



Kubernetes PowerPack Release Notes

Version 105

Overview

Version 105 of the *Kubernetes* PowerPack updates the PowerPack to Python 3, adds a Universal Credential and Guided Discovery to the PowerPack, adds support for SSL certificate verification, reduces the number of API calls made by the "Kubernetes: Node Discovery" Dynamic Application, and more.

- **Minimum Required SL1 Version:** 11.3.0

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Before You Install or Upgrade

Ensure that you are running version 11.3.0 or later of SL1 before installing "Kubernetes" PowerPack version 105.

NOTE: For details on upgrading SL1, see the relevant [SL1 Platform Release Notes](#).

In addition, before installing or upgrading the PowerPack, you must first import and install the *Linux Base Pack* PowerPack version 103 or later. The PowerPack leverages the *Linux Base Pack* PowerPack and will not work properly if it is not also installed.

If you are upgrading from version 101 to version 102 or later of the PowerPack, you must delete the version 101 dashboards on SL1. To do so, perform the following steps:

1. Go to the **Device Dashboards** page (System > Customize > Device Dashboards).
2. Search for "Kubernetes" in the *Device Dashboard Name* column.
3. Select the checkbox for each Kubernetes dashboard.
4. In the **Select Actions** drop-down field, select *Delete Dashboards*.
5. Click the **[Go]** button.
6. Click the **[OK]** button to confirm.

Installation and Upgrade Process

NOTE: If you are currently using the Dynamic Applications in this PowerPack to monitor devices, collection errors might occur for one or two polling cycles when installing a new version. To prevent collection errors during an upgrade, you can optionally disable collection for monitored devices before performing the following steps and re-enable collection after the upgrade.

NOTE: If you are currently using the Dynamic Applications in this PowerPack to monitor devices, collection errors might occur for one or two polling cycles during the installation of a new version. To prevent collection errors during an upgrade, you can optionally disable collection for monitored devices before performing the following steps and re-enable collection after the upgrade.

To install this PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page (Product Downloads > PowerPacks & SyncPacks) at the [ScienceLogic Support Site](#).
2. In SL1, go to the **PowerPacks** page (System > Manage > PowerPacks).
3. Click the **Actions** menu and choose *Import PowerPack*. The **Import PowerPack** modal appears.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal displays a list of the PowerPack contents.
6. Click **[Install]**. The PowerPack is added to the **PowerPack Manager** page.

NOTE: If you are upgrading from version 100 or greater of the Kubernetes PowerPack, install the DockerPowerPack version 102 or greater before upgrading, if you have not done so already.

For more information about using the PowerPack, see the [Monitoring Kubernetes](#) manual.

Included Features

This release includes the following features:

- Dynamic Applications to discover and monitor Kubernetes devices
- Device Classes for each of the Kubernetes devices the PowerPack can monitor
- Event Policies and corresponding alerts that are triggered when Kubernetes devices meet certain status criteria
- Run Book Action and Automation policies that do the following:
 - Align Dynamic Applications from the *Linux Base Pack* PowerPack to Kubernetes nodes and report if a successful alignment has occurred to the ScienceLogic Data Collector or All-in-One Appliance

- Ensure that Namespaces (and their children) have a 1-hour vanishing timer, to properly reflect topology changes

Enhancements and Issues Addressed

The following enhancements and addressed issues are included this release of the "Kubernetes" PowerPack:

- Updated the PowerPack to Python 3.
- Added a Kubernetes Universal Credential to the PowerPack.
- Added Guided Discovery for Kubernetes to the PowerPack. Widget discovery is no longer supported and has been removed from the PowerPack.

NOTE: ScienceLogic does not recommend rediscovering an existing cluster with the new discovery workflow since it will create duplicate devices and cause the device components to move between trees. ScienceLogic does recommend updating your Kubernetes devices' Dynamic Applications from using the SOAP/XML credential to the Kubernetes Universal Credential. To do this, create a new Kubernetes Universal Credential and populate the fields with the values of the old SOAP/XML credential and assign the universal credential to all devices. It is not necessary to delete and recreate the discovery tree, but if you want a clean approach to use the new discovery option, ScienceLogic recommends deleting the old tree, and doing a rediscovery.

- Added new device class icons to the PowerPack.
- Removed the following items from the PowerPack:
 - "Kubernetes Token Update" Dashboard Widget
 - "Kubernetes Token Entry" Dashboard Widget
 - Kubernetes Example SSH Credential
- Deprecated the following items from the PowerPack:
 - "Kubernetes: Cluster Creation" Dynamic Application
 - "Kubernetes: Cluster Creation" run book automation policy
- Added support for SSL certificate verification. For more information about configuring SSL certificate verification, see the [Monitoring Kubernetes](#) manual.
- Added three new collection objects to the "Kubernetes: Node Discovery" Dynamic Application that indicate the list of API endpoints and their respective response status code during data collection.
- Updated the "Kubernetes: Node Discovery" Dynamic Application to reduce the number of API calls made to the SL1 Collector.
- Updated the poll rates from 15 minutes to 5 minutes for the following Dynamic Applications:
 - Kubernetes: Node Discovery
 - Kubernetes: Self Monitoring Performance

Known Issues

The following known issues affect version 105 of the *Kubernetes PowerPack*:

- In systems in which a Kubernetes cluster is deleted or shut down, errors and exceptions may continue to appear in system and device logs. If your cluster has been deleted, you can disable data collection to stop the creation of more system log exceptions.
- Recommended cluster size is based on CPU usage. The recommended size does not reach 100% CPU usage. This issue will be addressed in a future version of the PowerPack. If you want to monitor a cluster that exceeds the recommended size, follow these recommendations based on a four core collector unit with 32 GB of ram memory and 150 GB of hard drive:
 - **Recommended:** 100 namespaces or less and 100 controllers or 10 namespaces and up to 200 controllers
 - **Low Risk of SIGTERMs:** 100 namespaces and 200 controllers
 - **Medium Risk of SIGTERMs:** 150 namespaces and 100 to 150 controllers
 - **High Risk of SIGTERMs:** 180 namespaces and 100 controllers
 - **Confirmed SIGTERMs:** 200 namespaces and 200 or more controllers

NOTE: When determining the amount of resources, consider the current size of the cluster and the possible risk of SIGTERMs during nightly discovery at "0:00 GMT".

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