.
5. Click Select All to check the boxes beside every managed machine.
6. Click Update.

Configuring Agents On the *Old* KServer

Finally machine ID accounts on the *old* KServer must be updated with the hostname / IP address of the *new* KServer.

1. On the *old* KServer, select Agent > Check-In Control.
2. Enter the hostname or IP address of the *new* KServer in the Primary KServer text edit field.
3. Select `<All Groups>` in the Machine ID / Group ID filter.
4. Click Select All to check the boxes beside each machine ID.
5. Click Update. At the next check-in to the *old* KServer, the agents will receive the *new* KServer's address as the primary KServer. Subsequently, the agents will check-in to the *new* KServer.

Remote Web Server

The fully qualified host name or IP address of the *old* KServer that machine ID accounts will be copied from. Machine ID accounts are copied into the KServer you are currently logged into.

Master Admin

A master administrator login name valid on the *old* KServer.

Password

The corresponding master administrator password.

Group ID

Displays the list of the group IDs on the *old* KServer. All groups can be selected or multiple groups can be selected by holding down the [Ctrl] key while clicking on the group names.

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.

Connect

Initiates the connection to the *old* KServer specified in the Remote Web Server field.

Copy

Copies selected machine ID accounts from the *old* KServer into the KServer you are currently logged into.

Overwrite duplicate data

If checked, duplicate machine ID accounts on the *new* KServer are automatically overwritten.

Copy Public Scripts and Reports

If checked, copying includes all public scripts and reports from the *old* KServer. If blank, only private scripts and reports are copied from the *old* KServer, assuming that the corresponding administrator accounts are also copied.

Settings

Displays machine ID accounts according to the groups selected in the Group ID list. Check the checkboxes next to the machine ID accounts that are to be copied to the *new* KServer from the *old* KServer.

Settings and private data

Shows all of the master and standard administrators on the *old* KServer. Private scripts are copied along with the administrator accounts if their corresponding checkbox is selected. Check the checkboxes next to the administrators that are to be copied to the *new* KServer from the *old* KServer.

Migrating the KServer

Use this procedure if:

- You are replacing an *old* KServer with a *new* KServer and the *new* KServer is using the *same* external hostname / IP address as the *old* KServer.
- You are upgrading the operating system of the Windows server or the SQL server used by your current KServer.

> Note: If the *new* KServer is using a *different* external hostname / IP address from the *old* KServer, use the procedure described in System > Migrate *(page 412)*.

Procedure

1. Log in to your *old* KServer as a master administrator.
2. Select the System > Configure *(page 397)*.
3. Click the Backup Now button. A SQL database backup will run within the next two minutes.
4. To confirm the completion of the database backup, locate the SQL database backup file named `<Kaseya_Installation_Directory>\UserProfiles\@dbBackup\ksubscribers_db_yyyymmddhhmm.BAK.` By default, the `<Kaseya_Installation_Directory>` is `c:\Kaseya\.` The `yyyymmddhhmm` portion of the filename contains the current year, month, day, hour, and minute of the database backup.
5. Copy the entire directory `<Kaseya_Installation_Directory>\UserProfiles\` to your *new* Windows server. This directory contains the files associated with your machine ID accounts.
6. With the exception of the subdirectory `VSAHiddenFiles`, copy the entire directory `<Kaseya_Installation_Directory>\WebPage\ManagedFiles\` to your *new* Windows server. This directory contains the scripts and managed files belonging to each administrator.

   > Warning: Do not copy `VSAHiddenFiles` from an *old* KServer to the *new* KServer This directory contains many system helper files. Your new system installation contains the latest versions of these files.

7. If you are re-installing the operating system or SQL server on the *same* Windows server, then save the directories in Steps 6 and 7. After re-installing the SQL server and KServer, copy back the two directories.

8. Log in to your *new* KServer as a master administrator.
9. Select the System > Configure.
10. Click the Restore button.
11. Select the link containing the date of the SQL database backup from the list that matches the backup created in Step 5. Click the Restore button to confirm the database restore operation.
12. After the database restore completes, you will have to log back in to the *new* KServer using one of the original administrator accounts.
13. If necessary, set the external name or IP address of the *new* KServer to match the old KServer using System > Configure.

Chapter 14

Database Views

In This Chapter

Database Views

System > Database Views

The system exposes a set of database views *(page 423)* 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 419)* and Microsoft Excel *(page 419)*. 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 423)*.

- 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 login 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).

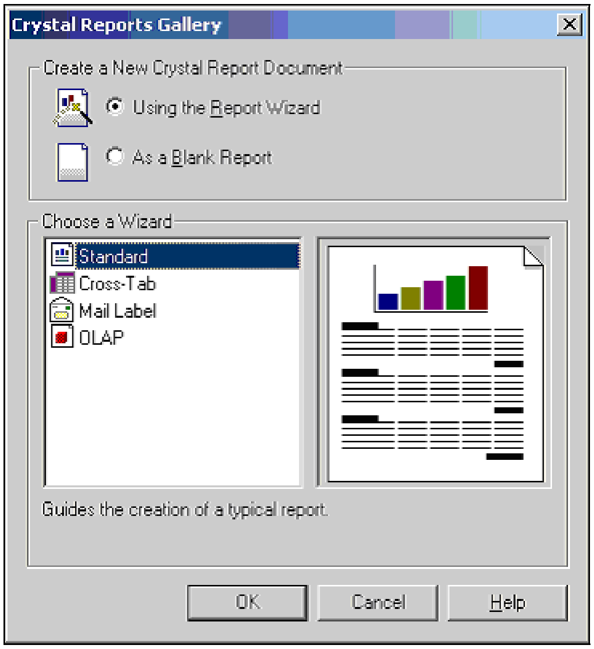
Once a data source is created it can be referenced by Excel. Selecting Get External Data from the Data menu does this. A new database query can be started from this selection. The user is prompted for the credentials to the database. Once this completes a view can be selected. A SQL query can be constructed 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.



Crystal Reports Gallery

Create a New Crystal Report Document

● Using the Report Wizard

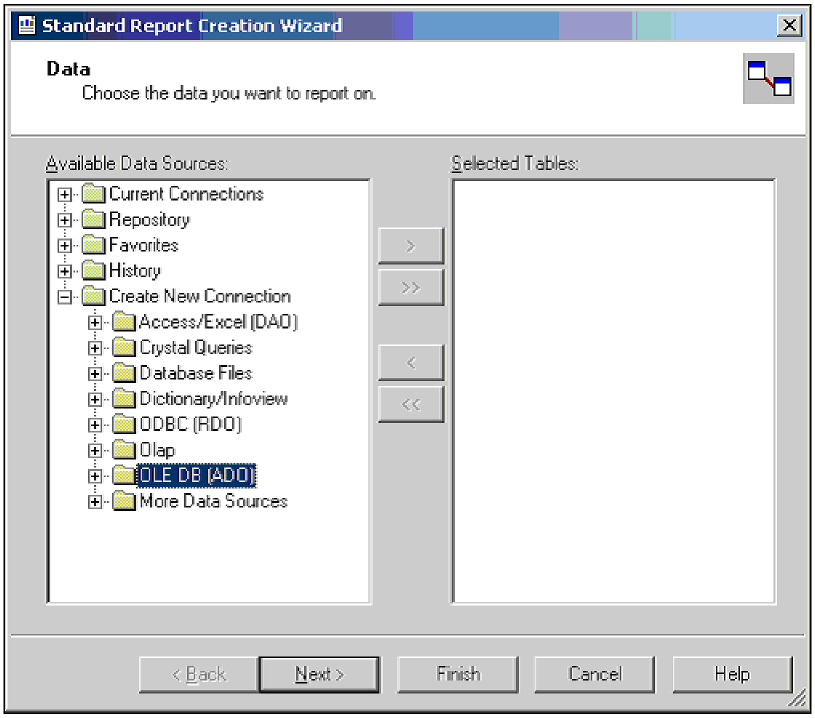
○ As a Blank Report

Choose a Wizard

- Standard (selected)
- Cross-Tab
- Mail Label
- OLAP

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.



Standard Report Creation Wizard

Data

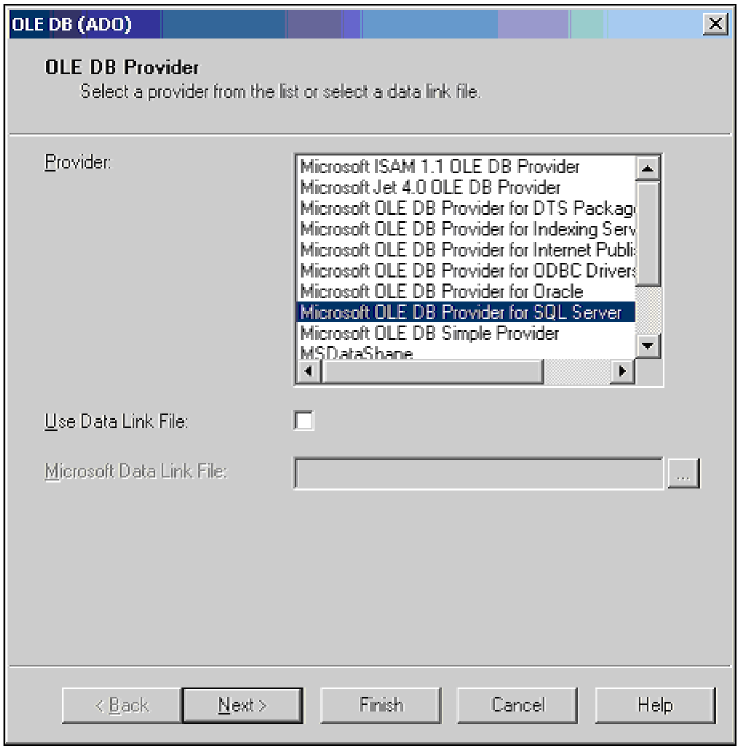
Choose the data you want to report on.

Available Data Sources:

- Current Connections
- Repository
- Favorites
- History
- Create New Connection
  - Access/Excel (DAO)
  - Crystal Queries
  - Database Files
  - Dictionary/Infoview
  - ODBC (RDO)
  - Olap
  - OLE DB (ADO)
  - More Data Sources

Selected Tables:

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.

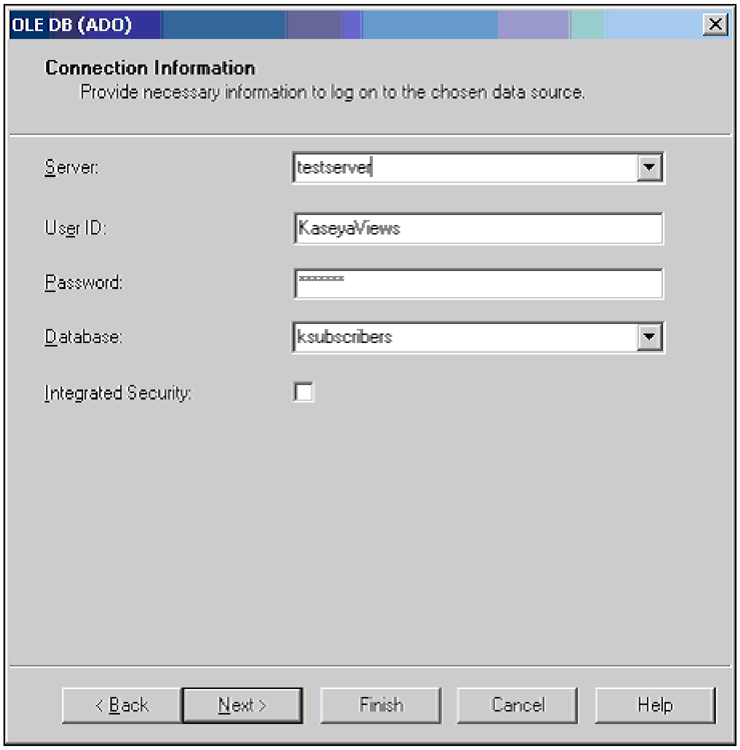
Provider:

- 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 Driver
- 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:

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

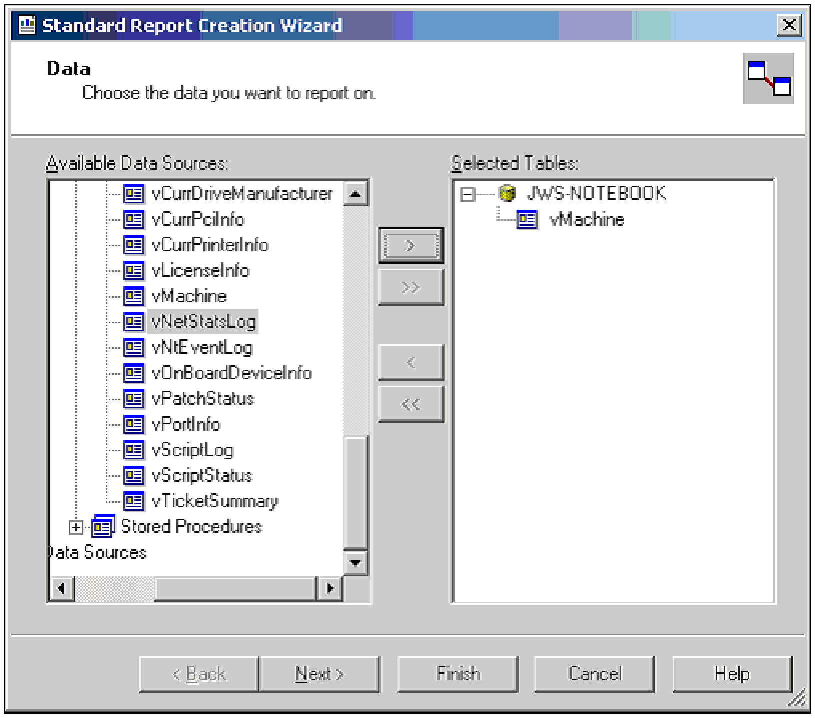
User ID: KaseyaViews

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

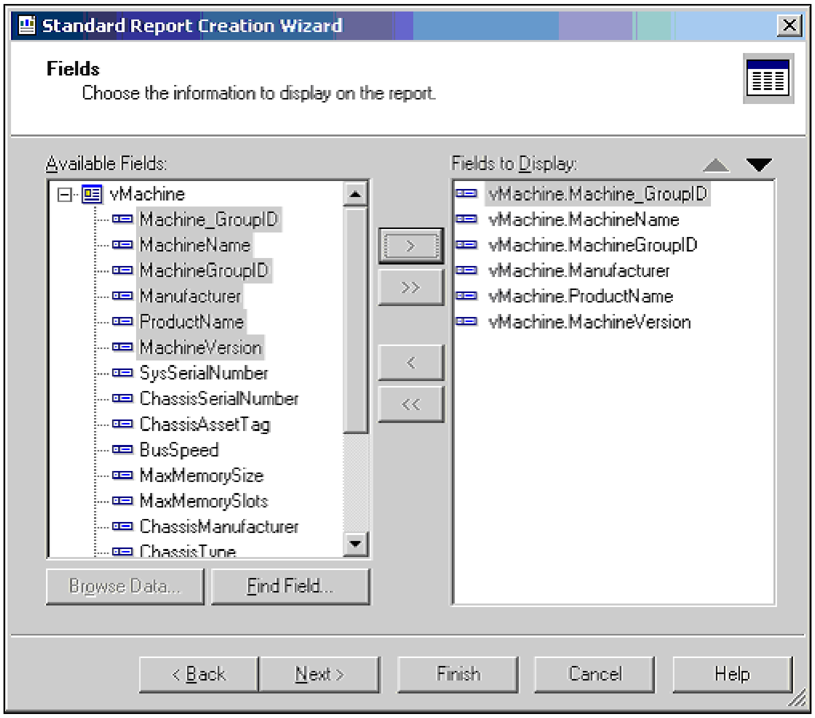
ata Sources

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.



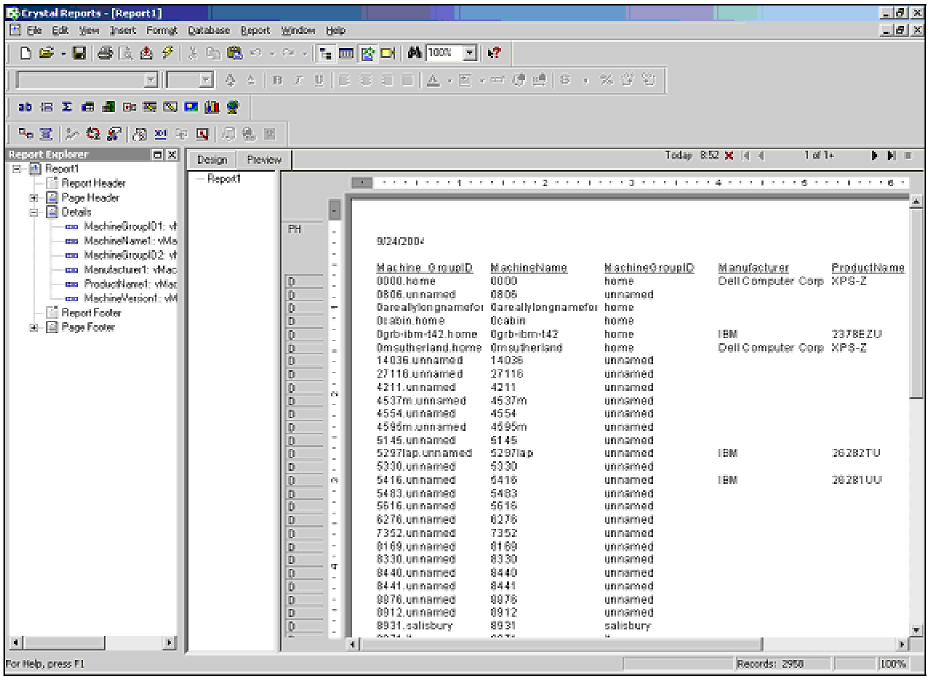
Available Fields:

- 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.



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 427)*	The baseline list of applications on a client desktop machine.
vBaseCpuInfo *(page 427)*	The baseline list of the CPUs in a client desktop machine.
vBaseDiskInfo *(page 428)*	The baseline list of the disks in a client desktop machine.
vBaseDriveManufacturer *(page 428)*	The baseline list of the manufacturers of the disks in a client desktop machine.
vBasePciInfo *(page 429)*	The baseline list of the PCI cards in a client desktop machine.
vBasePrinterInfo *(page 429)*	The baseline list of printers in a client desktop machine.
vCollectionMember *(page 430)*	List the collections each machine ID belongs to (if any)
vCurrApplicationInfo *(page 427)*	The current list of applications on a client desktop machine.
vCurrCpuInfo *(page 427)*	The current list of the CPUs in a client desktop machine.
vCurrDiskInfo *(page 428)*	The current list of the disks in a client desktop machine.
vCurrDriveManufacturer *(page 428)*	The current list of the manufacturers of the disks in a client desktop machine.
vCurrPciInfo *(page 429)*	The current list of the PCI cards in a client desktop machine.
vCurrPrinterInfo *(page 429)*	The current list of printers in a client desktop machine.
vSystemInfo *(page 430)*	All items collected by the System Info function under the Audit tab.
VLicenseInfo *(page 431)*	The licenses of applications on this machine.
vMachine *(page 432)*	The information known about each client desktop machine.
vOnBoardDeviceInfo *(page 435)*	The current list of on board devices in a client desktop machine.
vPortInfo *(page 436)*	The current list of ports in a client desktop machine.

Activity / Status Group

vAgentConfiguration *(page 424)*	Lists agent specific configuration data
vAdminNotesLog *(page 424)*	Notes each admin enters manually for a machine or group of machines. Entries in this log never expire.
vAlertLog *(page 425)*	Logs each alert sent out via email. Multiple rows per machine.
vBackupLog *(page 426)*	Logs all backup related events
vConfigLog *(page 430)*	Log of all configuration changes. One entry per change.
vNetStatsLog *(page 434)*	Network statistics log from the Agent.
vNtEventLog *(page 434)*	NT Event log data collected from each managed machine.
vPatchStatus *(page 435)*	Information on the state of all patches on a per machine basis. There is one row per patch for each machine.
vScriptLog *(page 436)*	Log of script executions as viewed by the KServer.
vScriptStatus *(page 436)*	Script status for each client.

Ticketing Group

vTicketSummary *(page 437)*	Trouble ticket summary. One row per ticket. Column names are used as the names displayed in the view summary table.
vTicketNote *(page 438)*	The notes associated with a ticket. Potentially multiple rows per ticket.

vTicketField *(page 438)*	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	
vMonitorAlarmCounter *(page 438)*	The current list of alarms for all monitor counters.
vMonitorAlarmService *(page 439)*	The current list of alarms for all monitor services.
vMonitorAlarmProcess *(page 440)*	The current list of alarms for all monitor processes.
vMonitorAlarmSNMP *(page 441)*	The current list of alarms for all monitor SNMP Get objects.
vMonitorAlarmAlert *(page 441)*	The current list of alarms for all alerts.
vMonitorAlarmSystemCheck *(page 442)*	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.
AdminAdmin	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.
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
agentTempDir	varchar	The temp directory used by the agent on this system

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.
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.
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

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.
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	varchar	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.
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	varchar	CPU speed in MHz (e.g. 601)
CpuCount	varchar	Number of processors (e.g. 1)
TotalRam	varchar	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.
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	varchar	Total MBytes on the disk (e.g. 28609 for 28.609 GB) May be null if unavailable.
UsedSpace	varchar	Number of MBytes used (e.g. 21406 for 21.406 GB). May be null if unavailable.
FreeSpace	varchar	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.

machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each 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.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
VendorName	int	PCI Vendor Name
ProductName	int	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.
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.
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.
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

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 Fields	varchar	Additional columns for each customer field created.

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.
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.
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.
WinsServer	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	varchar	Major version number from GetVersionEx() Windows function call.
MinorVersion	varchar	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.
BuildNumber	int	Build number from GetVersionEx() Windows function call.For NT or 2000, this value is the build numberFor 95 or 98, the high order word contains the major / minor version and the low order word contains the build number.
PlatformId	int	Platform ID from GetVersionEx() Windows function call. 0 -> Win32s 1 -> Win32 on Windows 2 -> Win32 on NT
CsdVersion	varchar	String from GetVersionEx() Windows function call containing additional OS info, such as Service Pack number and other arbitrary data.
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.

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.
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.
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.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
DeviceType	varchar	Device Type
DeviceDesc	varchar	Device Description

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.
machName	varchar	Machine Name used for each agent
groupName	varchar	Group Name used for each agent
BulletinID	varchar	bulletin ID string reported from the patch scanner
QNumber	int	Q Number for this patch. Refers to the Knowledge Base article on Microsofts site
FixedInServPackFlag	int	0 -> not part of a service pacelse the service pac ID that this patch has been incorporated into.
PatchAppliedFlag	int	0 -> patch has not been applied 1 -> patch has been applied
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.
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.
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.
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.

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.
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
ResolutionDate	datetime	timestamp when the ticket was closed
UserName	varchar	The name of the submitter
UserEmail	varchar	The email address of the submitter
UserPhone		The phone number of the submitter
LastModifiedDate	varchar	Date of the most recent note entered for this ticket

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
TicketNoteTime	dateTime	Timestamp identifying when the note was added
Author	varchar	person who wrote this note in the ticket
TicketNote	varchar	Contents of the ticket note
HiddenNote	int	0 if the note is visible. 1 if the note is hidden.

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	NUMBER(22,4)	The value of a number field
StringValue	varchar	The value of a string field
ListValue	varchar	The value of a list field

vMonitorAlarmCounter

vMonitorAlarmCounter	Listing of all alarms created by monitor counters.	
Column Name	Type	Purpose
MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
MachineName	varchar	Machine Name used for each agent
MonitorType	int	0 -> Monitor Counter
MonitorName	varchar	Name of monitor counter object

AlarmType	int	0 -> Alarm
		1 -> Trending
AlarmState	smallint	1 -> Open
		2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
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

vMonitorAlarmService

vMonitorAlarmService	Listing of all of the alarms created by monitor services.	
Column Name	Type	Purpose
MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with.
MachineName	varchar	Machine Name used for each agent
MonitorType	int	0 -> Monitor Service
MonitorName	varchar	Name of monitor service object
AlarmType	int	0 -> Alarm
		1 -> Trending
AlarmState	smallint	1 -> Open
		2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
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

vMonitorAlarmProcess

vMonitorAlarmProcess	Listing of all alarms created by monitor processes.	
Column Name	Type	Purpose
MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
MachineName	varchar	Machine Name used for each agent
MonitorType	int	2 -> Monitor Process
MonitorName	varchar	Name of monitor process object
AlarmType	int	0 -> Alarm
		1 -> Trending
AlarmState	smallint	1 -> Open
		2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
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

vMonitorAlarmSNMP

vMonitorAlarmSNMP	Listing of all alarms created by monitor SNMP Get objects.	
Column Name	Type	Purpose
MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
MachineName	varchar	Machine Name used for each agent
MonitorType	int	3 -> Monitor SNMP Get
MonitorName	varchar	Name of monitor SNMP Get object
AlarmType	int	0 -> Alarm
		1 -> Trending
AlarmState	smallint	1 -> Open
		2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
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

vMonitorAlarmAlert

vMonitorAlarmAlert	Listing of all alarms created by monitor alerts.	
Column Name	Type	Purpose
MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
MachineName	varchar	Machine Name used for each agent
MonitorType	int	4 -> Monitor alert

EventLogType	smallint	Only applies to AlertType=6(NT Event Log) 0 -> Application Event Log 1 -> System Event Log 2 -> Security Event Log
AlarmType	int	0 -> Alarm 1 -> Trending
AlarmState	smallint	1 -> Open 2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
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

vMonitorAlarmSystemCheck

vMonitorAlarmSystemCheck	Listing of all alarms created by monitor system checks.	
Column Name	Type	Purpose

MonitorAlarmID	int	unique monitor alarm number
Machine_GroupID	varchar	A concatenated representation of the machine id and the group id it is associated with
MachineName	varchar	Machine Name used for each agent
MonitorType	int	5 -> Monitor system check
SystemCheckType	smallint	1 -> Web Server
		2 -> DNS Server
		4 -> Port Connection
		5 -> Ping
		6 -> Custom
AlarmType	int	0 -> Alarm
		1 -> Trending
AlarmState	smallint	1 -> Open
		2 -> Closed
Note	varchar	Notes administrator has entered on the alarm
Paremeter1	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

Glossary of Terms

Administrator Roles

Administrators *(page 445)* can belong to none, one, or more administrator roles. The following policies are assigned by administrator role:

- Access to group IDs using System > Group Access *(page 387)*
- Access to VSA modules and functions using System > Function Access *(page 389)*
- Access to the entire VSA by weekday and hour using System > Login Hours *(page 389)*
- Remote control user notification using Remote Control > Admin Role Policy *(page 231)*

In addition, scripts and agent installation packages can be shared by administrator role.

Administrators

Administrators use the VSA application to maintain the KServer and oversee the monitoring of managed machines *(page 450)* by the KServer and its agents *(page 445)*. KServer management configuration and other specialized functions *(page 389)* 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. Certain policies are assigned by administrator role *(page 445)*.

Agent Menu

The set of options that display when the user right-clicks the agent *(page 445)* icon in the system tray (on page 451) of the managed machine. The agent menu can be customized *(page 358)*.

Agents

The KServer manages machines using agents installed on remote machines. Once installed:

- A K icon displays in the icon tray of the remote machine.
- Each installed agent is assigned a unique Kaseya machine ID / group ID *(page 449)*. 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 monitoring service provider.

> Note: See Agent > Deploy Agents *(page 336)* for details about installing agents.

Alarm

Alarms notify administrators when a machine's performance fails to meet a pre-defined criteria. This differs from an audit *(page 447)*, which simply collects selected data for reference purposes without regard to any criteria. Alarms can be reviewed using the View Console *(page 22)* page or the Reports > Logs *(page 321)* > Alarm Log report. An alert *(page 446)* is a response to an alarm.

Alarms are enabled using the following pages:

- Alerts *(page 97)*
- Monitor Sets *(page 108)* - Alerts are defined for Monitor Sets using Assign Monitoring *(page 119)*.

- SNMP Sets *(page 128)* - Alerts are defined for SNMP Sets using Assign SNMP *(page 141)*.
- System Checks *(page 114)*
- LAN Watch Alerts *(page 350)*
- Patch Alerts *(page 205)*
- Offsite Alerts *(page 269)*
- Backup Alerts *(page 282)*

Alert

Alerts have two meanings, generic and specific:

Generic Alerts

An alert is a response to an alarm *(page 445)* condition. Typically alerts indicate an alarm is enabled, and provide three types of response to the alarm:

- Create Alarm - This option is always checked and indicates the alarm is enabled. In some cases the alarm is defined independently of the alert. In other cases, an alert must be defined to enable the alarm.
- Create Ticket
- Run Script after alarm.
- Email Recipients

Defining an alert sets the ATSE alarm / response code *(page 446)* for that machine ID or SNMP device.

Alerts are defined using:

- Alerts *(page 97)*
- Assign Monitoring *(page 119)* - Monitoring alarms are defined using Monitor Sets *(page 108)*.
- Assign SNMP *(page 141)* - SNMP alarms are defined using SNMP Sets *(page 128)*.
- System Checks *(page 114)*
- LAN Watch Alerts *(page 350)*
- Patch Alerts *(page 205)*
- Offsite Alerts *(page 269)*
- Backup Alerts *(page 282)*

Specific Alerts

The Alerts page provides a simple set of typical parameters for setting up alarms *(page 445)* and their corresponding alerts quickly on a managed machine. 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 type of alert response to the alarm.

> Note: Monitor Sets *(page 450)* represent a more complex method for triggering alarms. Typical alarm conditions should be defined using the Alerts page.

ATSE Alarm / Response Code

The ATSE alarm / response code assigned to a machine ID or SNMP device *(page 451)* indicates how the system responds to the triggering of an alarm. Each type of alarm *(page 445)* can be assigned a different ATSE response code.

- A = Create Alarm
- T = Create Ticket

- S = Run Script
- E = Email Recipients

Audit

Agents *(page 445)* 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 server so you can access it 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 KServer 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 292)* are based on the latest audit. The Machine Changes report compares a machine ID's latest audit to a baseline audit. Two alert *(page 97)* types specifically address changes between a baseline audit and the latest audit: Application Changes and Hardware Changes.

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

◆ 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

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 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 381)*.

Collection

Machine collections let you group any number of arbitrary machines together. Any machine can be made a member *(page 335)* of one or more collections.

- Collections work together with group ID and machine ID filters to sort and list various machines. For example, you can create a collection named servers and assign all your servers to be members of this collection. Then if you want to see all the servers in the accounting machine group, define a view that shows the servers collection and the accounting machine group.

- Patch Approvals *(page 188)* are defined by machine collection.

Machine collections are defined using Agent > Create/Delete *(page 334)*. Machine IDs are assigned to machine collections using Agent > Membership *(page 335)*.

Console

The console is a summary display of the alarm status of all machines being monitored. The console's data is filtered by the Machine ID / Group ID filter *(page 449)*. Navigation: Home > View Console *(page 22)* or Monitor > View Console.

Credential

A credential is the login 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 370)*.

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 449)*. Navigation: Home > View Dashboard *(page 20)*.

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. 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.

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.

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 397)*, 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 445)* 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 451)*. Optionally, the VSA can send an alert *(page 446)* 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.

Logs

Logs collect event information on agent machines. 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 a Agent 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.
- Application Event Log, Security Log, System Log - Shows the Event Log 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.

MAC address

The unique media access control (MAC) identifier assigned to network adapter cards (NICs).

Machine ID / Group ID

Each agent *(page 445)* installed on a managed machine is assigned a unique machine ID/group ID combination. 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 the master administrator *(page 445)*, can create group IDs. Any administrator can create subgroup IDs. Group IDs and subgroup IDs are created using the System > Create/Delete *(page 379)* function 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 387)* are displayed.

Machine ID Template

Agent install packages can be based on machine ID templates. A machine ID template is *a machine ID record without an agent*. Since an agent never checks into a machine IT template account, it is not counted against your total license count. When an agent install package is created, the package's settings are copied from the 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 is created based on each machine ID template you define.

Machine IDs vs. Agents

When discussing agents it is helpful to distinguish between the machine ID / group ID *(page 449)* and the agent *(page 445)*. The machine ID / group ID is the KServer'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 client agent on a managed machine and its machine ID / group ID account name on the KServer. Tasks assigned to a machine ID by a KServer administrator direct the agent's actions on the managed machine.

Managed Machine

A monitored machine with an installed agent *(page 445)* and active machine ID/group ID *(page 450)* account on the KServer. Each managed machine uses up one agent license *(page 402)*.

MIB Object

The Management Information Base (MIB) of a SNMP network device is a listing of selected MIB objects that contain information about that device. Each MIB object is identified using a sequence of integers that specifies its location in a global object hierarchy maintained by the international standards bodies ISO and ITU. Each MIB object supports a set of commands and queries that can be used to communicate with that device.

Monitor Set

A monitor set is a collection of counter objects, counters, counter instances, services and processes used to monitor the performances of machines. Typically, a threshold is assigned to each object/counter/instance, 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 collection of things to monitor. A logical grouping, for example, could be to monitor all counters and services integral to running an Exchange Server. Monitor sets are maintained using Monitor > Monitor Sets *(page 108)*. and are assigned to machine IDs using Monitor > Assign Monitoring *(page 119)*. You can assign monitoring to any machine that has an operating system of Windows 2000 or newer. The results of monitoring can be displayed using Monitor > Monitor Log *(page 122)* or View Console *(page 22)*.

> Note: Monitor sets represent a more complex method for triggering alarms. Typical alarms should be defined using the Alerts *(page 97)* page.

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 66)* can perform a silent installation on any managed machine.

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 353)* to install agents *on remote systems* after a LAN Watch *(page 449)*.

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 450)* to create a custom installation package. See Creating Silent Installs *(page 58)*.

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 Device

Certain network devices such as printers, routers, firewalls, servers and UPS devices can't support the installation of an agent *(page 445)*. But an installed agent can report the status of these devices back to the Kserver using simple network management protocol (SNMP). SNMP monitoring begins by assigning a machine ID to an SNMP Community *(page 451)*. Then that same machine ID is used to perform a LAN Watch *(page 449)* of all SNMP devices on the same network.

SNMP Set

A SNMP set is a collection of MIB objects *(page 450)* used to monitor the performance of SNMP enabled network devices *(page 451)*. Typically, a threshold is assigned to each MIB object in a SNMP set. Alarms can be set to trigger if any of the thresholds in the SNMP set are exceeded. A SNMP set should be defined as a logical collection of things to monitor. SNMP sets are maintained using Monitor > SNMP Sets *(page 128)*. SNMP sets can be manually assigned to monitor a SNMP device using Monitor > Assign SNMP *(page 141)* or Monitor > SNMP Type *(page 148)*. SNMP Sets also provides a method of automatically assigning SNMP monitoring to an SNMP device. All SNMP Sets assigned to an SNMP device are displayed in Assign SNMP. SNMP alarms can be displayed using Monitor > SNMP Log *(page 144)* or View Console *(page 22)*.

System Check

System checks are performed on managed machines that don't have agents installed on them. Such machines 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 452)*.

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 169)*. The function list the user sees on the User Access Welcome Page can be customized using System > Customize *(page 407)*.

User Account

See Machine IDs vs. Agents *(page 450)*

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.

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 196)* can enable or disable this feature on managed machines. See Update Classification *(page 451)*.

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