Kubernetes PowerPack Release Notes

Version 102

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Overview

Version 102 of the *Kubernetes* PowerPack includes new collection objects, a new presentation object, new Dynamic Applications, a new icon, and updates to no longer require the Docker PowerPack to use the Kubernetes PowerPack.

- **Minimum Required Platform Version**: 8.12.2.6
- **Support Status**: GA

This document describes:

- *Pre-install information*
- *The installation process for the PowerPack*
- *The features included in version 102*
- *The enhancements and issues addressed in version 102*
- *The known issues in Version 102*

Before You Install or Upgrade

Ensure that you are running version 8.12.2.6 or later of SL1 before installing or upgrading the *Kubernetes* PowerPack version 102.

NOTE: For details on upgrading the ScienceLogic platform, see the appropriate ScienceLogic Release Notes.

In addition, before installing or upgrading the *Kubernetes* PowerPack version 102, you must first import and install the *Linux Base Pack* PowerPack version 103. The *Kubernetes* PowerPack leverages this PowerPack and will not work properly if it is not also installed.

If you are upgrading from version 101 to version 102 of the *Kubernetes* 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

To install version 102 of the *Kubernetes* PowerPack, perform the following steps:

1. Familiarize yourself with the ***Known Issues*** for this release.
2. If you have not done so already, upgrade your system to the 8.12.2.6 or later release.
3. If you have not done so already, install the *Linux Base Pack* PowerPack version 103.

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

4. Download version 102 of the *Kubernetes* PowerPack from the Customer Portal to a local computer.
5. Go to the **PowerPack Manager** page (System > Manage > PowerPacks). Click the **[Actions]** menu and choose *Import PowerPack*. When prompted, import version 102 of the *Kubernetes* PowerPack.
6. If you are upgrading from version 101 to version 102, ensure the dashboards are marked as "install" in the **Action** column of the **PowerPack Installer** modal.
7. After importing the PowerPack, you will be prompted to install the PowerPack. Click the **[Install]** button to install the PowerPack.
8. See the manual ***Monitoring Kubernetes*** for instructions on using the new PowerPack.

Included Features

The following features are included in version 102 of the *Kubernetes* PowerPack:

- Dynamic Applications to discover and monitor Kubernetes devices
- Device Classes for each of the Kubernetes devices the *Kubernetes* PowerPack can monitor
- Event Policies and corresponding alerts that are triggered when Kubernetes devices meet certain status criteria
- A Dashboard and Dashboard Widget that you must use to create Credentials for discovering Kubernetes devices
- An SSH/Key Credential that the Kubernetes Token Entry Dashboard uses as a template for creating additional SSH/Key Credentials for monitoring Kubernetes clusters

NOTE: You must use the Kubernetes Token Entry Dashboard that is included in the *Kubernetes*PowerPack to create a master SSH/Key Credential, a node SSH/Key Credential, and a SOAP/XML Credential that enables you to specify the Kubernetes device topology that you want to discover. For more information, see the ***Monitoring Kubernetes*** manual.

NOTE: You must not edit the SSH/Key Credential that is included in the *Kubernetes* PowerPack.

- Run Book Action and Automation policies that do the following:
    - Automatically create Kubernetes clusters whenever the ScienceLogic platform discovers a Kubernetes host
    - Align Dynamic Applications from the *Linux Base Pack* PowerPack to Kubernetes nodes and report back to the ScienceLogic Data Collector or All-in-One Appliance if the Dynamic Applications were successfully aligned
    - 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 in version 102 of the *Kubernetes*PowerPack:

- The Docker PowerPack is no longer required to use the Kubernetes PowerPack.
- The cache list was updated with improved URLs.
- The following Dynamic Applications were added to the PowerPack:
    - Kubernetes: Horizontal Pod Autoscaler Configuration
    - Kubernetes: Ingress Controller Discovery
    - Kubernetes: Ingress Controller Configuration
- Summarization state has been enabled for all Kubernetes Performance Dynamic Applications.
- The "% Successful Requests" presentation object was added to the "Kubernetes: Self Monitoring Performance" Dynamic Application.
- A new icon was added to the "Kubernetes: Ingress Controller Discovery" Dynamic Application.
- The "Horizontal POD Autoscale Count" collection object was added to the "Kubernetes: Controller Performance" Dynamic Application.
- The following collection objects were added to the "Kubernetes: Controller Pod Performance" Dynamic Application:
    - CPU
    - Memory

NOTE: The "Pod Count" and "Container Restart Count" collection objects were added to the "Kubernetes: Controller Performance" Dynamic Application. ScienceLogic recommends you delete the Collection Objects from the "Kubernetes: Controller Pod Performance" Dynamic Application. For more information on deleting collection objects from a Dynamic Application, see the "Performing Bulk Actions on Collection Objects" section in the *Collection Objects* chapter in the ***Dynamic Application Development*** manual.

- The following Dynamic Applications are now automatically aligned to this PowerPack by Run Book Actions:
    - Linux: IC Availability
    - Linux: IC Detail
    - Linux: IC Filesystem Inventory
    - Linux: IC Filesystem Performance
    - Linux: IC Interface Inventory
    - Linux: IC Interface Performance
    - Linux: IC Port Performance
    - Linux: IC Process Inventory
    - Linux: IC Process Performance
    - Linux: ICDA Cache
    - Linux: ICDA Interface Cache
- The following Dynamic Applications will no longer be automatically aligned by Run Book Actions. The information collected and presented by these Dynamic Applications will now be collected and presented by the Internal Collection Dynamic Applications that are now automatically aligned to this PowerPack:
    - Linux: File System Performance
    - Linux: Interface Performance
    - Linux: Network Configuration
    - Linux: TCP Services

NOTE: If you would like to use these Dynamic Applications, you may do so by aligning them to a device manually or using a template.

- The "Kubernetes: Docker Aggregate Container Performance" Dynamic Application was removed from the PowerPack.

NOTE: If you are upgrading from version 100 or greater to version 102 of the Kubernetes PowerPack, ScienceLogic recommends you delete the "Kubernetes: Docker Aggregate Container Performance" Dynamic Application from your SL1 system. For more information on deleting Dynamic Applications, see the "Performing Other Tasks in the Dynamic Application Manager Page" section in the *Managing Dynamic Applications* chapter in the ***Dynamic Application Development*** manual.

- An issue was addressed in the "Kubernetes: Node Discovery" Dynamic Application in which an exception was occurring when the Dynamic Application was run in Debug mode.
- An issue was addressed in which incorrect events were being generated when running the "Kubernetes: Persistent Volume Configuration" Dynamic Application.
- An issue was addressed in which an unhandled exception was occurring when running the "Kubernetes: Controller Pod Configuration" Dynamic Application.
- An issue was addressed in which the "Kubernetes: Cluster Creation" event was triggered multiple times.
- An issue was addressed in which the "Kubernetes Component Count" Dynamic Application was showing 0 total EM7 components.
- An issue was addressed in which an exception was occurring when running Kubernetes Configuration and Performance Dynamic Applications.

Known Issues

The following known issue affects *Kubernetes* PowerPack version 102:

- Users can discover Elastic Kubernetes Service (EKS) and Google Kubernetes Engine (GKE) clusters with the *Kubernetes* PowerPack version 102, but full support and testing for EKS and GKE has not yet been implemented.
- When using SL1 platform version 8.14.0 with this PowerPack, Kubernetes device discovery will fail and is not recommended to use this version of the PowerPack. SL1 platform version 8.14.1 and later accurately discovers Kubernetes devices.

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