



---

# SL1 Optimization Assessment Service On-Premises User Guide

SL1 OAS On-Premises Pack version 1.4



# Table of Contents

- 1. REVISION HISTORY .....3
- 2. INTRODUCTION.....3
- 3. POWERPACK CONTENTS.....3
- 4. PRE-REQUISITES & POWERPACK INSTALLATION .....4
- 5. CREDENTIAL CONFIGURATION .....6
- 6. RUN BOOK ACTIONS CONFIGURATION .....8
- 7. RUN BOOK AUTOMATION CONFIGURATION & EXECUTION .....9
- 8. OAS RESULTS.....11
- 8. OAS SCORE TRENDS DASHBOARD .....12
- APPENDIX A – AUTOMATION CREDENTIAL .....14

---

## 1. Revision History

Version Number	Revision Date	Notes
1.4	Feb 25, 2025	Minor fixes.
1.3	Feb 13, 2025	Minor enhancements to automation stability.
1.2	Feb 11, 2025	Bug Fixes
1.1	Feb 10, 2025	Introduced email report delivery option.
1.0	Jan 24, 2025	First version with support for storing OAS data for trending.
0.7	Dec 5, 2024	Revised Self-Monitoring Checks
0.6	Nov 24, 2024	Initial public release of SL1 Optimization Assessment Service On-Premises PowerPack.

---

## 2. Introduction

This document provides step-by-step instructions for installing and configuring the SL1 Optimization Assessment Service (OAS) On-Premises PowerPack.

The SL1 OAS PowerPack helps administrators gather configuration and operational data from SL1 systems and generates a structured report for health and optimization analysis.

This guide is designed to walk you through the entire process — from setup to viewing results.

---

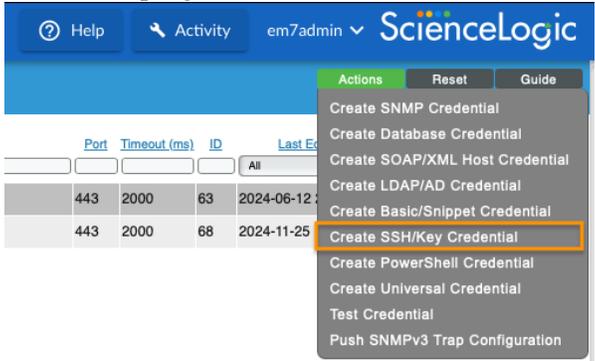
## 3. PowerPack Contents

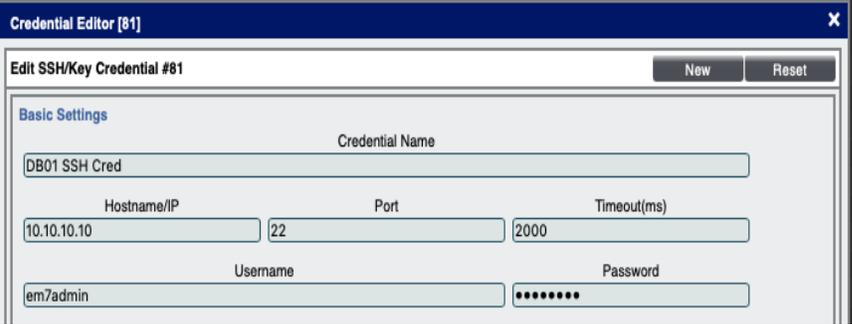
Content Type	Count
Credentials	2
Run Book Actions	4
Run Book Automations	2
Dynamic Application	2
AP2 Dashboard	1

## 4. Pre-requisites & PowerPack Installation

### Pre-requisites

Before installing the Power Pack, confirm the following components and configurations are in place. This ensures the OAS automation functions properly.

Pre-requisite item	Minimum required Version / Notes
SL1 platform	12.1.1
User	An administrator level user account details are needed.
Device for Automation Alignment	<p>SL1 Stats device should be present on the system.            Create “<b>SL1 Stats</b>” device (if not already present):</p> <ul style="list-style-type: none"> <li>• Navigate to Registry &gt; Devices &gt; Device Manager</li> <li>• Click on Actions &gt; Create Virtual Device</li> <li>• Fill in the following:               <ul style="list-style-type: none"> <li>○ <b>Device Name:</b> SL1 Stats</li> <li>○ <b>Organization:</b> System</li> <li>○ <b>Device Class:</b> Virtual Device   Dynamic App Emissary</li> <li>○ <b>Collector:</b> Select the same collector that is currently monitoring the SL1 Databases.</li> </ul> </li> </ul>
Operational Insights PowerPack	Latest version of Operational Insights PowerPack installed.
SSH Credentials for all SL1 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"> <li>1. Navigate to System &gt; Manage &gt; Credentials</li> <li>2. From the top right Actions menu select “Create SSHKey Credential.</li> </ol>
	 <p>The screenshot shows the ScienceLogic user interface. At the top, there is a navigation bar with 'Help', 'Activity', and 'em7admin'. Below this is a table with columns 'Port', 'Timeout (ms)', 'ID', and 'Last Edited'. The table contains two rows of data. An 'Actions' menu is open over the table, listing various credential creation options. The option 'Create SSH/Key Credential' is highlighted with an orange box.</p> <ol style="list-style-type: none"> <li>3. In the credential editor window fill the following:           <ol style="list-style-type: none"> <li>a. <b>Credential Name:</b> provide the name for the credential, example: DB01 – SSH Credential.</li> </ol> </li> </ol>

Pre-requisite item	Minimum required Version / Notes
	<p>b. <b>Hostname/IP:</b> IP of the Database</p> <p>c. <b>Port:</b> 22</p> <p>d. <b>Timeout:</b> 2000</p> <p>e. <b>Username:</b> Enter “em7admin”</p> <p>f. <b>Password:</b> 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"> <li>1 x New Credential for Single Database or AIO systems.</li> <li>2 x New Credentials for HA or DR Architecture</li> <li>3 x New Credentials for HA+DR Architecture.</li> </ol> <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

This section shows how to configure the credential that the OAS automation uses to connect to your SL1 system and SL1 databases. This step is required for the automation to run successfully.

### Credential Configuration Steps

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

#### Create a copy of the Example credential as follows:

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** – update the name to “SL1 - OAS On-Premises Cred – PROD”
  - **HTTP Auth User** – enter the SL1 Application Administrator user (This is NOT the Operating System (SSH) Account).
  - **HTTP Auth Password** – enter the SL1 Application Administrator password.
5. Optional changes:

Field	Description	Default
<b>Embed Value %1</b>	Whether the automation should make changes in SL1 (e.g., renaming EM7 references). Options are: MAKE_CHANGE=YES or MAKE_CHANGE=NO	MAKE_CHANGE=NO
<b>Embed Value %2</b>	Enable debugging. Use DEBUG=TRUE only if troubleshooting.	DEBUG=FALSE
<b>Embed Value %3</b>	Log file location (used internally). Do not modify.	(auto-set)
<b>Embed Value %4</b>	Whether the final report should be emailed. Options are: SEND_EMAIL=YES or SEND_EMAIL=NO	SEND_EMAIL=NO

6. HTTP Header updates:
  - **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.

7. Click **Save As**.

The screenshot shows the 'Credential Editor [77]' window. The title bar indicates 'Edit SOAP/XML Credential #77'. There are 'New' and 'Reset' buttons in the top right. The interface is divided into several sections:

- Basic Settings:** Profile Name (highlighted), Content Encoding, Method, HTTP Version, URL, HTTP Auth User, HTTP Auth Password, and Timeout (seconds).
- Soap Options:** Embedded Password [%P], Embed Value [%1], Embed Value [%2], Embed Value [%3], and Embed Value [%4].
- Proxy Settings:** Hostname/IP, Port, and User.
- CURL Options:** A list of options like CAINFO, CAPATH, CLOSEPOLICY, etc., with arrows to move them.
- HTTP Headers:** A list of headers including PRIMARY DB IP: SSH CRED, SECONDARY DB IP: SSH CRED, DR DB IP: SSH CRED, and example@company.com.

At the bottom, there are 'Save' and 'Save As' buttons, with 'Save As' highlighted by an orange box.

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 DB Headers
AIO/Single Database	1
High Availability OR Disaster Recovery	2
High Availability + Disaster Recovery	3

## 6. Run Book Actions Configuration

Run Book Action is an action that can be automatically triggered in SL1 when certain event criteria are met.

To configure the Run Book Actions:

1. Go to Registry > Run Book > Action.
2. Search for “SL1: OAS On-Premises”.
3. Perform Steps 4 – 6 for the following 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.
5. From the Snippet Credential dropdown select the credential SL1 - OAS On-Premises Cred – PROD (created in previous section)
6. Click Save and exit.

The screenshot shows the 'Action Editor' window in the ScienceLogic interface. The title bar reads 'Action Editor' with a close button. Below the title bar, the text 'Policy Editor | Editing Action [81]' is displayed, along with a 'Reset' button. The main configuration area contains several fields:

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

## 7. Run Book Automation Configuration & Execution

Run Book Automations are prebuilt workflows that run the OAS assessment in phases. Each phase collects a specific subset of so one data. You must align the correct device and set the correct credential for each automation.

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” Automation as well.

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 day.

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
SL1: OAS On-Premises	71	Enabled	Default	System	1	All	3	em7admin	2024-11-25 13:13:21

## 8. OAS Results

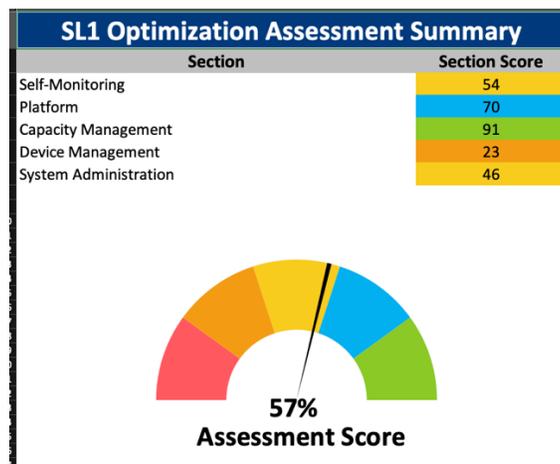
Once the Automation has been executed the results will be available on the device aligned to the automation.

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.

## 8. 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

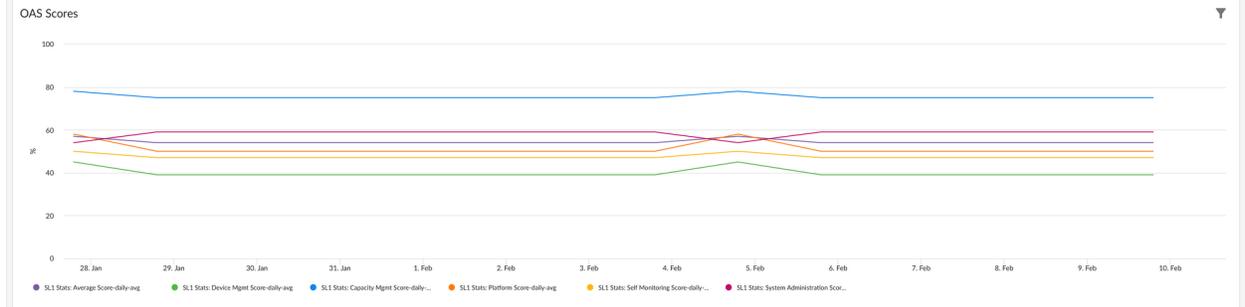
To display score trends on the Dashboard, the accompanying Dynamic Application must be aligned with the SL1 Stats device. Follow these steps to complete the alignment:

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.
14. Clear the SL1 Cache
  - a. Click on the hamburger icon (top left of the screen)
  - b. Navigate to Misc Section
  - c. Click **Clear SL1 Cache**

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&nbsp;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

## Appendix A – Automation Credential

The PowerPack includes a preconfigured credential named **SL1 - OAS On-Premises Cred - Example** 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).



© 2003 - 2025, ScienceLogic, Inc.

All rights reserved.

## LIMITATION OF LIABILITY AND GENERAL DISCLAIMER

ALL INFORMATION AVAILABLE IN THIS GUIDE IS PROVIDED "AS IS," WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. SCIENCELOGICTM AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

Although ScienceLogic™ has attempted to provide accurate information on this Site, information on this Site may contain inadvertent technical inaccuracies or typographical errors, and ScienceLogic™ assumes no responsibility for the accuracy of the information. Information may be changed or updated without notice. ScienceLogic™ may also make improvements and / or changes in the products or services described in this Site at any time without notice.

## Copyrights and Trademarks

ScienceLogic, the ScienceLogic logo, and EM7 are trademarks of ScienceLogic, Inc. in the United States, other countries, or both.

Below is a list of trademarks and service marks that should be credited to ScienceLogic, Inc. The ® and TM symbols reflect the trademark registration status in the U.S. Patent and Trademark Office and may not be appropriate for materials to be distributed outside the United States.

- ScienceLogic™
- EM7™ and em7™
- Simplify IT™
- Dynamic Application™
- Relational Infrastructure Management™

The absence of a product or service name, slogan or logo from this list does not constitute a waiver of ScienceLogic's trademark or other intellectual property rights concerning that name, slogan, or logo.

Please note that laws concerning use of trademarks or product names vary by country. Always consult a local attorney for additional guidance.

## Other

If any provision of this agreement shall be unlawful, void, or for any reason unenforceable, then that provision shall be deemed severable from this agreement and shall not affect the validity and enforceability of any remaining provisions. This is the entire agreement between the parties relating to the matters contained herein.

In the U.S. and other jurisdictions, trademark owners have a duty to police the use of their marks. Therefore, if you become aware of any improper use of ScienceLogic Trademarks, including infringement or counterfeiting by third parties, report them to Science Logic's legal department immediately. Report as much detail as possible about the misuse, including the name of the party, contact information, and copies or photographs of the potential misuse to: [legal@sciencelogic.com](mailto:legal@sciencelogic.com). For more information, see <https://sciencelogic.com/company/legal>.