

BACKBOX

User's Manual

Version 5



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Chapter 1. Introduction

The **BackBox** Solution provides both, comprehensive backup management, as well as a comprehensive and easy to use device monitoring solution.

BackBox enables security and network administrators to manage complete backup schedules, as well as to monitor the health of every device in the system. Managers can configure alerts if backups are incomplete or fail to run at all, check the health of devices, and schedule tasks such as changing the password, deleting files, etc. to be automatically performed at specified times on devices and device groups.

The intuitive dashboard displays all devices, networking, and security applications in a single view, while highlighting a device that has failed or that has not been recently backed up.

BackBox's unique multi-check engine ensures backups have run successfully. It also verifies that all saved configurations meet the criteria needed for successful restoration if any backup fails to run or is not completed successfully.

Features

- Live dashboard with real-time backup and monitor status display
- Detailed reporting
- Automated and scheduled backups from a single location
- Central application for all security and networking backup configurations
- Web-based management
- Alerts and notifications
- Disaster recovery templates
- Multi-vendor support
- Generic device and new product updates
- Built-in Firewall



- RADIUS authentication
- ASCII configuration file comparison
- Support for IPv6 across all features

About the User's Guide

The User's Guide is organized as follows:

Chapters 1-3 explain the basics of the system, including installation and getting started.

Chapters 4-16 contain in depth explanations of **BackBox**'s tools and instructions on how to navigate within the system.

Who Should Use It

BackBox is designed for use by people with advanced IT knowledge, such as:

- System administrators - to install, configure, and schedule backups
- Backup operators - to configure and schedule backups
- Monitor users - to review backups and system statuses

Typographical Conventions

In this user's manual, the following typographical conventions are used:

Item	Typographic Convention
Names of Screens and Sub-screens:	Appear in bold
Names of Dialog boxes:	Appear in bold
Names of Prompts:	Appear in bold
Names of Reports:	Appear in bold
Names of Tabs:	Appear in bold
Notes:	Appear in bold



Chapter 2. Installation

This chapter outlines the system requirements and prerequisites necessary to run **BackBox**. It also provides instructions for installing the system.

System Requirements

The following are the minimum hardware requirements:

- Intel CPU (dual core)
- Disk space: 250GB (estimated for 6 months of backups)
- Memory: 2GB
- At least one network interface card (NIC)
- CD-ROM drive (for physical hardware)
- Supported HBA card: Emulex LP10000

Prerequisites

- Static IP address
- DNS server IP address (and DNS suffix)
- IP address of SMTP server (and routing/SMTP access between the **BackBox** server and the SMTP server)

Installation

Installing BackBox

To install **BackBox**:

1. Insert the CD in the drive. The **Installation** screen appears.

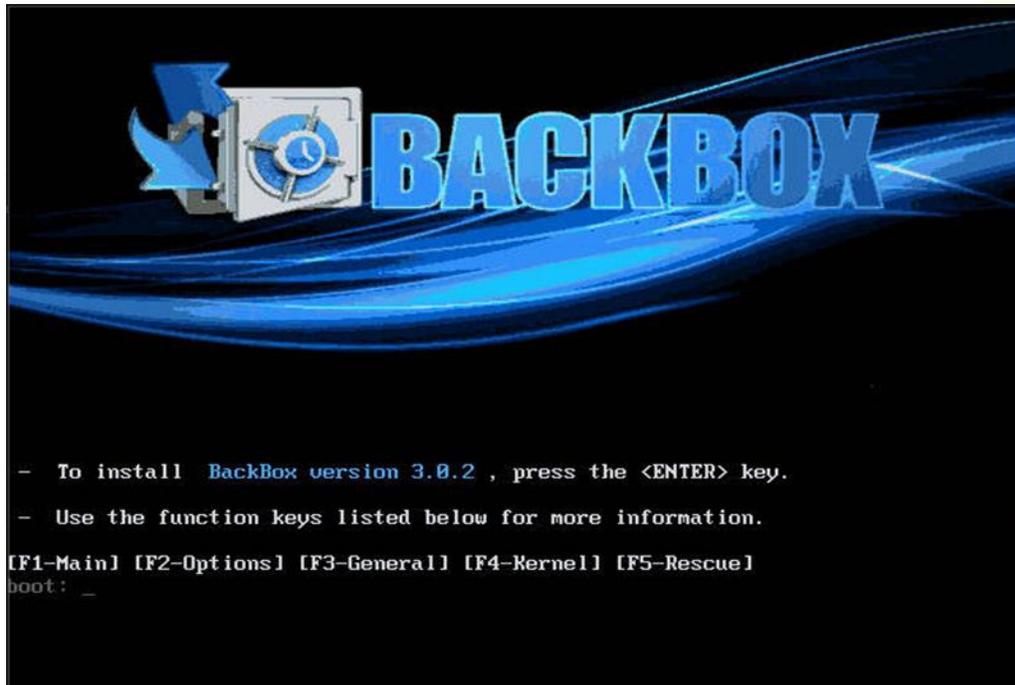


Figure 1: Installation Screen

2. Press Enter. The **Configure TCP/IP** screen appears.

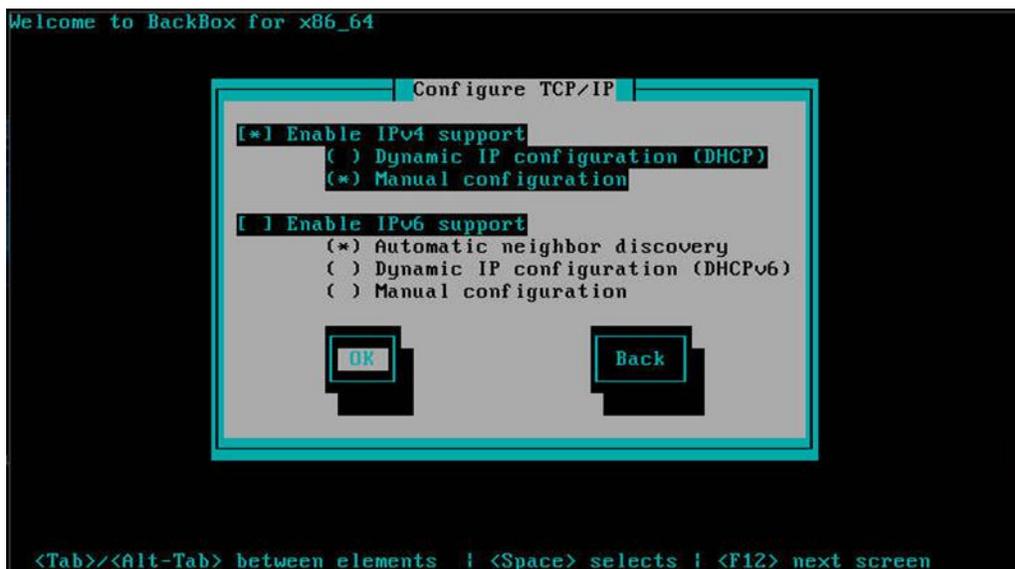


Figure 2: Configure TCP/IP Screen

3. Specify the TCP/ IP settings and click OK. If you specify Manual configuration the following screen appears:

Installation



Chapter 3. Getting Started

Logging In

To login to **BackBox**:

1. In your web browser, enter the IP address or host name in one of the following formats:

https://<BackBox_IP_or_Hostname>

The **Login** screen is displayed:



Figure 5: Login Screen

2. Enter your **BackBox** Username and Password and press Enter. The following default values appear:

Username: admin

Password: "password" (default supplied with system)

The Dashboard's **System Status** screen is displayed.

The Dashboard System Status Screen

The **Dashboard System Status** screen looks like this:

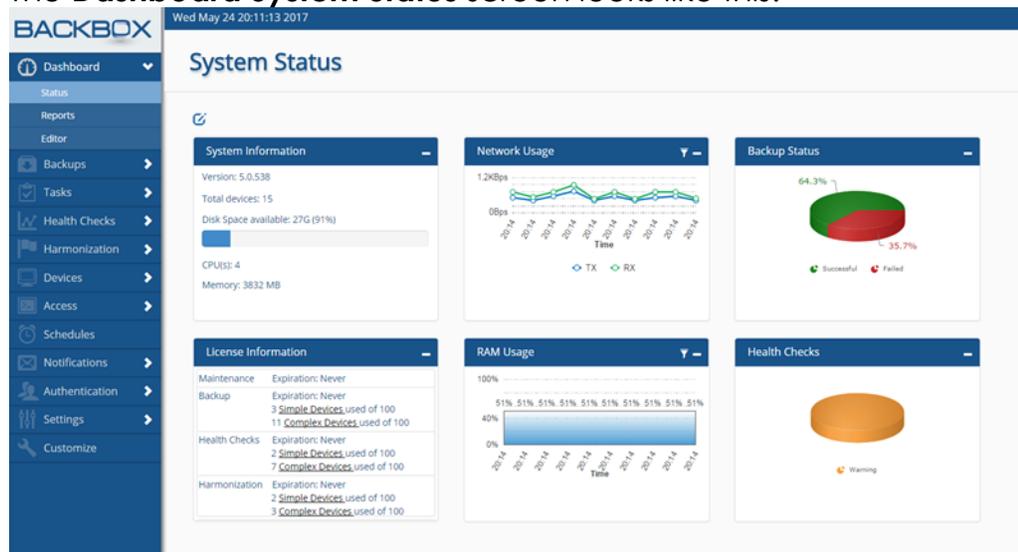


Figure 6: Dashboard System Status Screen

At the top left of the screen are displayed the time and date. On the right side (not shown here) are an Alerts button  as well as Getting Started

buttons for Username, Help and Logout. Clicking the Alerts button  displays the **Notification Alerts** screen. (The button is high-lighted  when there are indeed notification alerts.) Clicking on Help displays **BackBox** Online Help. The left side of the screen displays the **Sidebar** that provides easy navigation to any screen in the system.

Understanding the Sidebar

The **Sidebar** enables you to quickly navigate **BackBox** screens:

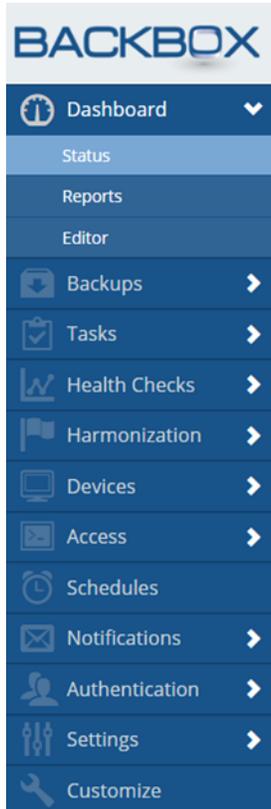


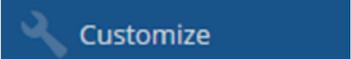
Figure 7: Sidebar Screen Navigation Buttons

Getting Started

Table 1: Functions of Sidebar Screen Navigation Buttons

Button	Description
 Dashboard >	<p>The Dashboard has three screens:</p> <p>The Status screen displays System Information, License Information, Network and RAM Usage, as well as the status of Device Backup and Health Checks.</p> <p>The Reports screen displays the list of reports BackBox has been set to generate. Here you can add, edit, and delete reports as needed.</p> <p>The Editor screen enables you to create customized report types which you can then select when you create a report on the Reports screen.</p>
 Backups >	<p>Backups enables you to create, schedule, and run backup jobs.</p> <p>Backups includes the following screens: Backup Jobs, Queue, and History.</p>
 Tasks >	<p>Tasks enables you to automate, schedule, and track various activities to be performed on devices in your system.</p> <p>Tasks includes the following screens: Configuration, Jobs, Queue, History, and File Repository.</p>
 Health Checks >	<p>Health Checks enables you to manage alerts for failed devices, view scheduled checks and configure health checks.</p> <p>Health Checks contains the following screens: Alerts, Queue, and Configuration.</p>
 Harmonization >	<p>Harmonization enables you to run tests for specific devices to ensure that their configuration harmonizes with organizational guidelines.</p> <p>Harmonization contains the following screens: Configuration, Signatures, Jobs, Queue, and History.</p>
 Devices >	<p>Devices enables you to manage devices to be backed up, such as creating/removing devices from backups, and changing device properties. You can also use Devices to run customized scripts on a device for backup, health check, tasks, etc.</p> <p>Devices contains the following screens: Devices, Groups, IP Address Management</p>

Getting Started

Button	Description
	<p>Access enables you to run scripts on devices within the system. Scripts can include task scripts, health checks scripts, harmonization scripts, and backup scripts. For detailed information on how to write scripts, see the chapter on Writing Command Scripts.</p>
	<p>Schedules enables you to create, modify, and delete schedules for backups and reports.</p>
	<p>Notifications enables you to view alerts for failed devices, as well as configure and view notifications for health checks and jobs. External notifications can be configured for Email, Syslog, SNMP, and Http.</p> <p>Notifications contains the following screens: Alerts and Jobs.</p>
	<p>Authentication enables you to create groups out of the devices that share authentication details, i.e. Username, Password, and Extra Password. You can create and remove groups, or change the members in each group.</p> <p>Authentication contains the following screens: Authentication Templates, Authentication Servers, BackBox Users, User Roles, and Operating System Users.</p>
	<p>Settings enables you to set parameters for BackBox, including interfaces, routing, DNS, date and time, alerts, administration, licenses, access rules, sites, agents, and system logs.</p> <p>Settings contains the following screens: Interfaces, Routing, DNS, Date and Time, Alerts, Administration, Licenses, Access Rules, Sites, Agents, System Logs.</p>
	<p>Customize enables you to customize BackBox screens and write scripts that perform various activities.</p>

Getting Started

Understanding the System Status Screen

The **System Status** screen provides general information about **BackBox** and the computer on which it is running. You can configure the **System Status** screen with up to 17 different widgets as explained below. A typical screen looks like this:

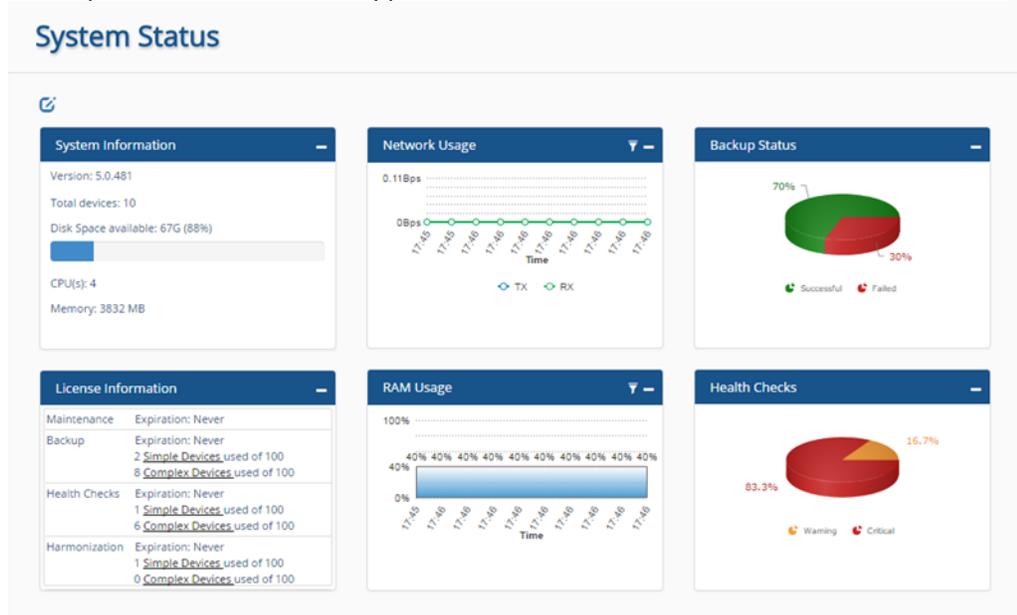


Figure 8: System Status Screen

CONFIGURING THE DASHBOARD'S SYSTEM STATUS SCREEN

You can easily configure the **System Status** screen by clicking the screen's Enable Edit Mode button  in the upper left corner of the screen. After clicking the button, the following three buttons appear:   .

To add widgets to the screen, click the Add New Widget button  and select the desired widgets listed in the Add New Widget box:

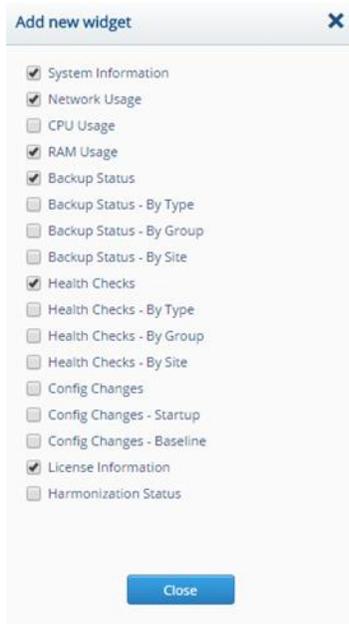


Figure 9: System Status Widget Menu

You can select up to 17 widgets (see the table below for a summary and explanation of the widgets).

After selecting the desired widgets, click Close. The widgets now appear on the **System Status** screen. While in Edit mode, you can further customize the display by using the buttons at the top of each widget: Change Widget Location, Collapse Widget, or Remove Widget

At the upper left of the **System Status** screen are the following buttons:

Add New Widget, Save Changes, and Undo Changes

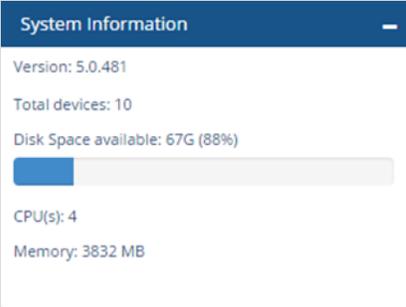
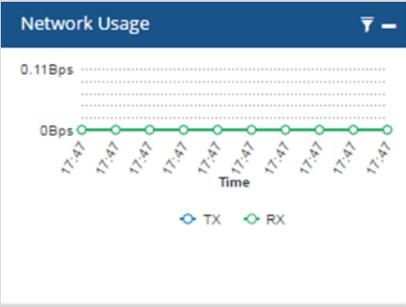
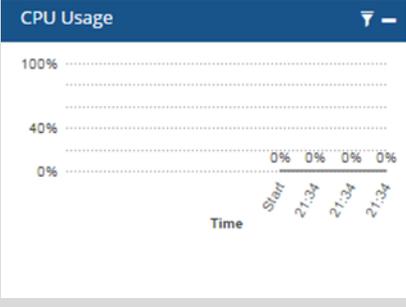
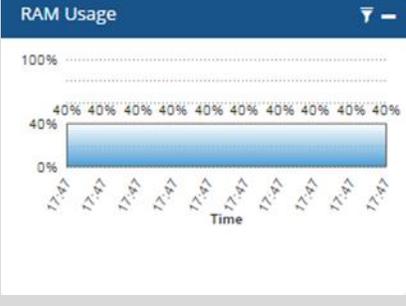
To exit Edit mode, click Save Changes.

Clicking on any status on the widget display, takes you to the **Devices** screen and displays a list of devices for that status.

Getting Started

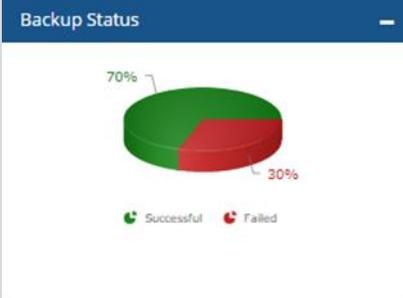
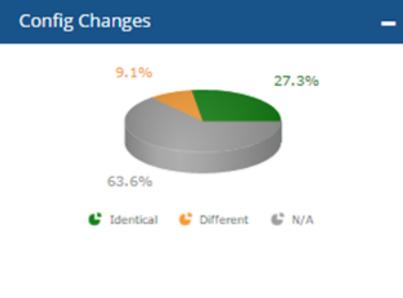
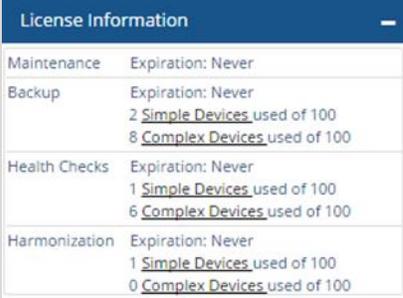


Table 2: Summary of Dashboard Widgets

Display	Description
	<p>Displays information about the current system, including the current BackBox version, number of devices, number of CPU(s), memory, and amount of free disk space on the backup partition of the server.</p>
	<p>Displays network usage in megabits over time.</p>
	<p>Displays the percent of CPU usage over time.</p>
	<p>Displays percent of RAM usage over time.</p>

Getting Started



Display	Description								
 <p>The screenshot shows a widget titled "Backup Status" with a 3D pie chart. The chart is divided into two segments: a green segment representing 70% for "Successful" and a red segment representing 30% for "Failed". A legend below the chart shows a green circle for "Successful" and a red circle for "Failed".</p>	<p>Displays a chart showing the statuses of the device backup operations performed: Successful, Suspected, and Failed.</p> <p>Backup status can be displayed for devices, type, group, or by site.</p> <p>Clicking on a status on the chart displays the Device screen with the devices for that status listed.</p> <p>In addition to the Backup Status widget, there are also widgets to display backup status by type, by group, and by site.</p>								
 <p>The screenshot shows a widget titled "Health Checks" with a 3D pie chart. The chart is divided into two segments: a red segment representing 83.3% for "Warning" and an orange segment representing 16.7% for "Critical". A legend below the chart shows a red circle for "Warning" and an orange circle for "Critical".</p>	<p>Displays the status of devices whose health is monitored by BackBox: Successful, Warning, or Critical.</p> <p>There are separate widgets to display health by type (of device), by (device) group, or by site.</p>								
 <p>The screenshot shows a widget titled "Config Changes" with a 3D pie chart. The chart is divided into three segments: a green segment representing 27.3% for "Identical", an orange segment representing 9.1% for "Different", and a grey segment representing 63.6% for "N/A". A legend below the chart shows a green circle for "Identical", an orange circle for "Different", and a grey circle for "N/A".</p>	<p>Displays the percent of devices whose configuration was changed or remained the same as detected in the backup.</p> <p>There are separate widgets for configuration changes by startup and baseline.</p>								
 <p>The screenshot shows a widget titled "License Information" with a table of license details:</p> <table border="1" data-bbox="431 1507 834 1761"> <tr> <td>Maintenance</td> <td>Expiration: Never</td> </tr> <tr> <td>Backup</td> <td>Expiration: Never 2 <u>Simple Devices</u> used of 100 8 <u>Complex Devices</u> used of 100</td> </tr> <tr> <td>Health Checks</td> <td>Expiration: Never 1 <u>Simple Devices</u> used of 100 6 <u>Complex Devices</u> used of 100</td> </tr> <tr> <td>Harmonization</td> <td>Expiration: Never 1 <u>Simple Devices</u> used of 100 0 <u>Complex Devices</u> used of 100</td> </tr> </table>	Maintenance	Expiration: Never	Backup	Expiration: Never 2 <u>Simple Devices</u> used of 100 8 <u>Complex Devices</u> used of 100	Health Checks	Expiration: Never 1 <u>Simple Devices</u> used of 100 6 <u>Complex Devices</u> used of 100	Harmonization	Expiration: Never 1 <u>Simple Devices</u> used of 100 0 <u>Complex Devices</u> used of 100	<p>Displays detailed license information.</p>
Maintenance	Expiration: Never								
Backup	Expiration: Never 2 <u>Simple Devices</u> used of 100 8 <u>Complex Devices</u> used of 100								
Health Checks	Expiration: Never 1 <u>Simple Devices</u> used of 100 6 <u>Complex Devices</u> used of 100								
Harmonization	Expiration: Never 1 <u>Simple Devices</u> used of 100 0 <u>Complex Devices</u> used of 100								

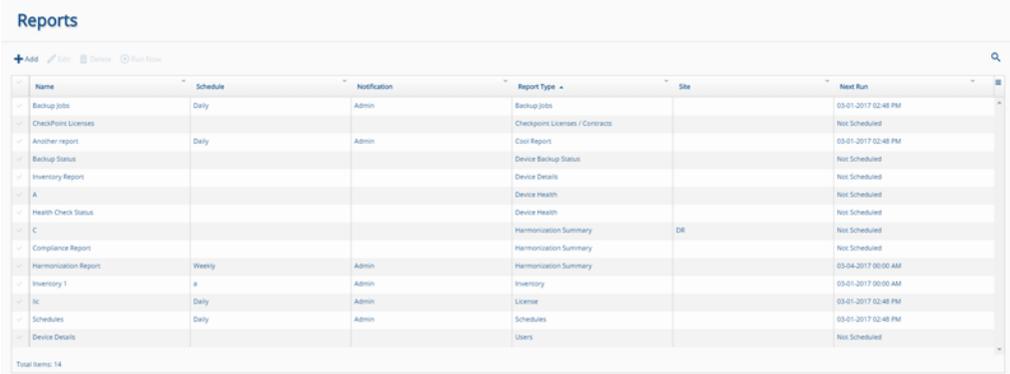
Getting Started



Display	Description
	<p>Displays the percentage of devices by harmonization status.</p>

THE REPORTS SCREEN

The **Reports** screen displays a list of reports that were created. You can add new reports as well as edit and delete existing reports. See the chapter on Reports for explanations of each type of report.



Name	Schedule	Notification	Report Type	Site	Next Run
Backup jobs	Daily	Admin	Backup jobs		03-01-2017 02:48 PM
CheckPoint Licenses			Checkpoints Licenses / Contracts		Not Scheduled
Another report	Daily	Admin	Cost Report		03-01-2017 02:48 PM
Backup Status			Device Backup Status		Not Scheduled
Inventory Report			Device Details		Not Scheduled
A			Device Health		Not Scheduled
Health Check Status			Device Health		Not Scheduled
C			Harmonization Summary	DR	Not Scheduled
Compliance Report			Harmonization Summary		Not Scheduled
Harmonization Report	Weekly	Admin	Harmonization Summary		03-04-2017 00:00 AM
Inventory 1	x	Admin	Inventory		03-01-2017 00:00 AM
IC	Daily	Admin	License		03-01-2017 02:48 PM
Schedules	Daily	Admin	Schedules		03-01-2017 02:48 PM
Device Details			Users		Not Scheduled

Figure 10: Reports Screen

The BackBox Interface: Screens and Tables

Aside from the **Dashboard Status** screen, most **BackBox** screens consist of tables that display information on backups, devices, health checks, etc. All **BackBox** tables are dynamic – that is, you can choose the columns to display and, in many cases, you can group rows to make a more readable display.

CONFIGURING TABLE COLUMNS

At the right of each table is the Columns button . Clicking the Columns button  displays a list of columns to choose from. Select

Getting Started

the columns you want to display in the table and click outside the list to return to the table.

You can change the width of a column by placing your mouse cursor at the right side of the column's head and dragging the column guide right or left to widen or narrow the width; for example, in the following screen, the Notification column will be altered by dragging:

The screenshot shows a table titled "Backup Jobs" with a toolbar containing "+ Add", "Edit", "Delete", and "Run Now". The table has five columns: Name, Schedule, Notification, Next Execution, and Site. The "Notification" column is being adjusted, as indicated by a double-headed arrow and a vertical line at its right edge.

Name	Schedule	Notification	Next Execution	Site
Daily Backup	Not Scheduled	Admin	Not Scheduled	Global
Weekly Backup	Not Scheduled	Admin	Not Scheduled	Global
DR Daily	Not Scheduled	DRMail	Not Scheduled	Global

Figure 11: Changing the Width of a Column

You can also reposition columns by pressing on an empty space in a column's head and dragging the entire column right or left.

SORTING A TABLE

You can sort tables by any column by clicking the Sort button located at the right side of the head of the column by which you want to sort; a menu like the following is displayed:



Figure 12: Column Sort Menu

Select an option and click outside the menu.

For a quick sort, just click the column's name at the top of the column: clicking the name toggles between Ascending and Descending sort orders.

GROUPING TABLE ROWS

For some tables, **BackBox** also enables you to group multiple rows into one row according to selected criteria. To group rows, click the Sort button in the head of the column by which you want to group the rows, to display a menu as in the following screen:

Getting Started

Name	IP	Vendor	
SW GW	172.31.255.254	Check Poi	Sort Ascending
CheckPoint P-1	172.31.254.23	Check Poi	Sort Descending
CheckPoint Smart ...	172.31.254.28	Check Poi	Remove Sort
Cisco 2960	172.31.254.33	Cisco	Hide Column
Cisco Nexus	172.31.253.99	Cisco	Group
F5	172.31.252.78	F5	

Figure 13: Example of Group Option

By clicking Group in the above example, the table's rows with identical vendors will be collapsed into single rows; each row indicates how many items have been grouped, like this:

	Vendor	Name	IP
+	Check Point (3)		
+	Cisco (2)		
+	F5 (1)		
+	Fortinet (2)		
+	PaloAlto (2)		

Figure 14: Example of Grouping According to Vendor

Clicking the Expand/Collapse buttons **+**/**-** in the left column of a row displays/collapses the rows underneath, like this:

	Vendor	Name	IP
-	Check Point (3)		
	Check Point	SW GW	172.31.255.254
	Check Point	CheckPoint P-1	172.31.254.23
	Check Point	CheckPoint Smart ...	172.31.254.28
+	Cisco (2)		
+	F5 (1)		

Figure 15: Example of Expanding a Grouped Row

By using the features to display and sort columns and to group rows, you can create easy to read tables that give you the data you need.

FILTERING TABLES

You can filter any table in a **BackBox** screen. To filter a table, click the Filter Results button  at the upper right of the screen, which displays a Filter box over each column of the table. You can also filter for more than one value. The following example shows a table with the filter value "Cisco" in the Vendor column and "Successful" in the Status column:

Getting Started



	Name	IP	Vendor	Group	Last Backup	Status	Harmonization	Reason	Checks	Site	Type	Product	Agent	Device ID
<input checked="" type="checkbox"/>	Cisco ASA	172.31.254.2	Cisco	cisco	19-03-2017 04:02 ...	Successful					Firewall	ASA / FWSM	agent	482
<input checked="" type="checkbox"/>	Cisco 2960	172.31.254.33	Cisco	cisco	20-03-2017 11:20 ...	Successful					Router	Router	agent	487

Figure 16: Example of a Filtered Table

Getting Started

Chapter 4. Reports

BackBox enables you to generate reports that provide information about your devices and the statuses of the backups, using all the data available in the **BackBox** system. You can either use **BackBox**'s wide range of predefined report types, or you can create your own customized reports. For either kind of report you can specify scheduling and notification.

To display reports that have already been generated, on the **Sidebar**, click **Dashboard**, then click **Reports**:

Name	Schedule	Notification	Report Type	Site	Next Run
Backup jobs	Daily	Admin	Backup jobs		03-01-2017 02:48 PM
CheckPoint Licenses			Checkpoint Licenses / Contracts		Not Scheduled
Another report	Daily	Admin	Cloud Report		03-01-2017 02:48 PM
Backup Status			Device Backup Status		Not Scheduled
Inventory Report			Device Details		Not Scheduled
A			Device Health		Not Scheduled
Health Check Status			Device Health		Not Scheduled
C			Harmonization Summary	DR	Not Scheduled
Compliance Report			Harmonization Summary		Not Scheduled
Harmonization Report	Weekly	Admin	Harmonization Summary		03-04-2017 00:00 AM
Inventory 1	a	Admin	Inventory		03-01-2017 00:00 AM
SC	Daily	Admin	License		03-01-2017 02:48 PM
Schedules	Daily	Admin	Schedules		03-01-2017 02:48 PM
Device Details			Users		Not Scheduled

Total Items: 14

Figure 17: Reports Screen

Adding a New Report

Use the **Reports** screen to create and schedule new reports. You can create reports by either selecting predefined reports or by selecting a customized report. For information on how to create a customized report, see [Creating Customized Reports](#).

To add a new report:

1. On the **Reports** screen click the Add button **+ Add**. The **New Report Configuration** dialog box appears:

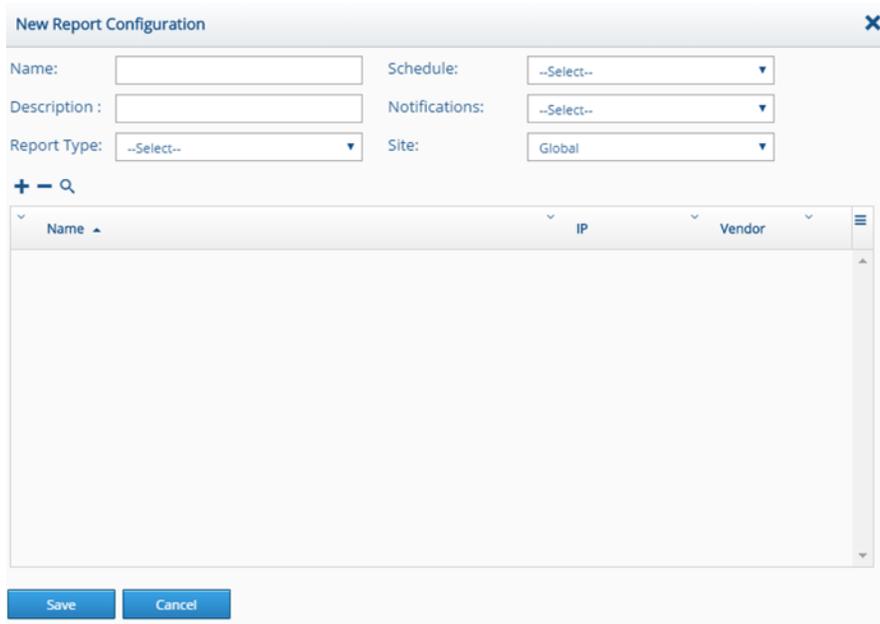


Figure 18: New Report Configuration Dialog Box

2. Type a name and a short description for the report.
3. In the Report Type list, select a Predefined or Customized Report type for your report. For a description of predefined report types, see
4. Types of Predefined Reports below. Customized report types also appear in the Report Type list. For an explanation of how to create a customized report type, see [Creating Customized Reports](#).
5. Select a schedule and method of notification.
6. Select the site where you want the report to be implemented.
7. Click Save.

Editing a Report

You can change report parameters using the Edit button  Edit.

To edit a report:

1. In the list of reports select a report and click the Edit button  Edit. The **New Report Configuration** dialog box appears with the details for the selected report.
2. Edit the appropriate fields.
3. Click Save.

Reports

Deleting a Report

To delete a report:

1. In the Report Types list, select the report to delete and click the Delete button  Delete. A prompt appears requesting confirmation.
2. Click Yes.

Types of Predefined Reports

You can create reports from a list of 17 predefined report types. This section provides examples of each predefined report type.

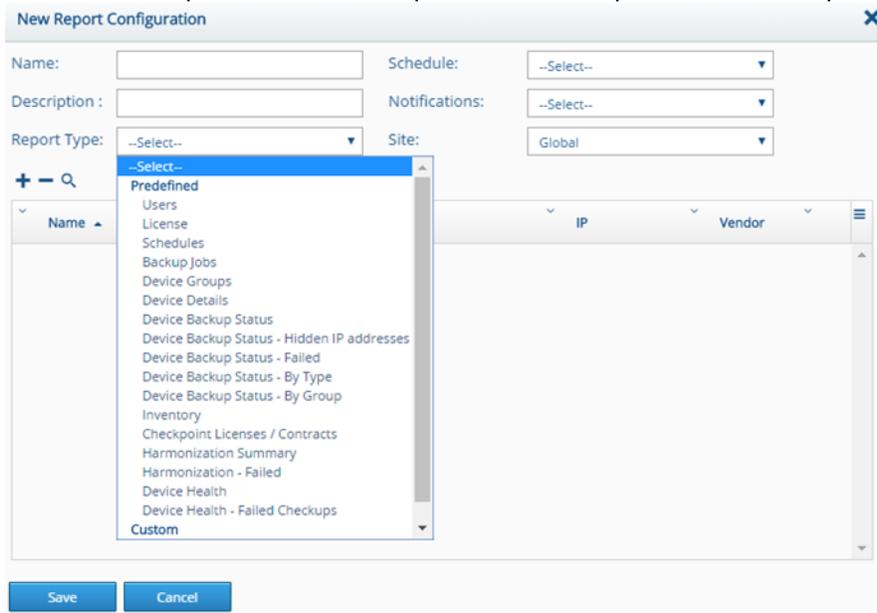


Figure 19: Report Type List

USERS REPORT

The Users Report displays information on the system users including: username, full name, E-mail address, role, whether they are able to receive notifications, type (local or external) and the site to which they have been assigned.

Full Name	Username	e-mail Address	Role	Receive Notifications	Type	Site
Administrator	admin	chanochm@backbox.co	administrator	true	local	Global
test	test		backup_operator	false	local	Global
Sales	sales		sales	false	local	Global
roy	roy		administrator	false	external	Global
guyb	guyb		administrator	false	external	Global
TestCafe	devexpress		backup_operator	false	local	Global

Figure 20: Users Report

Reports

LICENSE REPORT

The License Report displays information on the types of licenses, simple or complex, for devices throughout the system.

The screenshot shows a window titled "License Report" with two tables. The first table, titled "Global", shows license counts across different types. The second table shows a breakdown of these counts by site name, categorized into Backup, Health Checks, and Compliance.

Global			
License Type	Total	Used	Available
Complex Licenses	80	2	78
Complex Health Checks	80	1	79
Complex Compliance	80	1	79
Simple Licenses	80	1	79
Simple Health Checks	80	1	79
Simple Compliance	81	1	80

Site Name	Backup				Health Checks				Compliance			
	Complex		Simple		Complex		Simple		Complex		Simple	
	Total	Used	Total	Used	Total	Used	Total	Used	Total	Used	Total	Used
DR	10	6	10	2	10	4	10	1	10	0	10	1
Network	10	0	10	0	10	0	10	0	10	0	9	0

Figure 21: License Report

SCHEDULES REPORT

The Schedules Report displays the schedules in the **BackBox** system.

The screenshot shows a window titled "Schedules Report" with the BackBox logo and a table of schedules.

Schedules						
Name	Description	Site	Type	Info	Start Time	In Use
Daily		Global	Day	Every 1 day	14:48	Yes
Weekly		Global	Week	On Saturdays	00:00	Yes
DR Daily		DR	Day	Every 1 day	01:00	No
a		DR	Day	Every 1 day	00:00	Yes

Figure 22: Schedules Report

BACKUP JOBS REPORT

The Backup Jobs Report displays a summary of the backups and provides information on backup status as well as scheduling, next execution, and notification method.

Reports

Name	Description	Site	Number of Devices	Status	Schedule	Next Execution	Notification
Daily Backup		Global	0	Success	None	None	Admin
Weekly Backup		Global	0	Success	None	None	Admin
DR Daily		Global	1	Success	None	None	DRMail

Backup Jobs	Type	Name	Site	Host	Vendor
DR Daily	Device	Panorama	DR	172.31.254.251	PaloAlto

Figure 23: Backup Jobs Report

DEVICE GROUPS REPORT

The Device Groups Report displays a list of device groups and the number of devices in each group, as well as information about each device in the group.

Name	Description	Site	Number of Devices	In Use
CheckPoint		Global	2	Yes
Fortinet		Global	0	Yes
Load Balancers		Global	0	Yes
Other		Global	0	Yes
DR Devices		Global	0	Yes
DR Devices		Global	0	Yes

Device Groups	Type	Name	Site	Host	Vendor
CheckPoint	Device	CheckPoint P-1	DR	172.31.254.23	Check Point
	Device	SW GW	DR	172.31.255.254	Check Point

Figure 24: Device Groups Report

DEVICE DETAILS REPORT

The Device Details Report provides details such as: device name, IP address, device type (Firewall, Switch, etc.), assigned group, assigned jobs, and health. The health of the device is indicated by colored text indicating Scheduled or Not scheduled. The report also displays the average backup size, and the site.

Reports

Device name	IP address	Type	Group assigned	Jobs assigned	Health	Average backup size	Site
-------------	------------	------	----------------	---------------	--------	---------------------	------

Figure 25: Device Details Report

DEVICE BACKUP STATUS REPORT

The Device Backup Status Report shows the backup status of devices in the system. The report displays the following: device name, IP address, last backup date, last backup status (Success, Failure, or Suspected Failure), the date of the last successful backup, status of the last device backup, the date of the last successful backup, and status, which is the overall percentage of Successful, Failed and Suspected backups.

The report also displays a graph that shows the number of successful group backups, failed group backups, and suspected group backups.

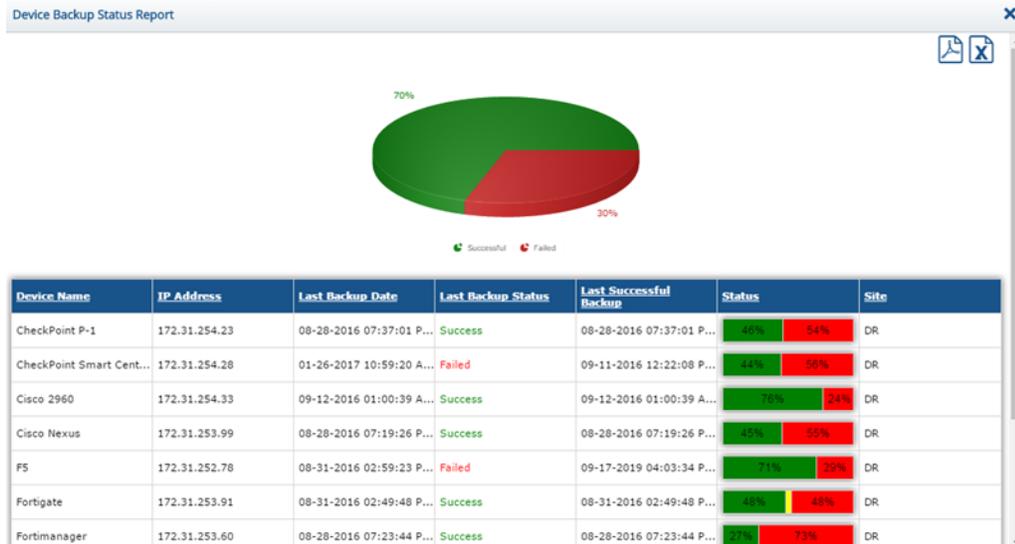


Figure 26: Device Backup Status Report

DEVICE BACKUP STATUS – HIDDEN IP ADDRESSES REPORT

The Device Backup Status – Hidden IP Addresses Report displays the backup status of devices with hidden IP addresses.

Reports



Figure 27: Device Backup Status Report – Hidden IP Addresses

DEVICE BACKUP STATUS – FAILED REPORT

The Device Backup Status - Failed Report displays a list of failed device backups along with information on the last successful backup.



Figure 28: Device Backup Status – Failed Report

DEVICE BACKUP STATUS - BY TYPE REPORT

The Device Backup Status - By Type Report shows the backup status of device types in the system. The report shows the device name, IP address, last backup date, last backup status (Failed, Suspected, or Successful), the date of the last successful backup, and status, which is the overall percentage of successful, suspected, and failed backups.

For each device type, the report also displays a graph which shows the number of successful, suspected, and failed backups.

Reports

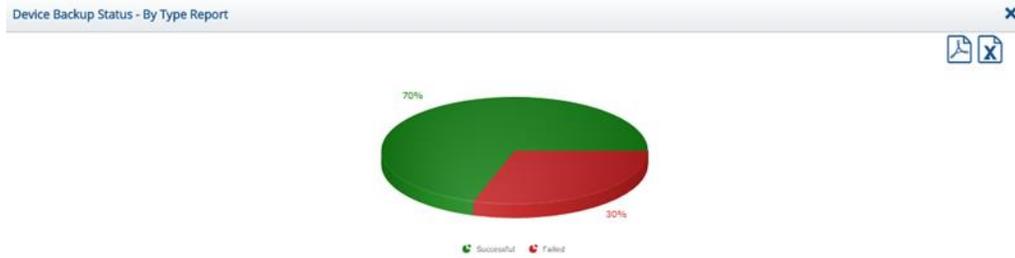


Figure 29: Device Backup Status– By Type Report

DEVICE BACKUP STATUS – BY GROUP REPORT

The Device Backup Status Report - By Group shows the backup status of device groups in the system. The report shows the status of the last backup (green for Success, red for Failure, yellow for Suspected), the date of the last successful backup, the site, and the percentage of devices in the group which have been successfully backed up. The report also displays a graph which shows the number of successful, failed, and suspected group backups.

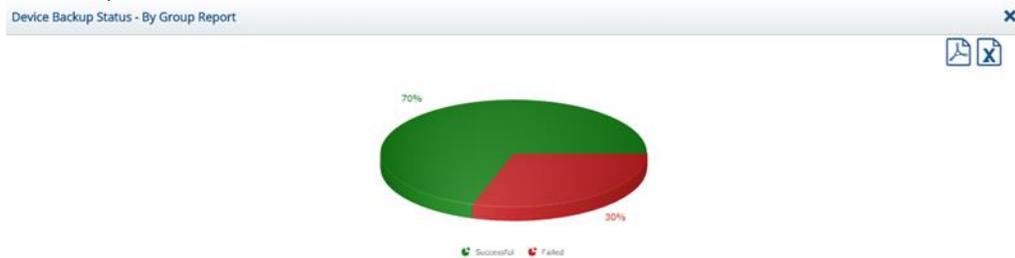


Figure 30: Device Backup Status – By Group Report

INVENTORY REPORT

The Inventory Report is displayed as an Excel spreadsheet which lists an inventory of each device in the system. It includes some or all of the following information, depending on the type of device and customization:

Device name, IP address, version, model, memory, CPU, uptime, CK, serial number, hostname, etc.

Reports

Device Name	Ip Address	Version	Model	Memory	CPU	Uptime	CK	Serial Number	Hostname
SW GW	172.31.255.254	SVN: R77	4600	4043420 k	Pentium(R)20 days	CK-04B4F1212B004			Arak

Figure 31: Inventory Report

CHECKPOINT LICENSES/CONTRACTS REPORT

The Checkpoint Licenses/Contracts Report is an Excel spreadsheet which lists the device name, **BackBox** device, host, expiration date and features.

Device Name	BackBox Device	Host	Expiration	Features	Certificate key
CheckPoint P-1	172.31.254.23	NA	NA	NA	NA
CheckPoint Smart Center	172.31.254.28	172.31.254.28	24Sep2014	a0s4RH2aSQwuhKSLARCFHq0Q5gM89Hvz cpsm-c-u cpsb-npm cpsb-epm cpsb-logs cpsb-mntr cpsb-pns cpsb-udir cpsb-wid-100 cpsb-ws cpsb-rpt-10 cpsb-evcr-10 cpsb-mptl cpgp-snx-u-ngx cpsb-swb cpsb-adnc-m cpsb-comp-u cpsb-sdgn-mobmail-5000	CK-345342D8618B
		172.31.255.170	10Jan2014	aUdH9Gwst5whNpxYez2V7m8zz4RcKkAuQQdk CPSM-C-U CPSB-NPM CPSB-EPM CPSB-LOGS CPSB-MNTR CPSB-CK-6C8BF6A623E PRVS CPSB-UDIR CPSB-WKFL-100 CPSB-W5 CPSB-RPRT-10 CPSB-EVCR-10 CPSB-MPTL CPVP-SNX-U-NGX CPSB-SWB CPSB-ADNC-M CPSB-COMP-U	CK-4C8BF6A623E
SW GW	172.31.255.254	172.31.255.250	6Sep2016	dAgMQz2chcNcGU5ptcDwDQGe3LmICDGM1 CPSG-C-8-U CPSB-FW CPSB-VPN CPSB-IPSA CPSB-DLP CPSB-SSLVPN-U CPSB-IA CPSB-ADNC CPSG-VSX-25S CPSB-SWB CPSB-IPS CPSB-AV CPSB-URLF CPSB-ASPM CPSB-APCL CPSB-ABOT	CK-04B4F3A7A500
		194.90.11.18	26Jul2016	a8d4yVfehEwK84PaGLwMMYVP12hCTN2z CPSG-C-8-U CPSB-FW CPSB-VPN CPSB-IPSA CPSB-DLP CPSB-SSLVPN-U CPSB-IA CPSB-ADNC CPSG-VSX-25S CPSB-SWB CPSB-IPS CPSB-AV CPSB-URLF CPSB-ASPM CPSB-APCL CPSB-ABOT	CK-43EFC8D08F98

Figure 32: Checkpoint Licenses/Contracts Report

HARMONIZATION SUMMARY REPORT

The Harmonization Summary Report displays a summary of devices on which harmonization tests have been run.

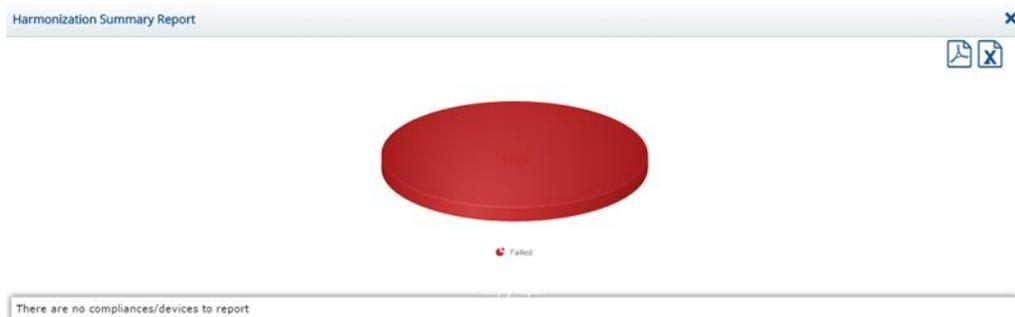


Figure 33: Harmonization Summary Report

Reports

HARMONIZATION - FAILED REPORT

The Harmonization – Failed Report displays the devices that failed the harmonization test.

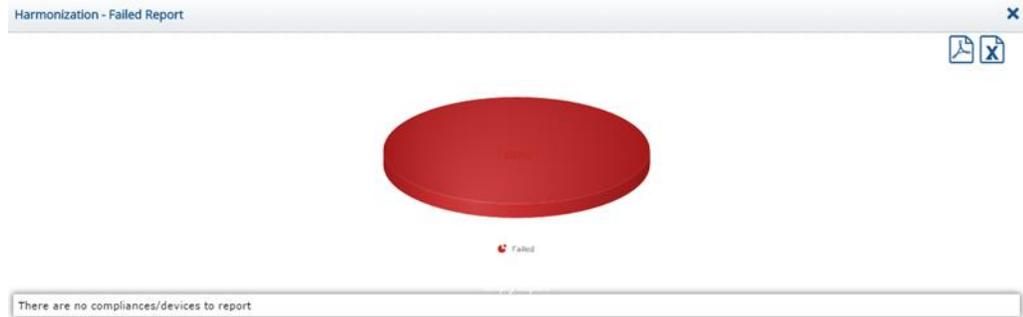


Figure 34: Harmonization – Failed Report

DEVICE HEALTH REPORT

The Device Health Report shows the results of health checks for specified devices. The checks that have been scheduled for each device are displayed along with information about check status and failure reason.

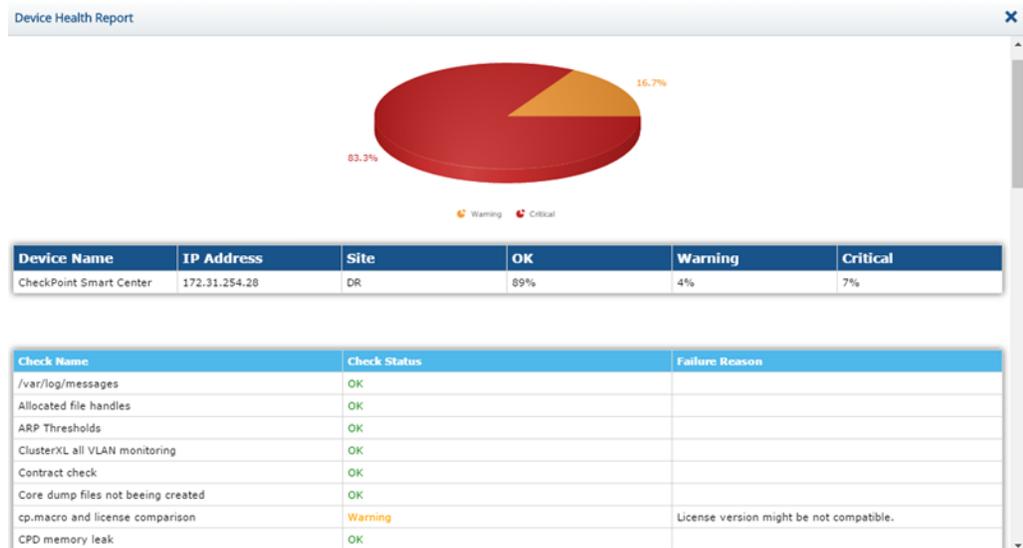


Figure 35: Device Health Report

DEVICE HEALTH – FAILED CHECKS REPORT

The Device Health – Failed Checks Report displays a list of device-scheduled health checks that failed to complete.

Reports

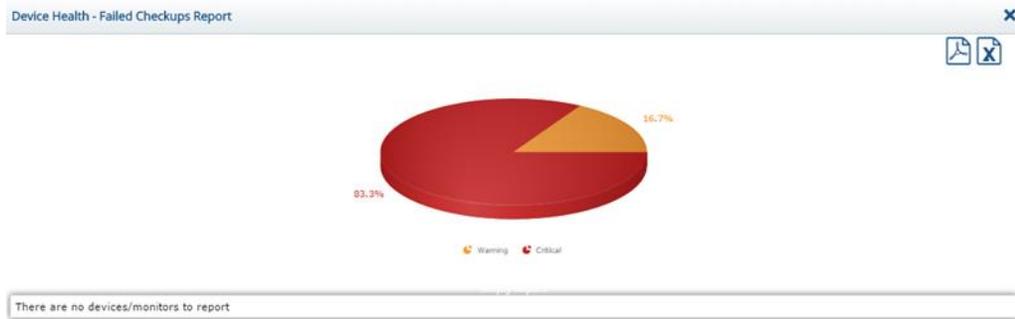


Figure 36: Device Health Report – Failed Checks

Creating Customized Reports

BackBox enables you to create customized reports that display information according to the layout and format that you specify. You use the Dashboard's **Editor** screen to create the report type. After you create and save the Customized Report Type, it is automatically added to the Report Type list that is displayed when creating a new report on the **Reports** screen. You can then select the new customized report type just as you do with any of the predefined report types.

ADDING A CUSTOMIZED REPORT

To create a customized report:

1. On the **Sidebar**, select Dashboard, and then select Editor. The **Editor** screen appears listing any customized reports that have already been created.

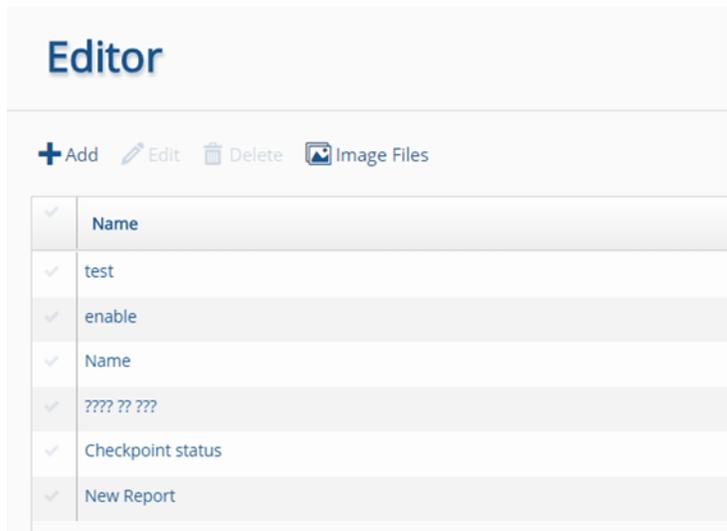


Figure 37: Editor Screen Listing Customized Reports

Reports

2. Click the Add button **+ Add** to display the **Custom Report Configuration** screen:

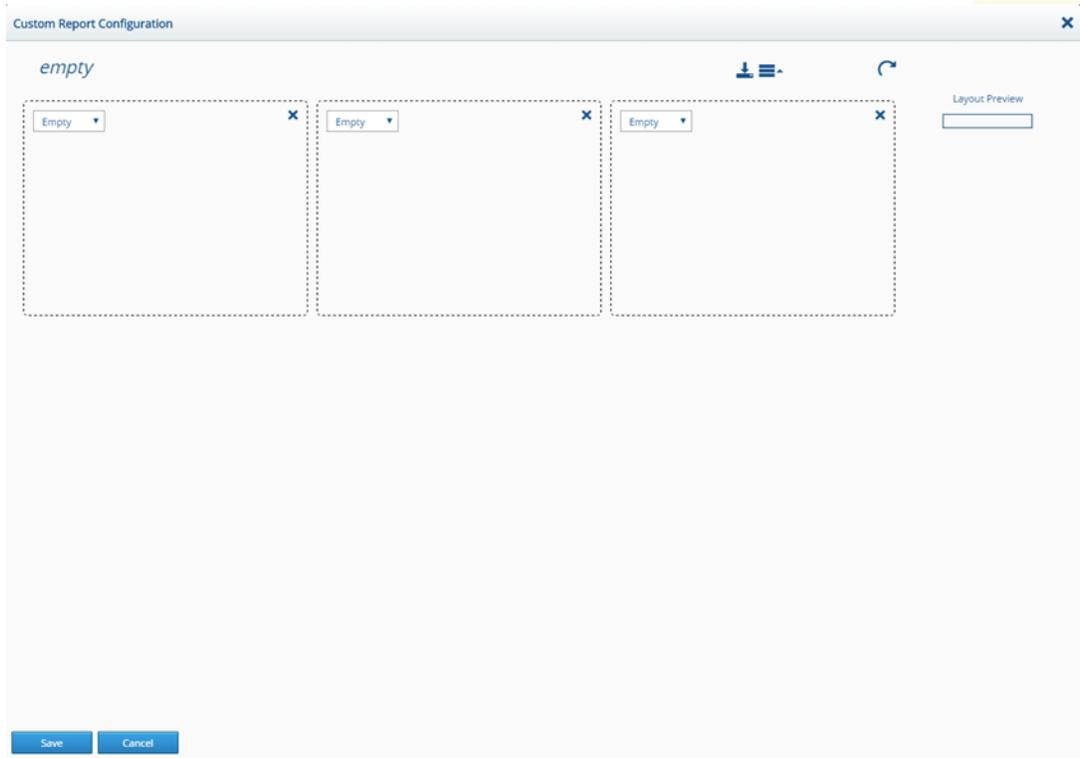


Figure 38: Custom Report Configuration

3. Click the default name of the report, *empty*, type a name for the report and click the Confirm button to save the name.
4. For each of the square areas displayed on the report, select the type of information that you want to display: Text, Image, Graph, Table, or Separator.

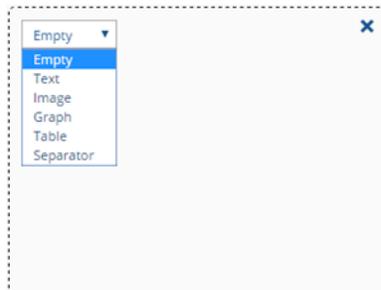


Figure 39: Custom Report Configuration Types List

Text and Image options enable you to type text and upload images from your computer. Graph and Table enable you to include a wide range of data from the **BackBox** system (for

Reports



Graph, you can select Pie or Bar). The Separator option inserts a horizontal line to separate between rows.

5. You can exchange the position of boxed areas by dragging them. To add another row of boxed areas, click the Add Row button . To remove an empty row, click the Remove Row button . To discard changes, click the Discard Changes button . To remove a box, click the Cancel button  in the upper right corner of the box.

While designing your report, you can gain a schematic overview of the design by inspecting the Layout Preview at the right of the screen:



Figure 40: Custom Report Layout Preview

6. After finishing the layout of your customized report type, click Save. The report type now appears in the Report Types list under Customized.

Reports



Chapter 5. Backups

Clicking Backups on the **Sidebar** displays the **Backup Jobs** screen. The screen lists all the backup operations that have been defined in the system, as well as when they are scheduled to run, the current status of the backup, and other relevant information. Clicking on Queue displays the current jobs in the backup queue. Clicking on History displays the backup history of each device in the system.

The Backup Jobs Screen

The **Backup Jobs** screen displays a list of backup jobs along with their schedule, notification, next execution, site, and status:

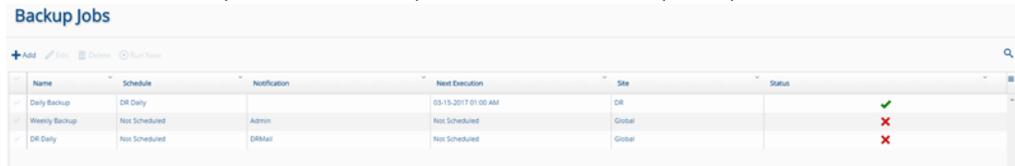


Figure 41: Backup Jobs Screen

Table 3: Backups Jobs Screen: Fields and Buttons

Field/Button	Function
Name	Displays the name assigned to the backup
Schedule	Displays the schedule that has been configured for the backup. To create a Schedule, see the chapter on Schedules.
Notification	Displays the people to be notified in case of failure or after the completion of the backup. To add a notification, see the chapter on Notifications.
Next Execution	Displays the date and time of the next scheduled backup, providing the job is enabled.
Site	Displays the site on which the backup will be run.
Status	Indicates whether the backup is Enabled  or Disabled  .

Backups

Field/Button	Function
 Add	Adds a new device for backup. To add a new backup job, see - Adding a Backup Job.
 Edit	Enables you to edit the configuration for a backup
 Delete	Enables you to delete a backup job listed in the Backup Jobs screen. To delete a backup job, select the job you want to delete and click the Delete button  Delete.
 Run Now	Manually runs the backup now, regardless of the scheduled time. Check the box next to the desired job and click the Run Now button  .

ADDING A BACKUP JOB

BackBox allows you to add additional backups to meet your needs.

To add another backup job:

1. On the **Backup Jobs** screen, click the Add button . The **New Backup Job Configuration** dialog box appears:

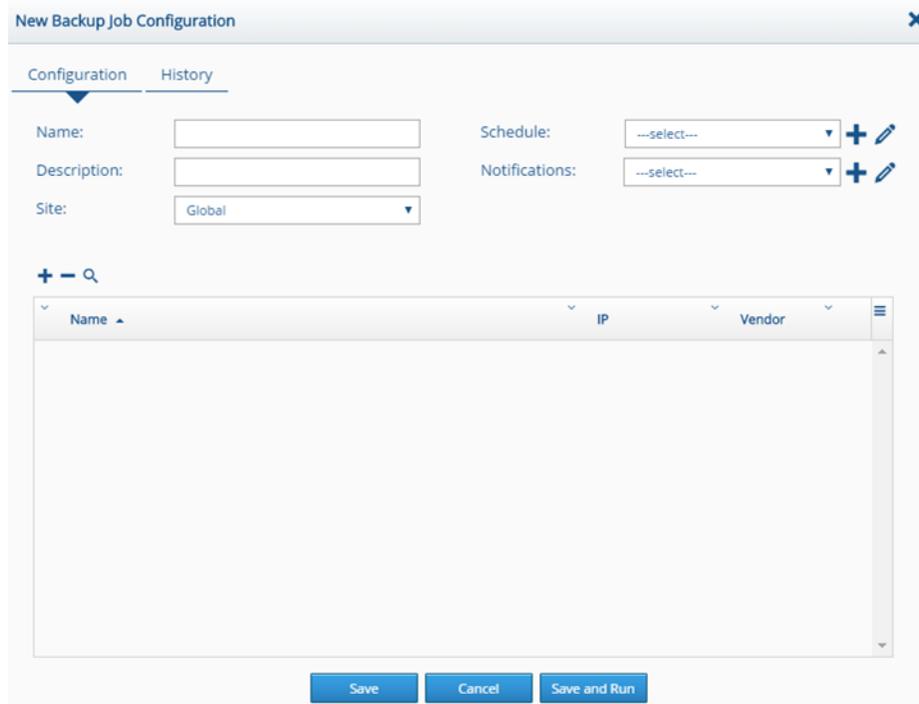


Figure 42: New Backup Job Configuration Dialog Box

Backups



Table 4: New Backup Job Configuration Fields

Field	Description
Name	Type a name that identifies the new backup.
Description	Type a brief description of the backup – this field is optional, but recommended.
Site	Select the name of the site to which the device is assigned. If the site is locked to an agent, you cannot run a backup from Global. Sites can be locked to an agent in the Agent screen, which is located under Settings in the Sidebar .
Schedule	Select a schedule for the backup. You can create a new schedule by clicking the Add Schedule button + next to the Schedule list, or select a schedule from the list. For further details, see the
Notifications	Select the notification configuration to be implemented regarding the completion/failure of the backup. If the notification configuration includes E-mail, below notifications, an additional button is displayed on the screen enabling you to attach comparison result files to the E-mail. In addition, you can click the Add Notification button + next to the Notifications list to configure a new notification. For further details, see the chapter on Notifications.

2. Complete the fields with the desired parameters.
 3. Click the Add Devices button **+** (under Site:) to display a list of available devices. Available columns display item type (with an icon), device name, IP, vendor, site, and group to which the device belongs.
 4. Click one or more devices which you want to add to the backup job, and click the Add button .
- To remove a device from this list, click the Remove Device button .
5. In the **New Backup Job Configuration** screen, click the Save button . If you wish to run the backup now, click the Save and Run button .

Backups

DELETING A BACKUP JOB

To delete a backup job:

1. On the **Backup Jobs** screen, select the Backup Job to be deleted.
2. Click the Delete button  **Delete**. The **Delete Backup Job** dialog box appears requesting confirmation.
3. Click Yes.

RUNNING A BACKUP JOB

Backup jobs will run according to the schedule that you assigned them. Their next execution is displayed on the **Backup Jobs** screen. However, you can run a backup immediately by selecting a backup job and clicking the Run Now button  **Run Now**.

The Backup Queue Screen

The **Backup Queue** screen contains all the backup jobs currently running or waiting to run. Each entry listed contains the device name (one line for each device in the queue), IP address, date started, duration (the time taken to run until now, if currently running) and the run status, i.e. running or pending. The View and Terminate columns display buttons for viewing the backup job or terminating it.



Figure 43: Backup Queue Screen

REMOVING A JOB FROM THE QUEUE

A job can be removed from the queue, or stopped if currently running, by clicking the Terminate button displayed in the job's Terminate column. To terminate all the jobs in the queue, double-click the Terminate All button .

Note: Due to the significance of terminating a backup job, you must double-click the Terminate All button  as opposed to a single click for most other functions.

Backups

Backup History Screen

The **Backup History** screen is a log of all the backups. Each entry listed displays the device name, its IP address, the date and time it was run, and the status of the run (Success, Success - Configuration Changed, Failure, or Suspected Failure). For those with a Failure status, the adjoining column also records the failure reason as shown in the following:

Backup History

Device Name	IP	Date	Status	Failure Reason	Log
Cisco 2960	172.31.254.33	04-05-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	03-05-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	02-05-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	01-05-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	30-04-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	29-04-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	28-04-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	27-04-2017 03:04 AM	Failure	Agent is Disconnected	View Log
Cisco 2960	172.31.254.33	26-04-2017 12:20 PM	Failure	Agent is Disconnected	View Log
Checkpoint GateWay	172.31.253.12	26-04-2017 01:00 AM	Failure	License Problem: no license available	View Log
Provider 1 CMA	172.31.253.14	26-04-2017 01:00 AM	Failure	License Problem: no license available	View Log
Cisco 2960	172.31.254.33	25-04-2017 12:20 PM	Failure	Agent is Disconnected	View Log
Checkpoint GateWay	172.31.253.12	25-04-2017 01:00 AM	Failure	License Problem: no license available	View Log
Provider 1 CMA	172.31.253.14	25-04-2017 01:00 AM	Failure	License Problem: no license available	View Log
Filter: 166%	172.31.254.33	24-04-2017 11:58 AM	Failure	Agent is Disconnected	View Log
Total Items: 182					

Figure 44: Backup History Screen

FILTERING THE BACKUP HISTORY

You can filter backup jobs listed on the **Backup History** screen. Clicking the Filter Results button  at the top right of the screen displays filter boxes at the top of each column: Device Name, IP, Date, and Status columns. To filter the backup jobs listed on the **Backup History** screen, type a value into the filter box by which you want to filter the table. To remove the filter, click the filter boxes' Cancel button . To remove the display of the filter boxes, click the Filter Results button  again.

BACKUP TRAIL LOG

For any backup, clicking on the View Log button  in the Log column displays a backup trail log that you can download.

Backups



Chapter 6. Tasks

Tasks enables you to automate routine tasks to be performed on various devices within your system. You can create and schedule tasks such as changing passwords and permissions, maintenance tasks such as deleting, copying, or moving data, powering devices on or off, and many others. You can also specify conditions that restrict or trigger the tasks to be performed.

How It Works

The **Task Configuration** screen displays a list of previously configured tasks and enables you to configure new tasks. A task can include any sequence of commands (a *script*) that the device normally responds to when using the command line. By writing a script, you are actually writing a series of commands that will be executed as if you were at the command line. The **Task Configuration** screen helps you to write the script by enabling you to select commands from a simple dialog box as explained below. Writing scripts and examples of scripts are presented in more detail in the chapter on Writing Command Scripts.

After saving the task, you can then use the **Task Jobs** screen to assign the task to various devices and determine when the task is executed (see

Assigning Tasks to Devices and Scheduling Task Execution).

The Task Configuration Screen

To display the **Task Configuration** screen, click Tasks on the **Sidebar**:

Task Configuration				
+ Add ✎ Edit 🗑 Delete 📄 Clone 📤 Export 📥 Import				
<input checked="" type="checkbox"/>	Name	Description	Site	Predefined
<input checked="" type="checkbox"/>	RC4-SHA Cipher for Gaia - Exported	Disable RC4-SHA cipher for Gaia Portal,		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Set administrative idle-timeout	Set administrative idle-timeout		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Upgrade to latest available version	Upgrade to latest available version		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Check for available content upgrades	Check for available content upgrades		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Download most recent content package	Download most recent content package		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Commit(partial: device-and-network excluded)	Commit(partial: device-and-network excluded)		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Commit(partial: policy-and-objects excluded)	Commit(partial: policy-and-objects excluded)		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Commit(force)	Commit(force)		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Commit	Commit		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Palo Alto -> Create New Rule	Create New Rule		<input type="checkbox"/>

Tasks



Figure 45: Task Configuration Screen

Adding a New Task

You can add a new task and write a task script using the **Task Configuration** screen.

To configure a new task:

1. On the **Tasks** screen, click the Add button **+ Add** to display the **New Task Configuration** dialog box:



Figure 46: New Task Configuration Dialog Box

2. Type a Name for the Task and click Save. The task now appears in the list of tasks in the **Task Configuration** screen, where you can edit it and write a script as shown in the next section,
3. Creating a Task Script.

Creating a Task Script

You can create a task script for any task listed in the **Task Configuration** screen. Creating a task script enables you to insert conditions, variables, and other elements that provide greater control of the automated task.

To create a script for a task:

1. In the **Task Configuration** screen, select a task and click the Edit button **Edit**. Alternatively, click on a task name displayed in the list. A dialog box appears with the name of the selected task, which by default displays the Dynamic Fields Tab, for example:

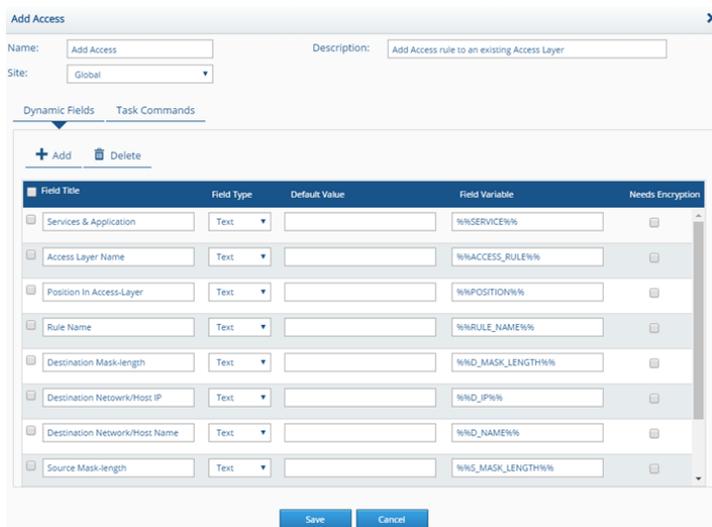


Figure 47: Edit Task Configuration Dialog Box displaying Add Access

2. Edit the Name, Description, and Site fields as desired.
3. To add fields and variables, click the Add button **+ Add**. See the section on Using the Dynamic Fields Tab, for details.
4. To add a command to the script, or to edit commands in the script, click the **Task Commands** tab. If the task already has a script, a list of commands to be executed is displayed, for example:

Tasks

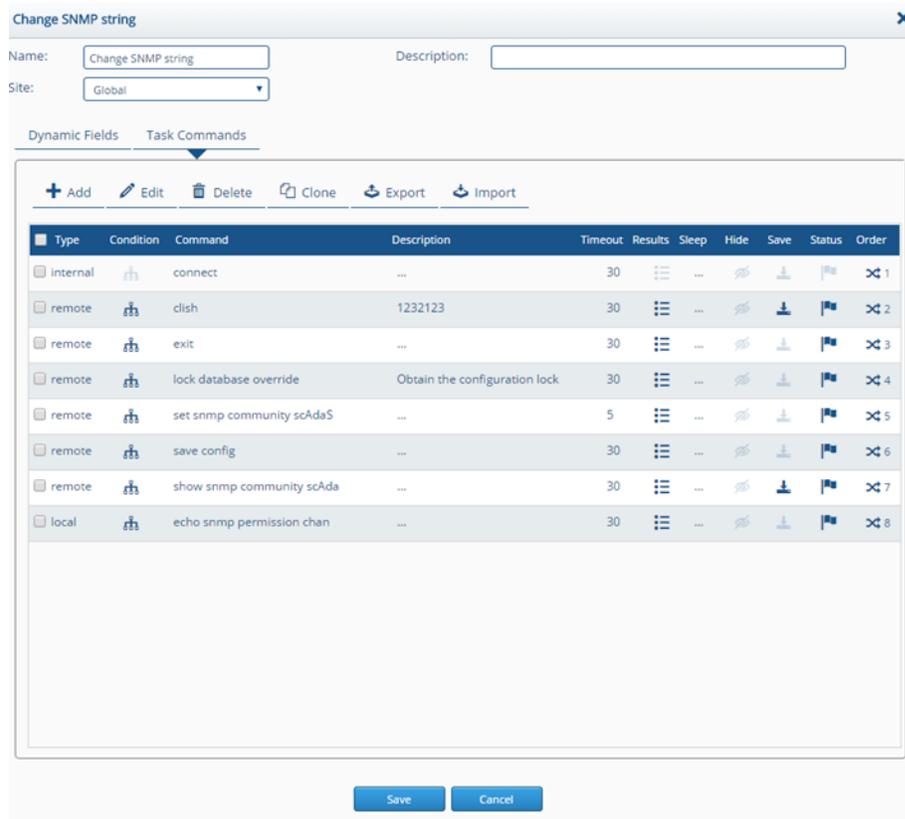


Figure 48: Edit Task Configuration Dialog Box Displaying Task Commands

The dialog box enables you to change the order of command execution by dragging the command's Reorder button up or down. You can also specify indicators for the command's execution by clicking the Results Options button in the command's Results field or the Status button in the Status field. For an explanation of Timeout and other fields, see the chapter on Writing Command Scripts.

- To add a new command to the script, click the Add button . The **Conditions** dialog box appears:

Tasks

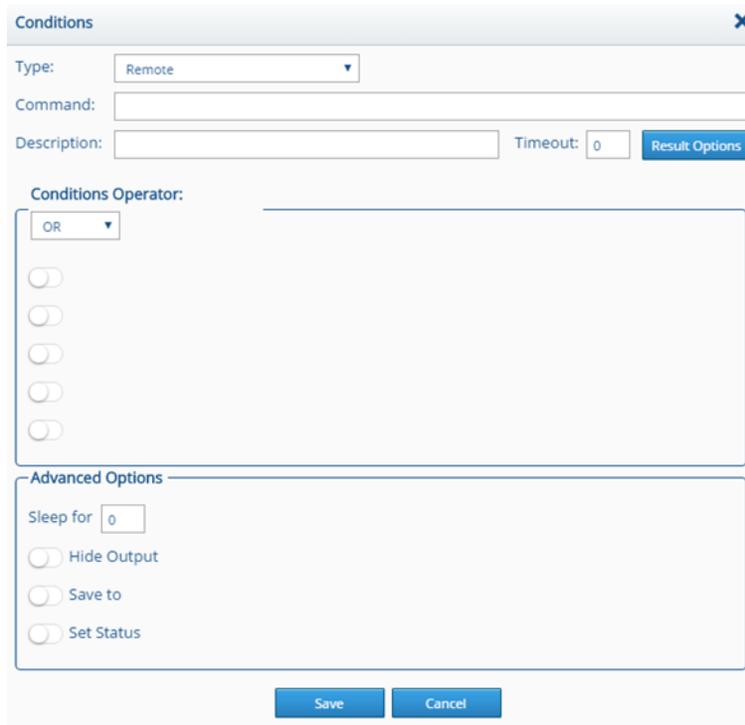


Figure 49: Conditions Dialog Box

6. Select the type of command (Internal, Local, Remote, or Verification), type the exact command in the Command field and use the remaining fields as desired. For details on these fields, as well as examples on writing command scripts, see the chapter on Writing Command Scripts.

Assigning Tasks to Devices and Scheduling Task Execution

The **Task Jobs** screen enables you to assign tasks to specific devices and to specify when the task is executed:

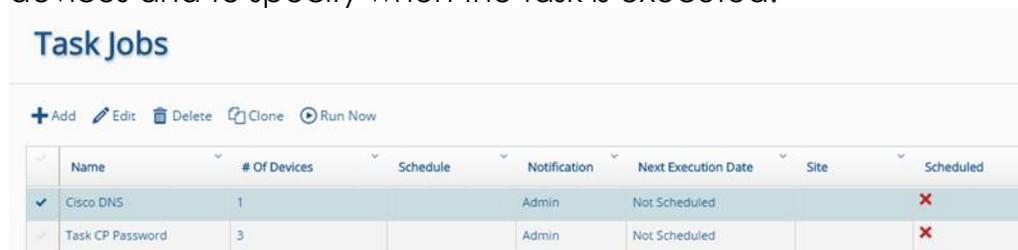


Figure 50: Task Jobs Screen

The **Task Jobs** screen displays a list of tasks, the number of devices to which the task has been assigned and other information. The following fields and buttons are displayed:

Tasks



Table 5: Task Job Fields

Field/Button	Description
Name	Name which identifies the task job.
# of Devices	Number of devices to which the task has been assigned.
Schedule	The schedule assigned to the task that determines when it is executed. See below, To assign a task to a device and schedule its execution, for instructions on assigning a schedule.
Notification	The notification configuration to be implemented regarding the completion/failure of the task. To add a notification, see the section on Adding a Notification.
Next Execution	The date and time of the next execution of the task.
Site	The site to which the task is assigned.
Status	Enabled/Disabled
 Add	Displays the New Task Job Configuration screen.
 Edit	Displays the Task Job Configuration screen for selected task jobs.
 Delete	Deletes selected task jobs.
 Clone	Clones selected task jobs.
 Run Now	Runs selected task jobs immediately.

To assign a task to a device and schedule its execution:

1. On the **Task Jobs** screen, click the Add button ; the **New Task Job Configuration** screen appears:

Tasks

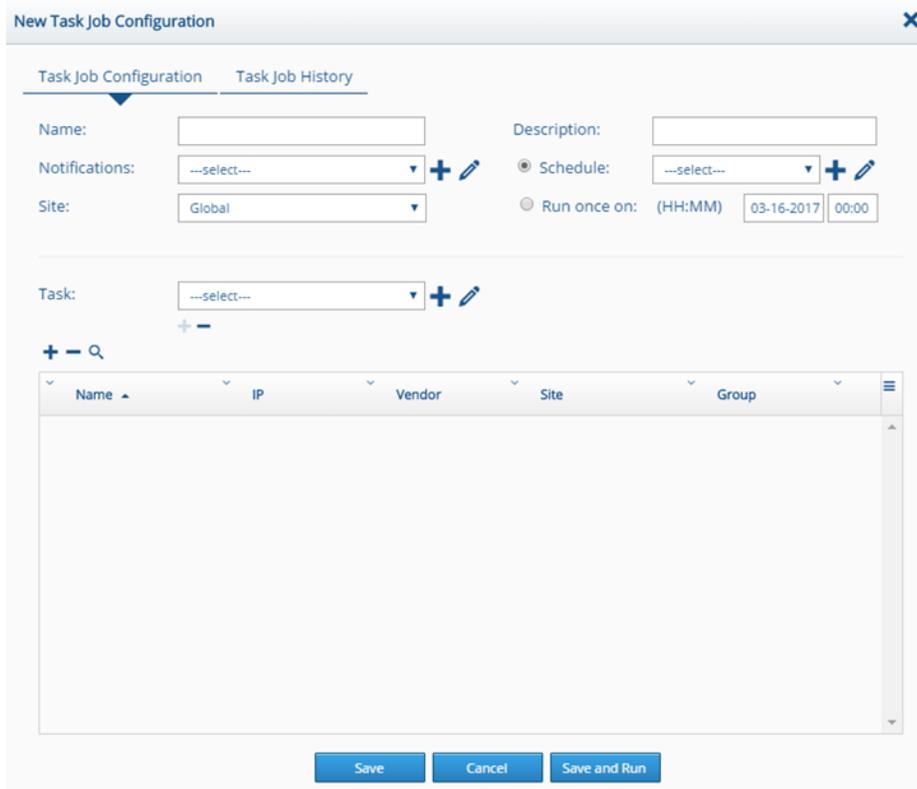


Figure 51: New Task Job Configuration Screen

2. Specify a name and description for the task job.
3. In the Notifications list select the desired notification configuration. Use the Add Notification button **+** or Edit Notification button to create or edit a notification configuration.
4. In the Site list, select a site for the task.
5. In the Schedule list, select a schedule that specifies when the task is to run. Use the Add Schedule button **+** or Edit Schedule button to create or edit a schedule. Alternatively, select Run once on, and specify a date and time for the task to run.
6. In the Task list, select the task that you want to execute. To create a new task on the fly, click the Add Task to System button **+** next to the Task field. Alternatively, you can select a task and edit it by clicking the Edit Task button .

You can add additional tasks or remove tasks by clicking the Add Task to Job button **+** or Remove Task from Job button **-** that are displayed underneath the Task list. For each task, a Dependency list appears that enables you to specify the task that will trigger the next.

Tasks

7. To add devices to the task, click the Add Devices button **+** underneath Tasks. The Add Devices dialog box appears. Select the Devices you want to add and click Add **Add**.
8. To remove a device from the Device list, select the device you want to remove and click the Remove button **-**.
 You can also use the Filter button **🔍** to display the filter boxes by which to filter the Device list.
 For information on creating schedules and notifications, see the chapters on Schedules, and Notifications.
9. Click Save **Save**, or Save and Run **Save and Run**.

Viewing Task Job History

You can view the history of a task job by clicking the **Task Job History** tab in the **Task Job Configuration** screen for the selected task job. The **Task Job History** tab displays the following parameters: Start Time, End Time, Status, Comments, and Task Name.

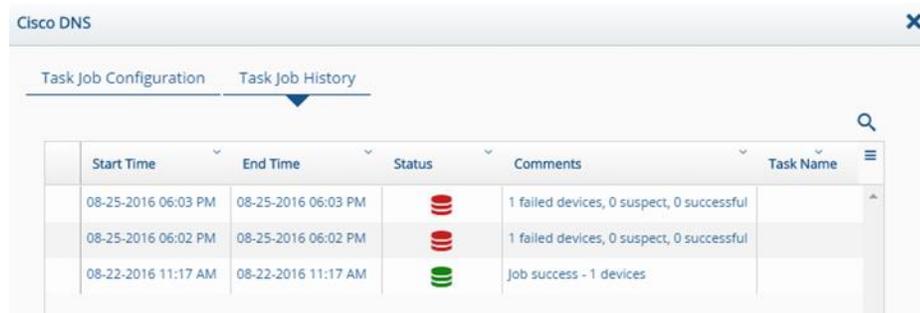


Figure 52: Task Job History Tab

Modifying an Existing Task Job

You can edit a task job listed in the **Task Jobs** screen by selecting a task job displayed in the list and clicking the Edit button **Edit**. The **Task Job Configuration** screen for the selected task job appears with the same fields as those in the **New Task Job Configuration** screen. Edit the fields as desired and click Save **Save** or Save and Run **Save and Run**.

Viewing a Task Job in the Queue

You can view the progress of a task job in the **Task Queue** screen:



Figure 53: Task Queue Screen

Tasks

For each device to which the task is assigned, the screen displays the device name, device IP, date, duration (how long the device has been running the task), and status of the job (for example, Running). To terminate a task job for a specific device, click the button in the Terminate column for that device. To terminate all task jobs in the queue, double-click the Terminate All button

 Terminate All

Viewing Task History

The **Task History** screen displays a list of devices that have run task jobs, along with the job name, the task name, device name, device IP, the date when the task job was run, its status (success, failure) and, if the status is failure, the reason for the failure.

Task History

Job Name	Task Name	Device Name	IP	Date	Status	Failure Reason	Log
Cisco DNS		Cisco 2960	172.31.254.33	08-25-2016 06:03 PM		Error in SSH connection.class "org.bouncycastle.crypto.prng.VMPCRandomG...	
Cisco DNS		Cisco 2960	172.31.254.33	08-25-2016 06:02 PM		Error in SSH connection.class "org.bouncycastle.crypto.prng.VMPCRandomG...	
Cisco DNS		Cisco 2960	172.31.254.33	08-22-2016 11:17 AM			
Cisco DNS		CheckPoint Smart Center	172.31.254.28	07-25-2016 03:14 PM		Timeout in command exit	
Cisco DNS		CheckPoint Smart Center	172.31.254.28	07-25-2016 03:14 PM		Timeout in command exit	
Cisco DNS		CheckPoint Smart Center	172.31.254.28	07-25-2016 03:14 PM		Timeout in command exit	

Figure 54: Task History Screen

You can download a log of the history by clicking the View Log button  in the Log column for the device.

Task File Repository

You can upload a task file in the **Tasks File Repository** screen.

Tasks File Repository

	Name	Size	Descriptio...	Synced Agents	Unsynced Agents
<input checked="" type="checkbox"/>	backbox-5.0.377.zip	227.5 MB			101

Figure 55: Tasks File Repository Screen

To upload a new tasks file:

1. In the **Tasks File Repository** screen, click the Add button  **Add**. The **New Tasks File** dialog box appears.

Tasks

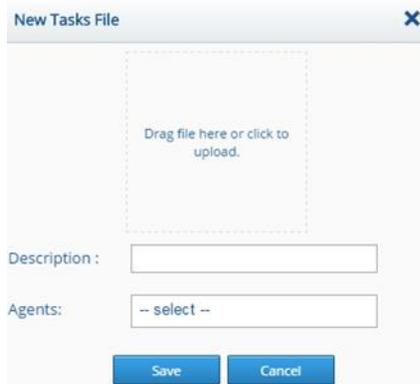


Figure 56: New Tasks File Dialog Box

2. Drag a file from your computer to the Upload File Box in the center, or alternately, click on the Upload File Box and select a file to upload.
3. Add a description, select an agent, and click Save .

To edit a tasks file:

1. Select a file and click the Edit button . The **Edit Tasks File** dialog box appears, with the name of the tasks file in the Title Bar, for example:

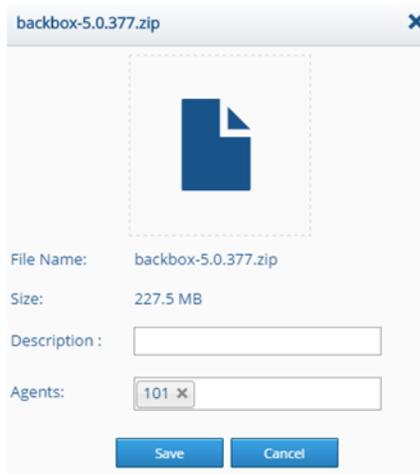


Figure 57: Edit Tasks File Box

2. Edit the Description and Agents fields as desired, and click Save .

To delete a tasks file:

1. Select the file you want to delete and click the Delete button . A prompt appears, asking you to confirm deletion.
2. Click Yes.

Tasks



Chapter 7. Health Checks

Health Checks enables you to monitor the health of every device in your system by automatically running a set of tests on the device, at regular intervals. Health Checks includes a database of hundreds of scripts that test the health of a wide variety of devices. The tests monitor issues depending on the type of device.

You can also write and upload additional scripts if required. For additional information on writing scripts see the chapter on Writing Command Scripts.

The Health Checks Alerts Screens

The **Health Checks Alerts** screen displays the results of the checks and alerts you of failures or suspected failures of a device. On the **Sidebar**, click Health Checks, which by default displays the **Health Checks Alerts** screen:

Severity	Date	Name	Device Name	IP Address	Alert
Critical	09-13-2016 11:28 AM	CPwD Monitor	CheckPoint Smart Center	172.31.254.28	cpWatchDog is NOT running.
Warning	09-13-2016 11:28 AM	cp.macro and license comparis...	CheckPoint Smart Center	172.31.254.28	License version might be not compatible.
Critical	09-13-2016 08:56 AM	ClusterXL all VLAN monitoring	CheckPoint Smart Center	172.31.254.28	ssh: connect to host 172.31.254.28 port 22: No route to host
Critical	08-31-2016 03:17 AM	License check	CheckPoint Smart Center	172.31.254.28	An expired license was found.
Critical	08-31-2016 03:17 AM	CPwD Monitor	CheckPoint Smart Center	172.31.254.28	cpWatchDog is NOT running.
Warning	08-31-2016 03:17 AM	cp.macro and license comparis...	CheckPoint Smart Center	172.31.254.28	License version might be not compatible.

Figure 58: Health Checks Alerts Screens

The severity of the failure (Critical or Warning) is displayed along with the device name and IP address. The Alert column displays the event that caused the failure.

In addition, the **Health Checks Alerts** screen displays a row of buttons with the following functions:

CHECK LOG

The Check Log button Check Log displays a downloadable Trail Log for the selected Health Checks alert, like this:

Health Checks

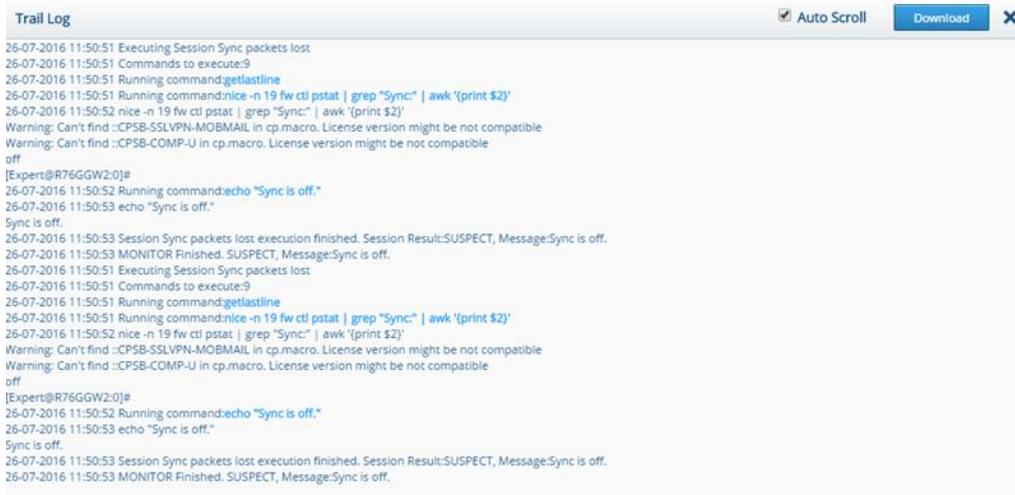


Figure 59: Trail Log for a Health Checks Alert

CHECK INFORMATION

The Check Information button  Check Information displays information on the selected Health Checks alert, like this:

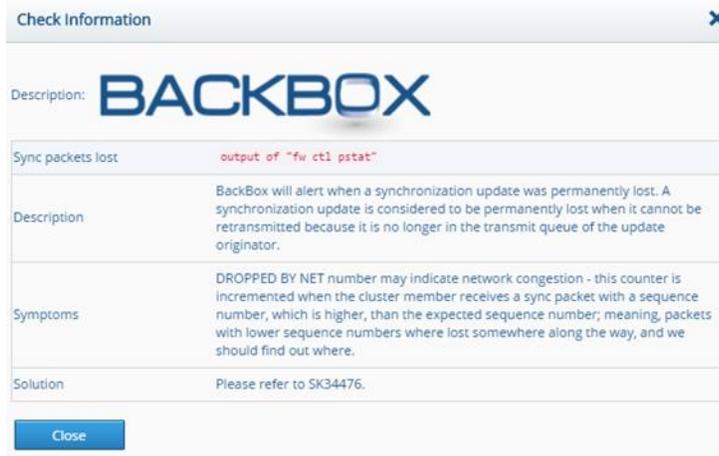


Figure 60: Check Information Dialog Box

ACKNOWLEDGE

The Acknowledge button  Acknowledge enables you to acknowledge the selected alert. **Note:** Clicking the Acknowledge button  Acknowledge removes the alert from the **Health Checks Alerts** screen. However, if the issue is not fixed, the next test run will cause the device to be displayed again as a failed device in the **Health Checks Alerts** screen.

Health Checks

CHANGE CHECK INTERVAL

The Change Check Interval button  **Change Check Interval** enables you to override the default interval for the health check and specify a new interval.

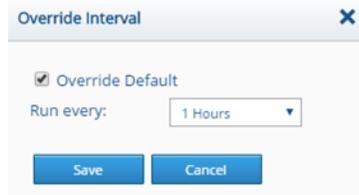


Figure 61: Override Interval Dialog Box

DISABLE

The Disable button  **Disable** lets you disable a selected health check for a selected device.

Note: Clicking the Disable button  **Disable** removes the alert from the **Health Checks Alerts** screen.

DISABLE ALL

The Disable All button  **Disable All** lets you disable a selected health check from all of the devices that are running it.

Queue Screen

The **Health Checks Queue** screen displays all health checks that have been scheduled to run. For each device to which a health check has been assigned, the screen displays the device name, device IP, check name, duration (how long the device has been running the check), and status of the check (for example: Running):



Figure 62: Health Checks Queue Screen

To terminate a health check for a specific device, click the button in the Terminate column for that device. To terminate all health checks in the Queue, double-click the Terminate All button .

Health Checks

Health Checks Configuration Screen

The **Health Checks Configuration** screen enables you to assign a health check to a device. The **Health Checks Configuration** screen looks like this:

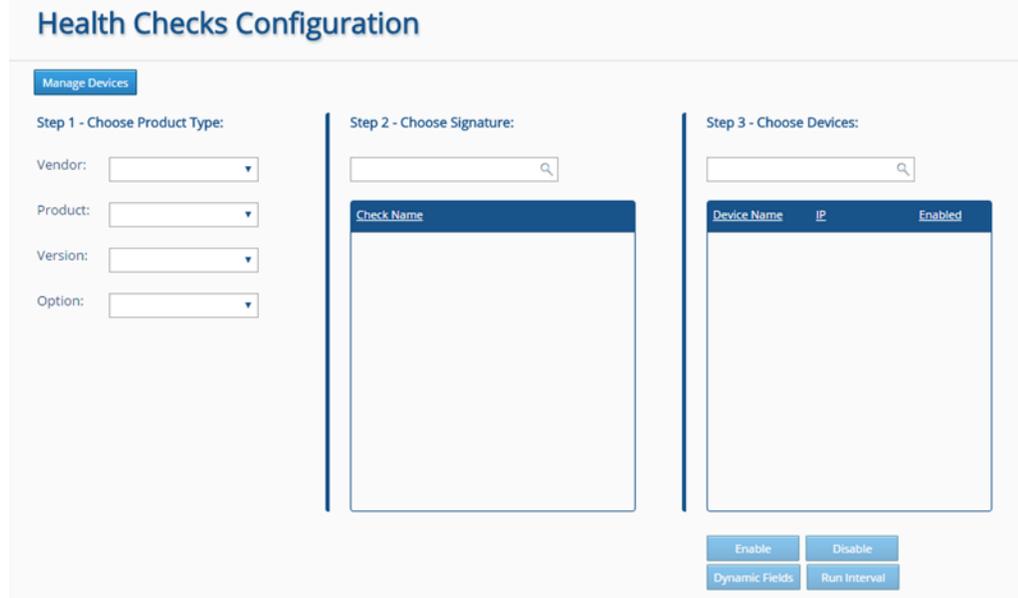


Figure 63: Health Checks Configuration Screen

To specify a check for a particular device:

1. Choose the product type. Use the fields to select the vendor, product, version, and an option such as SSH or Telnet.

You can also use the Manage Devices button Manage Devices to enable or disable health checks for devices as shown here:

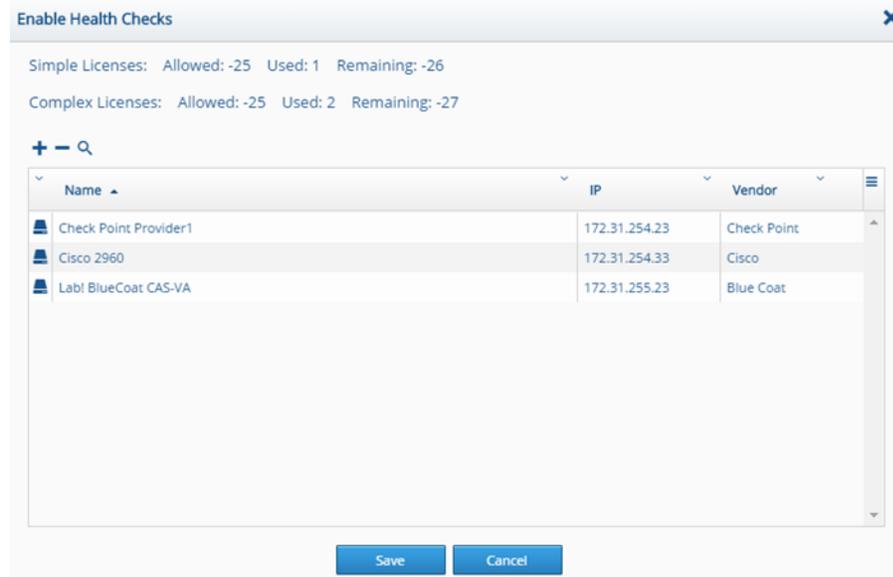


Figure 64: Enable Health Checks Dialog Box

Health Checks

In the **Enable Health Checks** dialog box, click the Add Devices button **+** to display a list of devices. Select the devices whose health you want to check and click Add **Add**. The selected devices appear in the **Enable Health Checks** screen. Click Save **Save**.

2. Choose a signature, which is the name of the health check. Signatures specify the type of health check that the system will run on the device. Each signature checks a specific device parameter. The signatures for the type of device are listed under check name.
3. Choose a device whose health you want to check in the Device Name list. There are four buttons under this area that enable you to do the following:

Use the Enable button **Enable** and Disable button **Disable** to enable or disable selected devices in the list.

You can also click the Run Interval button **Run Interval** to display a dialog box that enables you to specify the frequency with which the health check will run.

You can use the Dynamic Fields button **Dynamic Fields** to specify additional fields to control the execution of the health check.

Health Checks



Chapter 8. Harmonization

BackBox enables you to run harmonization signatures (tests) to test whether particular devices conform to a set of rules. The harmonization rules are stored as signatures which are contained in templates and sections listed in the **Harmonization Configuration** screen.

The Harmonization button in the **Sidebar** displays screens that enable you to do the following:

Table 6: Harmonization Screens

To do this:	Use this:
Create or edit harmonization templates.	Harmonization Configuration screen
Create harmonization sections for organizing harmonization signatures within a template.	Harmonization Configuration screen
Edit or create new harmonization signatures for a section. Create remediation procedures for devices that failed the harmonization signature.	Harmonization Signature screen
Schedule harmonization jobs to be run for specified devices. (The harmonization job runs all the signatures contained in a template and its sections.)	Harmonization Jobs screen
View a list of devices for whom harmonization jobs are scheduled. Terminate a harmonization job in the queue.	Harmonization Queue screen
View a list of harmonization jobs along with the devices they tested, the name of the signature that was run, the status of the test (success, failure, etc.) and the reason for failure of the signature.	Harmonization History screen

Harmonization Configuration Screen

The **Harmonization Configuration** Screen displays a list of existing harmonization templates and enables you to edit them, or to create new templates. A template is simply a logical container that helps you organize harmonization signatures (tests).

Templates contain sub-containers called categories for which you can create signatures.

Harmonization

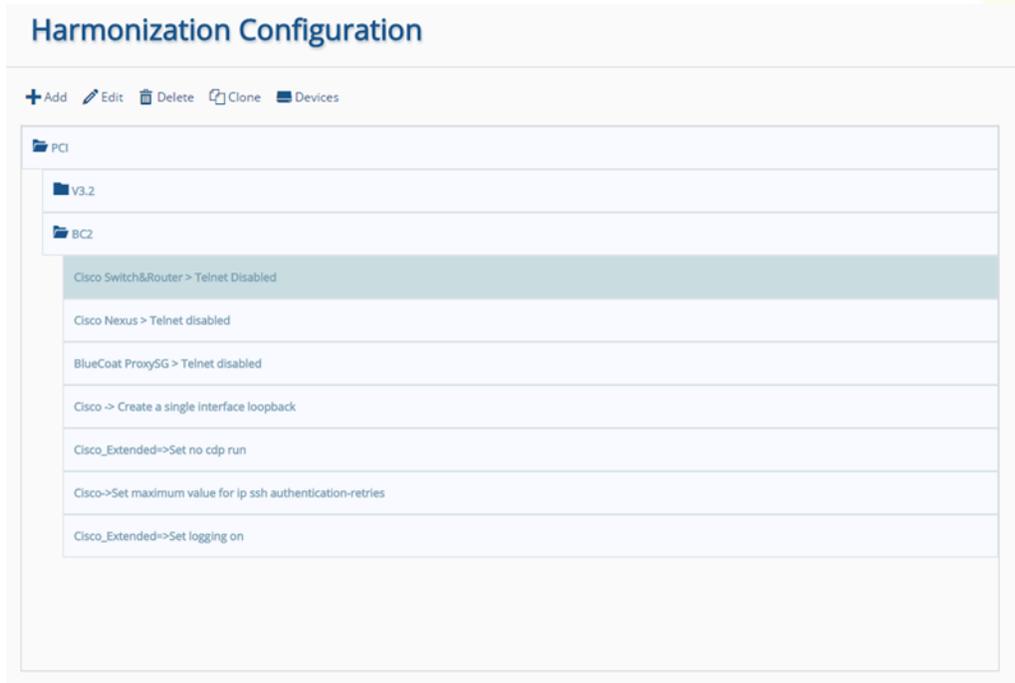


Figure 65: Harmonization Configuration Screen Displaying Harmonization Templates, Sections, and Signatures

ADDING A NEW HARMONIZATION TEMPLATE

You can add a new harmonization template to contain harmonization sections and signatures.

To add a new harmonization template:

1. In the **Harmonization Configuration** screen, click the Add button **+ Add**. The **Add Harmonization** dialog box appears:

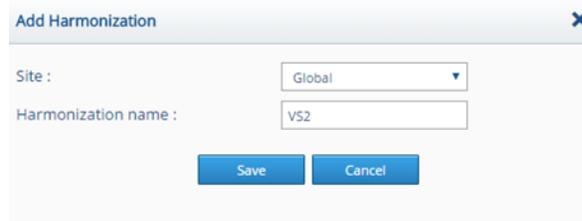


Figure 66: Add Harmonization Dialog Box

2. In the **Add Harmonization** dialog box, select a site, type a harmonization name and click Save.

The name now appears in the list of harmonization templates on the **Harmonization Configuration** screen.

Harmonization



ADDING A HARMONIZATION SECTION

To add a signature, add at least one section to a template. (Sections are logical containers for which you can create signatures and are contained in a template.)

1. To add a section to a template listed in the **Harmonization Configuration** screen, click the template to which you want to add the section. A list of existing sections appears, like this:

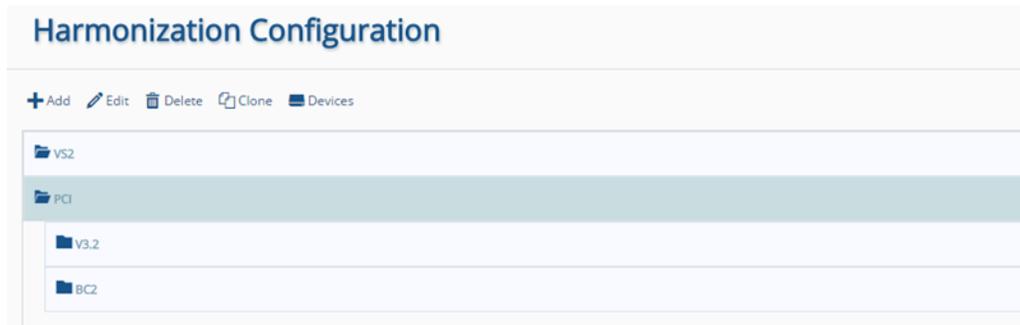


Figure 67: Harmonization Configuration Screen Displaying Templates and Sections

2. Click the Add button **+ Add** to display the **Add Harmonization Section** dialog box:

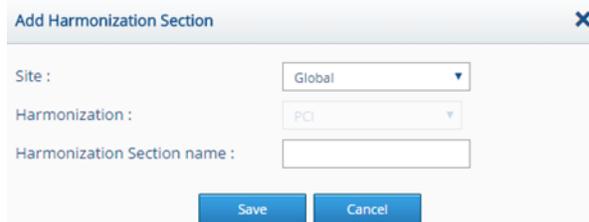


Figure 68: Add Harmonization Section Dialog Box

3. Select a site and type a name for the section. The Harmonization field will display the name of the template to which the category belongs.
4. Click Save. The section is now displayed on the **Harmonization Configuration** screen.

EDITING A HARMONIZATION TEMPLATE OR SECTION

You can edit the name and the site of an existing Harmonization Template or Section. Select the Template or Section you want to edit and click the Edit button **Edit**. Make the changes in the relevant fields and click Save.

Harmonization

ADDING HARMONIZATION SIGNATURES TO A SECTION

To add harmonization signatures to a section:

1. In the **Harmonization Configuration** screen, click the template and then the section to which you want to add the signature and click the Add button **+Add**. The **Available Harmonization Signatures** screen appears:

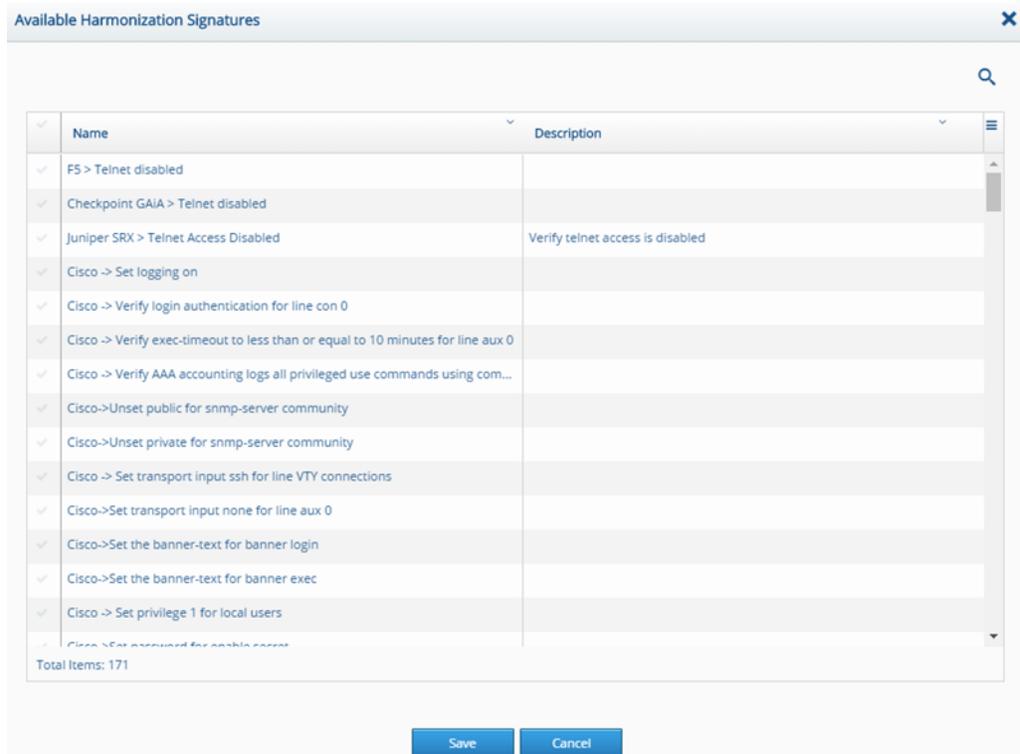


Figure 69: Available Harmonization Signatures Dialog Box

2. Select the Signatures you want to add to the Section and click Save. The Signatures are now displayed under the Section on the **Harmonization Configuration** screen.

HARMONIZATION SIGNATURE SCREEN

The **Harmonization Signatures** screen enables you to create a new harmonization signature or edit an existing one.

To create a new harmonization signature:

1. In the **Harmonization Signature** screen, click the Add button **+Add**. The **Add Harmonization Signature** dialog box appears.



Harmonization

Figure 70: Add Harmonization Signature Dialog Box

2. Type a name for the signature and click Save. The signature is displayed on the **Harmonization Signatures** screen. To add dynamic fields and commands to the signature, see Editing Harmonization Signatures, below.

EDITING HARMONIZATION SIGNATURES

After you have created a new signature, you can specify dynamic fields and commands for it.

1. On the **Harmonization Signatures** screen, select the signature that you want to edit and click the Edit button . The **Signature Configuration** dialog box appears with the name of the signature:

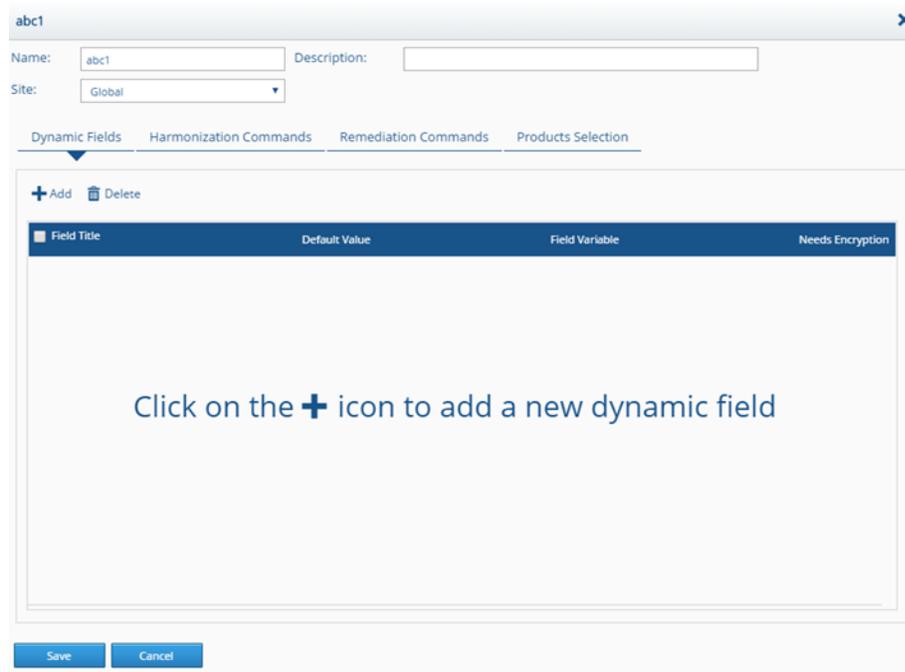


Figure 71: Signature Configuration Dialog Box

2. Specify or edit the name, description, and site as desired.
3. Add, edit, or delete dynamic fields, harmonization commands, remediation commands, and products selection and click Save.

For an explanation of dynamic fields and commands, see the chapter on Customize.

Harmonization

Harmonization Jobs Screen

The **Harmonization Jobs** screen displays a list of scheduled harmonization jobs and their status:

Name	Devices	Schedule	Notification	Remediation	Next Execution	Site	Status
cisco	1		syslog	✗	Not Scheduled	Global	✗
xxl	3			✓	Not Scheduled	Global	✓

Figure 72: Harmonization Jobs Screen

The screen shows how many devices are running the job, along with the specified schedule and notification. Furthermore, the screen displays whether the job will attempt remediation, its next execution, and the status of the job: ✓ Scheduled or ✗ Unscheduled.

Note: If you selected Run Now for the job, the screen will display the job as Scheduled ✓, even though the Next Execution field displays Not Scheduled.

You can also select a job in the list and use the buttons at the top of the screen: Edit, Delete, or, Run Now.

CREATING A NEW HARMONIZATION JOB

Once you have created a harmonization template, you can schedule and run the template's signatures on selected devices. To add a new harmonization job:

1. In the **Harmonization Jobs** screen, click the Add button **+Add**.
The **New Harmonization Job Configuration** dialog box appears:

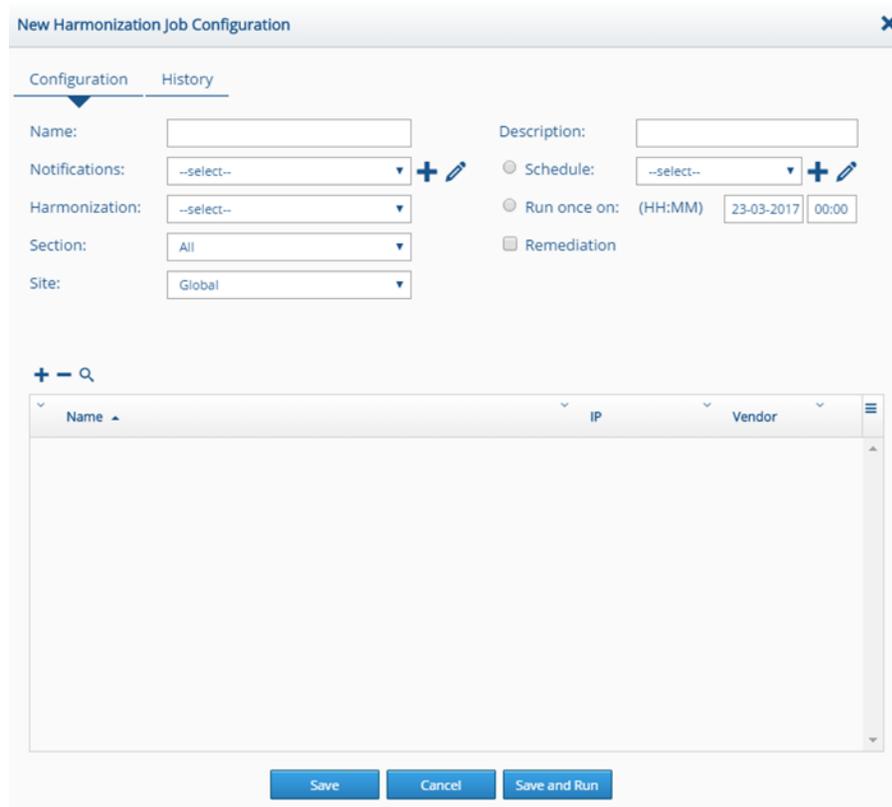


Figure 73: New Harmonization Job Configuration Screen

2. Type a name and description for the job in the appropriate fields.
3. In the Notifications list, select a notification method, or click the Add Notification button **+** or Edit Notification button **✎** to add a new notification method or edit an existing one. For more information on notifications, see the chapter on Notifications.
4. In the Harmonization list, select a template.
5. In the Section list, select the section whose signatures you want to run, or choose Select All. **BackBox** will run all the signatures contained in the selected sections.
6. Select a site and a schedule (you can also create or edit an existing schedule for the job by clicking the Add Schedule button **+** or Edit Schedule button **✎**).
7. To run the harmonization job once, select the Run Once On: option **Run once on:** and specify the date and time when you want the job to run.

Harmonization

8. If you want the job to run the remediation commands for the template (defined in the **Signature Configuration** dialog box), select Remediation.
9. To add devices that will run the harmonization job, click the Add Devices button **+** above and to the left of the Devices list. The **Add Devices** dialog box appears:

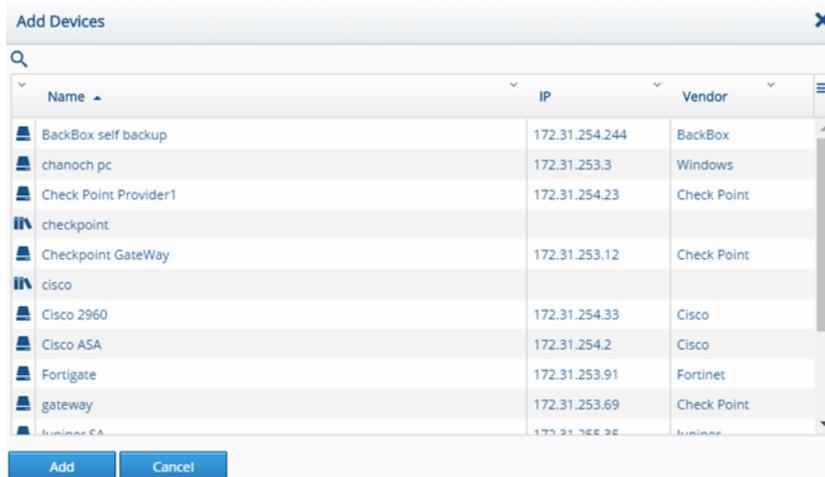


Figure 74: Add Devices Dialog Box

10. Click the devices on which you want to run the harmonization job and click Add **Add**.
11. In the **New Harmonization Job Configuration** screen, click Save **Save** or Save and Run **Save and Run**. The new job appears on the **Harmonization Jobs** screen and will be run at the time you specified.

Harmonization Queue Screen

You can view a list of devices for which you have scheduled harmonization jobs in the **Harmonization Queue** screen:

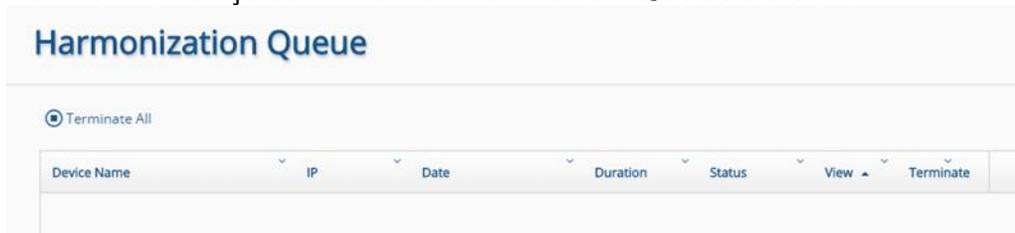


Figure 75: Harmonization Queue Screen

The **Harmonization Queue** screen displays the device name and its IP, the signature name, the date and duration of the harmonization job, and its current status (running, pending, or in queued). It also enables you to view the job’s log in real time. In

Harmonization

addition, you can terminate selected harmonization jobs, or terminate all harmonization jobs:

- To terminate a job in the queue, click the Terminate button  Terminate for the job.
- To terminate all the harmonization jobs for all devices in the queue, click the Terminate All button  Terminate All at the top of the screen.

Harmonization History Screen

You can view a list of all harmonization jobs and signatures that were run on devices by displaying the **Harmonization History** screen:



Job Name	Signature Name	Device Name	IP	Date	Status	Failure Reason	Log
----------	----------------	-------------	----	------	--------	----------------	-----

Figure 76: Harmonization History Screen

In the Status column, the screen also shows whether the device successfully ran the harmonization job or failed. If the device failed to run the job, the reason for failure is stated.

You can also click on a job's Log button  to display and download a detailed log of the jobs and their status.

Harmonization

Chapter 9. Devices

Backups can be done on a single device or on a group of devices at the same time.

Devices Screen

To display the **Devices** screen, on the **Sidebar** click Devices:

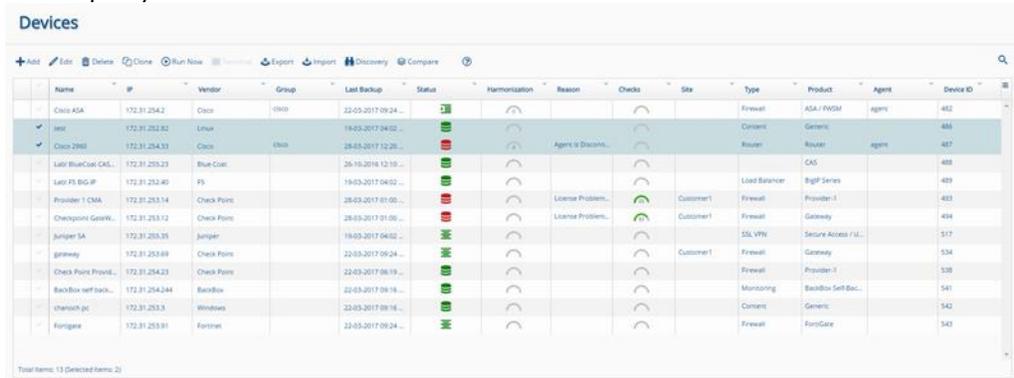


Figure 77: Devices Screen

The **Devices** screen displays the following columns:

Table 7: Device Fields

Fields	Description
Name	The name given to the device.
IP Address	The IP address assigned to the device. IPv6 addresses are supported.
Vendor	Name of the vendor of the device.
Group	The group to which the device is assigned.
Last Backup	Date of last backup.
Status	Displays information about the backup status: Successful/ Suspected/ Failed and more. See Devices Table Legend for other statuses.
Reason	Reason the backup failed or was not completed successfully.
Checks	Whether health checks have been enabled for the device.
Site	The site to which the device is assigned. When the site is locked to an agent, you cannot run a backup job from Global.
Type	The type of device (Switch, Firewall, etc.).
Product	The device product (Gateway, Router, etc.).

Devices

Fields	Description
Agent	The agent to which the device is assigned.
Harmonization	The harmonization that is set up for the device.
Device ID	An ID that has been assigned to the device.

The **Devices** screen also displays buttons that enable you to perform the following tasks:

Table 8: Devices Toolbar Buttons

Buttons	Description
 Add	Add a device for backup.
 Edit	Edit a device's details.
 Delete	Delete a device.
 Clone	Clone an existing device so that the clone has the same backup parameters.
 Run Now	Click to run the backup immediately.
 Export	Export a device list to a CSV file.
 Import	Import a device list from a CSV file.
 Discovery	Discover devices within a specified IP range. See below, Discovering Devices Within a Specific IP Range for details. IPv6 addresses are supported.
 Compare	Compare Backup files by comparing their ASCII.
	Legend: display the icons and their meaning. See Devices Table Legend below.

DEVICES TABLE LEGEND

The Devices Table Legend provides a key to understanding the status icons in the Status column on the **Devices** screen:

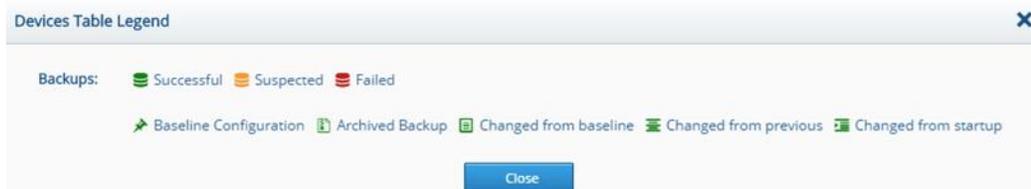


Figure 78: Device Table Legend

Devices

DISCOVERING DEVICES WITHIN A SPECIFIC IP RANGE

The **Devices** screen's Discovery button  enables you to search for all devices within a specified IP range. Once a list of devices is generated, you can then add selected devices to **BackBox**.

To search for devices within an IP range:

1. On the **Devices** screen, click the Discovery button . The **Discovery** dialog box is displayed:

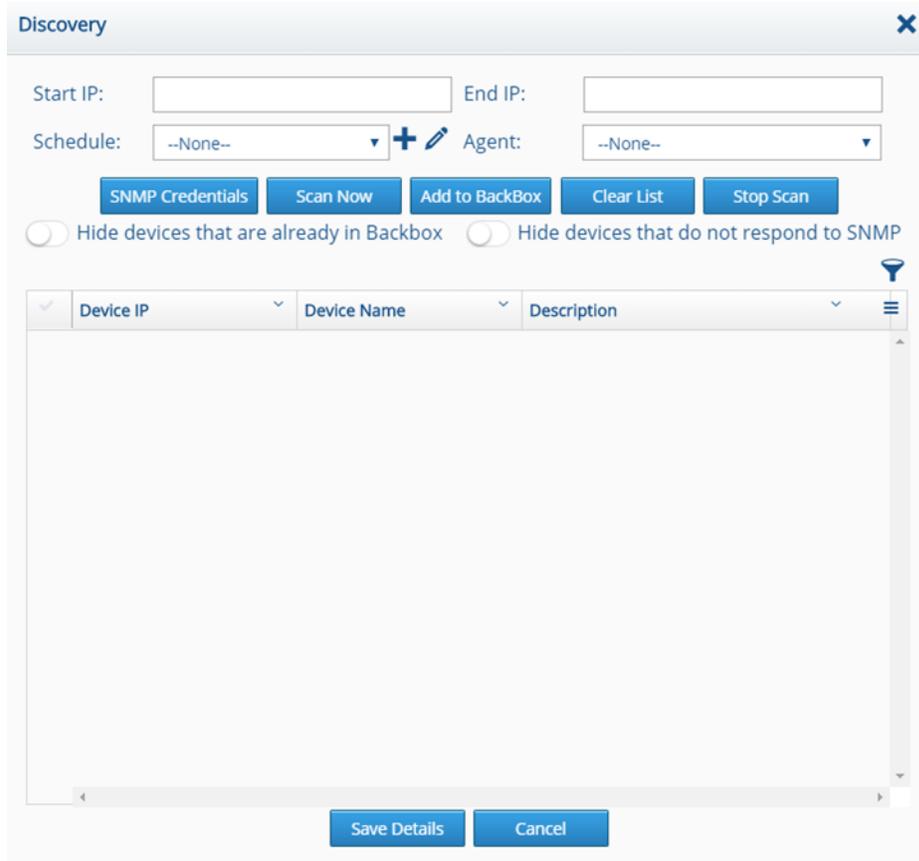


Figure 79: Discovery Dialog Box

2. Use the Start IP and End IP fields to specify the range of IP addresses you are searching for.
3. Click the **SNMP Credentials** button  to display the **SNMP Details** dialog box:

Devices

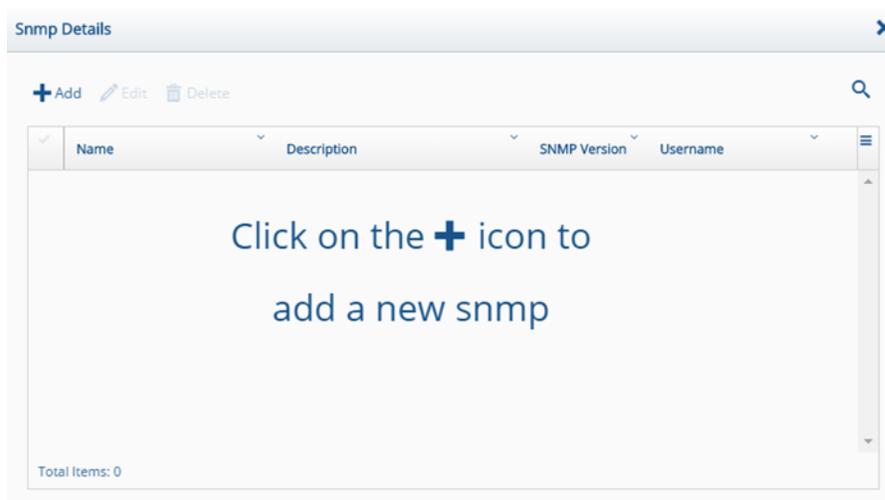


Figure 80: SNMP Details Dialog Box

4. Because devices are discovered by sending out SNMP messages, you need to configure SNMP details here. Click the Add button **+Add** or Edit button **Edit** to add or edit SNMP details:

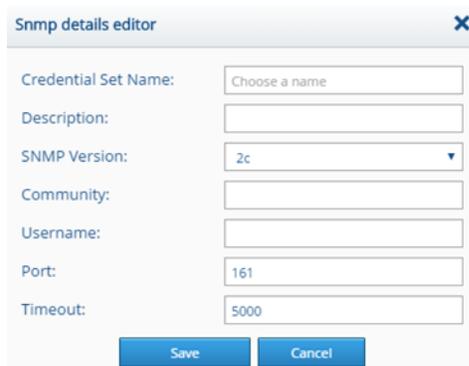


Figure 81: SNMP Details Editor Dialog Box

5. In the Credential Set Name and Description fields, type a name for the credentials, and a short description. Click the SNMP Version field and select the appropriate SNMP version. After selecting a version, the appropriate fields appear. Fill in the remaining fields that appear and click Save. The Credential Set Name for the SNMP details appears now in the **SNMP Details** dialog box.
6. Close the **SNMP Details** dialog box to return to the **Discovery** dialog box.
7. Click the Scan Now button **Scan Now**. A list of devices within the specified IP range is displayed. To stop the scan, click the Stop

Devices

Scan button . To clear the list of devices, click the Clear List button .

- To add a device to **BackBox**, select the device and click the Add to BackBox button .

COMPARING BACKUPS

BackBox enables you to compare backup files, line by line. This enables you to identify where backups have added or deleted lines, etc.

To compare backups:

- In the **Devices** screen, click the Compare button  **Compare** at the top of the screen. The **Compare Backups** dialog box appears:

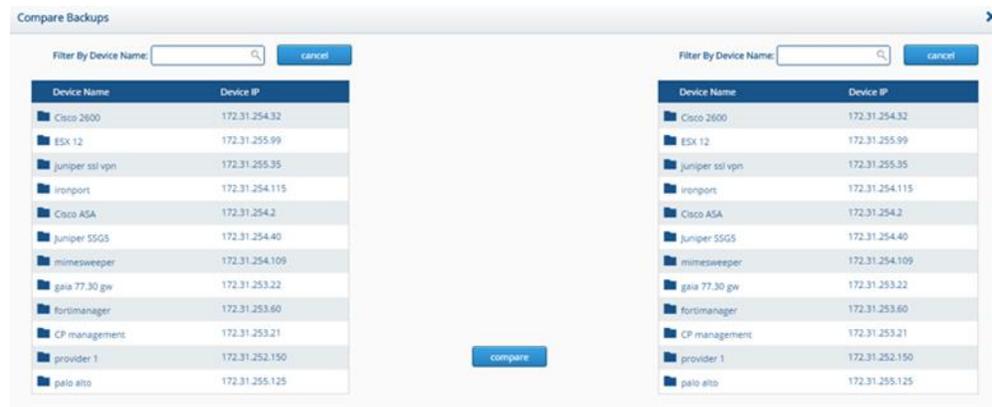


Figure 82: Compare Backups Dialog Box

All the devices with backup files in the **BackBox** system appear in both the left and right columns.

- In the left column, click a device and its subfolder. In the subfolder, click the backup file that you want to compare. The selected backup file will be highlighted in blue and a message above the Compare button  **Compare** appears, indicating that the file will be compared.
- Follow the same procedure for the right column. The selected backup file will be highlighted in blue and a message below the Compare button  **Compare** appears, indicating that the file will be compared.

For example, in the left column you may want to select a txt file that was generated at a certain date and time. In the right column, you might select the same file that was generated for the same device at a later date and time.

The **Compare Backups** dialog box records your selections like this:

Devices

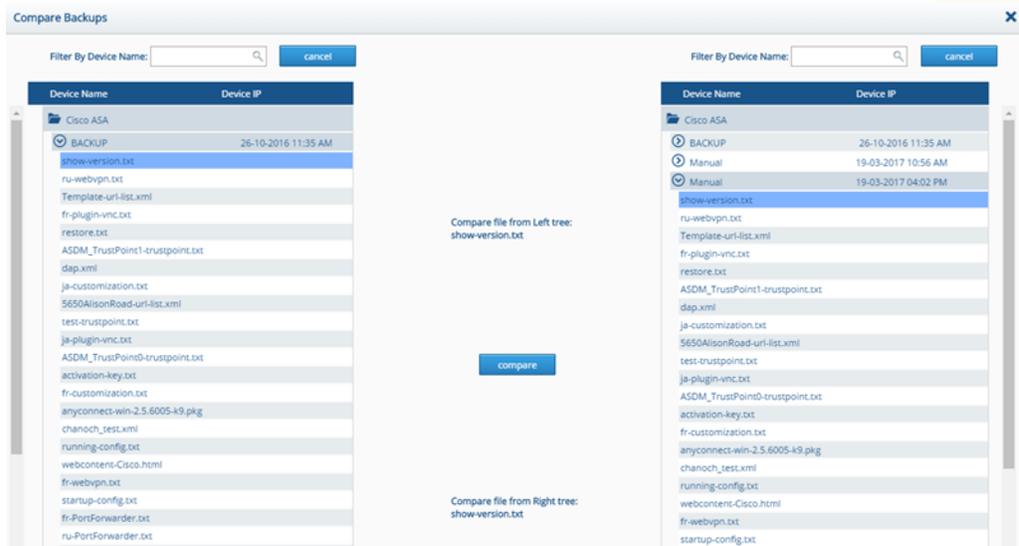


Figure 83: Compare Backups Screen with Files Selected

- Click the Compare button . The **Compare** screen appears, listing each line of both backups, like this:

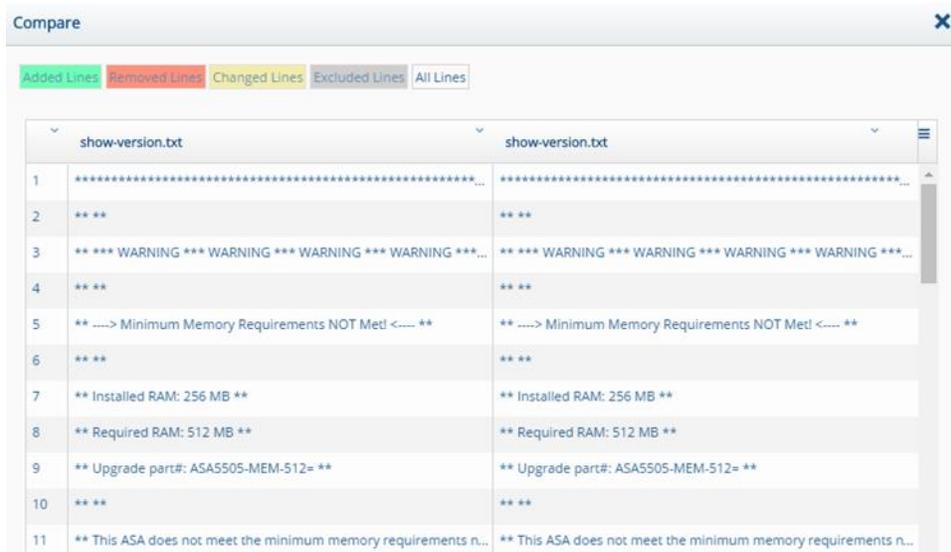


Figure 84: Compare Backups Screen with File Comparison Result

If the backup files are identical, an additional message is displayed informing you of this. If the backup files are not identical, you can scroll through the lines of the backup files and note the differences. Additions, deletions, and changes are highlighted by color as indicated by the colored buttons at the top of the screen. Additionally, you can click the buttons above to view the changed lines.

Devices

Moreover, you can export the comparison as a CSV or PDF, by clicking the Columns button ☰.

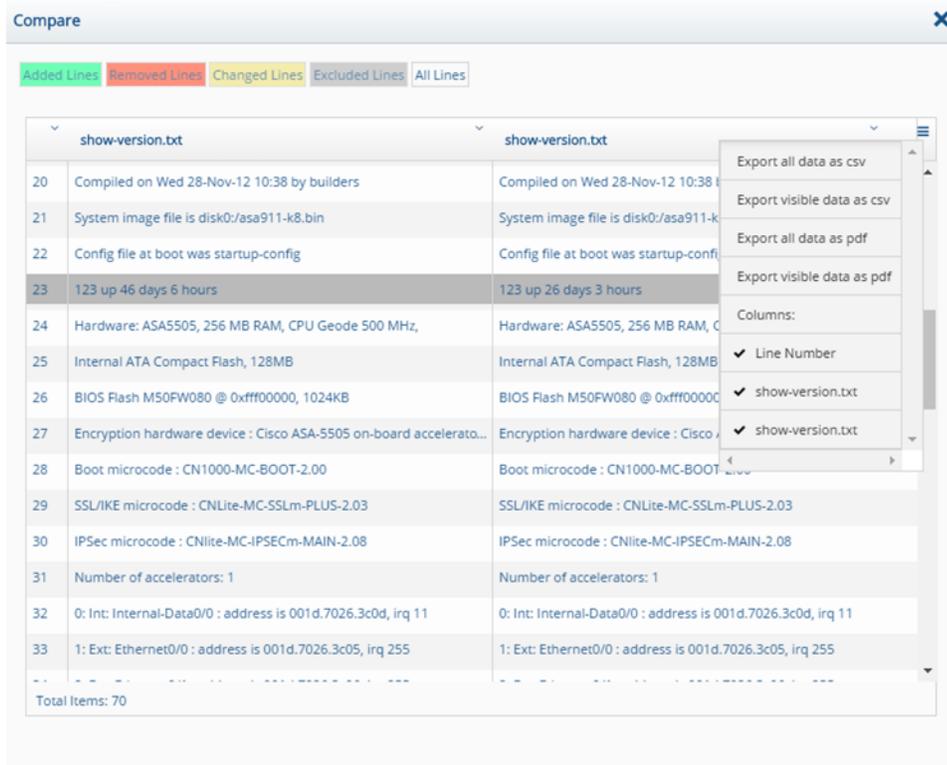


Figure 85: Compare Screen Showing Excluded Line in Grey and Export Options

DISPLAYING THE DETAILS OF AN INDIVIDUAL DEVICE

To display the details of an individual device listed on the **Devices** screen, click a device name in the list. The **Device Details** screen appears with the device name, displaying the following tabs: **Device Details**, **Device History**, **Harmonization**, **Health Checks**, and **Inventory**. The **Device Details** screen default to the **Device Details** tab.

Devices

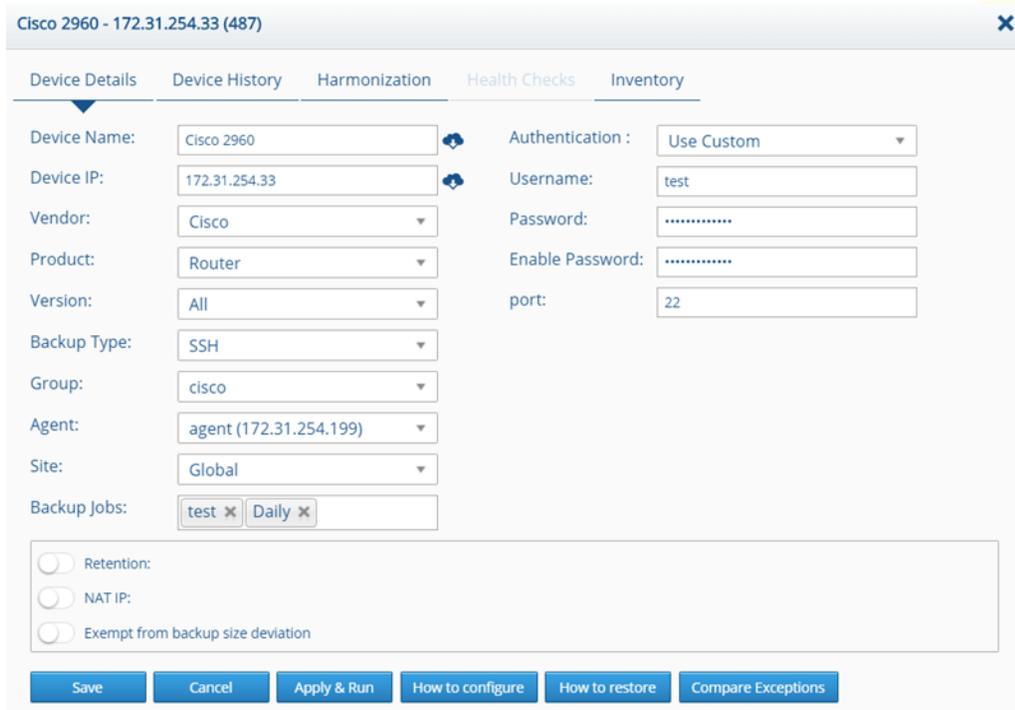


Figure 86: Device Details Screen Displaying Device Details Tab

DEVICE DETAILS TAB

The **Device Details** tab displays information about the device. You can edit the details, then click Save to save the details, or click Apply and Run to immediately apply the device details and backup information. Depending on the device, some, or all the fields in the following table appear:

Table 9: Device Details Fields and Buttons

Field/Button	Description
Device Name	Name of the device
Device IP	IP address of the device
Clear SSH	This button clears the SSH key for authorization.
Vendor	Vendor’s name
Product	Product name
Version	Product version
Backup Type	Backup type

Devices



Field/Button	Description
Group	The group of devices to which the device is assigned for backup.
Agent	The agent to which the device belongs.
Site	The site to which the device belongs.
Backup Jobs	The backup jobs to which the device is assigned.
Authentication	Select the method by which the device is authenticated: Custom, Template, or SSH.
Username	The username of the person accessing the device.
Password	The password of the person accessing the device.
Enable/Extra/Root/Expert-Password	Some devices enable access with an additional password.
Realm	The realm of the device
Login Path	The path for the login of the device
Server IP	The IP of the device's server
Port	The port used by the device
CMA IP	The IP of the Complex Matrix Arithmetic Processor (CMA)
<input type="checkbox"/> Retention:	Specify how many days backups and other files are retained. See below for details.
<input type="checkbox"/> NAT IP:	Click NAT IP to specify a NAT address for the device.
Apply & Run	Apply and run the backup with the changed device details.
How to configure	Provides detailed instructions on how to configure the backup.
How to restore	Provides detailed instructions on how to restore a backup configuration, if required.
Compare Exceptions	Enables you to specify a Compare Exception for a device so that you can exclude specific lines from the configuration when running the comparison feature.

Devices



RETENTION BUTTON

Click the Retention button Retention: to specify how many days backups and other files are retained. Clicking Retention displays two options:

- Backups
- Retention Policy

The Backups option enables you to type the number of days you want the backup to be retained.

Retention Policy enables you to edit the retention policy for backups and other files. Select the Retention Policy option and click the Edit button  next to it. The **Retention Policy** dialog box for the device appears:

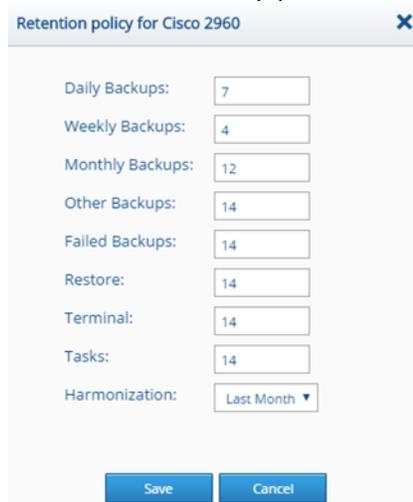


Figure 87: Retention Policy Dialog Box for a Device

Edit the number of days for retention and click Save.

DEVICE HISTORY TAB

The **Device History** tab lists all the backups performed on the device. The details displayed include the type (of backup), date (when the backup was performed), the file size (of the backup), status (success, failure, etc. of the backup) log (of the backup), failure reason (in case the backup failed), and comment (in the Comment column, you can type a short comment).

Devices

Type	Date	File S...	Status	Failure Reason	Log	Comment
Backup (Manual)	19-03-2017 04:02 PM	18.1 MB				...
Backup (Manual)	19-03-2017 10:56 AM	18.1 MB				...
Backup (Manual)	19-03-2017 10:48 AM			Backup Termina...		...
Backup (Manual)	28-10-2016 04:34 PM			Backup Termina...		...
Backup (Manual)	28-10-2016 04:32 PM			Backup Termina...		...
Backup (Daily)	26-10-2016 12:10 PM			Backup Termina...		...
Backup (Daily)	26-10-2016 11:35 AM	18.2 MB				...

Total Items: 7

Average backup size : 18.1 MB Total backup size : 54.4 MB

Figure 88: Device History Tab

You can view a detailed log of each backup by clicking the View Log button in the Log column. The **Backup Trail Log** screen appears:

```

Trail Log
msgid "Proxy Authentication Required"
19-03-2017 12:56:20 msgstr "Authentication du mandataire requise"
#: Kitsune.c:30
msgid "Web Server Authentication Required"
msgstr "Authentication du serveur Web requise"
#: Kitsune.c:97
msgid "Enter your username and password for %1$s at %2$s:%3$s"
msgstr "Enter votre nom utilisateur et mot de passe pour %1$s %2$s:%3$s"
#: Kitsune.c:100
msgid "Enter your username and password"
msgstr "Introduire votre nom utilisateur et mot de passe "
#: Kitsune.c:108
#: Gwyllion.c:136
msgid "Username:"
msgstr "Nom utilisateur : "
#: Kitsune.c:112
#: Gwyllion.c:137
msgid "Password:"
msgstr "Mot de passe : "
#: Amphisbaena.c:39
msgid "Enter URL/Web Address"
msgstr "Entrer adresse URL/Web "
19-03-2017 12:56:20
#: Amphisbaena.c:54
msgid "Wrong URL!"
19-03-2017 12:56:20 msgstr "URL incorrect!"
#: Amphisbaena.c:69
msgid "Are you sure you want to close your session?"
msgstr "tes-vous certain de vouloir fermer la session?"
    
```

Figure 89: Example for Backup Trail Log Screen

To download the log, click the Download button . The **Device History** screen also displays buttons that enable you to restore a configuration from those listed, or perform other actions as detailed in the following table:

Table 10: Device History Buttons

Devices

Button	What it Does
 Restore	Restores the selected device configuration. If a Restore script was written for a device on the Restore tab of Customize, clicking this button will start the script.
 Download	Downloads the selected configuration
 Compare	Compares backup files
 Compare Baseline	Compares the selected configuration to a Baseline configuration
 Set Baseline	Enables you to set a configuration as a Baseline
 Delete	Deletes a backup from the list
 Terminate	Terminates selected backups in the list
 Archive	Archives selected backup files

HARMONIZATION TAB

The **Harmonization** tab displays the scheduled harmonization tests for the device:

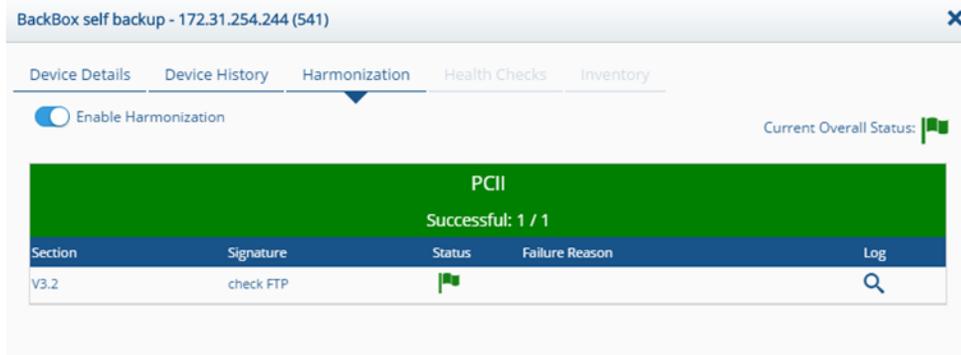


Figure 90: Harmonization Tab

For each harmonization test the following is displayed: section name, signature name, the status of the harmonization, the failure reason (in case of failure), and the log of the harmonization test. You can enable/disable harmonization tests for the device from the **Harmonization** tab.

Devices

HEALTH CHECKS TAB

The **Health Checks** tab displays a list of health checks (issues) for which the device is checked. The details displayed include:

- Name of the health checks (that were run for the device, like “Too many open files” or “License Expired”)
- Date (the date and time of the health check)
- Status of the health check (Success, Suspected, Failure)
- Failure reason
- View Log option (enables you to view a downloadable trail log)
- Interval (the time of periodic health checks)
- Info (information for troubleshooting).

This tab only appears if there are health checks configured for the device.

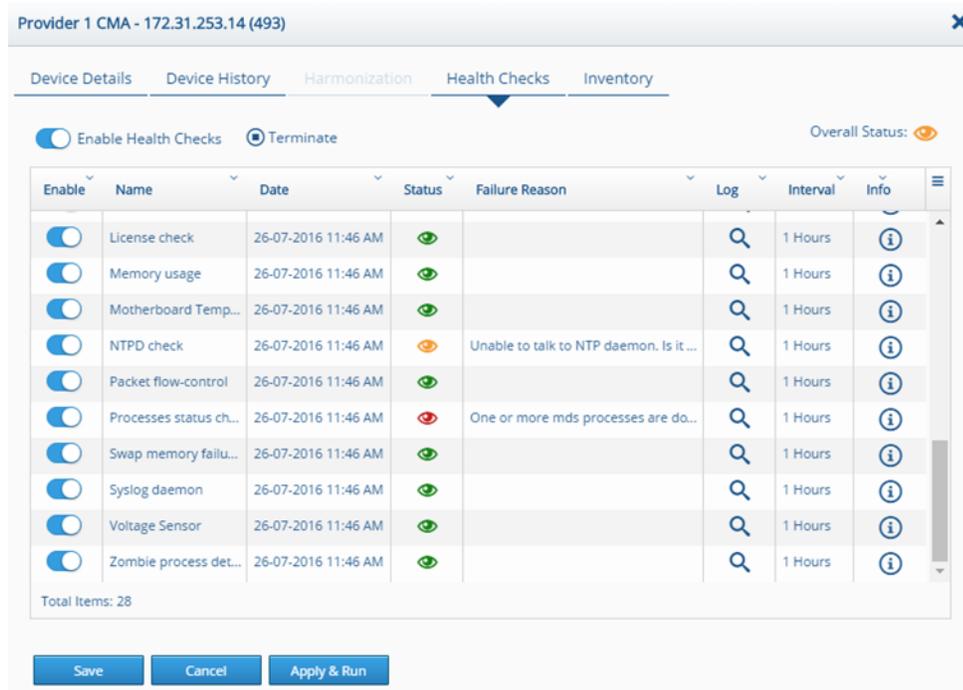


Figure 91: Health Checks Tab

INVENTORY TAB

The **Inventory** tab displays additional information about the device. These fields can display information on CPU, memory, and many other items that are relevant to the device.

You add fields to the **Inventory** tab in the Inventory Section of the **Dynamic Fields** tab. See Understanding the Inventory Section in the Customize chapter. You can then write a script on the Devices

Inventory tab in Customize to populate the fields with the appropriate information (see Inventory Tab). Here is an example of the information that you might have on the **Inventory** tab:

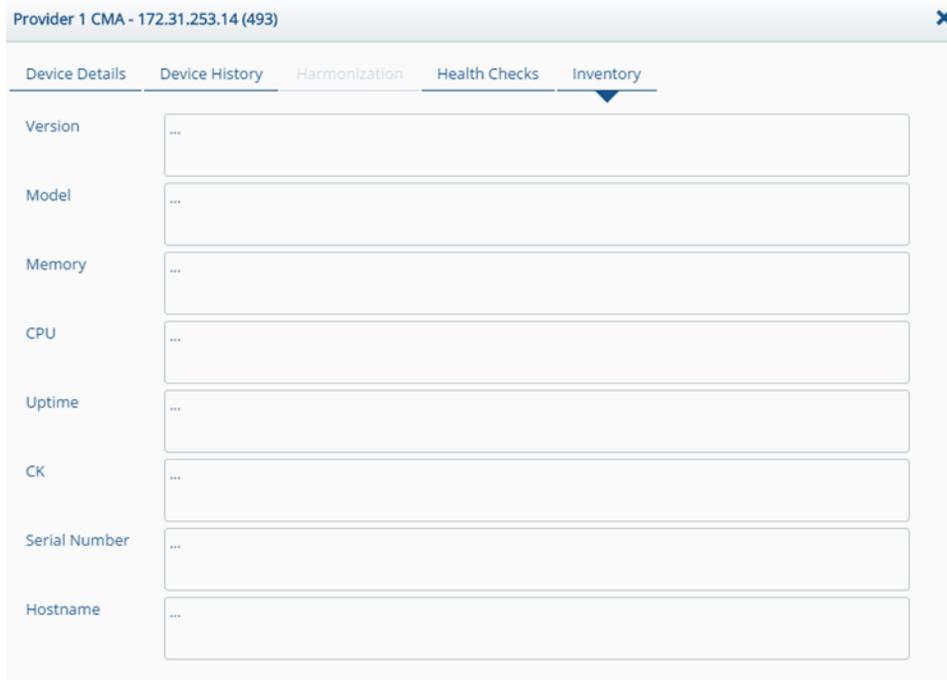


Figure 92: Example of Inventory Tab

ADDING A NEW DEVICE

To add a new device:

1. On the **Devices** screen, click the Add button **+ Add**. The **New Device Configuration** dialog box (Step 1 of 4) appears:

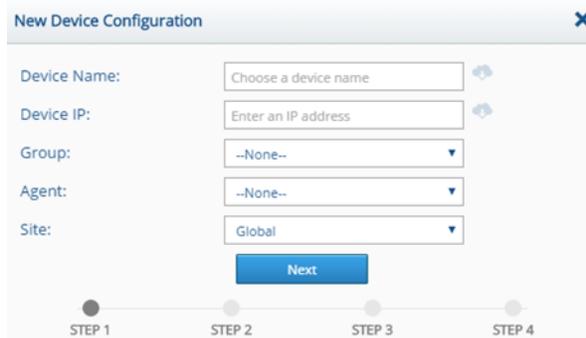


Figure 93: New Device Configuration Dialog Box - Step 1 of 4

2. Add the device name, the device IP address, and the group to which you want to assign the device and click Next **Next**. The second dialog box appears:

Devices



Figure 94: New Device Configuration Dialog Box - Step 2 of 4

3. Complete the Vendor, Product, Version, and Backup Type fields, and click Next . The third dialog box appears:

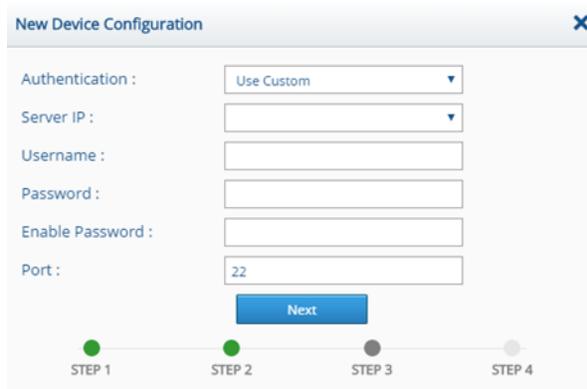


Figure 95: New Device Configuration Dialog Box - Step 3 of 4

4. Complete the Authentication, Username, Password, (Super Password,) and Port fields, and click Next . The fourth dialog box appears:

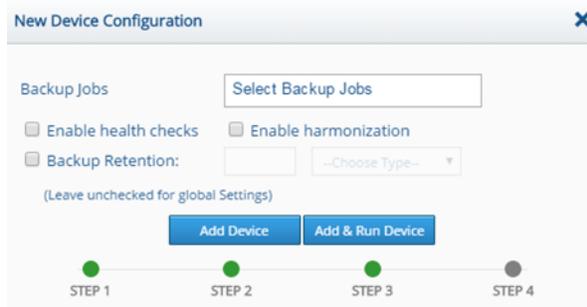


Figure 96: New Device Configuration Dialog Box - Step 4 of 4

5. Click in the Backup Job field to select a backup job and, optionally, check Enable Health Checks or Enable Harmonization.
6. For other than Global setting, check the Backup Retention field.

Note: Leave unchecked for Global settings.
Devices

If you choose Backup Retention, two additional fields are displayed: one for the number of days that backups are retained, and one for choosing backups or setting retention policy.

7. Indicate the number of days that backups are retained, or select Retention Policy and click the Edit button  to set a new retention policy.
8. Click Add Device  or Add & Run Device .

DELETING A DEVICE

To delete a Device:

1. On the **Devices** screen, select the device to be deleted.
2. Click the Delete button  Delete. The **Delete Device** dialog box appears requesting confirmation.
3. Click **Yes**.

Devices Groups Screen

Backups can be done on a single device or on a group of devices at the same time. **BackBox** enables the grouping of devices to make backups more manageable and efficient. The **Devices Groups** screen displays the list of devices grouped together for backup. Groups can be created based on vendor or by the device function such as Firewall, Load Balancer, Switch etc.

The **Device Groups** screen displays the device group name, together with information on how many devices are included in the group, when the group was created and when it was last modified:



Device Groups					
+ Add  Edit  Delete					
	Name	Description	Devices	Created	Modified
<input checked="" type="checkbox"/>	checkpoint		1	09-08-2016 05:17 PM	09-08-2016 05:17 PM
<input checked="" type="checkbox"/>	cisco		2	28-07-2016 11:14 AM	28-07-2016 11:14 AM

Figure 97: Devices Groups Screen

ADDING A NEW DEVICE GROUP

To add a new Device Group:

Devices

1. On the **Device Groups** tab click the Add button **+ Add**. The **Device Group** dialog box appears:

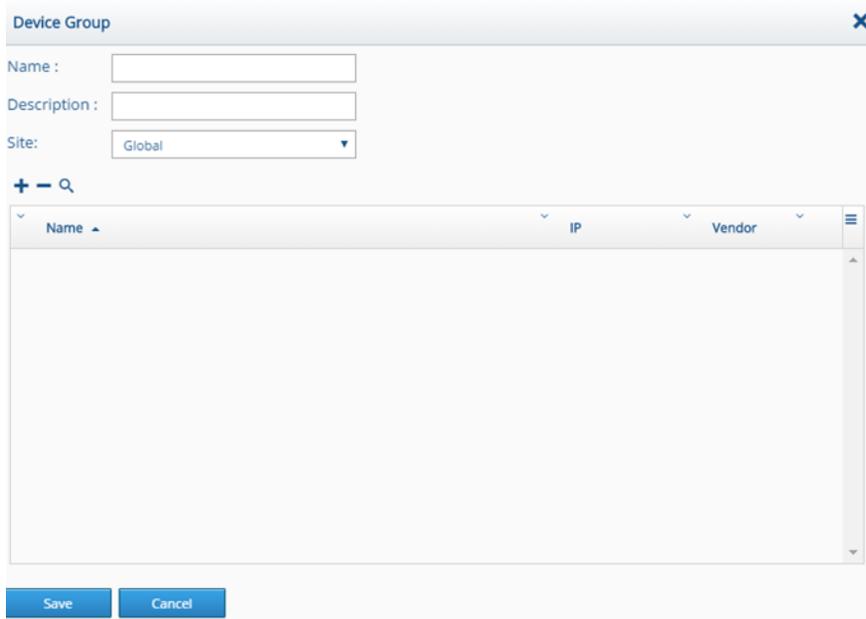


Figure 98: Device Group Dialog Box

2. Specify a name for the new group, and, optionally, a short description. In the Site field, select the site to which you want to assign the group.
3. In the list, select the devices according to name, IP address, or vendor that you want to add to the group and click Save.
4. The group is created with the specified devices.

EDITING A DEVICE GROUP

To edit a Device Group, on the **Device Groups** screen, click a device group in the list to display the **Device Group** dialog box. Edit the group details you want to change and click Save.

DELETING A DEVICE GROUP

1. Select the device group you wish to delete and click the Delete button **Delete**. The **Delete Groups** dialog box appears, requesting confirmation.
2. Click **Yes**.

Devices

IP Address Management

The **IP Address Management** screen displays a list of segments that contain IP addresses. You can create segments, add an IP to a segment, or edit/delete a segment. You can also synchronize existing devices into segments.

Segment Name	Name	Description	IP	BackBox Name	DNS Name	Subnet Mask	Site
1.1.1.0 (Synced Devices - Customer1)			1.1.1.0			255.255.255.0	Customer1
1.1.1.0 (Synced Devices)			1.1.1.0			255.255.255.0	Global
172.31.252.0 (Synced Devices - Customer1)			172.31.252.0			255.255.255.0	Customer1
172.31.252.0 (Synced Devices)			172.31.252.0			255.255.255.0	Global
172.31.253.0 (Synced Devices - Customer1)			172.31.253.0			255.255.255.0	Customer1
172.31.254.0 (Synced Devices)			172.31.254.0			255.255.255.0	Global
172.31.255.0 (Synced Devices - Customer1)			172.31.255.0			255.255.255.0	Customer1
172.31.255.0 (Synced Devices - Customer2)			172.31.255.0			255.255.255.0	Customer2
79.183.4.0 (Synced Devices)			79.183.4.0			255.255.255.0	Global

Figure 99: The IP Address Management Screen

ADDING A SEGMENT

To add a Segment to the **BackBox** system, in the **IP Address Management** screen, click the Add Segment button **+ Add Segment**. The **New Segment** dialog box appears:

New Segment ✕

Name :

Description :

IP :

Subnet Mask :

Site :

Figure 100: New Segment Dialog Box

Specify a name, description, IP address, subnet mask, and site for the segment and click Save.

Note: IPv6 is supported.

ADDING AN IP TO A SEGMENT

To add IP addresses to a segment:

1. Select the segment to which you want to add the IP addresses, and click the Add Addresses to Segment button

Devices

+ Add Addresses to Segment to display the **Add Addresses to Segment** dialog box:

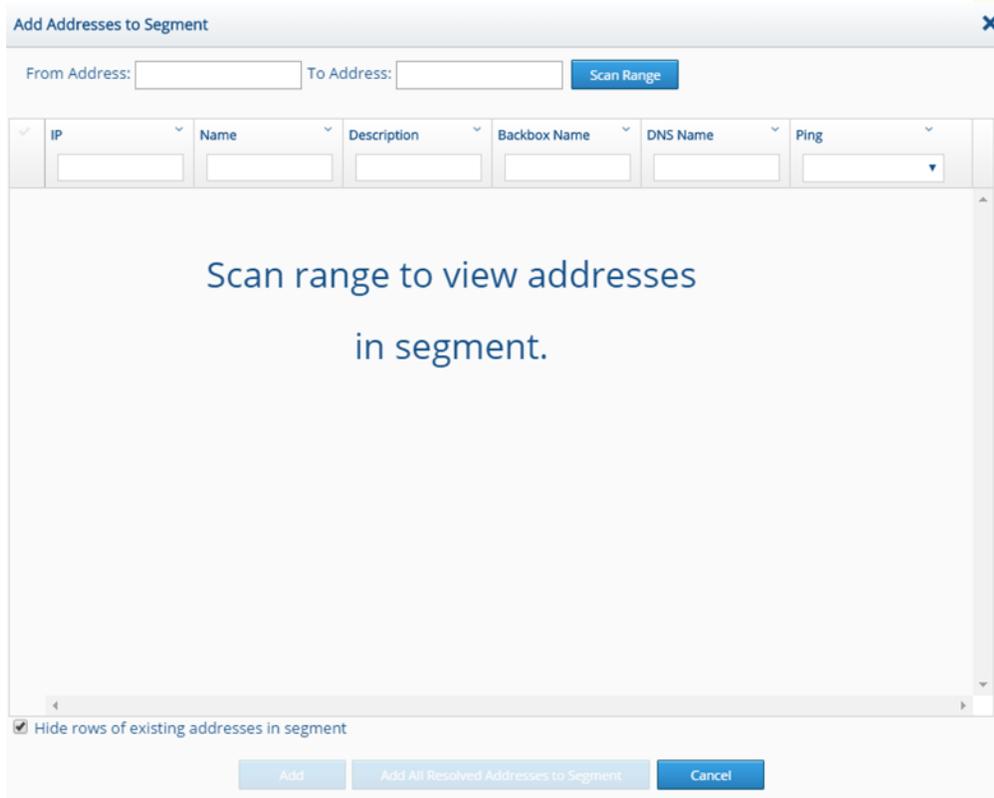


Figure 101: Add Addresses to Segment Dialog Box

2. In the From Address and To Address fields, type addresses that define the range of addresses that you want to add to the segment.
3. Click the Scan Range button **Scan Range**. The addresses that fall within the specified range are displayed.
4. Select the addresses that you want to add to the segment, and click Add **Add**. You can find specific addresses by using the search boxes that appear above the list of addresses. Alternatively, click Add All Resolved Addresses to Segment. You can select the Hide Rows of Existing Addresses in Segment option to facilitate viewing the available addresses only.

EDITING AND DELETING SEGMENTS

To edit or delete a segment, select the segment, and click the Edit button  Edit / Delete button  Delete.

Devices



SYNCHRONIZING EXISTING DEVICES INTO SEGMENTS

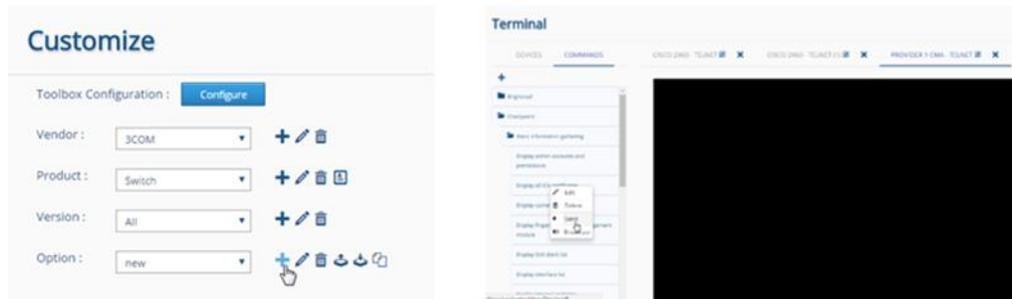
After creating the segments, you can synchronize existing devices into the segments, by clicking the Sync Existing Devices into Segments button  Sync Existing Devices into Segments .

Devices

Chapter 10. Access

Access enables you to connect to devices in the system and run command scripts from toolboxes that you have configured with Customize. As explained in the Customize chapter, a toolbox can be configured for a product on the **Customize** screen, which then enables you to write command scripts using the **Customize** screen's Options box. Scripts can include connection commands, backup and restore commands, inventory commands, as well as health checks.

Once you have created a toolbox and configured commands for it, the toolbox is listed on the **Terminal** screen in Access. The **Terminal** screen enables you to connect to a device, open a terminal, select a toolbox, and run the commands that you have configured for the toolbox by selecting them and sending them to the terminal.



You configure toolboxes and command scripts on the Customize screen.

You select a toolbox and run its commands on the Terminal screen in Access.

Figure 102: Process of Creating and Running Command Scripts

Connecting to Devices Using the Terminal Screen

The **Terminal** screen enables you to connect to one or more devices. For each device, a terminal is opened on which you can run commands.

To connect to devices:

1. On the **Sidebar**, click Access; the **Terminal** screen is displayed by default.
2. Click the **Devices** tab; a list of devices is displayed:

Access

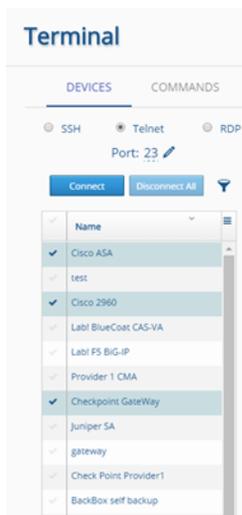


Figure 103: Devices Tab on the Terminal Screen

3. Select devices to which you want to connect by clicking in the column to the left of the device.
4. Select the method of connection: SSH, Telnet, or RDP.
5. Edit the Port if desired by clicking the port number, and using the Increment/Decrement button  that appears to specify another port and click the Submit button .



Figure 104: Changing the Port

6. Click the Connect button ; a name is displayed at the top of the screen for each device that you selected. Clicking the device name displays the terminal for that device. You can run scripts on more than one device by clicking from device to device:

Access

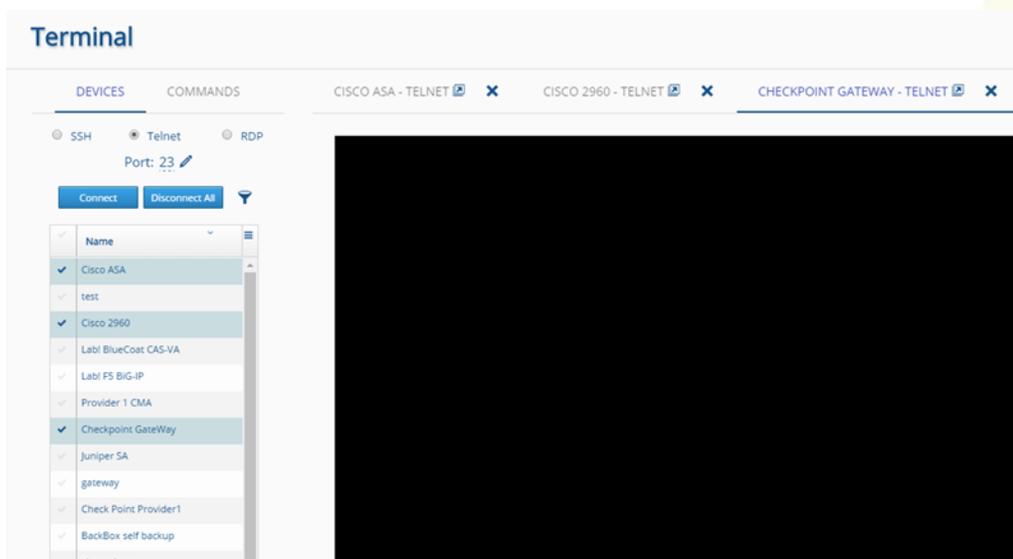


Figure 105: Terminal Screen with Multiple Devices Connected

Running A Toolbox's Command Script

Once you connect to one or more devices, the Access's **Terminal** screen enables you to run toolbox scripts on the terminal display for each device.

To run commands on a device:

1. On the **Sidebar**, click Access to display the **Terminal** screen.
2. Use the **Devices** tab to connect to the devices on which you want to run commands.
3. At the top of the **Devices** tab, click the device on which you want to run commands; a terminal display for the device appears.
4. On the **Terminal** screen, click the **Commands** tab; a list of toolboxes appears:

Access



Figure 106: Commands Tab Listing Toolboxes

5. Click a toolbox to display its commands. Some toolboxes have sections called Categories. Click the Category to display its commands:

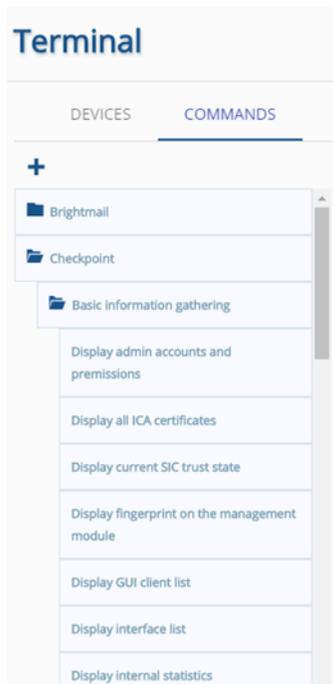


Figure 107: Toolbox Displaying Category and Commands

6. To run a command, on the device's terminal, click the command and right-click to display the following menu:

Access

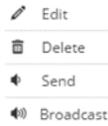


Figure 108: Command Options Menu

7. Click Send; the command appears on the terminal display and is executed.

Editing Toolboxes and Commands

You can edit toolboxes and their commands directly on the **Commands** tab on the **Terminal** screen.

You can edit the name of the toolbox, as well as add commands or sections to it. Sections, called Categories help organize commands.

You can also directly edit the commands themselves.

ADDING CATEGORIES OR COMMANDS TO A TOOLBOX

To add a category or command to a toolbox:

1. Right-click the toolbox to which you want to add the category or command. The **Add Category / Command** dialog box appears:

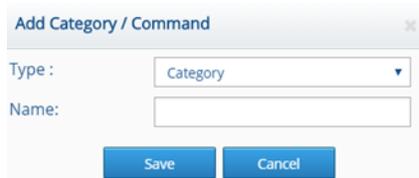


Figure 109: Add Category / Command Dialog Box

2. Select a category and type a name for the category, or select a command and type a name for the command as well as the code of the command.
3. Click Save.

EDITING THE NAME OF A TOOLBOX

To edit the name of a toolbox:

1. Right-click the toolbox you want to edit and click Edit. A dialog box with the name of the toolbox appears.
2. Edit the name and click Save.

Access

CLONING A TOOLBOX

To clone a toolbox:

1. Right-click the toolbox and click Clone. The **Clone Toolbox** dialog box appears.
2. Edit the name of the clone as desired and click Save. The cloned toolbox appears in the list of toolboxes on the **Terminal** screen.

DELETING A TOOLBOX

To delete a toolbox:

1. Right-click the toolbox you want to delete and click Delete. A Delete prompt appears.
2. Click Yes.

EDITING COMMANDS

To edit a command:

1. Right-click the command you want to edit and click Edit. A dialog box with the name of the command appears:

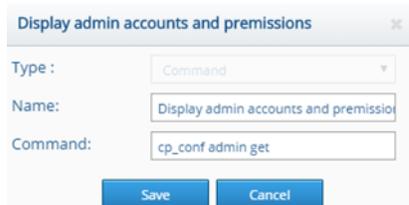


Figure 110: Edit Command Dialog Box

2. Edit the command's name, or the command's code and click Save.

DELETING A COMMAND

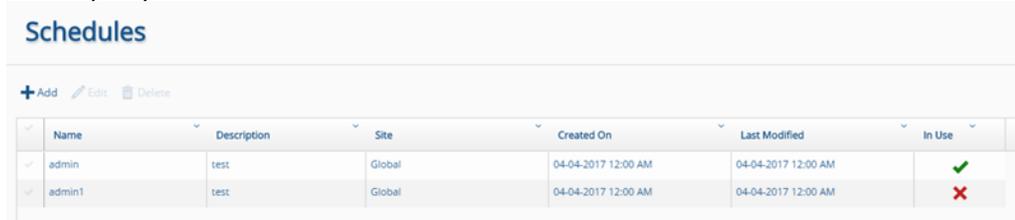
To delete a command:

1. Right-click the command you want to delete and click Delete. A Delete prompt appears.
2. Click Yes.

Access

Chapter 11. Schedules

BackBox allows you to schedule backups and reports. Schedules can be set for devices or device group. They can be set to run daily, weekly, or monthly, and at specified times. The **Schedules** screen lists all the schedules defined in the system. You can add more schedules to the list as well as delete any of them. To display the **Schedules** screen, on the **Sidebar**, click Schedules.



Name	Description	Site	Created On	Last Modified	In Use
admin	test	Global	04-04-2017 12:00 AM	04-04-2017 12:00 AM	✓
admin1	test	Global	04-04-2017 12:00 AM	04-04-2017 12:00 AM	✗

Figure 111: Schedules Screen

The **Schedules** screen displays the name given to the particular schedule, the description, the assigned site, the date the schedule was created, when it was last modified, and whether it is in use ✓ or not ✗.

Adding a new Schedule

You can add new schedules to the list of schedules. To add a new schedule:

1. On the **Schedules** screen, click the Add button **+ Add**. The **New Schedule Configuration** dialog box appears:

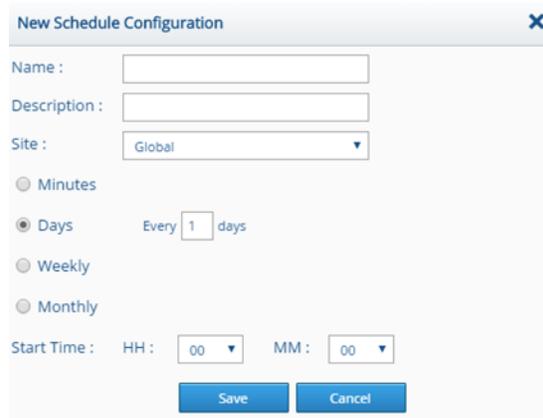


Figure 112: New Schedule Configuration Dialog Box

2. Fill in the fields and specify the interval and time for the new schedule and click Save.

Schedules



Deleting a Schedule

To delete one or more schedules:

1. Select the schedule(s) you wish to delete.
2. Click the Delete button  Delete. A prompt appears requesting confirmation.
3. Click Yes.

Schedules



Chapter 12. Notifications

BackBox is designed to send notifications to specified people when a backup or report is completed, failed to complete, or is suspected of failing to complete. The **Notifications** screen enables you to review and configure notifications and alerts. To open the **Notifications** screen, on the **Sidebar**, click Notifications. The **Notification Alerts** screen is displayed:

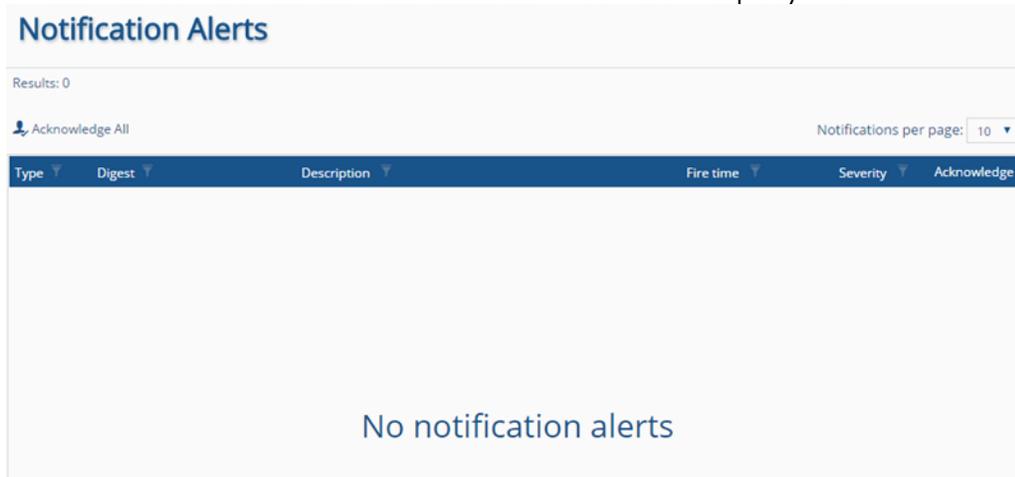


Figure 113: Notification Alerts Screen

The screen displays a list of alerts, and includes the following:

Table 11: Notification Alerts Columns

Field	Description
Type	Type of alert
Digest	A short digest of what the alert is about
Description	A more detailed description of the alert
Fire Time	When the alert was generated
Severity	The Severity of the alert (Critical, Warning, etc.)
Acknowledge	By clicking the Acknowledge button  Acknowledge , you indicate that you are aware of the alert. You can also click the Acknowledge All button  Acknowledge All at the top of the screen to indicate that you have seen all the alerts listed.

Notifications

Configuring Jobs Notifications

You use the **Jobs Notification** screen to set up notifications. The screen displays the name of the notification, whether the notification is to be sent via E-mail and/or Syslog, SNMP, HTTP, and/or Alerts. It further displays the site to which the notification is to be sent, when it was created, when it was last modified and whether it is in use. You can add a new notification as well as edit or delete an existing one:

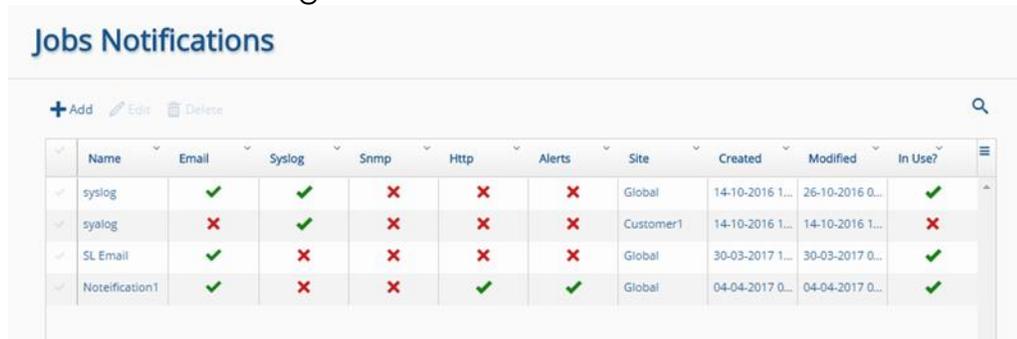


Figure 114: Jobs Notifications Screen

ADDING A NOTIFICATION

To add a notification:

1. On the **Jobs Notifications** screen, click the Add button **+ Add**. The **New Notification Configuration** dialog box appears:

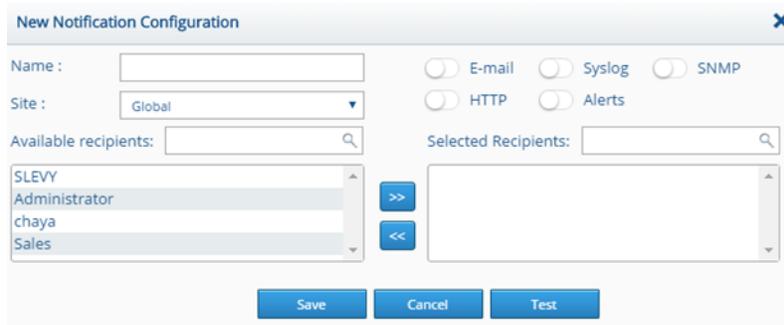


Figure 115: New Notification Configuration Dialog Box

Table 12: New Notification Configuration Fields

Field	Description
Name	Name of the notification
Email/Syslog/Snmp/Http/Alerts	Select the way you want the notification to be received.
Site	The site to which the notification will be available.

Notifications



Field	Description
<p>Available Recipients</p>	<p>The people available to receive notifications (of the backup). Note that you can type criteria in the Filter box to shorten the list. Those who are to be notified must be moved to the Selected Recipients box. Select the names of people who are to receive the notification and click the Include button  to move them into the Selected Recipients list.</p>
<p>Selected Recipients</p>	<p>Displays names of people that will receive notifications. Note that you can type criteria in the Filter box to shorten the list. To remove a name from the list, select the name and click the Exclude button .</p>

2. Complete the fields and click Save.

EDITING A NOTIFICATION

To edit a notification in the list, select the notification and click the Edit button  Edit to display the notification's dialog box. Edit the settings and click Save.

DELETING A NOTIFICATION

To delete a notification, select the notification you want to delete and click the Delete button  Delete.

TESTING A NOTIFICATION

Clicking the Test button  in a notification's dialog box, enables you to send a test notification to the specified recipients.

Notifications



Chapter 13. Authentication

The administrator gives permission to **BackBox** users to access the system. Before accessing the system, users are required to authenticate themselves via their usernames and passwords. The administrator assigns the passwords, and in some cases, an extra password.

To access the **Authentication** screen, on the **Sidebar**, click **Authentication**. The following screen appears:

Authentication Templates						
+ Add Edit Delete						
	Name	Site	Description	Created	Modified	In Use
<input checked="" type="checkbox"/>	cisco	Global		01-10-2016 03:09 PM	01-10-2016 03:09 PM	X
<input checked="" type="checkbox"/>	cisco1	Global		20-10-2016 03:40 PM	20-10-2016 03:40 PM	X

Figure 116: Authentication Templates Screen

Authentication Templates

BackBox allows you to create templates for authenticating users to access the system, and specify their level of access. For example, some users have complete access to the system while others are restricted to certain notifications or devices. Some may be able to modify reports and notifications, while others are only allowed to receive them.

BackBox displays the existing authentication templates on the **Authentication Templates** screen. The screen displays when the template was created, last modified, the site to which it applies, and whether it is currently being used or no longer in use . You can also add and delete templates.

ADDING AN AUTHENTICATION TEMPLATE

To add an authentication template:

1. On the **Authentication Template** screen click the Add button **+ Add**. The **Authentication Template** dialog box appears:

Authentication

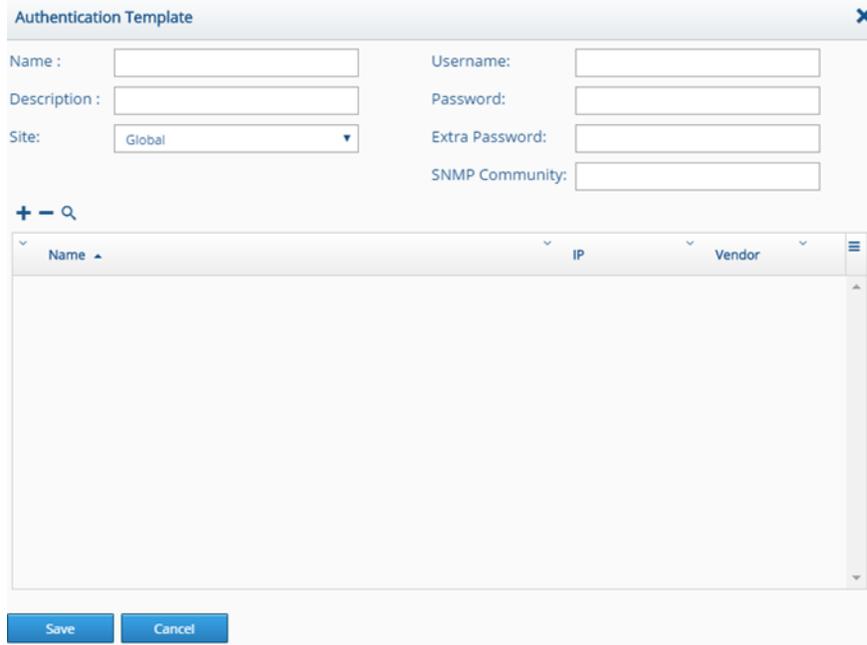


Figure 117: Authentication Template Dialog Box

2. Complete the fields as detailed in the following table and click Save.

Table 13: Authentication Template Fields

Field	Description
Name	The name given to the template
Description	A short description of the template (optional)
Username	Username of the person authorized to access the system
Password	Required for authentication
Extra Password	The administrator determines if an extra password is required.
Site	The site to which the template is assigned
SNMP Community	The SNMP community to which the template applies
	The Add Devices button  enables you to add devices for which the template will apply.
	The Remove Devices button  enables you to remove devices from the template.
	The Filter button  enables you to filter the devices listed in the Authentication Template dialog box.

Authentication



DELETING AN AUTHENTICATION TEMPLATE

To delete an Authentication Template, in the **Authentication Templates** screen:

1. Select the template(s) you wish to delete and click the Delete button  Delete.

A prompt appears requesting confirmation.

2. Click Yes.

AUTHENTICATION SERVERS

You can specify RADIUS and LDAP authentication parameters on the **Authentication Servers** screen:

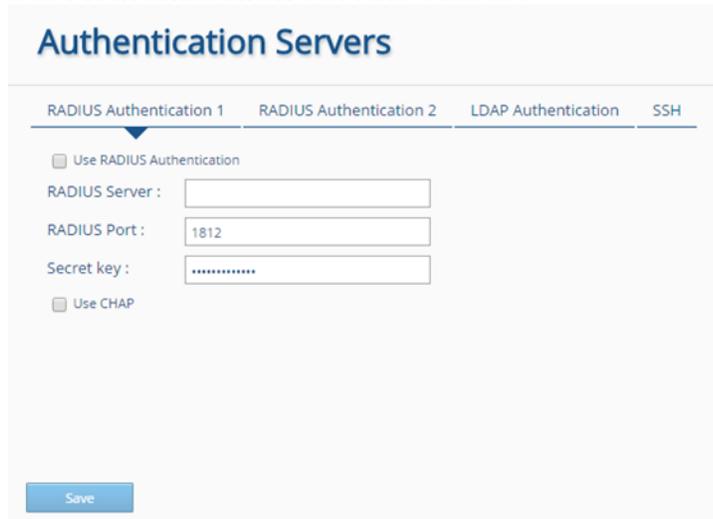


Figure 118: Authentication Servers Screen

BackBox Users

All authorized **BackBox** users must authenticate themselves to access the system. Specific information about users must be detected for the system to recognize them and their level of access.

The **BackBox Users** screen is where the user's pertinent identifying information is entered, including E-mail, password, the specific authorizations they have been granted, and whether they are authorized to receive notifications. To display the **BackBox Users** screen, on the **Sidebar**, click Authentication, then click **BackBox Users**.

Authentication

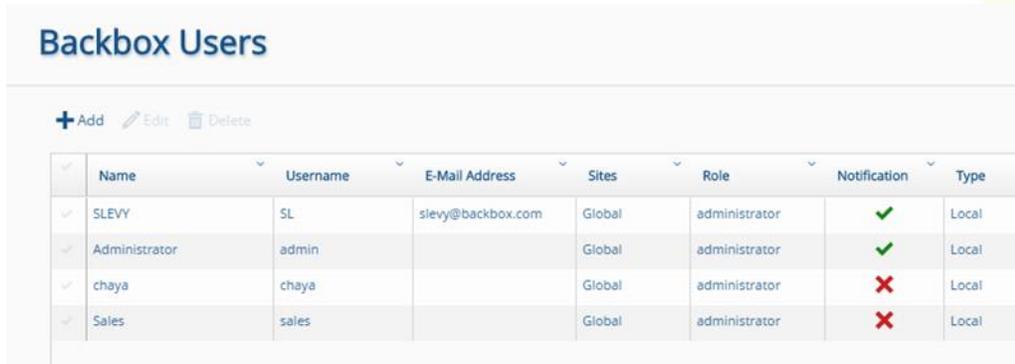


Figure 119: BackBox Users Screen

The **BackBox Users** screen displays a list of users with **BackBox** access, along with their usernames, E-mails, sites, roles, whether they receive notification, and type (i.e. local, notification, RADIUS, and LDAP). The administrator can add, edit, and delete users.

Table 14: BackBox Users Fields

Field	Description
Name	Name of the user
Username	Name to identify the user in the system.
Email Address	User’s E-mail address
Site	The sites to which the user is connected. Users will be able to view all information for the specified sites.
Role	The roles to which the user is assigned. For example: Administrator, Backup Operator, Backup Monitor.
Notification	Indicates whether the user receives notifications.
Type	User-defined types assigned by the administrator.

ADDING A NEW USER

To add a new user:

1. In the **BackBox Users** screen, click the Add button **+Add** to display the **Add a New User** screen:

Authentication

Figure 120: Add a New User Dialog Box

2. Select a type, and specify a name, user name, password, confirm password, and an E-mail address.
3. Specify whether the user is to receive system alerts by clicking the Receive System Alerts button **Receive System Alerts :** .
4. Select a notification type: Details or Summery.
5. Select a role. For example: Administrator.
6. Select a site by clicking the the Sites field to display a list of available sites.

EDITING A USER

To edit a user, in the **BackBox Users** screen, click the username to display the **Edit User** dialog box for that user and edit the fields. Click Save.

User Roles

The **User Roles** screen enables you to create a user role, such as Administrator, and configure permissions for the role. Permissions can be configured for each part of the **BackBox** system. For example, you can configure a role so that someone with that role can add or edit a device, or delete a backup, etc.

To display the **User Roles** screen, from the **Sidebar**, click Authentication, then click User Roles:

Authentication

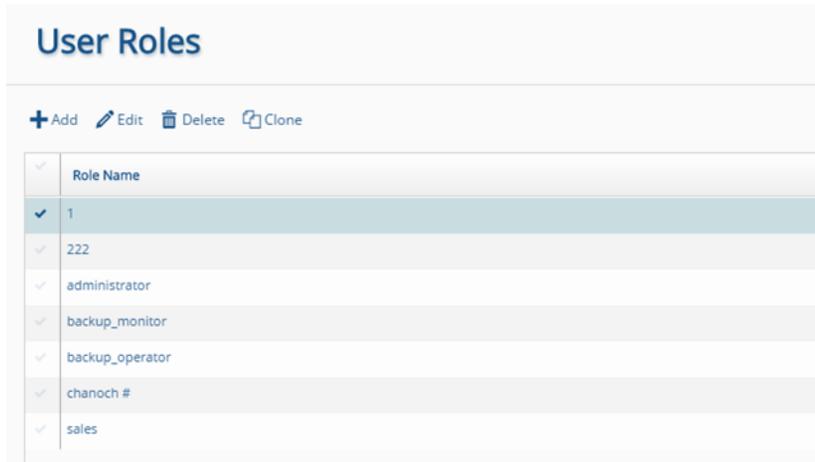


Figure 121: User Roles Screen

ADDING A NEW ROLE

To add a new role, click the Add button **+ Add**. The **New Role Configuration** dialog box appears:

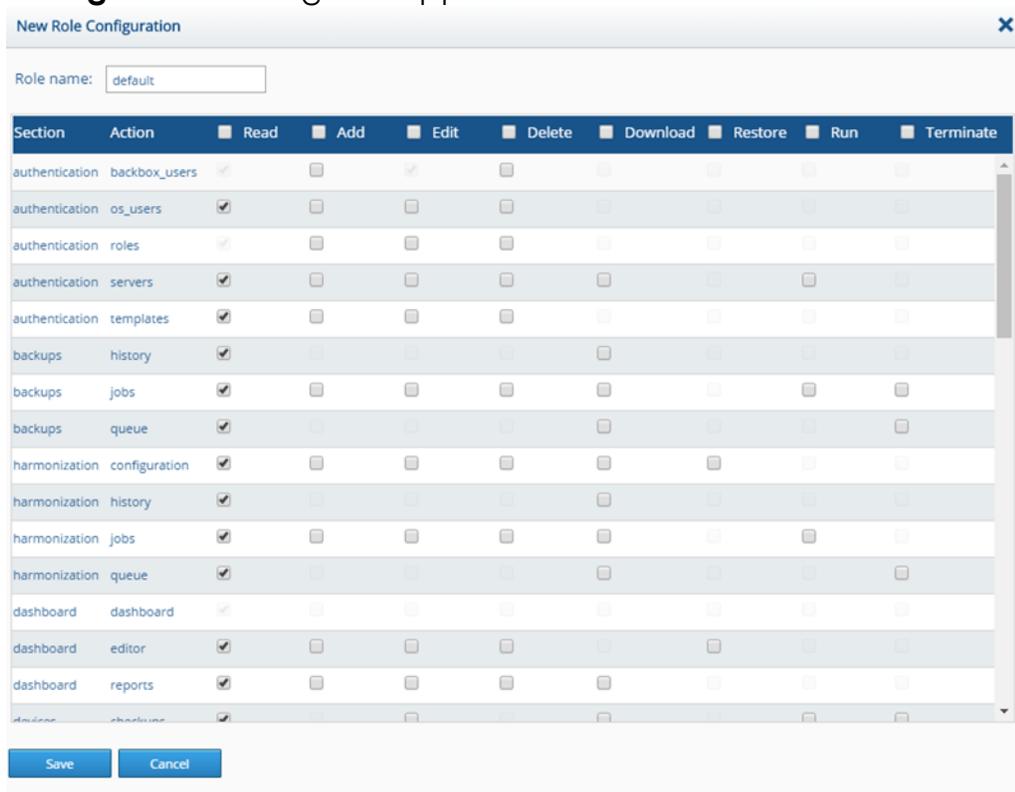


Figure 122: New Role Configuration Dialog Box

In the **New Role Configuration** dialog box, check the permissions for the role and click Save.

Authentication

EDITING A ROLE

To edit a role, on the **User Roles** screen, select the role you want to edit and click the Edit button  **Edit** to display the **Edit Role** dialog box. Edit the relevant fields and click Save.

DELETING A ROLE

To delete a role, on the **User Roles** screen, select the role and click the Delete button  **Delete**.

Operating System Users

The **Operating System Users** screen enables you to add and configure roles for those responsible for the operating system, such as administrators and support people. You can specify a name, and a password for the operating system user, as well as a site to which the operating system user is assigned.



Id	Name	SCP Path	FTP Path
0	root	/root	
10	test	/data/External_Backup/test/	/test/
15	rsa	/data/External_Backup/rsa/	/rsa/
16	rsatest	/data/External_Backup/rsatest/	/rsatest/

Figure 123: Operating System Users Screen

ADDING A NEW OPERATING SYSTEM USER

To add a new operating system user, in the **Operating System Users** screen, click the Add button  **Add**. The **Add OS (Operating System) User** dialog box appears:



Add OS User ✕

User name:

Password:

Confirm Password:

Site:

Figure 124: Add OS User Dialog Box

Fill out the fields and click Save.

Authentication



EDITING AN OPERATING SYSTEM USER

To edit an operating system user, in the **Operating System Users** screen, select the operating system user you want to edit and click the Edit button  Edit. The **Edit OS User** dialog box appears. Edit the fields and click Save.

DELETING AN OPERATING SYSTEM USER

To delete an operating system user, in the **Operating System Users** screen, select the user you want to delete and click the Delete button  Delete. A prompt appears requesting confirmation. Click Yes.

Authentication



Chapter 14. Settings

Settings is where all the system parameters for **BackBox** are set. **Settings** displays a list of options which enable you to access the various functions. Only the administrator has access to Settings. On the **Sidebar**, clicking Settings, defaults to the **Interfaces** screen.

The following table provides an overview of the screens accessible from Settings.

Table 15: Settings Screens

Screen	Description
Interfaces	Displays the interfaces which define the connections to the devices in the system and whether the link is up or down. They are used in routing entry definitions.
Routing	Displays the routing tables of the BackBox servers.
DNS	Displays the DNS settings which specify the location of the domain name servers.
Date and Time	Displays the fields where the date and time are set. The time can be set as Static or NTP.
Alerts	Displays the fields for setting alert protocols. There are three different protocols: SNMP, SMTP, and Syslog.
Administration	Displays general settings for backup retention, execution time, and server IP address.
Licenses	Enables uploading a license and displays license information.
Access Rules	Displays the settings that controls the local Firewall of the BackBox server. This determines which IP address can access the web interfaces and the CLI interfaces.
Sites	Displays information about existing sites, such as number of devices assigned, and number of users. You can also add, delete, and edit sites.
Agents	Displays a list of agents and their IP addresses. It also shows which operating systems are assigned to the agent.
System Logs	Displays a detailed log of each user's activity while in the system.

Settings



Interfaces

Interfaces displays basic network information. When the Status button  is green, it indicates the link is up; when it is red , the link is down.

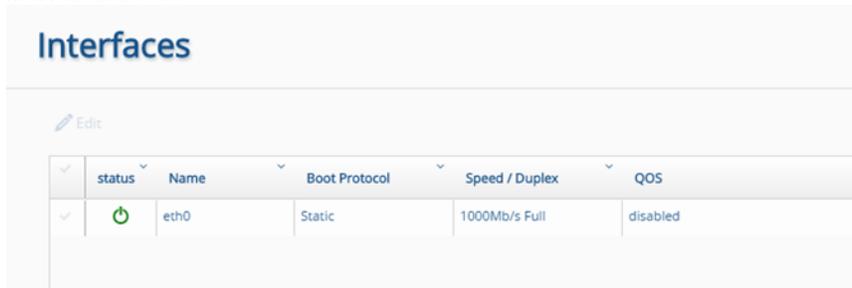


Figure 125: Interfaces Screen

EDITING AN INTERFACE

You can edit the interface by selecting the interface you want to edit and clicking the Edit button . You can edit the IP address, subnet mask and other settings as shown here:



Figure 126: Edit Interface Dialog Box

Edit the fields and click Save.

Routing

To display the Routing settings, click Routing:

Settings

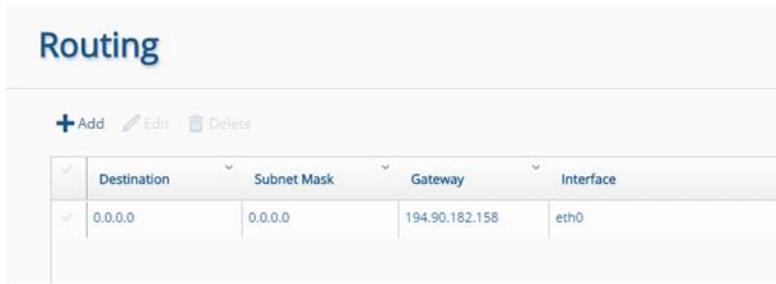


Figure 127: Routing Screen

ADDING OR EDITING A ROUTE

You can add or edit a route.

To add a route, on the **Routing** screen, click the Add button **+ Add**. The **New Route Configuration** dialog box appears:

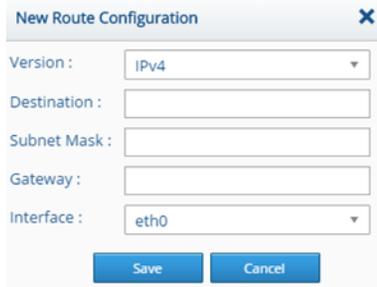


Figure 128: New Route Configuration Dialog Box

Fill in the fields and click Save.

To edit a route, on the **Routing** screen, select the route you want to edit and click the Edit button **✎**. Edit the fields and click Save.

DELETING A ROUTE

To delete a route:

In the list of routes, select the route you want to delete and click the Delete button **🗑 Delete**. You are prompted to confirm the delete. Click Yes.

DNS

On the **DNS** screen you can define primary, secondary, and tertiary settings as well as a domain name.



Figure 129: DNS Screen

Date and Time

The **Date and Time** screen, enables you to configure the date and time:

Figure 130: Date and Time Screen – NTP View

Note: The tab defaults to the NTP (Network Time Protocol) view. Click the Static button to view the current date, place, and time.

Alerts

The **Alerts** screen enables the administrator to create the following alert protocols: SMTP, SNMP monitoring, SNMP traps, Syslog, and HTTP:

Figure 131: Alerts Screen

Settings

Note: The SNMP monitoring and SNMP traps have three versions to choose from: v1, v2c, or v3. Each version has different fields to be completed. Complete the appropriate fields in the desired protocol and click Save.

Administration

The administrator uses the **Administration** screen to add and edit general settings, perform maintenance tasks, implement customizations such as uploading a logo, and create clusters of devices:

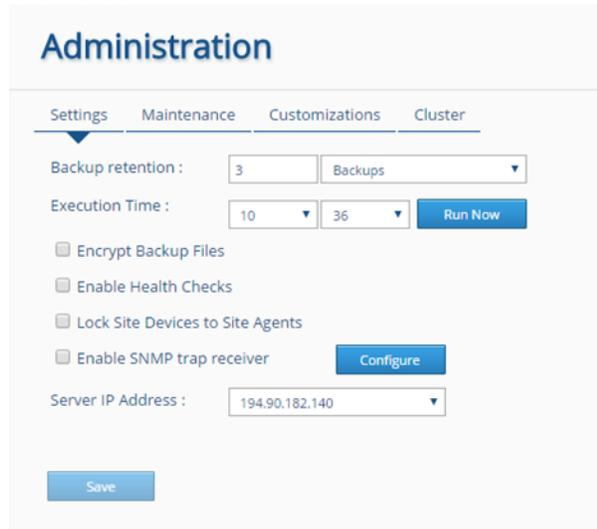


Figure 132: Administration Screen

Table 16: Administration Field

Field	Description
Settings Tab	Basic settings of the server’s properties
Backup Retention	Can be set for either the number of days or the number of backups a backup is to remain on the server before being deleted.
Execution Time	Specified time to run the backup.
Encrypt Backup Files	Files may be encrypted in the period before deletion.
Enable Health Checks	Enables/disables health checks.
Lock Site Devices to Site Agents	Enables/disables locking site devices to site agents.

Settings



Field	Description
Enable SNMP Trap Receiver	Enables/disables SNMP trap receiver. See below for configuration instructions.
Server IP Address	Select the IP address from the list.
Maintenance Tab	Enables you to perform upgrade, restore, and backup tasks.
Upgrade to New Version	Uploads and installs a new version of BackBox .
Restore (Configuration only)	Restores the BackBox configuration.
Backup (Configuration only)	Saves a backup of the BackBox configuration.
Download Tech Support info	Clicking the Download button  exports a compressed file containing text support information.
System: (Reboot, Shutdown)	Enables rebooting or shutting down the system.
Customizations Tab	Enables uploading a custom logo, or restoring the default logo.
Cluster Tab	Selecting Enable Cluster, enables setting a secondary server with IP address, SSH key, and synchronized schedule.

CONFIGURING SNMP TRAP RECEIVER

The SNMP trap receiver will initiate backup for the device that sent the trap. It will only do so for traps that contain certain text which can be modified in the configuration table.

To configure an SNMP trap receiver:

1. On the **Administration** screen, on the **Settings** tab, select Enable SNMP trap receiver and click the Configure button . The **SNMP Trap Receiver** dialog box appears:

Settings

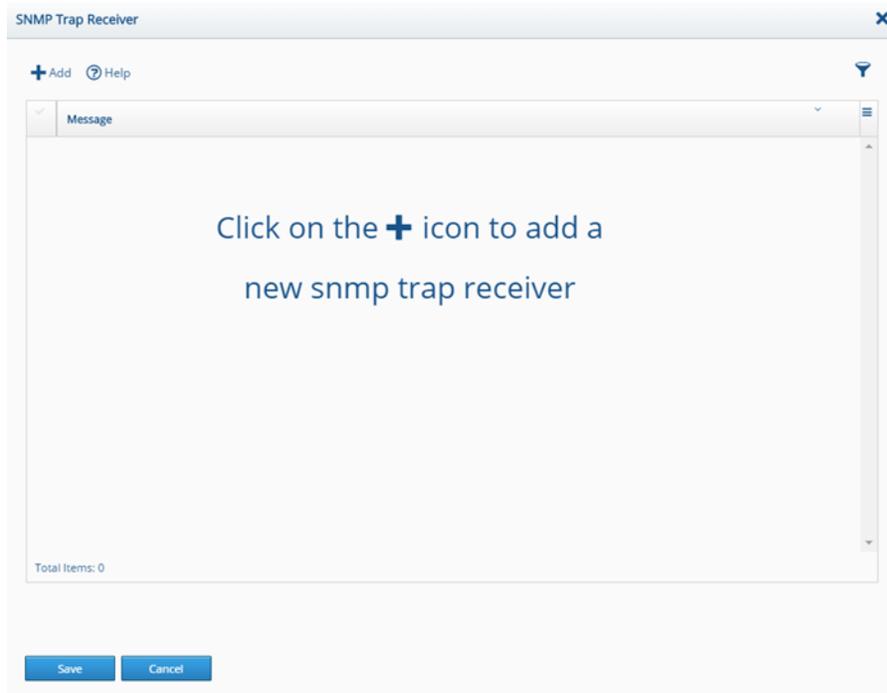


Figure 133: SNMP Trap Receiver Dialog Box

2. Click the Add button **+ Add** to display the SNMP Trap Receiver Message field.
3. Type the text for the SNMP trap receiver and click the Submit button , or the Cancel button to delete the text. To delete text that has already been submitted, click the Delete button .
4. To add additional receivers, click the Add button **+ Add** again.

Licenses

The **license** screen enables uploading a license and displays information about the current license. The fields are populated when the license is uploaded.

Note: The License Alert can be deleted.

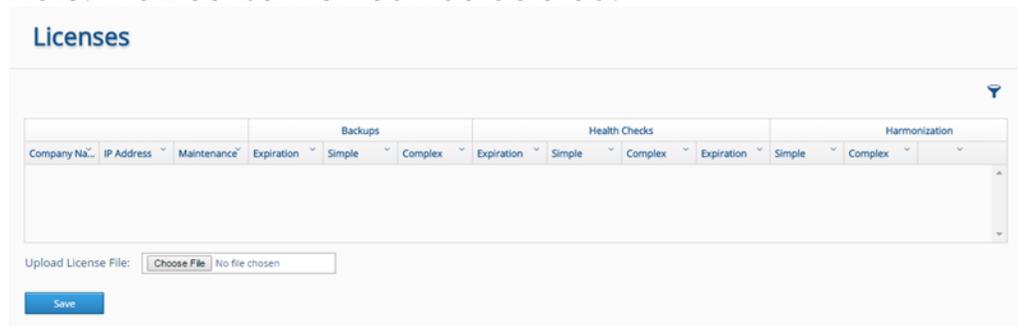


Figure 134: License Screen

Settings

Access Rules

The **Access** screen allows the administrator to control the local Firewall of the **BackBox** server. This determines which IP address/network can access **BackBox** via SSH, the web interfaces, or the CLI interfaces.

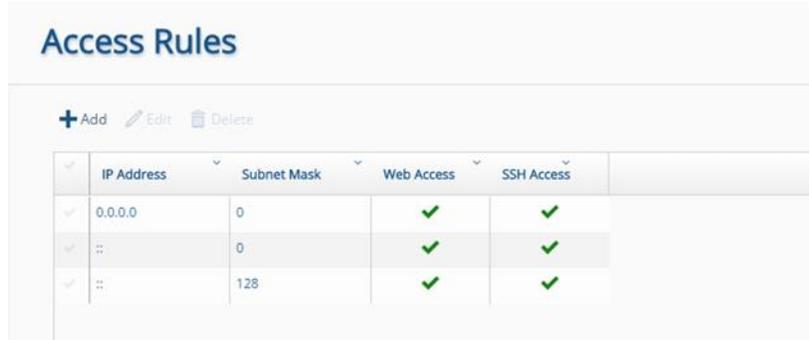


Figure 135: Access Rules Screen

To edit the Access settings, click an entry to display the following dialog box:

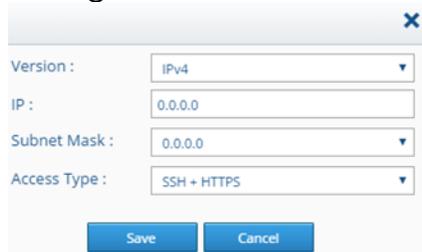


Figure 136: Edit Access Rule Dialog Box

Specify the desired settings and click Save.

Sites

A site is a logical partition which contains devices, device groups, templates, or backup instructions. It is a mechanism used by the Global administrator to delegate administration of all aspects of the **BackBox** application to local servers. These local servers are managed by site administrators who control the configuration, notifications, and backup jobs. Creating sites is an efficient and effective way to help organize and manage the devices and backups in larger and more complex installations.

Sites help users know what devices they are authorized to access. Sites can be assigned based on the combination of geographic location, device type, and whatever other criteria the Global administrator decides.

On the **Sidebar**, under Settings, click Sites:

Settings

Licenses left:
 Backups : -27 Simple, -73 Complex,
 Health checks : -27 Simple, -30 Complex,
 Harmonization : -27 Simple, -27 Complex

+Add Edit Delete

Site	Devices	Users	Retention	Backups Simple	Backups Complex	Health Checks Simple	Health Checks Complex	Harmonization Simp...	Harmonization Complex
Customer1	3	0	3 Backups	10 (0)	50 (3)	10 (0)	10 (2)	10 (0)	10 (1)
Customer2	0	0	Policy	15 (0)	15 (0)	15 (0)	15 (0)	15 (0)	15 (0)

Figure 137: Sites Screen

For each site, the **Sites** screen displays site information, including: site name, and number of devices, users, retention (how long backups are retained), simple and complex backups, health checks, and harmonizations.

ADDING A SITE

1. On the **Sites** screen, click the Add button **+Add** to display the **New Site Configuration** dialog box:

New Site Configuration

Site Name :

Backups :

Simple : Complex :

Health Checks :

Simple : Complex :

Harmonization :

Simple : Complex :

Backup retention :

Save Cancel

Figure 138: New Site Configuration Dialog Box

2. Type a name for the site, fill in the appropriate fields, and click Save. The new site is displayed in the list.

EDITING A SITE

1. On the **Sites** screen, in the list of sites, click the site whose settings you want to change and click the Edit button
2. Make the relevant changes and click Save.

Settings

DELETING A SITE

1. On the **Sites** screen, select the sites that you want to delete and click the Delete button  **Delete**. A prompt appears requesting confirmation.
2. Click Yes to confirm.

Agents

Agents are used to manage the backups when there are larger installations with multiple servers. On the **Sidebar**, under Settings, click Agents. The **Agents** screen appears:

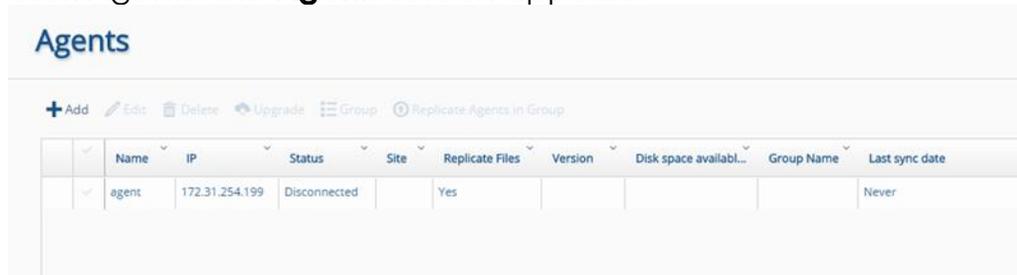


Figure 139: Agents Screen

ADDING AN AGENT

1. On the **Agents** screen, click the Add button  **Add**. The **New Agent Configuration** dialog box appears.

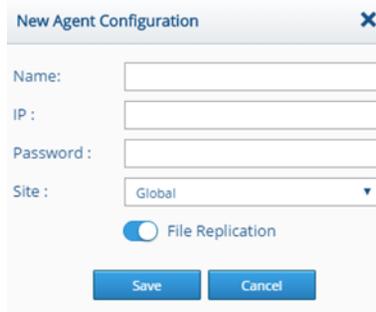


Figure 140: New Agent Configuration Dialog Box

2. Fill in the agent's name, IP address, password, and site, and click Save.

EDITING AN AGENT

You can edit the details of an agent, as well as the agent's OS users.

To edit the details of an agent:

Settings

1. On the **Agents** screen, in the list of agents, click the agent whose settings you want to change and click the Edit button .
2. Make the relevant changes and click Save.

CLEANING AN AGENT

You can clean an agent from older backup files that may exist, because the agent was connected to another server (the older backup files will be deleted).

1. To clean an agent, on the **Agents** screen, select the agent you want to clean and click the Edit button .
2. In the agent's dialog box click the Clean button .

DELETING AN AGENT

1. On the **Agents** screen, select the agent to be deleted.
2. Click the Delete button  Delete. A prompt requesting confirmation appears.
3. Click Yes.

UPGRADING AN AGENT

You can upgrade an agent to a new version by clicking the Upgrade button  Upgrade.

System Logs

BackBox allows administrators to audit each user who accesses the system. The program keeps a detailed log of each action performed in the system, as well the object of the action. The log details each time a user logs-in, adds, updates, or deletes. It also records the objects of these actions such as devices, backup jobs, time and date, etc.

For example, if a device group is changed, the log will show which user made the change, what the change was, when it was done and whether the change was successful.

To access the **System Logs** screen, on the **Sidebar**, click System Logs:

Settings

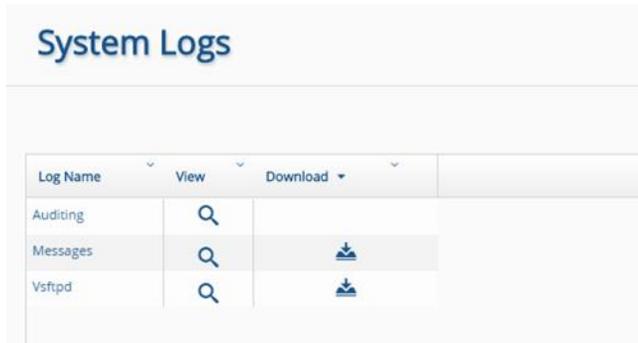


Figure 141: System Logs Screen

The **System Logs** screen displays three types of logs: Auditing, Messages, and Vsftpd. These are explained in the following sections.

AUDITING

The basic auditing information for a log is displayed in the **Audit Log** screen.

To open the **Audit Log** screen, in the **System Logs** screen, click the View Log button in the View column of the Auditing row. The **Audit Log** screen appears:

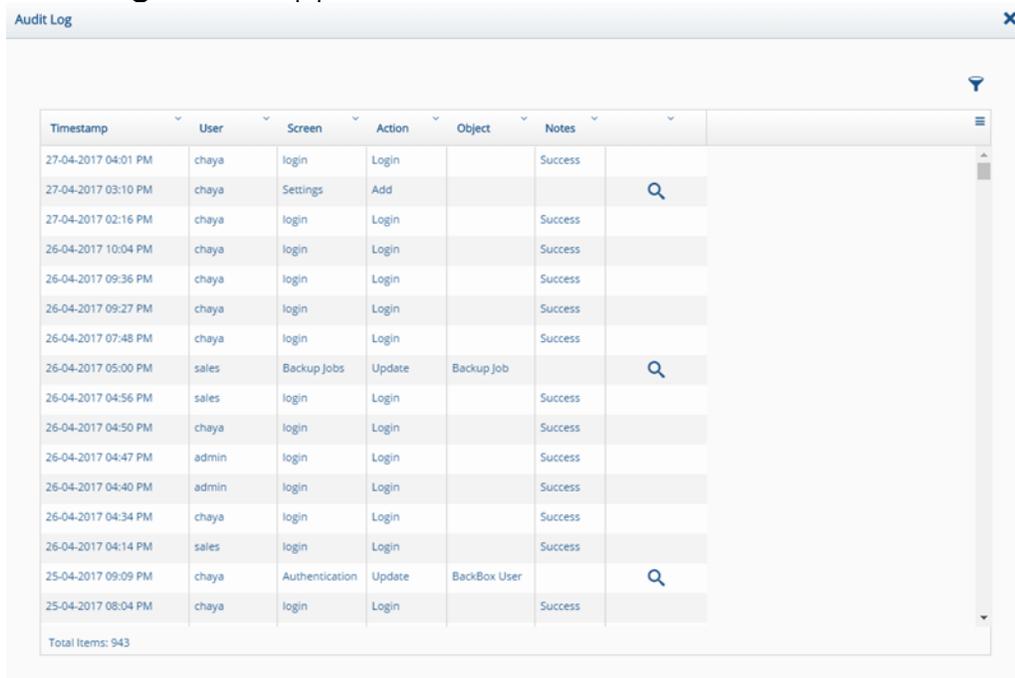


Figure 142: Audit Log Screen

The Filter button at the top right enables you to filter the log using any of the following criteria: timestamp, user, screen, action, object, and notes.

Settings

Table 17: Audit Log Filter Criteria

Criterion	Description																				
Timestamp	Date and time																				
User	The user's name																				
Screen	The screen that was accessed																				
Action	You can filter for the following actions: Login, Add, Update, Delete																				
Object	<p>You can choose to filter the following:</p> <table border="0"> <tr> <td>Administration</td> <td>Group</td> </tr> <tr> <td>Agent</td> <td>Interface</td> </tr> <tr> <td>Alert</td> <td>Access</td> </tr> <tr> <td>Authentication</td> <td>Notification</td> </tr> <tr> <td>Template</td> <td>Role</td> </tr> <tr> <td>Backup Job</td> <td>Routing</td> </tr> <tr> <td>DNS</td> <td>Schedule</td> </tr> <tr> <td>Time and Date</td> <td>Site</td> </tr> <tr> <td>Device</td> <td>Operating System User</td> </tr> <tr> <td>Device History</td> <td>BackBox User</td> </tr> </table>	Administration	Group	Agent	Interface	Alert	Access	Authentication	Notification	Template	Role	Backup Job	Routing	DNS	Schedule	Time and Date	Site	Device	Operating System User	Device History	BackBox User
Administration	Group																				
Agent	Interface																				
Alert	Access																				
Authentication	Notification																				
Template	Role																				
Backup Job	Routing																				
DNS	Schedule																				
Time and Date	Site																				
Device	Operating System User																				
Device History	BackBox User																				
Notes	Success/Failure																				

On some of the items displayed on the **Audit Log**, there is more detailed log information available. To view the additional log details, click the View Change button  at the end of the row. The **Audit Details Log** screen appears:

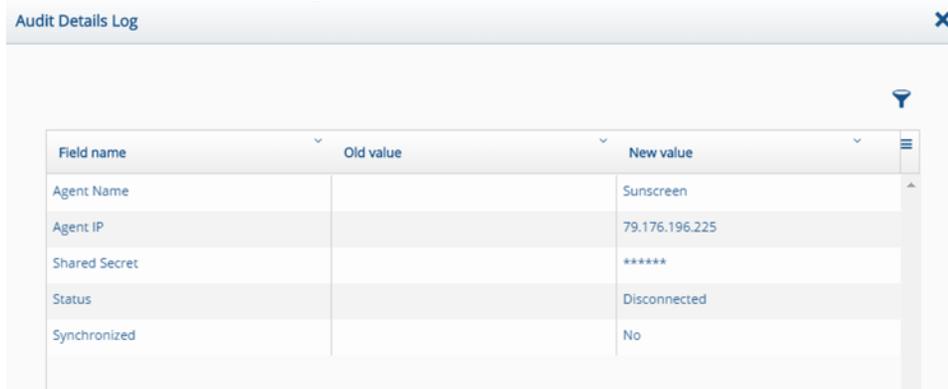


Figure 143: Audit Details Log Screen

Note: Each object will display different details in the log.

Settings



MESSAGES

The Messages shows a trail log from the **BackBox** operating system (`/var/log/messages`).

To open the Messages' **Trail Log** screen, in the **System Logs** screen, click the View Log button  in the View column of the Messages row. The **Trail Log** screen appears:



Figure 144: Trail Log Screen

You can download message logs to your computer by clicking the Download Log button  at the end of the Messages row.

VSFTPD

VSFTPD shows the **BackBox VSFTPD** log (`/var/log/vsftpd.log`).

To open the VSFTPD's **Trail Log**, on the **System Logs** screen, click the View Log button  in the View column of the VSFTPD row. The VSFTPD **Trail Log** appears:

You can download the VSFTPD log by clicking the Download Log button  at the end of the VSFTPD row.

Settings

Chapter 15. Customize

The **Customize** screen enables you to customize backup scripts, restore scripts, inventory information, toolbox commands, automated tasks, and health checks. **BackBox** supports a robust scripting environment that makes it easy to write and edit scripts with easy-to-use tabs and drop-down lists. The scripting environment is available in various modules in **BackBox** including Tasks, Health Checks, Harmonization, Devices, and Customize. For an explanation of how to write scripts and use the scripting environment see the chapter on Writing Command Scripts. Besides enabling you to write scripts, the **Customize** screen also allows you to customize lists that appear in other **BackBox** screens.

On the **Sidebar**, click Customize. The **Customize** screen appears:

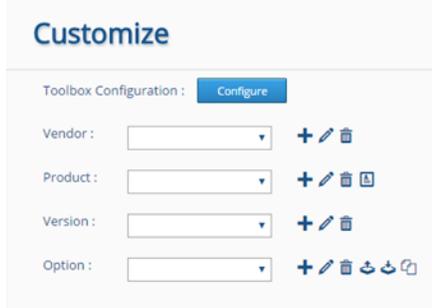
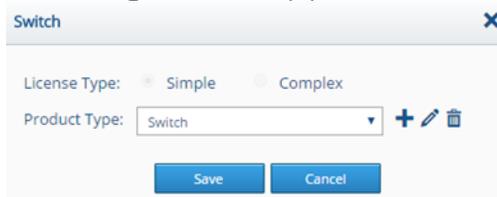


Figure 145: Customize Screen

Customizing Vendor, Product, and Version Lists

The **Customize** screen enables you to customize Vendor, Product, and Version lists that appear in other screens in **BackBox** such as in the **Devices** screen. Use the Add, Edit, and Delete buttons **+ / ✎ / 🗑** next to each list to add, edit or delete items. Some of the items listed are dependent on others. For example, if you selected a vendor in the Vendor list, the products that appear in the Product list are from that vendor only.

In the Product list, you can also use the Preferences button **⚙** to display the **Preferences** screen for that item. For example, the following screen appears for a certain switch:



Customize

Figure 146: Product Preferences Screen

The **Product Preferences** screen enables you to select a license type: Simple or Complex. Customized products are by default a complex type. You can also customize the product type which is used in other screens for grouping items. Select a product from the list, or use the Add, Edit, and Delete buttons    to add, edit, or delete a product.

Items that appear in the Version list are based on your vendor and product selections. Use the Add, Edit, and Delete buttons    to modify the list.

Toolbox Configuration

Use the **Customize** screen to configure a toolbox. This toolbox will contain the option that enables you to write command scripts which you can use in the device's terminal.

Note:

To display the terminal of a device, on the **Sidebar**, click Access: The **Terminal** screen appears. Select a device and click the Connect button  on the **Terminal** screen. After you write backup scripts and/or other scripts for restore, health checks, etc. you can “push” them to the device while in the device's terminal. For more information, see the chapter on Access.

First you need to configure a toolbox by giving it a name. Once the toolbox is configured, select a vendor, product, and version for which the toolbox will apply. Lastly, select and configure an option for the toolbox (i.e., write the command scripts for it.)
To create a toolbox:

1. At the top of the **Customize** screen, click the Configure button . The **Toolbox Configuration** dialog box appears:

Customize

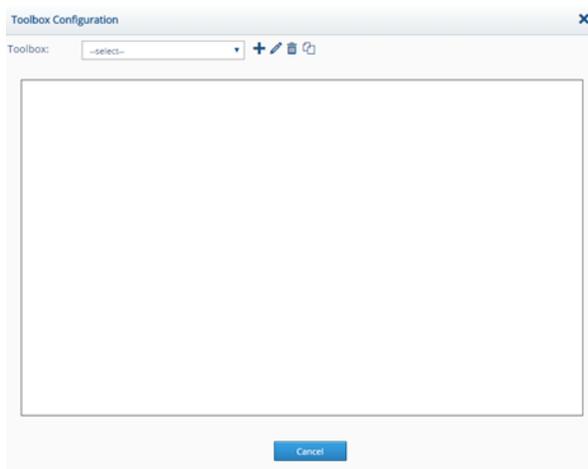


Figure 147: Toolbox Configuration Dialog Box

2. In the **Toolbox Configuration** dialog box, click the Add button **+**. The **Add Toolbox** dialog box appears:

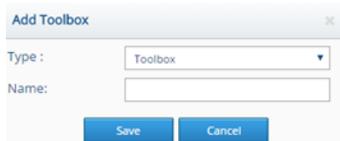


Figure 148: Add Toolbox Dialog Box

3. In the Type box, select Toolbox or Link:
 - Selecting Toolbox enables you to send commands to the device when in the device's terminal. After selecting this option, you can go on to write commands for the device. For an explanation on running scripts, see the chapter on Access.
 - Selecting Link causes the **Terminal** screen, the default screen in Access, to open the web interface of the device instead of running commands. The URL should point to the web link of the device. You can use environment variables such as %%HOST%% for the IP of the device, or %%PORT%% for the port of the device.
4. In the Name box, type a name for the toolbox and click **Save**.
5. Click the Close button **X** or the Cancel button **Cancel** to exit the dialog box.

Customize

Configuring Commands for a Toolbox

To configure commands for a toolbox, select vendor, product, and version, and in the Option box, click the Add Option button **+**. The **Add Option** dialog box appears. Type a name for the option and click Save & Edit. The **Option Configuration** screen appears. For an explanation of the **Option Configuration** screen, see

Option Configuration Screen.

Option Configuration Screen

The **Option Configuration** screen enables you to customize backups for any device in your system. It enables you to write command scripts for device backup, inventory, restore, health checks, and cleanup as well as define additional options and fields for the **Devices** screen. You can customize additional fields and their defaults for the **Device Details** tab and the **Inventory** tab for a device.

To display the **Option Configuration** screen, on the **Sidebar**, click **Customize**. The **Customize** screen appears. Select the vendor, product, and version, and in the Option box, select the option you want to edit or click the Add Option button **+** to create a new option. In either case, the **Option Configuration** screen appears:

Customize

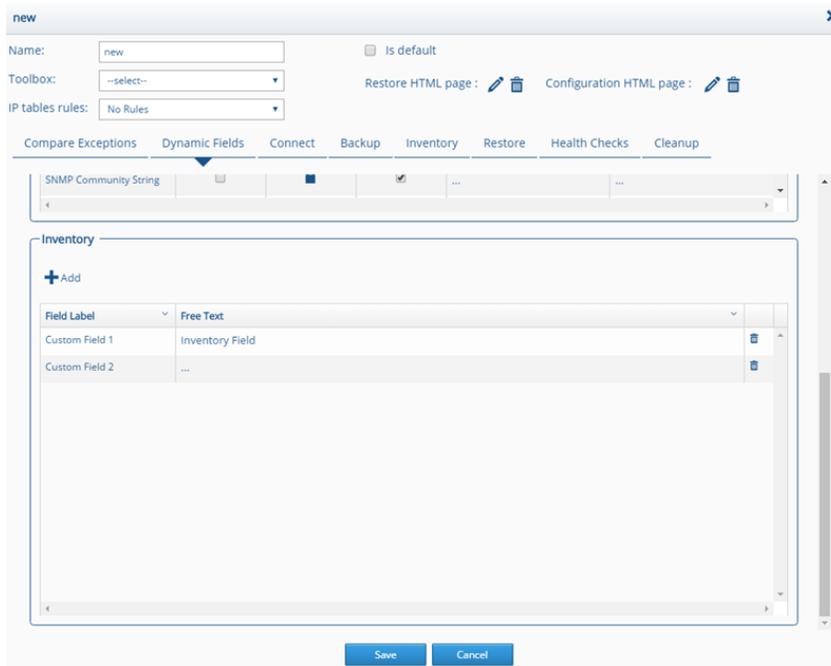


Figure 149: Option Configuration Screen

(In the above example, the screen is named tip2 because this is the name of the option that we created. See below.)

To configure the **Option Configuration** screen:

1. In the Name box, type or edit the name of the option as desired. It is recommended to indicate the protocol in use in the name. For example, common names are SSH, TELNET, FTP.
2. In the Toolbox list, select a toolbox. The scripts and fields that you create in the **Option Configuration** screen will be contained in this toolbox. Later, you can run the commands in the script by connecting to a device and selecting the toolbox in the **Terminal** screen displayed by selecting Access in the **Sidebar** (see the chapter on Access).
3. In the IP Tables Rules list, select the appropriate setting for the device. This setting is used when the device script needs to send a file back to **BackBox**. In this case, a relevant IP tables rule (**BackBox's** internal Firewall) should be specified. The rules are as follows:

Table 18: BackBox IP Table Rules

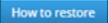
For:	Use this:
FTP connections	TCP Port 21
SCP connections	TCP Port 22

Customize

RSYNC connections	RSYNC PORT 873
TFTP connections	UDP Port 69
All other communications	Any Port

Note: Although, by default, all daemons run on the **BackBox** server, the communications via these ports are closed by default.

- If desired, select the **Is default** checkbox. Selecting this checkbox causes the configured option to be selected by default when a user configures a backup or other task for this device.
- To add a HTML page for restoring or configuring a device, use the **Add Restore HTML Page** button , or the **Add Configuration HTML Page** button .

Note: The contents of these pages are displayed when users click the **How to Configure** button  or the **How to Restore** button  in the **Device Details** tab for the device (accessed on the **Devices** screen). The **How to Restore** document should explain how to manually restore the device, while the **How to Configure** document should explain all the prerequisites for the backup to work.

You can format these documents by using the buttons on the ribbon at the top of the screen or by clicking the **View HTML** button  and inserting standard HTML code. Click **Finish**.

- When a backup finishes as an ASCII file, **BackBox** automatically compares it to the previous backup file. However, you may want to exclude some lines from the comparison, such as the timestamp. To do this, on the **Compare Exceptions** tab, click the **Add** button  and type any text that you want **BackBox** to ignore when comparing the backup. You can also use the **Import** button  to import a file. Clicking the **Export** button  enables you to export the exceptions.

Instructions on how to complete the other tabs on the **Option Configuration** screen, are contained in the following sections.

USING THE DYNAMIC FIELDS TAB

The **Option Configuration** screen's **Dynamic Fields** tab enables you to define fields that appear on the **Device Details** tab for a

Customize



device listed in the **Devices** screen. The tab contains two sections:

- Dynamic Fields section in the upper part of the tab
- Inventory section in the lower part of the tab (you may need to scroll the tab to display this part).

UNDERSTANDING THE DYNAMIC FIELDS SECTION

This section displays a list of fields that are typically used on the **Device Details** tab, such as: Authentication, Username, etc. For each field in the Field Label column, you can choose the options of the following columns:

Table 19: Options Columns of Dynamic Fields

Selecting this:	Causes this:
Mandatory	The field becomes required. You cannot save the settings on the Device Details tab without supplying a value for this field.
Encrypt	Encrypts the field's contents so that it appears as dots. This is the default for fields such as Password.
Hide Command	The field will not appear in the Backup log.
Free Text	Displays the text that will appear as the name of the field on the screen.
Default Value	A default value will appear in the field when the screen is displayed. This is optional.

Following is a description of the fields and their variables. Backup scripts can make use of the contents of these fields through using the variables as noted.

AUTHENTICATION

Determines whether this device will be enabled to use with authentication templates. The default action is that they will, and that the authentication will be mandatory. If an authentication template is chosen, the Username / Password / etc. fields that are irrelevant will be hidden. For example:



Figure 150: Authentication Screen

Customize

AUTHENTICATION TEMPLATES

When Use Templates is selected in the Authentication list, it displays a list of authentication templates to select from.

SERVER IP

Displays a list of IP addresses of the **BackBox** server. These IP addresses will be used by **BackBox**, to determine the IP address to which to send the file.

Variable: %%SERVER_IP%%

USERNAME

Displays a field for the Username login to the remote device.

Variable: %%USER%%

PASSWORD

Displays a field for the Password login to the remote device.

Variable: %%PASSWORD%%

EXTRA PASSWORD

Displays a field for the Extra Password (expert mode, enable mode, priv mode, su, etc.) to the remote device.

Variable: %%SU_PASSWORD%%

USERNAME 2

Sometimes a device will need a dual login. This field is for the second username to log-in to the remote device.

Variable: %%COMMAND_USER%%

PASSWORD 2

Sometime a device will need a dual login. This will display a field for the second user password to the remote device.

Variable: %%COMMAND_PASSWORD%%

SNMP VERSION

Displays a field for the SNMP version login to the remote device.

Variable: %%SNMP_VERSION%%

SNMP COMMUNITY STRING

Displays a field for the SNMP community to the remote device.

Customize



Variable: %%SNMP_COMMUNITY%%

PORT

Displays a field for the communication port to the remote device.

Variable: %%PORT%%

Note: In this field, the free text value will be configured as the default value, and the label is hard-coded to the port.

BACKUP CUSTOM FIELD

Displays a custom field to use with the remote device.

Variable: %%CUSTOM_1%%

CLUSTER NODE IP

Some devices may be part of a cluster. This field displays a field for the cluster node IP.

UNDERSTANDING THE INVENTORY SECTION

The Inventory section of the **Dynamic Fields** tab is in the lower part of the tab (scroll down) and looks like this:

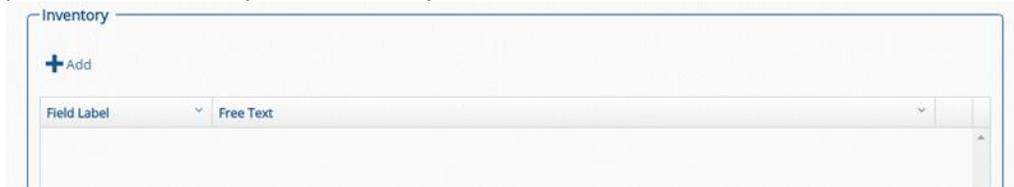


Figure 151: Inventory Section of the Dynamic Fields Tab

This section enables you to create fields for the device's **Inventory** tab in the **Devices** screen. To create a field for the device's **Inventory** tab, click the Add button **+ Add**. The new Inventory field is added to the list of field labels. In the Free Text column, type a name for the field and click the Submit button . After clicking Save, the fields will be displayed on the **Inventory** tab for the device in the **Devices** screen.

Variables: To access the contents of any of the Inventory fields in backup command scripts, use the variables %%Custom_Field1%%, %%Custom_Field2%%, etc., and not the name given in Free Text.

Customize



OPTION CONFIGURATION SCRIPTING TABS

The **Option Configuration** screen's scripting tabs include: Connect, Backup, Inventory, Restore, Health Checks, and Cleanup.

The scripting tabs enable you to write and edit scripts for a variety of actions. You can add a sequence of commands that will be executed, line by line. (The **Health Checks** tab is a little different and first requires that you create a health check before you can add commands to it.)

Note: Commands on the **Connect** tab and the **Inventory** tab can only be initiated if called by a command on the **Backup** tab as explained in the relevant sections below.

The scripting tabs and their uses are as follows:

Table 20: Option Configuration Scripting Tabs

Tab	Used for
Connect	Connecting to a remote device
Backup	Creating a backup for the device
Inventory	Providing information about the device
Restore	Restoring the device
Health Checks	Creating tests to check the health of the device
Cleanup	Cleaning up remains of the backup process

The relationship between the six scripting tabs is as follows:

- The script on the **Connect** tab can be called by a Connect command from the **Backup, Restore, Health Checks, and Cleanup** tabs.
- The script on the **Inventory** tab can be called by an Inventory command from the **Backup, Restore, Health Checks, and Cleanup** tabs.

Clicking the Add button  on a scripting tab's toolbar, or clicking on the large Add icon  in the middle of the tab's screen, displays the **Conditions** dialog box, in which you can configure the command and its parameters. Clicking Save returns you to the **Option Configuration** screen, which now displays information on your configuration, including such items as the Customize

type of command, description, timeout, the message that the command generates upon execution or failure (Result Option), etc. For details see the next section, Writing Command Scripts .

The last column displayed for each command is the Order of the command. This refers to its place in the sequence in which commands will be executed on the tab. You can reorder the sequence by simply dragging the sequence number in the Order column up or down in the command list. The sequence number automatically changes to reflect the new ordering of commands.

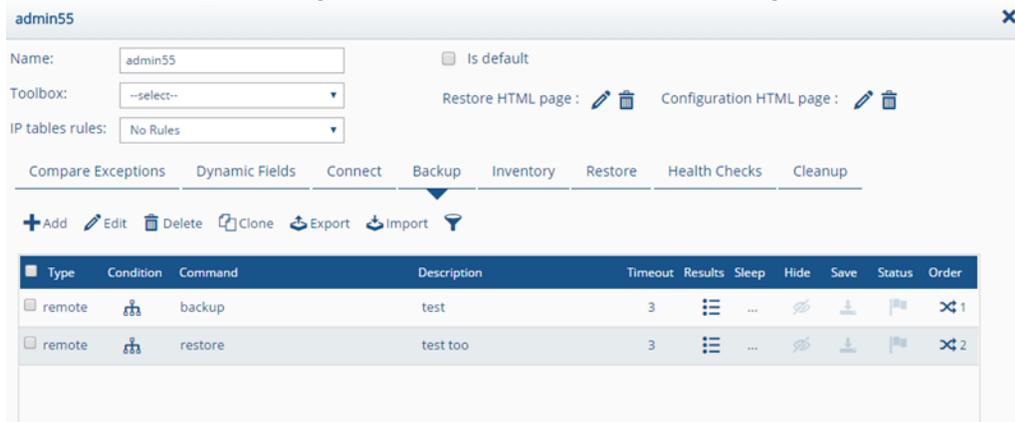


Figure 152: Example of Scripting Tab on the Customize Option Configuration Screen

Customize

Chapter 16. Writing Command Scripts

BackBox enables you to write command scripts in order to customize and automate a variety of activities in the system: backups, restores, inventories, tasks, health checks, harmonizations, and cleanups. For backups, restores, inventories, health checks, and cleanups you write the scripts using the **Option Configuration** screen in **Customize**. For tasks and harmonizations, you use their respective **Configuration** screens, accessed from the **Sidebar**, to write scripts.

Regardless of which command script you are writing, you configure commands in the **Conditions** dialog box that is displayed when you click the **Add** button in any tab meant to contain a list of commands; for example, the **Harmonization** tab in a **Harmonization** template, or the **Backup** tab in **Customize**. The **Conditions** dialog box looks like this:

Figure 153: Conditions Dialog Box

To add a command to a scripting tab:

1. On the scripting tab, click **Add** to display the **Conditions** dialog box.

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2. In the Type list, select a command type. There are four types of commands and they are discussed in depth in the next section,
3. Command and Command Type.
4. In the Command box, type a command along with its parameters. These can be standard Linux commands that you would type on a typical SSH session, or device specific commands. There are also **BackBox** specific commands as explained in the next section,
5. Command and Command Type.
6. In the Description box, type a short description of what the command is meant to do. The description is displayed in the list of commands on the tab to which you added it.
7. In the Timeout box, type the number of seconds that must elapse before a command will fail with a timeout error. This is mandatory for remote commands.
8. For remote, local, and verification commands, click the Result Options button **Result Options** to indicate what **BackBox** should do upon success, failure, or suspected failure of the command execution. The following dialog box is displayed:

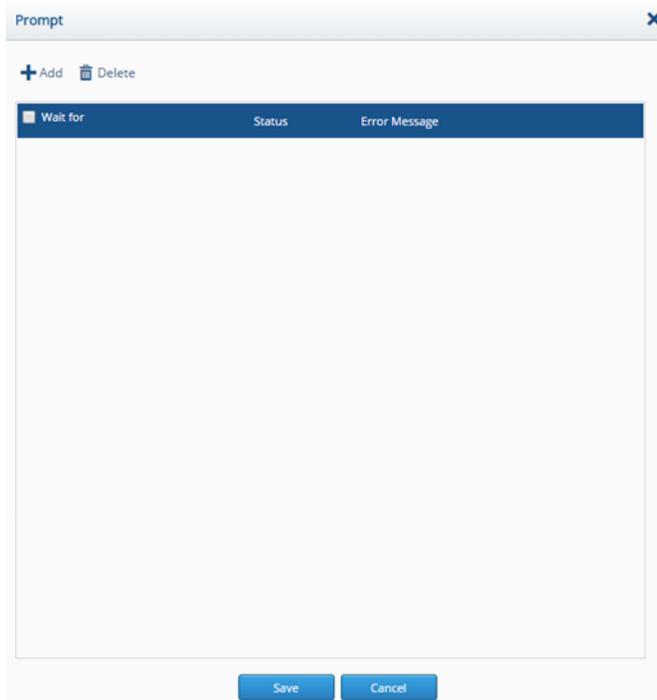


Figure 154: Prompt Dialog Box

9. Click Add to add a prompt. The following dialog box appears:

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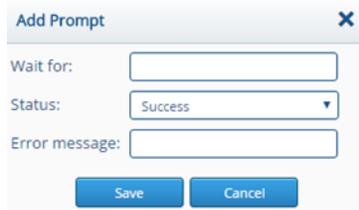


Figure 155: Add Prompt Dialog Box

10. In the Wait for box, specify a character or string that indicates the selected status: Success, Suspect, or Failure.
11. In the Error Message box, type the message that will be displayed to the user when the status occurs. Click Save to return to the **Prompt** dialog box. The prompt is now displayed in the Prompt dialog box. Click Save to return to the **Conditions** dialog box.
12. Under Conditions Operator, and Advanced Options, select the appropriate settings – see the next section
13. Command and Command Type for details.

Note: The Advanced Options fields are different for verification commands as discussed in the section on Verification Commands.
14. Click Save; the command now appears in the list of commands, on the tab to which you added it.

See

Command and Command Type below for details.

Command and Command Type

The command that you type in the Command box depends on the type of command that you selected in the Command Type list. In the Command Type list, you can select from among the following four types of commands:

Table 21: Command Type Summary

Command Type Summary	
Command Type	Used for
Remote	Standard SSH or device specific commands running on BackBox and a remote device. You would usually run these commands to communicate and pull backups.
Internal	Built-in commands that are unique to BackBox , and perform various tasks that aid in the backup process. See the section below on Internal Commands.

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Command Type Summary	
Command Type	Used for
Local	Standard scripting commands disconnected from the Remote commands session. They have the same options and features as the remote commands but on a parallel SSH session. Note that the local prompt on BackBox is BBP .
Verification	Built-in commands that are used to verify that the backups received are valid, and sane. See the Verification Commands section below for details.

A more detailed discussion and examples of how to write commands for the various types is provided below.

REMOTE COMMANDS

Remote commands use a standard syntax that is used by Linux (while connecting to **BackBox**) or by the device itself (after connecting to the remote device). An example of a Remote command is the Cisco Terminal Length command – for example, adding the command *terminal length 0* in the **Conditions** dialog box would display the entire output (such as configuration) without any user interaction.

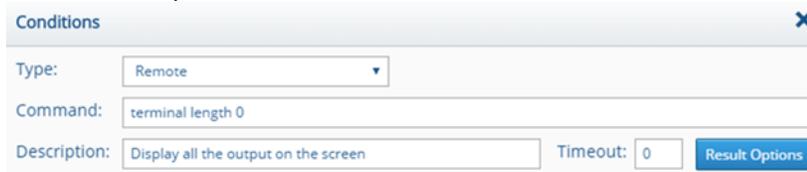


Figure 156: Entering the Terminal Length Command in the Conditions Dialog Box

INTERNAL COMMANDS

Internal commands are specific to **BackBox** and perform various backup tasks. They consist of the following:

CONNECT

Causes all commands on the **Connect** tab to execute. Once they are all performed, the script will continue as usual. In this case, the **Connect** tab acts as a function which is called by the Connect command. For an understanding of the **Connect** tab, see Connect Tab below.

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GETLASTLINE

Looks at the last line of output from the remote device. You can use this command to trim the backup file so that it excludes the prompt. To do this you would use the variable `%%CURRENT_PROMPT%%` to save the backup file. For example, entering `getlastline %%CURRENT_PROMPT%%` in the command box would save the backup file to the variable `%%CURRENT_PROMPT%%` and trim the file so that the prompt is excluded:

Figure 157: Using the Getlastline Command to Trim the Backup File

TRIM

Cleans unwanted characters from the output file. For example, sometimes when saving the output of a command to a variable, a line break character (invisible) will be added. By trimming the variable, it will be cleaned of the unwanted characters.

For example, the following trims the output file and saves it to the variable VAR:

Figure 158: Trimming the Output and Saving It to VAR with the Trim Command
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GOTOLINE

Implements a simple looping mechanism within a script. For example, the following would cause the script to jump to line 63 if a specified condition is true:

Figure 159: If the Condition Is True, Jump to Line 63 of the Script

INVENTORY

Causes all the commands on the **Inventory** tab to execute. In this case, **Inventory** tab acts as a function that is called by the inventory command.

DECRYPT

Backup files are kept encrypted (if configured so) on the **BackBox** server. You use the decrypt command to decrypt the files (which is usually done when restoring). The command decrypts all files within the backup directory, and copies them into the %%DEFAULT_BACKUP_LOCATION%% directory.

CARRIAGE

Some devices use a non-standard terminal connection. In rare cases, they use a different character for the carriage return, or for the new line character. In that case, you can run the carriage command with the ASCII number of the character, which will

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ensure that it functions as the carriage return until the end of the current session.

BACKUP

Enables you to call the backup commands configured on the **Backup** tab. This enables calling the backup commands from inside a script.

RESTORE

Enables you to call the restore commands configured on the **Restore** tab. This enables calling the restore commands from inside a script.

STRIP

Enables you to strip characters from a string. This works like the trim command (see Trim), but enables you to remove multiple characters if desired. For example, the following removes the characters \$ and #:

```
strip 12 3$#%4 5$6 --$ --#
```

and produces the following:

```
12 3%4 56
```

LOCAL COMMANDS

These are standard scripting commands that are disconnected from the remote commands session, which allows you to run commands simultaneously both on **BackBox** and the remote device. Local commands are the same as the remote commands – but on a parallel SSH session.

Note: The local prompt on **BackBox** is **BBP**. This is designed to distinguish the **BackBox** shell from the remote device shell. Usually local commands will have the Result Option of **BBP** for a successful command.

VERIFICATION COMMANDS

These are built-in commands that are used to verify that the backup files generated by **BackBox** are valid, and sane. There are three verification mechanisms within the verification commands: Check Size, Find Text, and Archive Contains.

CHECK SIZE

Verifies that a specific file is within a backup range. Command, Timeout, or Result options are not required. When this command is

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selected in the **Conditions** dialog box, the following Advanced Options are displayed:

Figure 160: Advanced Options for Configuring the Check Size Command

Table 22: Check Size Options

Advanced Option Field	Values
If size of file	The full path of the file being verified. Usually the path is: %%DEFAULT_BACKUP_LOCATION%%/<filename>.
In Range / Not in Range	Determines if the file size must be in the set Min/Max range.
Min size/Max size	Sets the lower and upper limits of the file size. The units can be selected: Bytes - Terra Bytes.
Error Message	The message informing the user whether or not the file meets the verification limits.

FIND TEXT

Makes sure that a specific string is found within a text based file. Command, Timeout, or Result options are not required. When this command is selected in the **Conditions** dialog box, the following Advanced Options are displayed:

Figure 161: Advanced Options for Configuring the Find Text Command

Table 23: Find Text Options

Advanced Option Field	Values
If Found	The text string that must be found in a text based file
In File	The full path of the file being verified. Usually the path is: %%DEFAULT_BACKUP_LOCATION%%/<filename>

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Advanced Option Field	Values
From line To line	Sets the line numbers in which the string should be found. If From Line is blank, BackBox searches from the beginning of the file. If To Line is blank, BackBox searches to the end of the file.
Error Message	The message informing the user whether or not the text string was found.

ARCHIVE CONTAINS

Makes sure that a specific file is contained in an archived file. Command, Timeout, or Result options are not required. When this command is selected in the **Add Command** dialog box, the following Advanced Options are displayed:

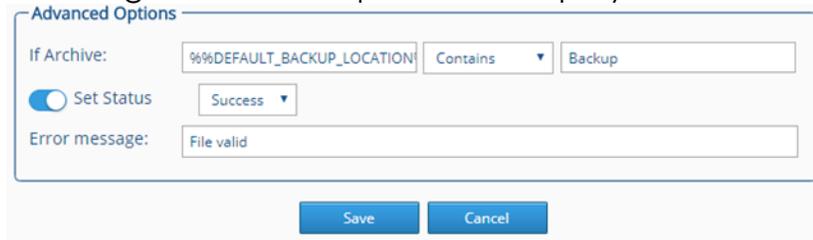


Figure 162: Advanced Options for Configuring the Archive Contains Command

Table 24: Archive Contains Options

Advanced Option Field	Values
If Archive	The full path of the archive being verified. Usually the path is: %%DEFAULT_BACKUP_LOCATION%%/<archivename>.
Contains/Not contains	Whether or not the filename is contained in the archive.
Set Status	Determines the final result of a verification (Success, Suspect, Failure).
Error message	The message informing the user whether or not the filename was found in the archive.

Conditions

The **Conditions Operator** area in the **Conditions** dialog box enables you to add conditions that control the execution of a command. These are equivalent to If statements in a program and involve writing variables whose values can be evaluated by **BackBox**. For example, the following are conditions for a specified command:

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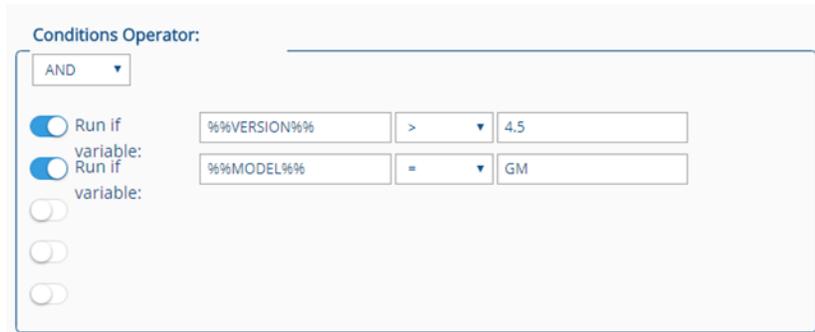


Figure 163: Example of Conditions for a Command

In the above example, the command will be executed only if both Condition 1 AND Condition 2 are evaluated as true. In this case, a variable called VERSION must be greater than 4.5 AND a variable called MODEL must be equal to the string GM. Operators can be either AND or OR. Variables can be evaluated as related to a numerical or string value according to the following:

Table 25: Conditions Area Logical Operators

Contains	The variable contains the specified string.
=	The variable is equal to the specified value.
Exists	The variable exists in the system.
>	The variable is greater than the specified value.
Is empty	The variable has not been assigned a value.
Is not empty	The variable has been assigned a value.
<	The variable is less than the specified value.
Not Contains	The variable does not contain the specified string.
< >	The variable is less than, or greater than, the specified value.
REGEX	The variable is equal to the specified Regular Expression.

Advanced Options

For all commands, except when the Verification command type is selected, the following Advanced Options area is displayed on the **Conditions** dialog box:

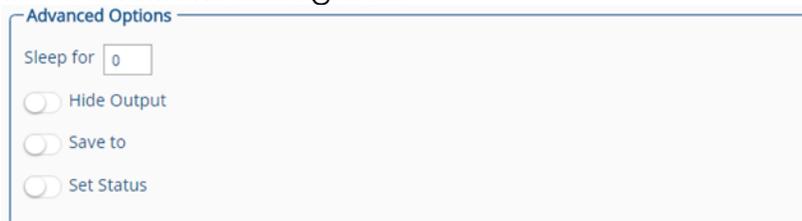


Figure 164: Advanced Options Area

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The Advanced Options for most commands consists of the following:

SLEEP FOR

This adds a specified number of seconds after the command has run, and before waiting for the Result Options.

HIDE OUTPUT

Hides the output of the result from the backup trail-logs.

SAVE TO

Saves the output of a command to a variable or a file. When you select this option, a box appears enabling you to specify the variable or file to which to save.

If Save to Variable is selected, you can specify the name of a variable, and the variable will be created on the fly. It is recommended to use the following for a variable name:

%%VARIABLE_NAME%%.



Figure 165: Advanced Options Displaying Save to Variable

If Save to File is selected, you can select either Overwrite File or Append to File. If you select Overwrite File, the specified file will overwrite the file that you selected. Selecting Append to File will append the output to the end of the selected file.

SET STATUS

Normally, you set the status of the command in the Result Options . However, in some cases, you may want to set the status of the operation regardless of the outcome of the command. In this case, you can select the Set Status option and specify the status and error message in the boxes that appear. For Advanced Options for Verification Commands, see Verification Commands.

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Connect Tab

Connect commands are commands that run on the **BackBox** CLI (Command Line Interface) in order to connect to the remote device. These commands will only start running when a Connect command is executed on the **Backup** tab.

These commands are separated from the regular backup commands due to the following:

- Sometimes you might need to connect to the devices more than once during the backup process.
- Scripts other than the Backup script might also need to connect to the remote device (Inventory script, Restore script, Toolbox, etc.).

Thus, the **Connect** tab acts as a function or method whose command sequence can be called by other scripts.

EXAMPLE

The following is an example of a command script on the **Connect** tab:

Type	Condition	Command	Description	Timeout	Results	Sleep	Hide	Save	Status	Order
remote		telnet%%HOST%%	Connecting to host	60						1
remote		%%USER%%	Providing username	60						2
remote		%%PASSWORD%%	Providing password	60						3

Figure 166: Example Connect Script

This example illustrates a typical telnet connection to a remote device. The first command enables you to telnet to the IP of the device. The variable %%HOST%% automatically takes the IP of the device. Note that a 60 second timeout delay was set. The Results Options for the command specifies that if “user” or “username” is received within that time, the command is successful and the system proceeds to the next command as shown in the following:

Wait for	Status	Error Message
user	Success	Successful
connection	Failure	Connection timed out
Connection	Failure	Connection refused

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Figure 167: Sample Results Option Configuration for Telnet Command

Backup Tab

You use the **Backup** tab to write customized Backup scripts that you can edit and revise as desired. Like all scripting tabs, you can add and delete commands, revise the criteria for success or failure of a command and easily reorder commands.

EXAMPLE

The following is an example of a backup script:

Type	Condition	Command	Description	Timeout	Results	Sleep	Hide	Save	Status	Order
internal		connect	Starts connection to remote de	...	...	...				1
internal		getlastline	Displays last line	...	...	...				2
remote		terminal length 0	Displays all of the out on the	60	...	...				3
remote		show running-config	Displays configuration on scre	600	...	...				4
internal		inventory	Calls all the commands on the	...	...	...				5
verification		Check Size	Checks if size is sane	...	...	...				6

Figure 168: Example of Backup Script

Note that the script starts with an internal Connect command that starts the connection to the remote device by calling the Connect script on the **Connect** tab. This is typical when pulling backups from a remote device.

The next command is another internal command, Getlastline, which is saved into the special variable name `%%CURRENT_PROMPT%%`. This will make sure that when any file is saved, the prompt will be automatically trimmed from the file. This will also tell **BackBox** what the prompt looks like, so it can later be used in Result Options for other commands.

The third command is a specific Cisco command, which in this case will make sure that if any configuration is displayed, the output will be completely displayed on the screen – without any user interaction. Note that since this is a remote command, a timeout has been assigned (60 seconds).

The fourth command displays the configuration on the screen, and saves it in a file in the **BackBox** default backup directory. Note that since this command can take longer, the timeout has been increased to 600 seconds.

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The fifth command is an internal Inventory command that starts the script on the **Inventory** tab. For details on Inventory scripts, see the

Inventory Tab section below.

Lastly, a verification command, Check Size, checks the size of the file to make sure that it is not too small and contains some configuration. It also checks for an upper size limit to make sure that the file is sane.

Inventory Tab

The **Inventory** tab is for creating scripts that draw information from, or populate fields on, the Inventory tab for a device (see Device Screen: Inventory Tab).

For the Inventory commands to work, you must first create Inventory fields for the device's **Inventory** tab. You do this by using the Inventory section of the **Option Configuration** screen's **Dynamic Fields** tab in Customize (see Using the Dynamic Fields Tab, and Understanding the Inventory Section). Here is the logic of this process:

	To do this	Use this
1	Create custom fields for the Device Details and Inventory tabs on the Devices screen.	Inventory area of Dynamic Fields tab in the Option Configuration screen in Customize.
2	Write a script that will populate the fields or draw information from them.	Inventory tab on the Option Configuration screen in Customize.

When you create a field using the **Dynamic Fields** tab's Inventory area, you create a label for the field as well as a variable that will hold the value of the field. The variables are hard coded as %%Custom Field 1%%, %%Custom Field 2%%, etc., like this:



Figure 169: Fields in the Inventory Area of the Dynamic Fields Tab

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To cause a command to populate a field with information, you must save the command's output to the corresponding variable name.

EXAMPLE

Assume that you created the following custom fields in the Inventory area of the **Dynamic Fields** tab:



Figure 170: Example of Custom Fields

Those fields now appear on the **Inventory** tab in the **Device** screen for that device. Now, suppose that you want to populate those fields with information. You can do so by writing a script consisting of the following commands on the **Inventory** tab like this:

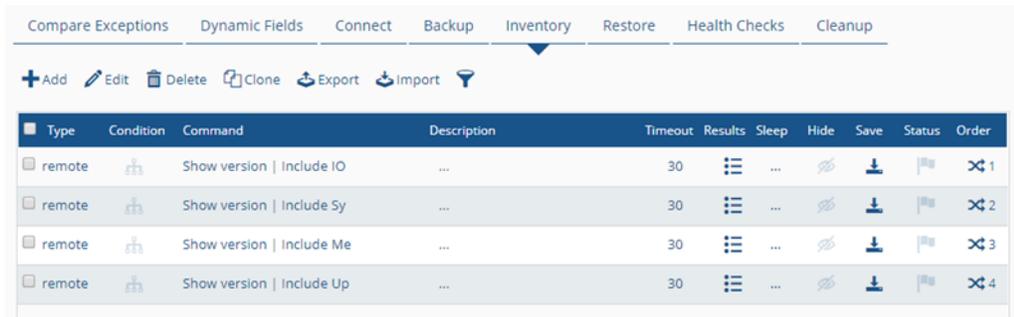


Figure 171: Sample of Inventory Script

All these commands save their output to their respective custom variable, like this:



Figure 172: This Setting Will Output the Results to %%Custom_Field1%%

This, in turn, populates the respective fields on the device's **Inventory** tab on the **Device** screen.

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Restore Tab

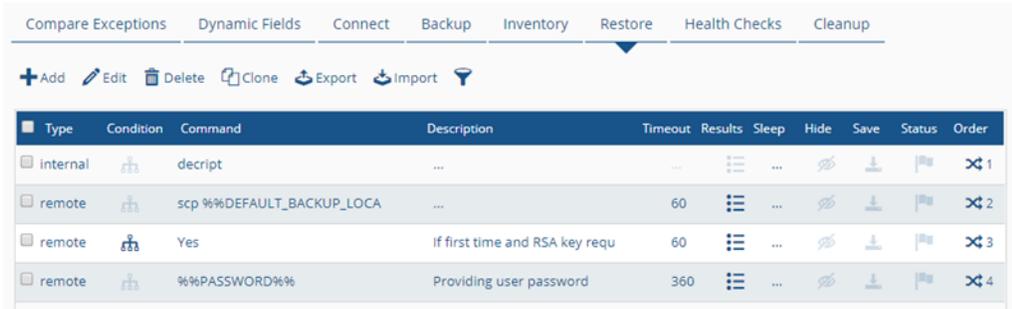
The **Restore** tab enable you to write scripts that restore the device to the currently selected configuration. These scripts use the same commands and features as the Backup scripts. To run the script, choose the Restore button  **Restore** in the **Device History** tab for the device (see the Device History Tab).

Restore scripts usually begin with an internal command called decrypt, to make sure that, in case the files are encrypted, they will be decrypted (see Internal Commands).

Subsequently, a new directory that holds the configuration files should be created. To access it in the script, you can use the same variable as in the backup script, i.e.,
`%%DEFAULT_BACKUP_LOCATION%%`.

EXAMPLE

Below is a Restore script that copies a configuration file back to the remote location:



Type	Condition	Command	Description	Timeout	Results	Sleep	Hide	Save	Status	Order
internal		decrypt	...	...						1
remote		scp %%DEFAULT_BACKUP_LOCA	...	60						2
remote	Yes		If first time and RSA key requ	60						3
remote		%%PASSWORD%%	Providing user password	360						4

Figure 173: Sample Restore Script for Copying a File to a Remote Location

Notes

- The full path used for the scp command above is this:
`scp %%DEFAULT_BACKUP_LOCATION%%/configuration_backup.conf
 -P %%PORT%% %%USER%%@%%HOST%%:fgt_restore_config`
 where %%HOST%% is the variable containing the Host IP, and %%USER%% is the variable containing the username.
- The Results Options for the scp command was set for Wait for assword – Success, where the P is omitted so that it can be either upper or lower case.
- For the scp command, in Advanced Options, the output of the command is saved to the variable %%SCP_CONNECT_RESPONSE%%. This is done to help determine whether this is the first time connecting to the device.
- The Yes command runs only on condition that this is the first time as specified in conditions:

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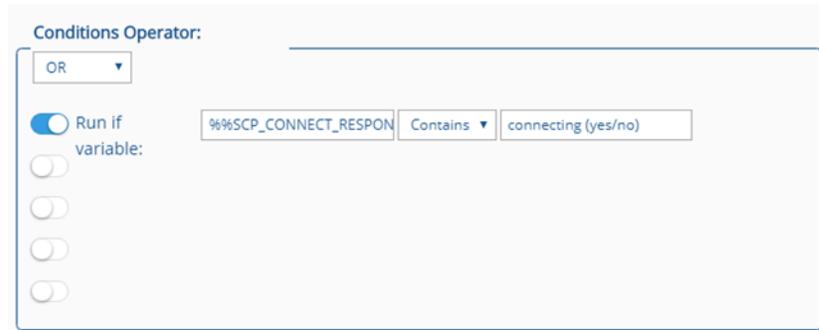


Figure 174: Example of Conditions Operator

- 5 The last command pushes in the password.

Health Checks Tab

The **Health Checks** tab on the **Option Configuration** screen enables you to write scripts to check the health of remote devices and alert you to issues when they occur. The scripts will appear in the list of Signatures for the device on the **Health Checks Configuration** screen.

The health checks for a device can be selected and run from the device's **Health Checks** tab which is accessible from the **Devices** screen when you click on a device in the list.

To create a Health Check script:

1. In the **Customize Configuration** screen for the device, click the **Health Checks** tab. The following dialog box is displayed:



Figure 175: Add Health Check Dialog Box

2. Type a name for the health check and click the Save & Edit button. The **Health Check Configuration** dialog box appears with the name of the health check in the title-bar:

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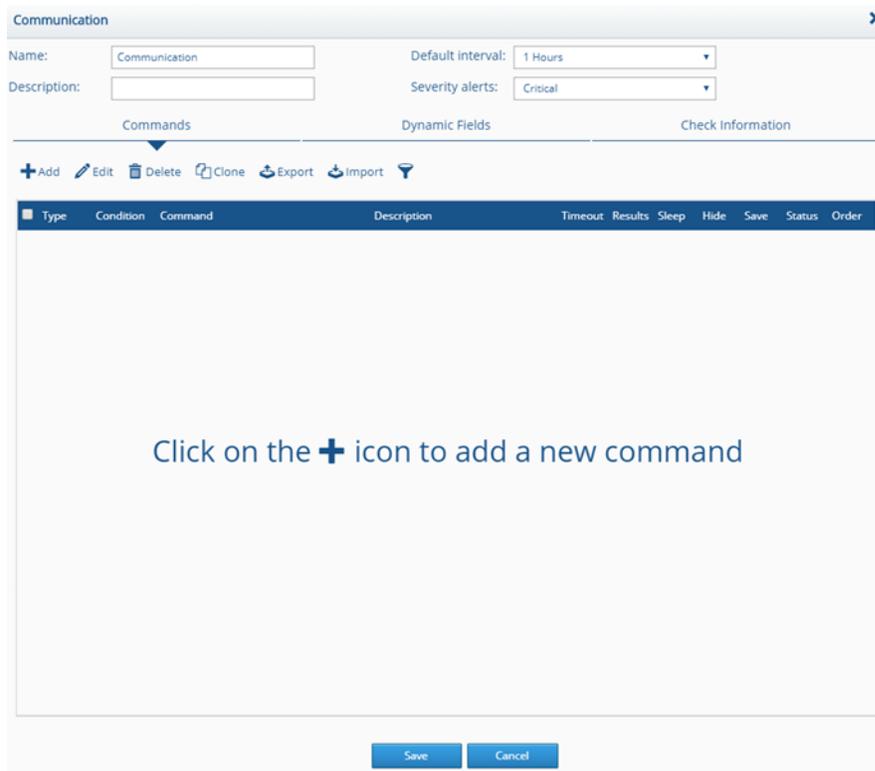


Figure 176: Health Check Script Configuration Dialog Box

3. Edit the name and description as desired and set the default interval for how often the health check should run.
4. In the Severity Alerts list, select the alerts that the check should trigger. You can select Critical, All or None. If you select All, the alert will include the following alerts: Success, Warning (suspect), Critical (failed).
5. Use the **Commands**, **Dynamic Fields**, and **Check Information** tabs to write the script and create the health check as explained in the sections below.

WRITING HEALTH CHECK SCRIPTS

You write Health Check scripts the same way you write other scripts such as a Backup script. The following sections provide additional information.

THE HEALTH CHECKS DYNAMIC FIELDS

The Health Checks' **Dynamic Fields** tab enables you to create dynamic fields similar to those created for the **Device Details** screen (see Using the Dynamic Fields Tab) with the following differences:

Writing Command Scripts

- You can configure the variable name as desired.
- You can specify that the field is locked. In that case, the user will not be able to modify its value.

Field Variable	Field Title	Default Value	Locked
<input type="checkbox"/> %%CPU_CRITICAL%%	CPU Critical Value	80	<input checked="" type="checkbox"/>
<input type="checkbox"/> %%CPU_WARNING%%	CPU Warning Value	70	<input type="checkbox"/>

Figure 177: Dynamic Fields Tab for Health Check Scripts

To add a Dynamic field, click the Add button and fill in the fields. After you save the field specifications, the fields appear in the list of fields as shown above. You can click on a field in the list and edit it just like those in the other parts of the **Option Configuration** screen.

HEALTH CHECK SCRIPT EXAMPLE

Most Health Check scripts follow this pattern:

First command: Checks a value and saves it to a variable.

Second command: Sets the result to Critical on condition that the value of the variable is greater or less than the value configured for the condition. For information on how to configure conditions for commands see

Conditions.

Third command: Sets the results to Warning on condition that the value of the variable is greater or less than the value configured for the condition. This assumes that the previous command did not detect a Critical state.

CHECK INFORMATION TAB

The **Check Information** tab provides an HTML Editor that enables you to write detailed information about the health check. The information will appear when you click the Information button ⓘ in the Info column for the health check on the **Devices** screen's **Health Checks** tab for a device. Here is an example of information written for a health check:

Writing Command Scripts

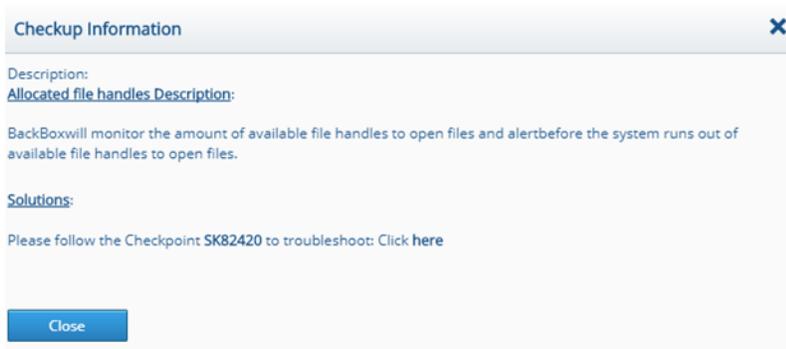


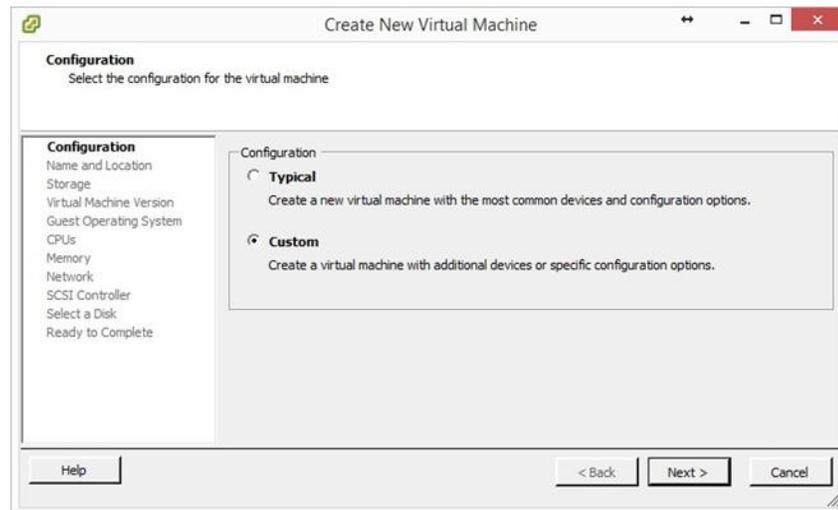
Figure 178: Example of Health Check Information

Writing Command Scripts

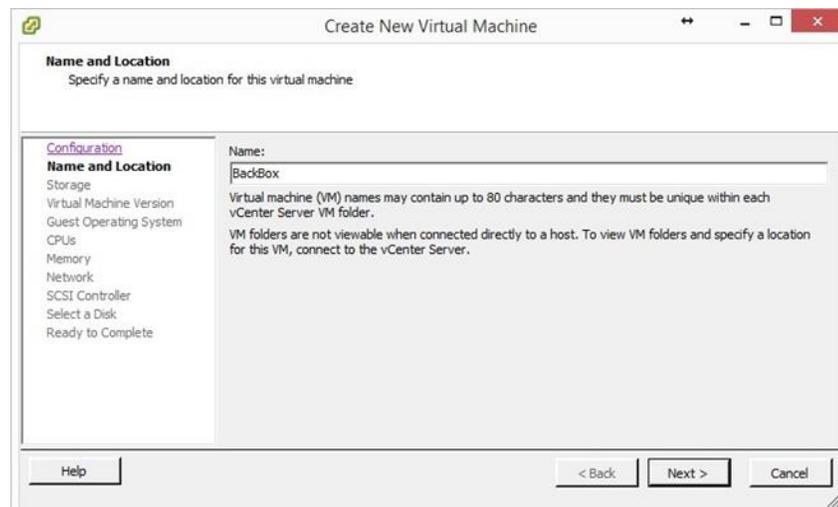
Appendix A. VMWARE INSTALLATION

This chapter provides instructions on how to install **BackBox** on a system running VMWare.

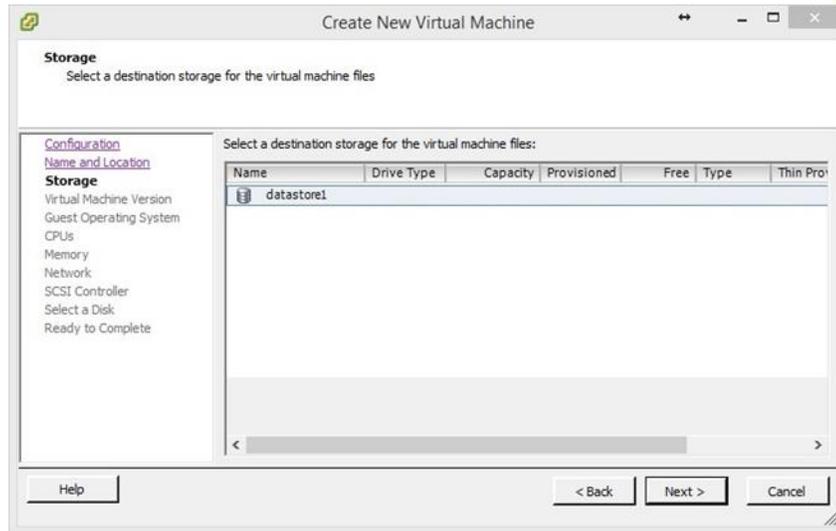
1. Open the vSphere client.
2. From the upper pane, click on File.
3. Select New -> Virtual Machine.
4. On the Configuration pane, select Custom and click Next.



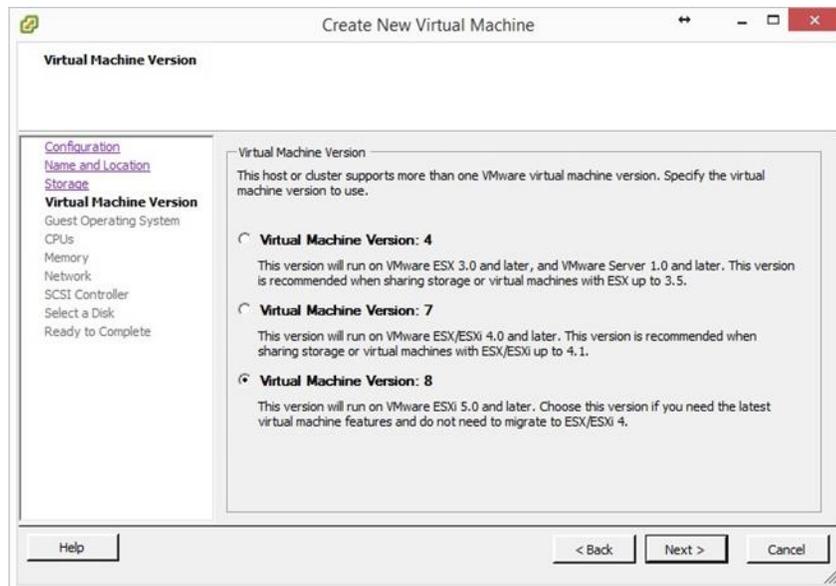
5. On the Name and Location pane, in the Name field, specify "**BackBox**" or any other name, and click Next.



6. On the Storage pane, select the data store that you want **BackBox** to reside on and click Next.

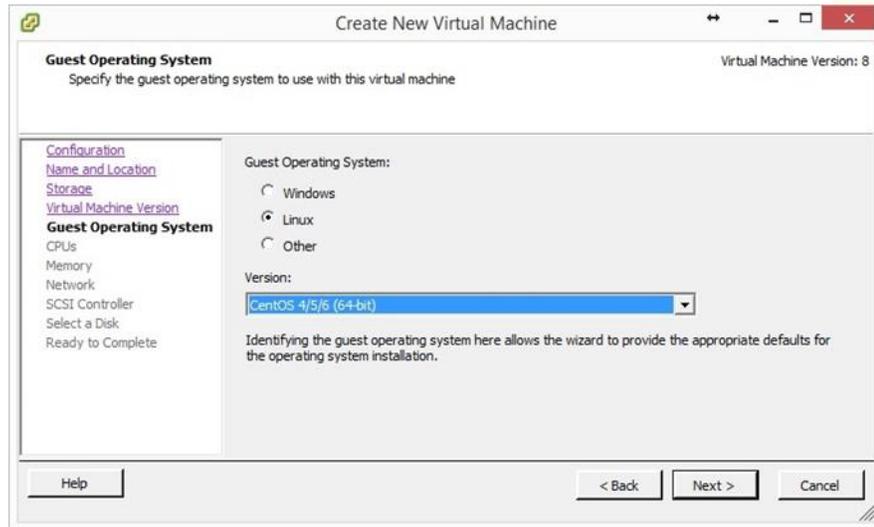


7. In the Virtual Machine Version pane, select Virtual Machine Version 8, and click Next.



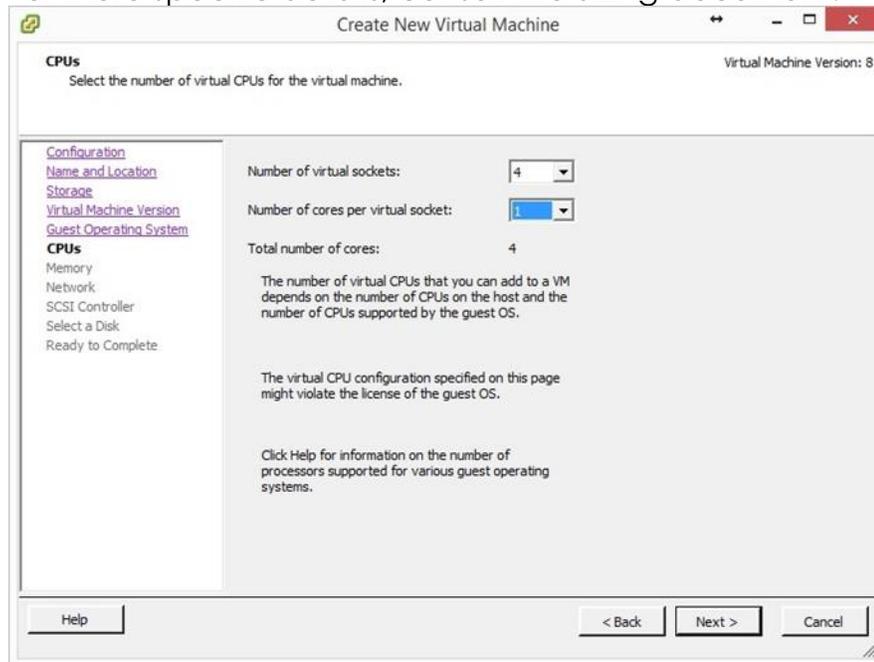
Appendix A: VMWare Installation

ON THE GUEST OPERATING SYSTEM PANE, SELECT LINUX AND IN THE VERSION BOX, SELECT CENTOS 4/5/6 (64-BIT) AND CLICK NEXT.



- 8. On the CPU pane, make sure that the Total number of cores is at least 4, and click Next.

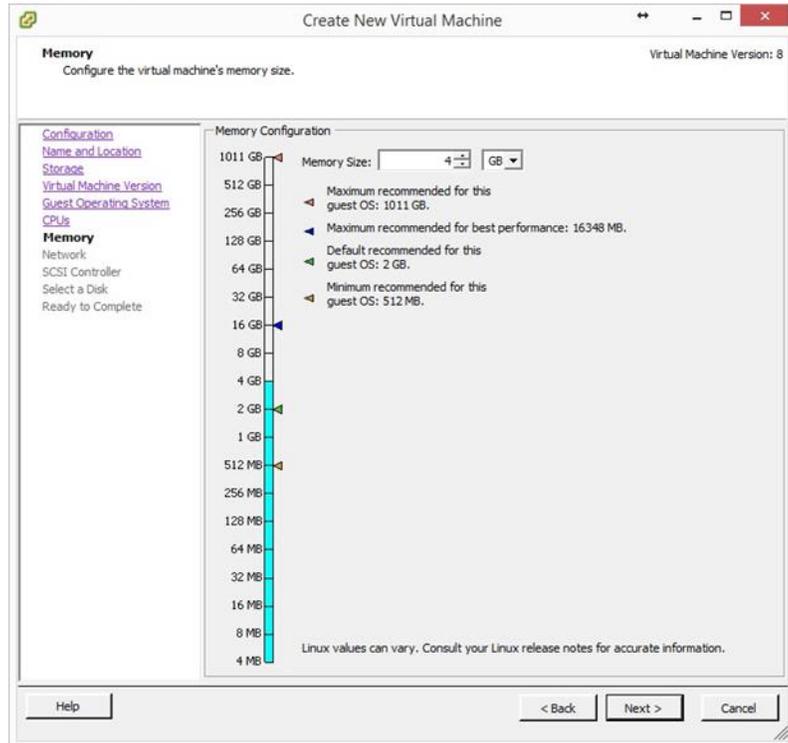
For more specific details, consult the Sizing document.



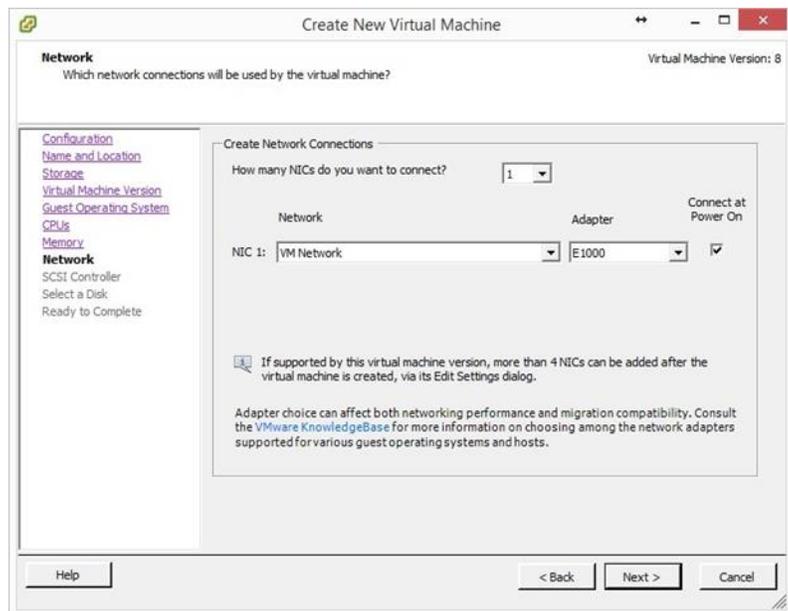
- 9. On the Memory pane, for Memory Size, specify a minimum of 4096MB.

Appendix A: VMWare Installation

For more specific details, please consult the Sizing document.

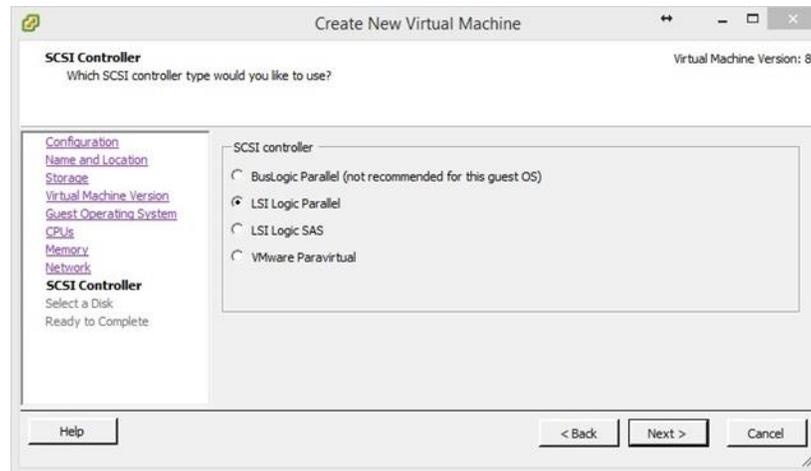


10. On the Network pane, select the E1000 network adapter and click Next.

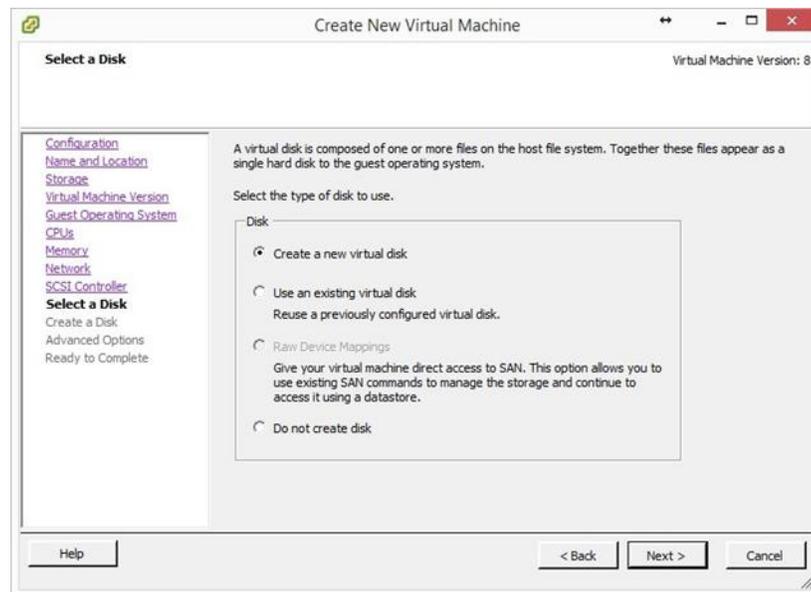


11. On the SCSI Controller pane, select LSI Logic Parallel and click Next.

Appendix A: VMWare Installation

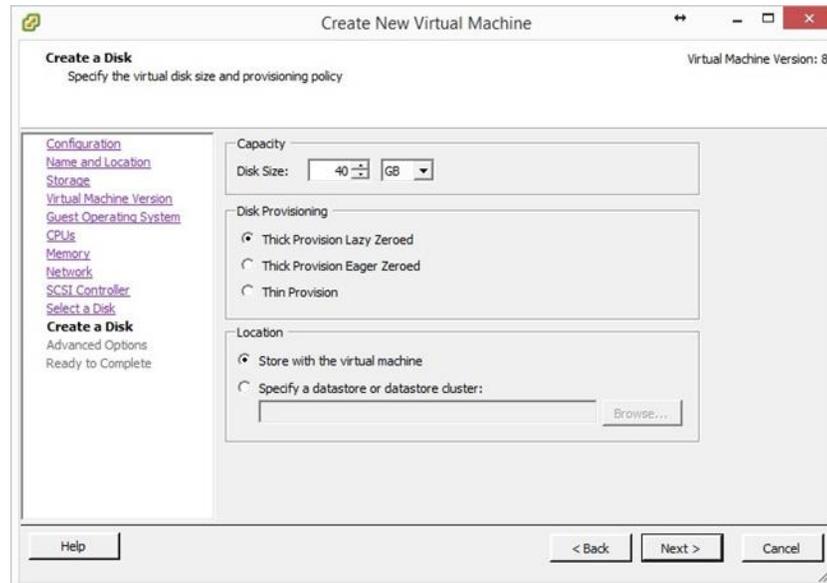


12. On the Select a Disk pane, select Create a new virtual disk and click Next.

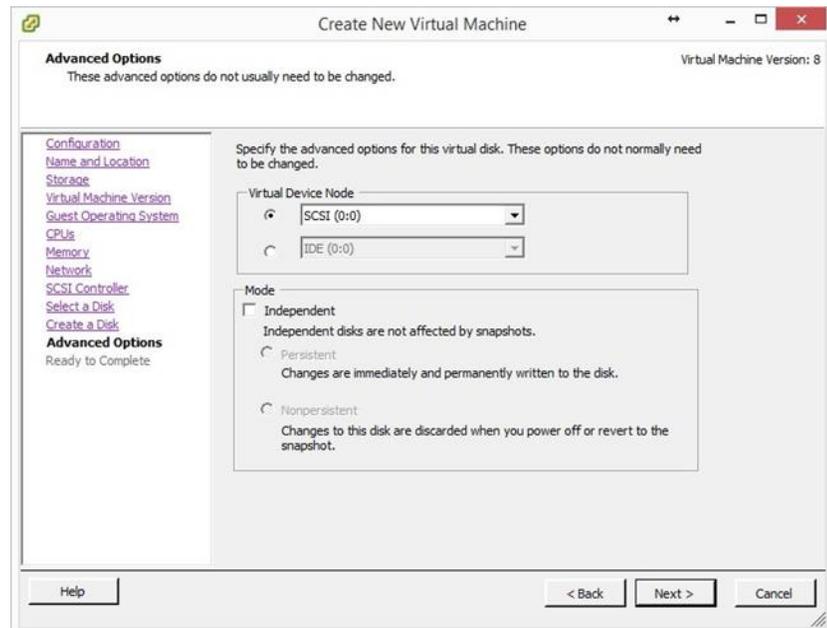


Appendix A: VMWare Installation

- On the Create a Disk pane, select a Disk provisioning option and location. Note that the Minimum disk size for **BackBox** is 40 GB.

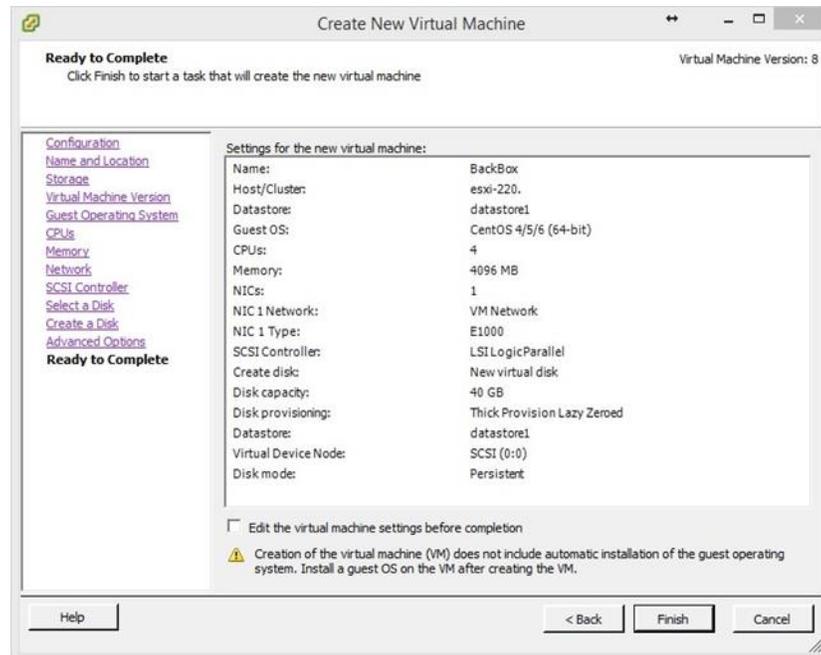


- On the Advanced Options pane, in the Virtual Device Node list choose SCSI (0:0) and click Next.



- On the Ready to Complete pane, select Edit the virtual machine settings before completion and click Continue.

Appendix A: VMWare Installation



16. From the left pane, select CD/DVD.
17. From the right pane, select Data store ISO file and click on Browse to locate the **BackBox** ISO file.
18. Click Finish.

Appendix A: VMWare Installation



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