



SL1 Optimization Assessment Service On-Premises User Guide

SL1 OAS On-Premises Pack version 1.7

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1. Revision History

Version Number	Revision Date	Notes
1.7	June 25, 2025	Bug fixes and added the ability to skip checks.
1.1	Feb 10, 2025	Added the ability to send the report via email.
1.0	Jan 24, 2025	Added the ability to store the data in the database to be used for trending.
0.7	Dec 5, 2024	Updated Revised Self-Monitoring Checks
0.6	Nov 24, 2024	Initial release

2. Introduction

This document provides installation steps and detailed instruction on how to use **SL1: Optimization Assessment Service (OAS) - On-Premises**.

The **SL1: Optimization Assessment Service (OAS) - On-Premises** PowerPack has Automations, that collect all necessary data for performing OAS on an SL1 systems. It generates a fully completed spreadsheet, which is then used to create the final PowerPoint presentation for the customer.

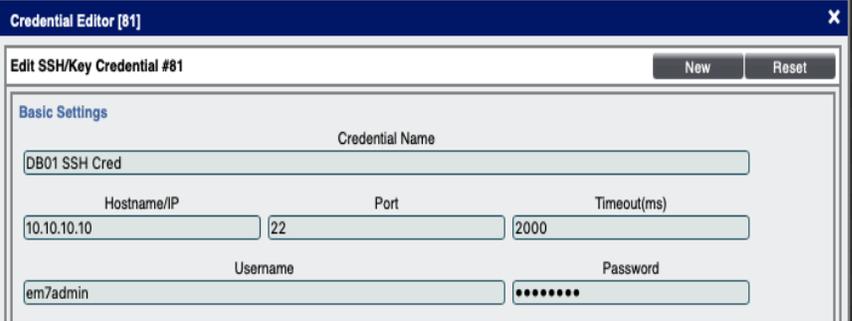
3. PowerPack Contents

Content Type	Count
Credentials	2
Run Book Actions	4
Run Book Automations	2
Dynamic Applications	2
AP2 Dashboard	1

4. Pre-requisites & PowerPack Installation

Pre-requisites

Pre-requisite item	Minimum required Version / Notes
SL1 platform	12.1.2
User	An administrator level SL1 user account details are needed.
Device for Automation Alignment	<p>SL1 Stats device should be present on the system. If SL1 Stats device is not present, then create a new virtual Device and name is “SL1 Stats”:</p> <ul style="list-style-type: none"> Go to Registry > Devices > Device Manager Click on Actions > Create Virtual Device Enter the following information: <ul style="list-style-type: none"> Device Name: SL1 Stats Organization: System Device Class: Virtual Device Dynamic App Emissary Collector: Select the same Collector Group that is currently monitoring the SL1 Databases.
Operational Insights PowerPack	Latest version of Operational Insights PowerPack installed and configured.
SSH Credentials for all SI1 Databases	<p>All SL1 Databases on the stack should have a credential created with SSH access details. If these credentials do not exist, then for every database perform the following steps:</p> <hr/> <p>NOTE: If all Databases have the same ssh credentials, then only ONE credential can be created using steps 1-3. In that case enter “%D” for Hostname/IP instead of the Database IP and note the Credential ID.</p> <hr/> <ol style="list-style-type: none"> Navigate to System > Manage > Credentials From the top right Actions menu select “Create SSHKey Credential.  <ol style="list-style-type: none"> In the credential editor window fill the following: <ol style="list-style-type: none"> Credential Name: provide the name for the credential, example: DB01 – SSH Credential. Hostname/IP: IP of the Database Port: 22

Pre-requisite item	Minimum required Version / Notes
	<p>d. Timeout: 2000</p> <p>e. Username: Enter “em7admin”</p> <p>f. Password: Provide the ssh password for the em7admin account on the database.</p>  <p>4. Click Save</p> <p>5. After steps 1-3 have been completed for every Database, you should have:</p> <ol style="list-style-type: none"> 1 x New Credential for Single Database or AIO systems. 2 x New Credentials for HA or DR Architecture 3 x New Credentials for HA+DR Architecture. <p>6. Note the Credential IDs for each Database.</p>

Installation

To install the PowerPack:

1. Go to System > Manage > PowerPacks.
2. Select Actions > Import PowerPack.
3. Select the PowerPack file and import.
4. Once imported, click on the Install button.

The PowerPack should now be installed on the system.

5. Credential Configuration

Credential Configuration Steps

Before proceeding, capture the IPs, and SSH credential IDs for all DBs from Section 4 (Pre-requisites & PowerPack Installation).

1. Go to System > Manage > Credentials
2. Search for “OAS On-Premises” in the Profile Name.
3. Edit credential named “SL1 - OAS On-Premises Cred - Example”
4. Update the credential with the following:
 - **Profile Name** – Give a new name for the credential (example: SL1 - OAS On-Premises Cred – PROD)
 - **HTTP Auth User** – enter the SL1 UI Administrator user that will be used for collecting data.
 - **HTTP Auth Password** – enter the SL1 UI Administrator password that will be used for collecting data.
5. Optional changes:
 - **Embed Value %1** – If client has approved the changes that the Automation makes to the system, then change the value to “MAKE_CHANGE=YES”, if no changes are approved then leave the value as “MAKE_CHANGE=NO”.
 - **Embed Value %2** – If Debug needs to be turned on for troubleshooting purpose, then change the value to “DEBUG=TRUE” else leave the value as “DEBUG=FALSE”.
 - **Embed Value %3** – This is the location of the log file. Do not change this value.
 - **Embed Value %4** – This field provides the option to send the final assessment report in an email.
 - If you want to the system to send an email with the assessment report, then set this field’s value to “SEND_EMAIL=YES”
 - If you do not want to the system to send an email with the assessment report, then set this field’s value to “SEND_EMAIL=NO”
 - Default value is “SEND_EMAIL=NO”
 - **HTTP Headers** – The HTTP Headers section contains the following:
 - Database to SSH Credential mappings for all SL1 Databases. Update each row with the Database IP and the appropriate credential ID noted from Section 4. The format should be “Database IP:SSH Cred ID”, example:
10.10.10.10:85
 - A comma (,) separated list of email addresses. If the Embed Value %4 is populated with “SEND_EMAIL=YES” then this header should be updated with the comma separated list of email addresses to whom you want the system to email the assessment results.

If Embed Value %4 is populated with “SEND_EMAIL=NO” then do not edit or delete this header.

The screenshot shows the 'Credential Editor [83]' window. The main title is 'Edit SOAP/XML Credential #83'. There are 'New' and 'Reset' buttons in the top right. The interface is divided into several sections:

- Basic Settings:** Includes 'Profile Name' (SL1 - OAS On-Premises Cred - PR), 'Content Encoding' (text/xml), 'Method' (POST), 'HTTP Version' (HTTP/1.1), 'URL' (https://127.0.0.1), 'HTTP Auth User' (em7admin), 'HTTP Auth Password' (masked), and 'Timeout (seconds)' (2).
- Soap Options:** Includes 'Embedded Password [%P]', 'Embed Value [%1]' (MAKE_CHANGE=NO), 'Embed Value [%2]' (DEBUG=TRUE), 'Embed Value [%3]' (/dev/shm/), and 'Embed Value [%4]' (SEND_EMAIL=YES).
- Proxy Settings:** Includes 'Hostname/IP', 'Port' (0), and 'User'.
- HTTP Headers:** Includes a '+ Add a header' button and three headers: '100.14.72.11:80', '100.24.72.12:81', and 'user@company.com'.
- CURL Options:** A list of options like CAINFO, CAPATH, CLOSEPOLICY, etc., with navigation arrows.

At the bottom, there are 'Save' and 'Save As' buttons.

If you do not have a Secondary Database or DR Database or neither then delete the corresponding headers from the credential.

DO NOT delete the header reserved for email addresses.

The following table provides expected number of headers for every SL1 architecture type, excluding the header reserved for email addresses:

Architecture	Number of HTTP Headers
AIO/Single Database	1
High Availability OR Disaster Recovery	2
High Availability + Disaster Recovery	3

6. RunBook Action Configuration

To configure the Action:

1. Go to Registry > Run Book > Automation.
2. Search for “SL1: OAS On-Premises”.
3. Perform steps 4 -6 to update the credential for the following OAS Actions:
 - a. SL1: OAS On-Premises – Phase 1
 - b. SL1: OAS On-Premises – Phase 2
 - c. SL1: OAS On-Premises – Phase 3
 - d. SL1: OAS On-Premises - Send Report Email
4. Edit the Action by clicking on the “wrench” icon.
5. From the Snippet Credential dropdown, select the newly created credential from previous section (5.6)
6. Click Save and exit.

The screenshot shows the 'Action Editor' window for editing an action. The title bar reads 'Action Editor' with a close button. The main content area is titled 'Policy Editor | Editing Action [81]' and includes a 'Reset' button. The configuration fields are as follows:

- Action Name:** SL1: OAS On-Premises - Phase 1
- Action State:** [Enabled]
- Description:** (Empty text area)
- Organization:** [System]
- Action Type:** Run a Snippet
- Snippet Credential:** [SL1 - OAS On-Premises Cred - PF] (highlighted with an orange box)
- Action Run Context:** [Database]
- Execution Environment:** [SL1 OAS (python3)]
- Snippet Code:**

```
#OAS On-Premises Phase 1
#Version 1.7
#Author: Dishant Lihantu - ScienceLogic Expert Services
#Date: June 2025

import logging
from logging.handlers import RotatingFileHandler
import time
import sys
import re
import math
from datetime import timedelta, datetime, timezone
import tempfile
import importlib
os = importlib.import_module("os")
```

At the bottom, there are two buttons: 'Save' (highlighted with an orange box) and 'Save As'.

7. RunBook Automation Configuration & Execution

To configure the Automations:

7. Go to Registry > Run Book > Automation.
8. Search for “SL1: OAS On-Premises”.
9. Edit the Automation.
10. Align the right device to the Automation:
 - a. Search for ‘SL1 Stats’ in the Available Devices.
 - b. If SL1 Stats device is not present on the system, then use “SL1 OAS” device (see pre-requisites section for details).
11. Move the device from 4.a or 4.b to ‘Aligned Devices’.
12. Click Save and exit.
13. Perform steps 2-6 for “SL1: OAS On-Premises – Send Report Email”.

Following Automations are provided with the PowerPack:

- **SL1: OAS On-Premises:** This automation handles collecting the data needed for performing OAS.

The Automation is configured to trigger once a month.

The Automation triggers three separate Actions that handle collecting data and creating the final spreadsheet.

1. SL1: OAS On-Premises - Phase 1: This action is used to collect data for the following OAS Sections:
 - a. Self-Monitoring
 - b. Platform
 2. SL1: OAS On-Premises - Phase 2: This action is used to collect data for the following OAS Sections:
 - a. Capacity Management
 - b. Device Management
 - c. System Administration
 3. SL1: OAS On-Premises - Phase 3: This action is used to create the final spreadsheet and to collect data for the following OAS Sections:
 - a. Informational
- **SL1: OAS On-Premises – Send Report Email:** This automation handles sending emails to the users after the Report has been created.

The Automation is configured to trigger once a month.

The Automation triggers one Action that sends out an email, with the Assessment Report as an attachment, to the email addresses specified in the credential. The email is only sent out if the **Embed Value %4** option in the credential is set to “SEND_EMAIL=YES”

Manual Automation Execution

If you need the automation process to run immediately rather than at its next scheduled interval, you have the option to manually trigger it. This means you can bypass the pre-set schedule and start the process at any moment you choose, allowing for more flexible execution when necessary.

To execute the automation, perform the following steps:

1. Go to Registry > Run Book > Automation
2. Search for Automation Policy Name “SL1: OAS On-Premises”.
3. Click on the lightning bolt icon for policy named “SL1: OAS On-Premises”.

Automation Policy Manager | Automation Policies Found [1] Create Reset Guide

Automation Policy Name	ID	Policy State	Policy Priority	Organization	Devices	Events	Actions	Edited By	Last Edited
OAS On-Premises	71	Enabled	Default	System	1	All	3	em7admin	2024-11-25 13:13:21

8. OAS Results

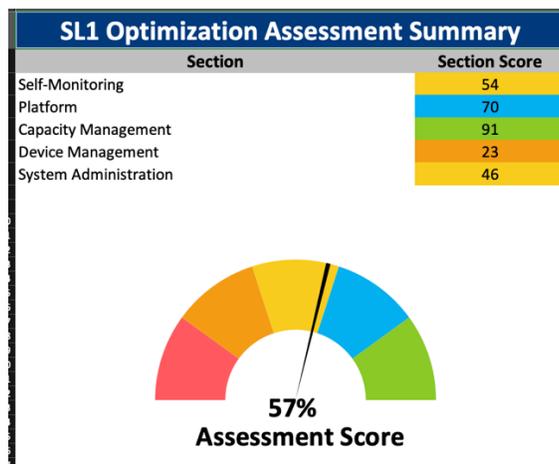
Once the Automation has been executed the results will be available on the device aligned to the automation.

To download the results of the OAS:

1. Go to Registry > Devices > Device Manager.
2. Search for “SL1 Stats” in Device Name.
3. Edit the device and Navigate to the Notes Tab.
4. The latest output of the OAS will be saved in the device note, if there are multiple notes then the latest one will be at the bottom of the list.
5. Click on the attachment icon and download the spreadsheet called “sl1_oas_checklist.xlsx”.

The finished OAS checklist spreadsheet has the following five tabs:

1. Assessment Summary – This tab has the score summary for every section and the overall score for OAS.



2. Informational – This tab has all the informational checks that do not impact the overall score of the assessment.
3. Self-Monitoring – This tab has all the Self-Monitoring checks along with the overall section score.
4. Platform – This tab has all the Platform checks along with the overall section score.
5. Capacity Management – This tab has all the Capacity Management checks along with the overall section score.
6. Device Management – This tab has all the Device Management checks along with the overall section score.
7. System Administration – This tab has all the System Administration checks along with the overall section score.

9. OAS Score Trends Dashboard

The PowerPack contains a Dynamic Application that collects scores, which can be displayed and trended on a Dashboard (also included in the PowerPack).

Dynamic App Setup

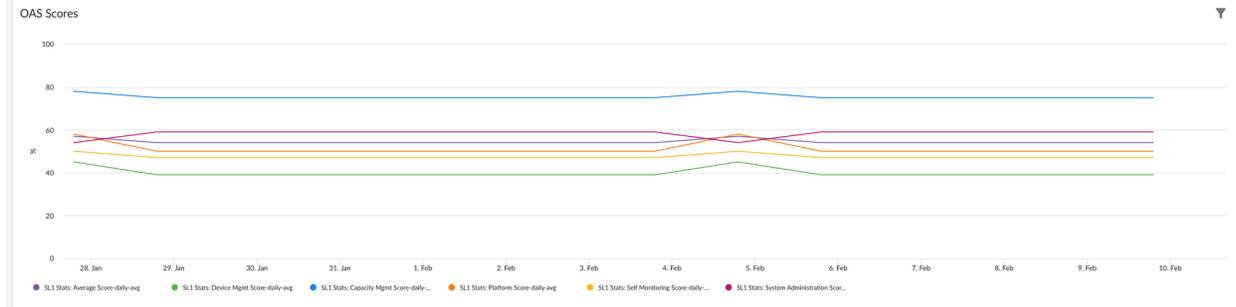
To display score trends on the Dashboard, the accompanying Dynamic Application must be aligned with the SL1 Stats device. Follow these steps to complete the alignment:

1. Navigate to the Devices Page.
2. Search for device name “SL1 Stats”.
3. Click on the Device Name.
4. In the Device Navigator screen, navigate to the Collections tab.
5. Click on “Edit” button located in the top right of the screen.
6. Click on “Align Dynamic Application”.
7. Click “Choose Dynamic Application”.
8. Search for Name “OAS”.
9. Select “SL1: OAS Assessment Scores” Dynamic Application.
10. Uncheck “Use Device SNMP Credential”.
11. Select Choose Credential and select the database Credential for the system.
 - a. If a credential doesn’t exist, then a new Database credential must be created with login credentials for the SL1 Database.
12. Click Align Dynamic Application.
13. Perform steps 1-12 selecting “SL1: OAS Corrective Actions – On-Premises” Dynamic Application.

Once the Dynamic Application is aligned and collecting data the **#SL1: Optimization Assessment Service (OAS) Score Trends – On-Premises** Dashboard will show the latest Assessment scores along with a graph with the trended values.

Since the Dynamic Application is configured to trigger once in 12 hours, it will take at least 12 hours for the dashboard to show any data.

Optimization Assessment Service (OAS) Results & Trends



Below is a summary of the checks that did not pass, along with brief corrective actions. For more details, go to the SL1 Stats device's Notes tab and download the latest Assessment Report.

Self Monitoring

Check ID	Check	Corrective Action
3	Discovery - Are all SL1 Collectors discovered for Self-Monitoring?	Discover all SL1 Collectors for Self-Monitoring.
5	Dynamic Applications - Do the SL1 Collectors have all of the expected dynamic applications aligned?	Align all relevant Dynamic Apps to the SL1 Collectors.
6	Dynamic Applications - Is the Support: Maintenance Tracking Dynamic Application configured with alerts and events?	Update SL1: Support Maintenance Dynamic Application.
9	System organization - Are all SL1 appliances located in the System organization or a dedicated organization?	All SL1 Appliances should be aligned with the System Organization.
11	Device Templates - Has the SL1 Collector device template been applied to all SL1 collectors?	SL1 Collector Device Template should be applied to the SL1 Collector D
13	Run Book - Is the Support: Notify SL1 Administrators Automation Policy enabled and aligned to a Run Book Action?	Enable Notify SL1 Administrators RunBook and insure that it incl

Platform

Check ID	Check	Corrective Action
2	Version - Is the SL1 version and MariaDB version consistent across all SL1 Appliances?	Best Practice is for all SL1 appliances to be on the same SL1 and MariaDB ve
3	Subscription Usage - Is each SL1 DB/DE configured to send Subscription License Usage Data to the SL1 License Usage Server?	Populate the [SUBSCRIBER] section on each SL1 DB/DE in the silo.conf file
6	Vitals - What is the CPU health for the SL1 Collectors?	Best Practice is for all SL1 Collectors to have an average CPU utilization und
7	Vitals - What is the Memory health for the SL1 Collectors?	Best Practice is for all SL1 Collectors to have an average Memory utilization
8	Vitals - What is the Swap health for the SL1 Collectors?	Best Practice is for all SL1 Collectors to have an average Swap utilization und
9	Vitals - What is the Disk health for the SL1 Collectors?	Best Practice is for all SL1 Collectors to have an average disk utilization und

10. New Features and Enhancements

This section describes the features and enhancements that are included in SL1: Optimization Assessment Service (OAS) – On-Premises version 1.7

Skipping Specific Checks

The latest SL1 PowerPack release introduces a new feature that allows users to skip individual checks from the assessment. This gives administrators more control and flexibility when certain checks are not relevant to their environment.

You can skip a specific check by changing its status from YES to NO. When a check is set to NO, the automation will run the check but will:

- Mark the check as “Skipped” in the Priority column of the OAS checklist spreadsheet.
- Exclude it from the Assessment score calculation.

Steps to skip checks

1. Navigate to System > Manage > PowerPacks.
2. Search for **SL1: Optimization Assessment Service (OAS) – On-Premises**, and edit the PowerPack by clicking on the wrench icon [].
3. In the PowerPack Editor window, navigate to Manage PowerPack > Technical Notes.
4. Expand the notes by clicking on the expand icon [].
5. Locate the check that you want to ignore using the check ID.
6. Update the check:
For example to skip check 9 under Self-Monitoring Section:
9:YES:System Status Script should have successfully executed in the past hour.
should be changed to:
9:NO:System Status Script should have successfully executed in the past hour.

Each check must follow this strict format:
<Check Number>:<YES|NO>:<Check Description>
7. Click on the shrink icon [] to shrink the notes followed by Save.

NOTE: Check updates are reset with each PowerPack upgrade. Support for preserving the skipped check setting will be added in a future version.

Appendix A – Automation Credential

The PowerPack comes with a credential (SL1 - OAS On-Premises Cred) which is used by the Automation. Below are the main components to the credential:

1. **User / Password** – This is the information about the admin user that will be used to collect data from the system
2. **MAKE_CHANGE** – This is optional field, when enabled the OAS Automation can make the following changes to the system:
 - Rename device category from System.EM7 to System.SL1
 - Rename category EM7 Administration to SL1 Administration.
 - Rename device classes with description EM7 to SL1.
 - In System > Manage > Applications - rename any dynamic applications that reference EM7 with SL1
 - In Registry > Events > Event Manager - rename any events that reference EM7 with SL1
 - In System > Manage > Credentials - rename any credentials that reference EM7 with SL1
3. **DEBUG** – This is an optional field used only when debug logs are to be collected for troubleshooting purposes. This requires ssh access to the primary Database /Administration Portal.
4. **Database SSH Credential Mapping:** These fields map the Database/s to their SSH credential from Section 4 (SSH Credentials for all S11 Databases).



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