Linux Base Pack PowerPack Release Notes

Version 105

Overview

Version 105 of the *Linux Base Pack* PowerPack updates the library and example credential included in the PowerPack. This version of the PowerPack addresses issues with Dynamic Applications and Event Policies.

- **Minimum Required Platform Version**: 8.12.2.4

This document includes the following topics:

Before You Install or Upgrade

Ensure that you are running version 8.12.2.4 or later of SL1 before installing *Linux Base Pack* version 105.

NOTE: For details on upgrading SL1, see the appropriate 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 or upgrade this PowerPack, perform the following steps:

1. Familiarize yourself with the ***Known Issues*** for this release.
2. See the ***Before You Install or Upgrade*** section. If you have not done so already, upgrade your system to the 8.12.2.4 or later release.
3. Download the *Linux Base Pack* version 105 PowerPack from the Support Site to a local computer.
4. Go to the **PowerPack Manager** page (System > Manage > PowerPacks). Click the **[Actions]** menu and choose *Import PowerPack*. When prompted, import *Linux Base Pack* version 105.
5. Click the **[Install]** button. For details on installing PowerPacks, see the chapter on *Installing a PowerPack* in the ***PowerPacks*** manual.

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, 103, or 104 of this *Linux Base Pack* PowerPack:

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

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

Version 105 of the *Linux Base Pack* PowerPack 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 105 of the *Linux Base Pack* PowerPack:

- The "silo_ssh" library was updated to version 0.3.0.
- The "Linux Example Credential" credential default timeout was updated to 5 seconds.
- The "Linux: Disk IOPS" Dynamic Application was updated to calculate data per second.
- The "Linux: System Load Performance" Dynamic Application was updated with new presentation objects for normalized CPU load average metrics.
- The "Linux: Configuration Discovery" Dynamic Application was updated for compatibility with MySQL 5.7.
- The following Event Policies were updated to be disabled by default. See the table below for the Event Policies and the Dynamic Applications that trigger them:

Event Policy	Dynamic Application
Linux SSH: Load Average (1 min) has Exceeded Major Threshold	Linux: System Load Performance
Linux SSH: Load Average (1 min) has Exceeded Minor Threshold	Linux: System Load Performance
Linux SSH: Load Average (5 min) has Exceeded Major Threshold	Linux: System Load Performance
Linux SSH: Load Average (5 min) has Exceeded Minor Threshold	Linux: System Load Performance
Linux SSH: Load Average (15 min) has Exceeded Major Threshold	Linux: System Load Performance
Linux SSH: Load Average (15 min) has Exceeded Minor Threshold	Linux: System Load Performance
Linux SSH: Zombie Process Count has Exceeded Critical Threshold	Linux: Zombie Process

Event Policy	Dynamic Application
Linux SSH: Zombie Process Count has Exceeded Warning Threshold	Linux: Zombie Proccess

NOTE: The Event Policies are disabled by default. You must manually enable the Event Policies that you want to use. Before you enable an Event Policy, ScienceLogic recommends that you update the threshold of the Dynamic Applications that trigger the Event Policy to match your environment. To enable an Event Policy, go to the **Event Policy Editor** page (Registry > Events > Event Manager > create or edit) and change the ***Operational State*** to *Enabled*. For information on editing the threshold of a Dynamic Application, see the "Editing a Threshold" section of the ***Dynamic Application Development*** manual .

Known Issues and Workarounds

The following known issues affect version 105 of the *Linux Base Pack* PowerPack:

- 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 the 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).
- When using SL1 version 8.14.0 with version 104 and 105 of the *Linux Base Pack* PowerPack, classic discovery will fail. It is recommended that users upgrade to SL1 version 8.14.1 or later. Otherwise users must perform discovery using the "Linux: Dynamic Applications Template" device template.
- To avoid false alarms from internal collection, you must update your SL1 system to version 10.2.1.2 or 10.2.2 and update to version 104 of the *Linux Base Pack*PowerPack.
- 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>
```

- SL1 version 10.2.0 includes a major Known Issue that can cause performance degradation and a potential outage for Data Collectors. The Concurrent SSH Collection feature in the PowerPack is enabled by default on 10.2.0 systems, both upgrades and new installations. The Concurrent SSH Collection feature generates temporary files for each connection attempt to the monitored devices. These temporary files can eventually use all the space in the /var directory of each Data Collector, which can cause performance degradation and a potential outage. To prevent performance degradation and a potential outage, customers on version 10.2.0 of SL1 should disable this feature. This feature will be disabled automatically SL1's upcoming version 10.2.1.

  To disable concurrent SSH collection:

  1. Log in to the Administration Portal.
  2. Go to the Process Manager page (System > Settings > Processes).
  3. Find the process "Data Collection: SSH Collector" and select its wrench icon ().
  4. Set the ***Operating State*** to *Disabled*.
  5. Save your change.
  6. Wait 10 minutes for all collection processes to complete

CAUTION: : If you are monitoring a large number of Linux devices, for example, 100 devices or more, you must re-balance the Data Collectors after stopping Concurrent SSH Collector. For details, see the chapter on *Collector Groups and Load Balancing* in the **Systems Administration** manual.

- If you have a concurrent SSH Data Collector enabled, this may cause the Dynamic Applications in the PowerPack to stop collecting data. To address this issue, follow the steps at https://support.sciencelogic.com/s/article/5887.
- 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 and105 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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