



Linux Base Pack PowerPack Release Notes

Version 111

Overview

Version 111 of the *Linux Base Pack PowerPack* adds compatibility with Python 3 and various bug fixes.

- **Minimum Required SL1 Version:** 11.3.1.3

NOTE: The Linux Base Pack PowerPack version 109 release has been removed from the ScienceLogic Support portal and replaced with the version 110 release.

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Before You Install or Upgrade

Ensure that you are running version 11.3.1.3 or later of SL1 before installing "Linux Base Pack" PowerPack version 111.

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

NOTE: You should check the thresholds for zombie processes and load average. The load average is compared to the threshold based on the normalized data per CPU.

Installing or Upgrading the PowerPack

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.

CAUTION: If you are upgrading from version 102, 103, or 104 of the *Linux Base Pack PowerPack*, you must verify that some Dynamic Applications are disabled and removed if they are still present in your SL1 environment. For more information on how to remove the Dynamic Applications, see the "Upgrading the PowerPack and Removing Dynamic Applications" section in the **Monitoring Linux Systems** manual.

Remove the following Dynamic Applications before upgrading from version 102 directly to version 105 or above of the *Linux Base Pack PowerPack*:

- Linux: File System Stats
- Linux: Interface Stats
- Linux: Network Config
- Linux: Performance Cache
- Linux: TCP Services

Remove the following Dynamic Applications if you are upgrading along one of the following paths: version 103 > 105 or above; version 102 > 103 > 105 or above; or version 102 > 103 > 104 > 105 or above:

- Linux: File System Performance
- Linux: IC Availability
- Linux: Interface Performance
- Linux: Network Configuration
- Linux: Performance Cache (Deprecated)
- Linux: TCP Services Configuration

Remove the following Dynamic Applications if you are upgrading from version 102 to 104 to 105 and above:

- Linux: File System Stats
- Linux: Interface Stats
- Linux: Network Config
- Linux: Performance Cache
- Linux: TCP Services

TIP: By default, installing a new version of a PowerPack will overwrite 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 the new version of the PowerPack from overwriting local changes for some commonly customized fields.

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.

For more information about using the PowerPack, see the *Monitoring Linux* manual.

Features

This release includes the following features:

- Dynamic Applications that discover and collect configuration and performance data for Linux systems
- Internal Collection Dynamic Applications that collect inventory and performance data for Linux systems
- Event Policies and corresponding alerts that are triggered when Linux systems meet certain status criteria

NOTE: Many of the Event Policies included in this PowerPack are disabled by default. You must manually enable the Event Policies that you want to use. To do so, go to the **Event Policy Editor** page (Registry > Events > Event Manager > create or edit) and change the **Operational State** to *Enabled*.

- Device Classes for each type of Linux system monitored
- A Run Book Action and an Automation policy to assign the proper device classes to Linux systems

Enhancements and Issues Addressed

The following enhancements and addressed issues are included in version 111 of the "Linux Base Pack" PowerPack:

- Added the new "Linux SSH Cache Worker" Dynamic Application to the PowerPack. This must be manually added to all devices that were discovered using the "Linux: Dynamic Applications Template" so that data collection will work. To perform a bulk update on devices, see [Aligning the "Linux: SSH Cache Worker Dynamic Application"](#).
- The following Collection Objects were added to the "Linux: Hardware Configuration" Dynamic Application:
 - Physical Disks
 - Disk Name
 - Disk Size (Kb)
 - Physical Disk Information
 - Disk Count
 - Total Disk Size

- Added the following device classes to the PowerPack:
 - Debian 12
 - Fedora 39
 - Ubuntu 23
- Introduced caching behavior for Dynamic Applications to improve overall performance of the PowerPack by utilizing single SSH connection for all data collection. The new "Linux: SSH Cache Worker" Dynamic Application is aligned when you use a template for discovery. When aligned to a device, all commands from other Linux Base Pack Dynamic Applications aligned to that same device will be requested using a single connection from within the "Linux: SSH Cache Worker" Dynamic Application.
- Addressed an issue in which users were not receiving SSH physical memory alerts by adding a "major" alert for the "Physical Memory Utilization in Linux: Memory Performance" Dynamic Application. (Case: 00365229)
- Added support for full path in `sudo dmidecode` command in the "Linux: Hardware Configuration" Dynamic Application to eliminate issues on some distributions where `sudo dmidecode` can be used in multiple locations.
- Updated the PowerPack so that disabled Dynamic Applications are no longer automatically aligned. Enabling those Dynamic Applications again will trigger alignment.
- Updated the PowerPack to generate an alert to detect stale file systems. If you receive an exit code `124` when running the command `timeout 3 df-kPT`, an alert will be triggered to warn you of a stale file system.
- Updated the PowerPack so that when a new Dynamic Application is introduced via manual creation or PowerPack upgrade, it aligns to existing devices as well as any newly discovered devices. Then the Run Book Automation is triggered only when new Dynamic Applications are aligned.
- Addressed an issue in which CPU data was not being collected when running the "Linux: CPU Performance" Dynamic Application in debug mode because a parsing error with a single collection object caused all collection objects to fail and return an output of `None`. (Case: 00404111)
- Updated the Linux Classification and Automation Run Book Actions to operate with Python3 EE.

Known Issues and Workarounds

The following known issues affect version 111 of the *Linux Base Pack* PowerPack:

- Version 22.04 of Ubuntu and earlier may have problems discovering devices with a PEM key. It is recommended that you use a password in this case.
- Parsing may fail with some commands if there are custom images on the device.
- In patch SL1 systems there is a platform issue in versions 8.14.0 and earlier in which the SSH credential can store corrupted information in the Password field which will affect data collection when the SSH Data Collector is enabled. To avoid this issue, resave the SSH credential with the PEM key.
- If you use the default timeout in the "Linux Example Credential" credential and continue to experience timeout and login errors on a limited number of servers, create a copy of the credential, and edit the timeout value to 10 seconds then align your new credential to the servers with login errors.

- After upgrading from version 103 to version 105 of this PowerPack, you may not continue to receive data from your interfaces due to the deprecation of ifconfig commands. The deprecation of ifconfig commands will also cause interfaces to be reordered, resulting in IC Interface Performance and IC Interface Inventory data not matching between versions. This issue will resolve during nightly discovery.
- In SL1 version 10.2.1.2, if you mistakenly align a Windows Server during discovery you will see many process exceptions. **NOTE:** This issue has been fixed in SL1 version 10.2.2.
- Monitoring interface packets is not supported yet. To avoid errors or unhandled exceptions while monitoring interface performance data with the "Linux: IC Interface Performance" Dynamic Application, do not enable the packets setting in the **Interface Properties** page (Registry > Networks > Interfaces > interface wrench icon).
- Modifying any of the IC Dynamic Applications will change the value of the **Collector Affinity** setting from *Assigned collector* to *Default*. If you make any changes to the configuration of these Dynamic Applications, run the following query on the **Database Tool** (System > Tools > DB Tool):

```
SELECT ppguid FROM master.powerpack WHERE name = "Linux Base Pack"
```

```
Save the result of ppguid as <LBP PPguid>
```

```
UPDATE master.dynamic_app SET cu_affinity="2" WHERE ppguid = <LBP  
PPguid>
```

- CSR 1000v Series Cisco routers discovered after version 102 of the PowerPack should not be aligned with Linux Base Pack Dynamic Applications. After upgrading to version 103, Linux Base Pack Dynamic Applications aligned to the Cisco routers should be removed and the device class should be updated to the expected device class of the router.
- If you have a device with more than one SSH credential aligned, only one credential will be used. The connection to that credential will be maintained until it is terminated by the target host or the network, which means that it will continue to use the old credential through that connection even when the credential has changed.
- An issue with the "Cisco: CSP 2100 CLI Alignment" Dynamic Application is causing Dynamic Application alignment to fail for versions 101 and 111 of the PowerPack when installed on SL1 versions 8.9.0 and greater. To work around this issue, disable the "Cisco: CSP 2100 CLI Alignment" Dynamic Application.
- To discover Linux devices, the PowerPack uses an API call to align Dynamic Applications from the PowerPack to the devices. The API call length can cause API queries to back up and time out when attempting to discover multiple devices. As a workaround, ScienceLogic recommends leveraging SQL queries to align these Dynamic Applications.
- A collection exception appears in the device log if a device's hostname is not properly set.

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