



Our Automation. Your Liberation.™

Network Discovery

User Guide

version 1.0

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About Kaseya

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

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Chapter 1

Network Discovery

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Network Discovery Overview

The **Network Discovery** module discovers machines and devices on a network, identifies their components and displays analysis charts of real time performance.

Scanning begins once the Network Discovery client--called a **collector**--is installed, using a machine with an existing Kaseya agent. Unlike LAN Watch, which is limited to a maximum of 1024 IP addresses, *the entire subnet is scanned*. Once the collector is installed on a subnet Network Discovery *requires no further configuration*.

Discovery of a machine or device—both hereafter referred to simply as a *device*—begins by revealing the network configuration for that device. Configuration attributes include the subnet the device is on, its IP address, the device's open ports, and whether or not the device is SNMP enabled. If the device is SNMP enabled, Network Discovery performs an SNMP walk, this time identifying the status of SNMP objects and instances found on the device. If necessary, you can set or reset the community name of SNMP devices.

You can click any active SNMP object/instance supported by a device and get a real time display of the most commonly used performance-monitoring metric for that object. Once discovered, SNMP monitoring continues automatically.

Network Discovery's scanning and data requirements are very small. NMAP--a secure, lightweight scanning utility--performs command line scans of the LAN every two hours for rapid retrieval of network object attributes. Network Discovery uses a second utility called RRDtool to provide automatic monitoring and graphic display of SNMP-enabled devices. Graphic results are plotted vs time into day, week, month and year graphs. RRDtool uses a "round-robin database" (circular buffer) design so the system storage footprint on the collector remains constant over time, no more than 500 kb per SNMP device.

Use **Network Discovery** for:

- **Host and Device Discovery** - Identifying hosts and devices on a network, for example listing the hosts which respond to pings.
- **Port Scanning** - Enumerating the open ports on each device.
- **OS and Hardware Detection** - Remotely determining the operating system and some hardware characteristics of network devices.
- **SNMP Discovery** - Identifying active SNMP objects and instances on SNMP-enabled devices.

Note: See System Requirements.

Functions	Description
Devices (page 5)	Discovers machines and devices on a network, identifies their components and displays analysis charts of real time performance.
Install/Remove (page 11)	Installs and uninstalls a collector on a Windows machine with an agent.
Collector Status (page 11)	Displays the status of all collector on all networks managed by the VSA.

KND System Requirements

KServer

- The Network Discovery module installs on VSA 6.0.1 or later

Requirements for Each KND Collector (page 4)

- Windows OS: XP, Vista, Server 2003, Server 2003 R2, Server 2008, Server 2008 R2, or Windows 7
- .Net 3.5 for Server 2008 and Server 2008 R2. All other operating systems install .Net 3.5 automatically.
- 2 GB free space on the hard drive minimum
- Microsoft Windows Installer 2.0
- 800 MHz CPU or greater
- 2 GB RAM minimum

Devices

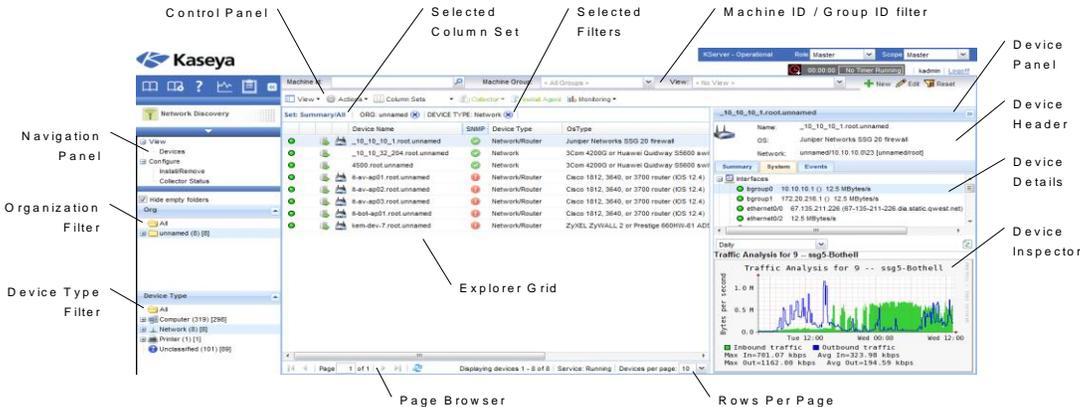
Network Discovery > Devices

The **Devices** page discovers machines and devices on a network, identifies their components and displays analysis charts of a component's real time performance.

- **Page Layout** (page 5)
- **Explorer Grid** (page 6)
- **Filter Panel** (page 7)
- **Control Panel** (page 7)
- **Device Panel** (page 9)
- **Network Diagram** (page 10)

Page Layout

The layout of the **Devices** (page 5) page comprises the following main panels:



- **Navigation Panel** - Used to navigate to the Network Discovery module. There are three functions: **Devices** (page 5), **Install/Remove** (page 11) and **Collector Status** (page 11).
- **Explorer Grid** - Each a machine or a device—both considered a **device** in this context—is listed in this panel.
 - **Page Browser** - If more than one page of devices displays, pages forwards and back.
 - **Rows Per Page** - Sets the number of devices displayed per page: 10, 30 or 100.

Network Discovery

- **Organization Filter Panel** - Filters the **Explorer Grid** by **Organization**.
- **Device Type Filter Panel** - Filters the **Explorer Grid** by **Device Type**.
- **Control Panel** - Executes tasks, either for the entire **Explorer Grid** or for a single selected device.
- **Device Panel** - This expandable/collapsible panel displays the properties and status of a single device. The **Device Panel** has three sections: a **Device Header** section, a **Device Details** section and the **Device Inspector** section.
- **Device Header** - Identifies the selected device in the **Explorer Grid**.
- **Device Details** - Displays the following tabs of information about the device.
 - **Summary** - Additional static information about the device.
 - **System** - Displays an expandable/collapsible tree of a device's hardware and software components. Clicking an individual component in the **System** tree usually displays a graph of its performance data in the **Device Inspector Panel**. Not all components have data to graph.
 - **Events** - Lists a series of events such as ports scanned and when.
 - **Collectors** - Only displays if a device is a collector. Displays the collector's current activity, range of IP addresses it scans, and a listing of logs of recent collection events.
- **Device Inspector** - Displays a graphic, if available, of the latest performance data for a component selected in the **System** tab of the **Device Details Panel**. The graphic constantly refreshes and can display performance data for different time periods.

Note: - Double-clicking a device in the **Explorer Grid** displays a popup window of the **Header, Details and Inspector** panels for that device, along with controls that can be executed for that single device.

Explorer Grid

The **Explorer Grid** of the **Devices** (*page 5*) page lists each **device** in a network—in this context either a machine or a device.

- The list of devices is filtered by the **Device Type Filter Panel** (*page 7*). The currently selected filter displays in the bar just above the **Explorer Grid**.
- The set of columns displayed is determined by the **Column Set** selection in the **Control Panel** (*page 7*). The currently selected column set displays in the bar just above the **Explorer Grid**.
- Check-in icons identify managed machines. Machines with agents installed on them can be used as collectors.
- Machines discovered on the same network as the collector, but without an agent installed on them, display with either a green traffic icon if they are currently online or a red traffic icon if they are currently offline.
- If a discovered device has a host name, the device is identified by its host name, plus the group and organization of the collector that discovered it. If the discovered device has no host name, its IP address is used in place of the host name.
- Page forward displays multiple pages of devices.
- Devices per page sets the number of rows on each page.

- A green check in the SNMP column identifies a device as SNMP enabled.

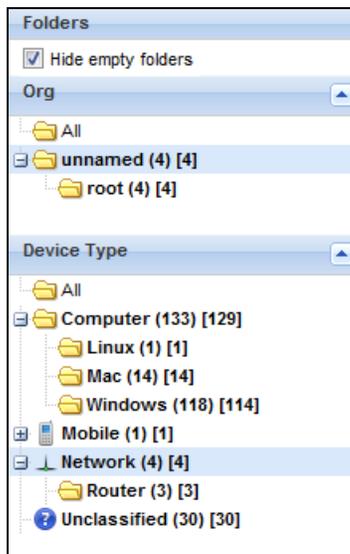
Set: Summary/All ORG: unnamed DEVICE TYPE: Network				
	Device Name	SNMP	Device Type	OsType
✓	_10_10_10_1.root.unnamed	✓	Network/Router	Juniper Networks SSG 20 firewall
✓	_10_10_32_204.root.unnamed	✓	Network	3Com 4200G or Huawei Quidway S5600 swi
✓	4500.root.unnamed	✓	Network	3Com 4200G or Huawei Quidway S5600 swi
✓	it-av-ap01.root.unnamed	!	Network/Router	Cisco 1812, 3640, or 3700 router (IOS 12.4)
✓	it-av-ap02.root.unnamed	!	Network/Router	Cisco 1812, 3640, or 3700 router (IOS 12.4)
✓	it-av-ap03.root.unnamed	!	Network/Router	Cisco 1812, 3640, or 3700 router (IOS 12.4)
✓	it-bot-ap01.root.unnamed	!	Network/Router	Cisco 1812, 3640, or 3700 router (IOS 12.4)
✓	kem-dev-7.root.unnamed	!	Network/Router	ZyXEL ZyWALL 2 or Prestige 660HW-61 ADS

Page 1 of 1 | Displaying devices 1 - 8 of 8 | Service: Running | Devices per page: 10

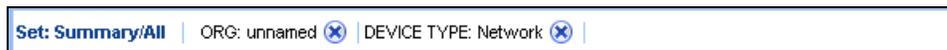
Filter Panel

The **Filter Panel** area of the **Devices** (page 5) page filters the **Explorer Grid** (page 6) using two folder trees: **Org** and **Device Types**. Folders containing devices display in bold, along with the number of devices in that folder. You can **Hide empty folders** in each filter panel by checking this checkbox.

When the filter panel is first displayed, none of the folders are selected, so all organizations and all device types are displayed in the **Explorer Grid**. Selecting a folder in either or both of the folder trees filters the devices listed in the **Explorer Grid**. *The two filters work in combination.*



The filters you select are identified at the top of the **Explorer Grid**. The selected **column set** (page 7) displays in bold at the far left.



Control Panel

The **Control Panel** at the top of the **Devices** (page 5) page executes tasks, either for the entire **Explorer Grid**

Network Discovery

(page 6) or for a single selected device.



View

- **Horizontal** – The Explorer Grid and Device Panel are oriented side by side.
- **Vertical** – The Explorer Grid and Device Panel are oriented on top of one another.

Actions

- **Open** - Display **Device Inspector** (page 9) information for a selected device in a new window.
- **Device Type** - Change the device type of selected devices.

Column Sets

Column sets determine the set of columns displayed in the **Explorer Grid**.

- **Modify Columns** - Customize the set of columns displayed.
- **Discovered** - Only displays devices discovered by KND. Does not include machines with agents checking into the VSA from another subnet.
- **Summary/All** - Displays all discover devices as well as machines with agents checking into the VSA from another subnet.
- **Collector** - Displays managed machine serving as collectors. This is the same view displayed when clicking the Network Discovery > **Collector Status** (page 11) page.
- **Managed Agents** - Displays managed machines. This is the same view displayed when clicking the Network Discovery > **Install/Remove** (page 11) page. A collector can only be installed on a machine with an agent.
- **Hardware** - Displays hardware columns: processor and RAM.
- **Network** - Displays network columns: IP address, connection gateway, and MAC address.

Collector

- **Install** - Install discovery components on the selected devices.
- **Uninstall** - Uninstall discovery components on selected devices.
- **Open Diagram** - Displays a network diagram of discovered devices. Enabled only if the selected device is a collector.

Install Agent

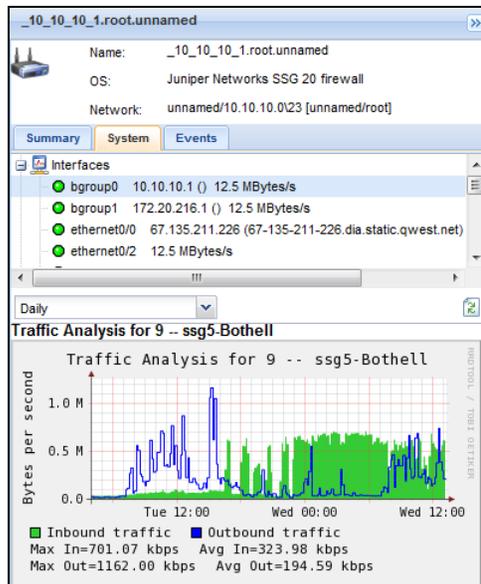
- Installs an agent install package on selected machines. A dialog prompts you to select the agent install package and, if necessary, enter the logon credential for one or more target machines.

Monitoring

- **Scan Now** - Deep scans run every two hours. This will reset the selected devices to scan now.
- **Set SNMP Community** - Set SNMP Community password on the selected device. If SNMP is enabled on a device and no monitoring data is returned the SNMP community password may be invalid.
- **Clear SNMP Community** - Reset SNMP Community password on selected devices to `public`.

Device Inspector Panel

The **Device Inspector Panel** of the **Devices** (page 5) page is an expandable/collapsible panel that displays the properties and status of a single device selected from the **Explorer Grid** (page 6). The **Device Panel** has three sections: a **Device Header** section, a **Device Details** section and the **Device Inspector** section.



Device Header

The **Header** section of the **Device Panel** the main identifiers for the selected device.

- **Name** - The name of the device.
- **OS** - The type of device or operating system.
- **Network** - The network the device belongs to. The name of the network is expressed as the starting IP address of a range of IP addresses on the network, followed by number of bits—for example, /24—representing the network portion of the IP address.

Device Details

The **Details** section of the **Device Panel** displays properties and other types of information about the device.

- **Summary** - The tab provides additional general information about the device.
 - Name - The name of the device.
 - IP Address - The IP address of device on the network.
 - Last Detected - The last time the device was detected.
 - SNMP Enabled - Yes, in enabled.
 - OS - The type of device or operating system.
 - Network
 - Location Address
 - Logged In
 - RAM
- **System** - Displays an expandable/collapsible tree of a device's hardware or software components. If performance data exists for a hardware or software component, clicking the component in the **System** tree displays a graph of the performance data in the **Device Inspector Panel**. Types of hardware and software components can include:
 - Interfaces

Network Discovery

- CPUs
 - File Systems
 - Memory
 - Ports
 - Windows services
- **Events** - Lists discovery events for this device, such as the detection of a new port or starting or stopping of a Windows service.
 - **Collectors** - Only displays if a device is a collector. Displays the collector's current activity, range of IP addresses it scans, and a listing of logs of recent collection events.

Device Inspector

The **Device Inspector** section of the **Device Panel** displays an analysis chart of the latest performance data for a component selected in the **System** tab of the **Device Details** section. The analysis chart can display performance data for different, selectable time periods: day, week, month and year. Inbound is plotted in green. Outbound is plotted in blue.

Device Inspector data for a device is stored on the managed machine acting as the collector. As long as the collector itself is actively checking into the the VSA, performance data for the device can be inspected within **Network Discovery** even if the device itself is momentarily offline. When the device is online, the graphic is constantly refreshed. The data storage for each device is very small, because the **Device Inspector** only stores the latest "moving average" values appropriate for each time scale.

Note: - Double-clicking a device in the Explorer Grid displays a popup window of the Header, Details and Inspector panels for that device, along with controls that can be executed for that single device.

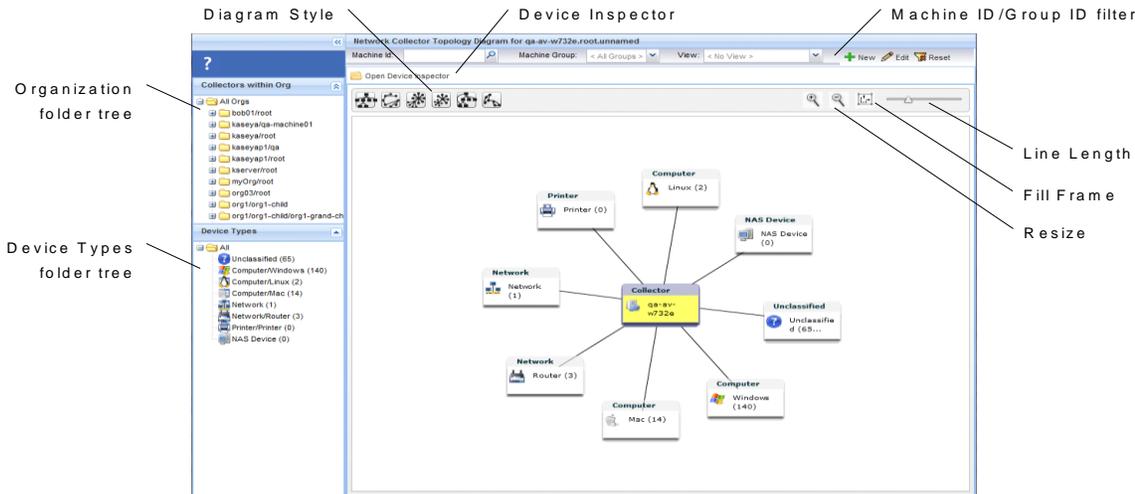
Network Diagram

Network Discovery > Devices > Collector > Open Diagram

A **network topology diagram** displays machines discovered by a single collector in a popup window.

- Click a collector in the **Collectors within Org** folder tree to display *device types* for that collector in the diagram, or select the Collector icon next to a collector device from the **Explorer Grid** (*page 6*).
- Click a *device type* folder in the **Device Types** folder tree to display devices for that type in the diagram.
- Click any *device* box displayed in the diagram, then select **Open Device Inspector** to display the **Device Inspector** for that device.
- Use the **Resize**, **Fill Frame** and **Line Length** tools to adjust the display of the diagram.

- Filter the machines displayed using the machine ID/group ID filter.



Install/Remove

Network Discovery > Install/Remove

- This page also displays by clicking the Collector option in the Control Panel (page 7) of the Devices page.

The Install/Remove page installs a collector on a Windows machine with an agent. Only one collector is required for each subnet of a network. This page can also uninstall a collector.

Note: See the Devices (page 5) page for a description of all other controls and panels on this page.

Installing a Collector

- Select a managed machine row in the Explorer Grid (page 6).
 - The Collector Status for the selected row should be blank. This indicates the managed machine is not already a collector.
- Click the Collector > Install button in the Control Panel.

Removing a Collector

- Select a managed machine row in the Explorer Grid.
 - The Collector Status for the selected row shows some text. This indicates the managed machine is a collector.
- Click the Collector > Install button in the Control Panel.

Collector Status

Network Discovery > Collector Status

- This page also displays by clicking the Column Set > Collectors option in the Control Panel (page 7) of the Devices page.

The Collector Status page lists all collectors on all networks managed by the VSA. Use this page to determine the Collector Status of each collector in the VSA.

Note: See the Devices (page 5) page for a description of all other controls and panels on this page.

Network Discovery

Removing a Collector

You can uninstall a collector from a managed machine using this page.

1. Select a managed machine row in the **Explorer Grid** (*page 6*).
 - The **Collector Status** for the selected device displays a collector icon.
2. Click the **Collector > Install** button in the **Control Panel**.

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