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# Monitoring RabbitMQ Systems

Beta Version

AMPQ: RabbitMQ PowerPack version 101

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# Chapter

# 1

## Introduction

### Overview

This manual describes how to monitor RabbitMQ systems in SL1 using the Dynamic Applications in the AMPQ: RabbitMQ PowerPack.

The following sections provide an overview of RabbitMQ and the AMPQ: RabbitMQ PowerPack:

- [What is RabbitMQ? .....](#) 3
- [What Does the AMPQ: RabbitMQ PowerPack Monitor? .....](#) 4
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### What is RabbitMQ?

RabbitMQ is a message broker that uses the Advanced Message Queuing Protocol. RabbitMQ can be installed on servers running Linux or Windows.

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## What Does the AMPQ: RabbitMQ PowerPack Monitor?

To monitor RabbitMQ using SL1, you must install the *AMPQ: RabbitMQ* PowerPack. This PowerPack enables you to collect data about the RabbitMQ application. The *AMPQ: RabbitMQ* PowerPack can monitor RabbitMQ systems running version 3.5.1 and later.

The *AMPQ: RabbitMQ* PowerPack includes:

- An example credential you can use as a template to create a Basic/Snippet credential to connect to the RabbitMQ API
- Dynamic Applications to monitor performance metrics and collect configuration data for RabbitMQ
- A Device Class that can be manually aligned to a device on which a RabbitMQ system is installed
- Event Policies and corresponding alerts that are triggered when a RabbitMQ system meets certain status criteria

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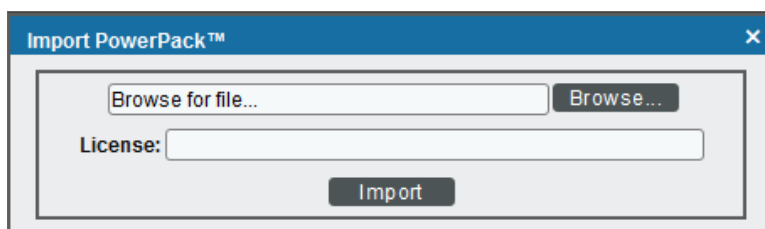
## Installing the AMPQ: RabbitMQ PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *AMPQ: RabbitMQ* PowerPack.

**TIP:** By default, installing a new version of a PowerPack overwrites all content in that PowerPack that has already been installed on the target system. You can use the **Enable Selective PowerPack Field Protection** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. (For more information, see the **System Administration** manual.)

To download and install a PowerPack:

1. Download the PowerPack from the [ScienceLogic Customer Portal](#).
2. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*.
4. The **Import PowerPack** dialog box appears:



5. Click the **[Browse]** button and navigate to the PowerPack file.
6. When the **PowerPack Installer** modal page appears, click the **[Install]** button to install the PowerPack.

**NOTE:** If you exit the **PowerPack Installer** modal page without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPack Manager** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal page. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

## Discovering RabbitMQ Systems

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### Overview

The following sections describe how to configure and discover a RabbitMQ system for monitoring by SL1 using the AMPQ: RabbitMQ PowerPack:

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<i>Creating a Credential for RabbitMQ</i> .....	6
<i>Discovering RabbitMQ Devices</i> .....	7
<i>Verifying Discovery and Dynamic Application Alignment</i> .....	9
<i>Aligning the RabbitMQ Device Class</i> .....	10

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### Prerequisites for Monitoring RabbitMQ

To configure SL1 to monitor a RabbitMQ system using the AMPQ: RabbitMQ PowerPack, you must first have the following information:

- The IP address of the server running the RabbitMQ system
- The username and password for a RabbitMQ user that has read permission to the RabbitMQ API. For information about configuring users in RabbitMQ, see <https://www.rabbitmq.com/management.html>.

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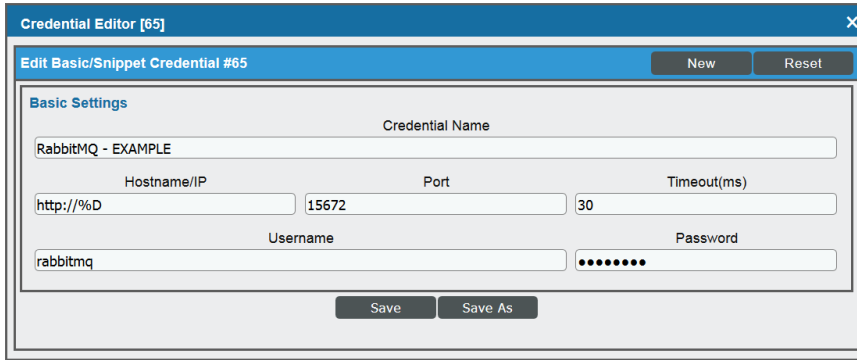
### Creating a Credential for RabbitMQ

To configure SL1 to monitor a RabbitMQ system, you must first create a Basic/Snippet credential. This credential allows the Dynamic Applications in the AMPQ: RabbitMQ PowerPack to communicate with your RabbitMQ system.

The PowerPack includes an example Basic/Snippet credential that you can edit for your own use.

To configure a Basic/Snippet credential to access a RabbitMQ system:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **RabbitMQ - EXAMPLE** credential, then click its wrench icon (🔧). The **Edit Basic/Snippet Credential** modal page appears.
3. Enter values in the following fields:



- **Profile Name.** Enter a name for the RabbitMQ credential.
- **Hostname/IP.** Use the provided "http://%D".

**NOTE:** The IP address in the **Hostname/IP** field must be preceded by "http://".

- **Username.** Enter the username for a RabbitMQ user that has read permission to the RabbitMQ API.
- **Password.** Enter the password for the user you entered in the **Username** field.

4. Leave all other fields set to the default values. Click the **[Save As]** button.

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## Discovering RabbitMQ Devices

To monitor your RabbitMQ system, you must run a discovery session to discover the server on which RabbitMQ is installed.

To discover the server on which RabbitMQ is installed, perform the following steps:



1. Go to the **Discovery Control Panel** page (System > Manage > Discovery).
2. In the **Discovery Control Panel**, click the **[Create]** button.

- The **Discovery Session Editor** page appears. In the **Discovery Session Editor** page, define values in the following fields:

The screenshot shows the 'Discovery Session Editor | Editing Session [7]' window. It is divided into several sections:

- Identification Information:** Name: Cisco UK Lab soap rest, Description: (empty).
- IP and Credentials:** IP Address/Hostname Discovery List: 172.16.244.26, 172.16.244.27, 172.16.244.23, 172.16.244.24. Includes an 'Upload File' section with a 'Browse...' button.
- SNMP Credentials:** A list of credentials including 'Cisco SNMPv2 - Example', 'Cisco SNMPv3 - Example', 'EM7 Default V2', 'EM7 Default V3', 'IPSLA Example', 'LifeSize: Endpoint SNMP', 'Nexus snmp', 'SNMP Public V1', and '[ SNMP Public V2 ]' (selected).
- Other Credentials:** A list including 'QA-Silo AD', 'PowerShell', 'Lync 2010 Credentials - Example', 'Windows PowerShell - Example', 'SOAP/XML Host', 'Amazon Web Services Credential', 'Azure Credential - SOAP/XML', and '[ Cisco UK lab SOAP ]' (selected).
- Detection and Scanning:** Initial Scan Level: [ System Default (recommended) ], Scan Throttle: [ System Default (recommended) ], Port Scan All IPs: [ System Default (recommended) ], Port Scan Timeout: [ System Default (recommended) ], Detection Method & Port: [ Default Method ], Interface Inventory Timeout (ms): 600000, Maximum Allowed Interfaces: 10000, Bypass Interface Inventory: .
- Basic Settings:** Discover Non-SNMP: , Model Devices: , DHCP: , Duplication Protection: , Collection Server PID: 5, Organization: [ System ], Add Devices to Device Group(s): Please create a device group first, Apply Device Template: [ Choose a Template ].

Buttons at the bottom include 'Save', 'Save As', and 'Log All'.

- **IP Address/Hostname Discovery List.** Enter the IP address for the server on which RabbitMQ is installed.
  - **SNMP Credentials.** Optionally, select the SNMP credential for the Linux or Windows server you are discovering.
  - **Other Credentials.** Select the Basic/Snippet credential you created for the RabbitMQ API.
  - **Discover Non-SNMP.** Select this checkbox.
- Optionally, you can enter values in the other fields on this page. For more information about the other fields on this page, see the **Discovery & Credentials** manual.
  - Click the **[Save]** button to save the discovery session and then close the **Discovery Session Editor** window.
  - The discovery session you created appears at the top of the **Discovery Control Panel** page. Click its lightning-bolt icon (  ) to run the discovery session.
  - The **Discovery Session** window appears. When the device is discovered, click the device icon (  ) to view the **Device Properties** page for the device.



# Verifying Discovery and Dynamic Application Alignment

To verify that SL1 automatically aligned the correct Dynamic Applications during discovery:

1. From the **Device Properties** page for the server on which RabbitMQ is installed, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
2. All applicable Dynamic Applications for RabbitMQ are automatically aligned during discovery.

**NOTE:** It can take several minutes after the discovery session has completed for Dynamic Applications to appear in the **Dynamic Application Collections** page.

The screenshot displays the SL1 interface for a device named 'doc-svn'. The top navigation bar includes tabs for Close, Properties, Thresholds, Collections (selected), Monitors, and Schedule. Below this, there are sub-tabs for Logs, Toolbox, Interfaces, Relationships, Tickets, Redirects, Notes, and Attributes. The main content area is divided into two sections. The upper section shows device details: Device Name (doc-svn), IP Address / ID (172.16.0.68 | 1691), Class (Ping), Organization (System), Collection Mode (Active), and Description. The lower section, titled 'Dynamic Application™ Collections | Application Added', contains a table with the following data:

	Dynamic Application	ID	Poll Frequency	Type	Credential	
+ AMQP: RabbitMQ Performance		1591	5 mins	Snippet Performance	RabbitMQ - EXAMPLE	<input type="checkbox"/>
+ AMQP: RabbitMQ Configuration		1592	15 mins	Snippet Configuration	RabbitMQ - EXAMPLE	<input type="checkbox"/>

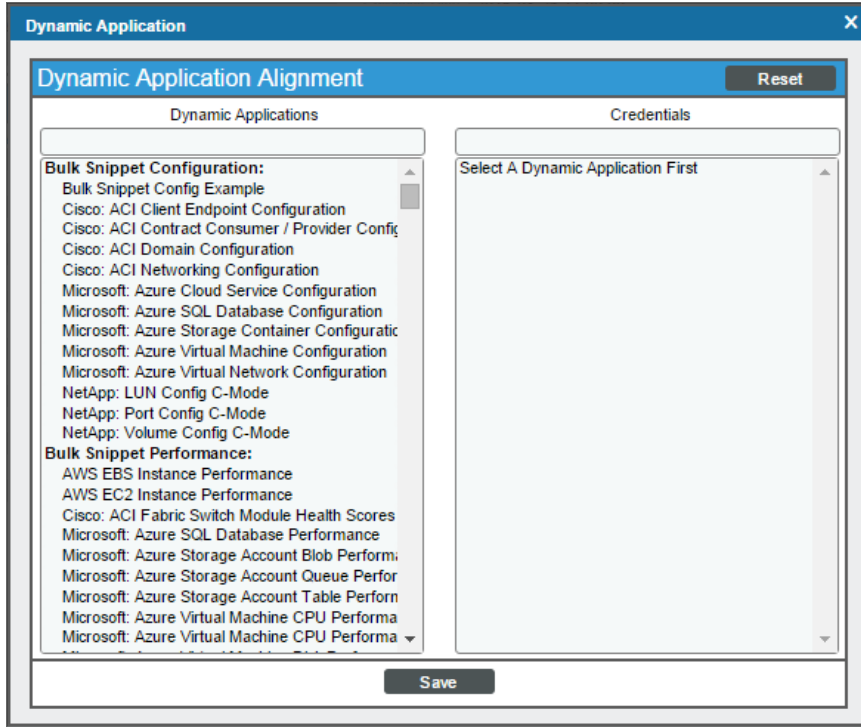
At the bottom of the interface, there is a '[Select Action]' dropdown menu, a 'Go' button, and a 'Save' button.

The following Dynamic Applications should be aligned to the device:

- AMQP: RabbitMQ Configuration
- AMQP: RabbitMQ Performance

If the listed Dynamic Applications have not been automatically aligned during discovery, you can align them manually. To do so, perform the following steps:

1. Click the **[Action]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:



2. In the **Dynamic Applications** field, select the Dynamic Application you want to align.
3. In the **Credentials** field, select the Basic/Snippet credential you created for the RabbitMQ API.
4. Click the **[Save]** button.
5. Repeat steps 1-4 for the other unaligned Dynamic Applications.

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## Aligning the RabbitMQ Device Class

By default, SL1 discovers the server running the RabbitMQ system as a Linux, Windows, or Pingable device. Optionally, you can align the AMQP | RabbitMQ device class to the device.


To align the device class:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).

2. Find the device you want to edit. Click its wrench icon (🔧).

Device Manager ( Devices Found [176] )											Actions	Report	Reset	Guide
Device Name *	IP Address	Device Gateway	Device Class / Sub-class	OID	Organization	Current State	Collection Group	Collection Status	SNMP Credentials	SNMP Access				
151	10.20.0.177	Office Printers	Lexmark International   Print Server	42	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
152	10.20.0.214	Unknown	Shoreline Teleworks   OEM	15	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
153	10.20.0.7	Servers	Microsoft   Windows Server 2008 R2	77	System	Minor	CUG1	Active	cdsmos V2					
154	10.20.0.249	Storage NAS	Quantum Corp - Snap Division   Snap Server	158	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
155	10.20.0.247	Network Switches	Juniper Networks   NFX Router	162	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
156	10.20.0.188	Servers	Microsoft   Windows CE Version 3.0 (Multiple	27	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
157	10.20.0.92	Network Switches	Extreme Networks   Summit45a Version 7.1.1	101	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
158	10.20.0.27	Servers	NET-SNMP   Solara	169	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
159	10.20.0.210	Telephony	Quantum   Heinz AB400	18	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
160	10.20.0.1	Network Switches	Cisco Systems   Catalyst 3750-Stack	76	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
161	10.20.0.15	Network Switches	Brocade   Channel-A-L Switch	104	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
162	10.20.0.217	Unknown	Tandberg ASA   OEM	12	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
163	10.20.0.157	Network Firewall	Cisco Systems   ASA-5520	146	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
164	10.20.0.86	Unknown	Tec Corporation   OEM	124	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
165	10.20.0.229	Unknown	Xerox   OEM	81	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
166	10.20.0.71	Network Switches	Cisco Systems   TS SEC	68	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
167	10.20.0.72	Network Switches	Cisco Systems   TS SEC	67	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
168	10.20.0.168	Unknown	HP   OEM	168	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
169	10.20.0.77	Environmental UPS	APC   SmartUPS 2200	66	System	Critical	CUG1	Active	Cisco SNMPv2 - Exa V2					
170	10.20.0.166	Unknown	General Instrument   OEM	55	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
171	10.20.0.227	Telephony	Vina Technologies   Multiplexor	136	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
172	10.20.0.84	Servers	Empire Technologies   Default Enterprise Agent	87	System	Critical	CUG1	Active	Cisco SNMPv2 - Exa V2					
173	10.20.0.62	Network Router	Cisco Systems   879g	83	System	Minor	CUG1	Active	Cisco SNMPv2 - Exa V2					
174	10.20.0.228	Unknown	Generic   SNMP	78	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					
175	10.20.0.23	Servers	XenServer   Xen Host	176	System	Healthy	CUG1	Active	Cisco SNMPv2 - Exa V2					

3. In the **Device Properties** page, find the *Device Class* field. Click the toolbox icon (  ).

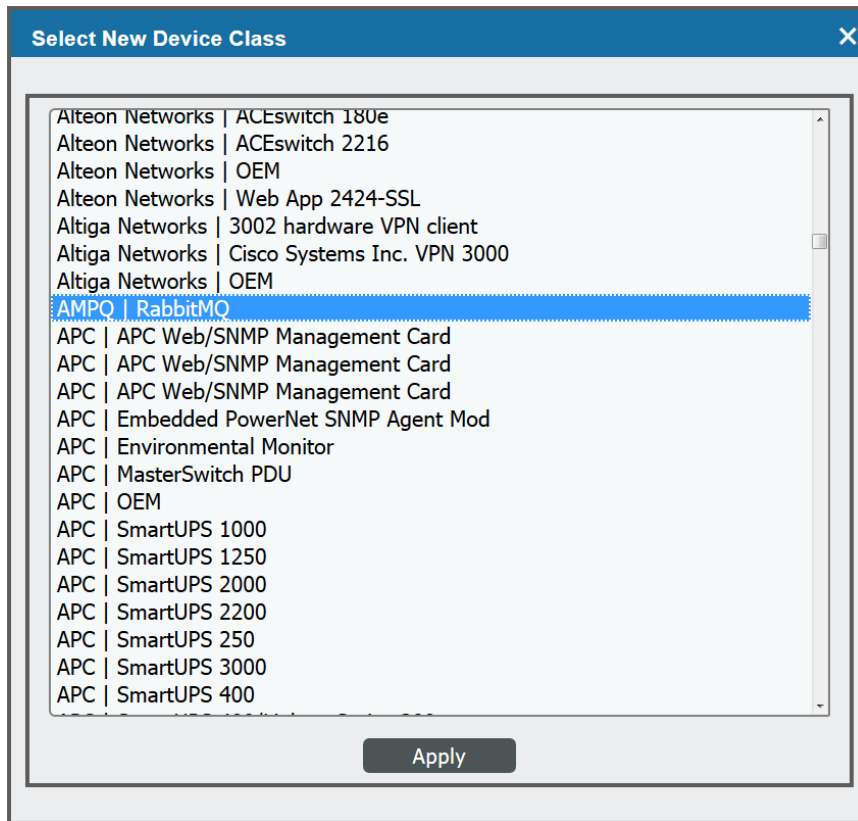
Close	Properties	Thresholds	Collections	Monitors				
Schedule	Logs	Toolbox	Interfaces	Relationships	Tickets	Redirects	Notes	
Device Name	10.20.0.175	Managed Type	Physical Device					
IP Address / ID	10.20.0.175   62	Category	Unknown					
Class	Generic	Sub-Class	SNMP					
Organization	System	Uptime	0 days, 00:00:00					
Collection Mode	Active	Collection Time	2014-06-12 17:20:00					
Description		Group / Collector	CUG2   em7_cu2					
Device Hostname								

Device Properties		Organization	Asset		
Actions		Reset	Guide		
<b>Identification</b>					
Device Name	10.20.0.175	IP Address	[10.20.0.175 - verified]	Organization	[System]
<b>Monitoring &amp; Management</b>				<b>Preferences</b>	
Device Class	Generic SNMP			Auto-Clear Events	<input checked="" type="checkbox"/>
SNMP Read/Write	[Cisco SNMPv2 - Example]		[None]	Accept All Logs	<input checked="" type="checkbox"/>
Availability Port	[UDP]		[161 - SNMP]	Daily Port Scans	<input checked="" type="checkbox"/>
Latency Port	[ICMP]		[ICMP]	Auto-Update	<input checked="" type="checkbox"/>
Avail-Latency Alert	[Disable]			Scan All IPs	<input type="checkbox"/>
User Maintenance	[Disabled]		[Maintenance Collection Enabled]	Dynamic Discovery	<input checked="" type="checkbox"/>
Collection	[Enabled]		[CUG2]	Preserve Hostname	<input checked="" type="checkbox"/>
Coll. Type	[Standard]			Disable Asset Update	<input type="checkbox"/>
Critical Ping	[Disabled]				
Dashboard	[None]				
Event Mask	[Group in blocks every 10 minutes]				
<b>Save</b>					



4. In the **Select New Device Class** modal page, select the AMQP | RabbitMQ device class.



5. Click the **[Apply]** button.
6. In the **Device Properties** page, deselect the **Auto-Update** checkbox.
7. Click the **[Save]** button.

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