



HPE Universal SLA Manager

Release Notes

Release V4.3

Edition 1.0

Notices

Legal notice

© Copyright 2016 Hewlett Packard Enterprise Development LP

Confidential computer software. Valid license from HPE required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

The information contained herein is subject to change without notice. The only warranties for HPE products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HPE shall not be liable for technical or editorial errors or omissions contained herein.

Trademarks

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Oracle and Java are registered trademarks of Oracle and/or its affiliates.

Adobe®, Acrobat® and PostScript® are trademarks of Adobe Systems Incorporated.

Java™ is a trademark of Oracle and/or its affiliates.

Microsoft®, Internet Explorer, Windows®, Windows Server®, and Windows NT® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Firefox® is a registered trademark of the Mozilla Foundation.

Google Chrome® is a trademark of Google Inc.

Oracle® is a registered U.S. trademark of Oracle Corporation, Redwood City, California.

UNIX® is a registered trademark of The Open Group.

X/Open® is a registered trademark, and the X device is a trademark of X/Open Company Ltd. in the UK and other countries.

Red Hat® is a registered trademark of the Red Hat Company.

Linux® is a registered trademark of Linus Torvalds in the U.S. and other countries.

Contents

Notices	2
Chapter 1 Preface.....	5
1.1 Intended Audience	6
1.2 Software Version.....	6
1.3 Associated Documents	6
1.4 Terms and Acronyms	7
1.5 Support.....	7
1.6 Document history	7
Chapter 2 Introduction.....	8
2.1 Product Goals	8
2.2 Product Content.....	8
Chapter 3 Software Prerequisites	10
3.1 Software Prerequisites.....	10
Chapter 4 Installation and Upgrade	11
4.1 Kit.....	11
4.2 Code Signing.....	11
4.3 Installation.....	12
4.3.1 HPE USLAM Service.....	12
4.3.2 USLAM License.....	12
4.3.2.1 Obtaining a USLAM License	12
4.3.2.2 Installing a USLAM License	12
4.3.3 Starting USLAM.....	13
4.3.4 HPE USLAM ETL	13
4.3.5 Starting USLAM.....	13
Chapter 5 Enhancements and CR Fixes	14
5.1 Enhancements	14
5.1.1 Compared to previous version.....	14
5.2 CR Fixes.....	15
Chapter 6 Problems and Limitations	16
6.1 Known Problems.....	16
6.2 Known Limitations	16
Chapter 7 Troubleshooting	18
7.1 Tracing	18
7.2 Viewing Logs.....	18
Chapter 8 Product Documentation	19

List of tables

Table 1: List of Software Version	6
---	---

Chapter 1 Preface

This document consists of the release notes for the HPE Universal SLA Manager software kit.

The software kit name is **USLAM 4.3**.

The following installation kits are available for the current version:

- HPE_USLAM_Services.bin – *on Linux Only*
- HPE_USLAM_ETL.bin – *on Linux Only*
- HPE_USLAM_BOE.tar – *on Windows Only*
- HPE_USLAM_Reporting.biar – *on Windows Only*
- HPE_USLAM_Report_Publisher.exe – *on Windows Only*
- HPE_USLAM_MyUSLAMPortal.bin/exe – *on Linux and Windows*

USLAM V4.3 is the next official release on top of USLAM V4.2.1. It is backward compatible with USLAM V4.2.1.

To install it, you must stop any prior version and either de-install it or install USLAM V4.3 in a new directory.

In case of upgrade from previous version V4.0/V4.1/V4.2/V4.2.1, the administrator must execute a migration procedure.

For more details about a V4.0/V4.1/V4.2/V4.2.1 to V4.3 migration or for an installation from scratch, please consult the *HPE USLAM Installation and Configuration Guide*.

The V4.3 Installation kits include all the Universal SLA Manager components:

- Calculation Engines
 - BIF Engine
 - KPI Engine
 - KQI Engine
 - SLA Engine
 - Ticket Engine
- Data Collection framework for Data Records, Performance Metrics, Tickets and Exclusions
- Action Executor framework including standard SNMP and SMTP Action Executors
- Repository manager / Dataload
- Web UI
- ETL (powered by SAP Business Objects Data Services)
- Universe (powered by SAP Business Objects Data Services)
- Reports (powered by SAP Business Objects Enterprise)
- Pre-defined reports
- End-user SLA Intelligence Portal
- Model examples

- MyUSLAM Portal (powered by Liferay Portal)
- MyUSLAM Portlets

It is highly recommended to read this document before installing USLAM.

The *HPE USLAM Installation and Configuration Guide* provides the prerequisites and other relevant information about installing USLAM.

1.1 Intended Audience

This document is for Solution Architects, USLAM Solution deployment teams and USLAM Solution administrators.

1.2 Software Version

We use the term Windows as a generic reference to the operating system, unless otherwise specified. The software versions referred to in this document are as follows:

Table 1: List of Software Version

Software	Version
HPE Universal SLA Manager	V4.3
Red Hat Linux 6.5 64-bit	6.5 (*)
Oracle client for Linux 64-bit	Oracle 12c Or Oracle 11g Release 2 (11.2.0.4) (*)
Oracle client for Windows 32-bit	Oracle 12c Or Oracle 11g Release 2 (11.2.0.4) (*)
Oracle Server	Oracle 12c Or Oracle 11g Release 2 (11.2.0.4) (*)
Enterprise DB - Postgres Plus Advanced Server (PPAS)	9.3 (*)
Windows	Windows Server 2008 or Windows Server 2012
Internet Explorer	9.0 or upper
Firefox	27.0 or upper
Google Chrome	32.0 or upper
SAP Business Objects BI Platform	4.1 SP6(14.1.6.1702)
SAP Business Objects Data Service	BO DS 4.2 SP2 (14.2.2.446)
Liferay Portal	6.1.1 CE GA2

(*) Specified servers versions have been successfully tested by Hewlett Packard Enterprise. Incremental releases of the specified versions defined by the last number in the server name will be supported as they are made available, but may not have been tested by Hewlett Packard Enterprise. Exceptions in support will be documented.

1.3 Associated Documents

The following documents contain useful reference information:

- HPE Universal SLA Manager, Installation and Configuration Guide.
- HPE Universal SLA Manager, User guide.
- HPE Universal SLA Manager, Administration guide.
- HPE Universal SLA Manager, Support Matrix.
- HPE Universal SLA Manager, Modeling and Integration guide: this guide is available on demand, please contact USLAM-Product-Management@hpe.com

1.4 Terms and Acronyms

Table 2: List of Terms and Acronyms

Term	Description
USLAM	Universal Service Level Agreement Manager
SLA	Service Level Agreement
ETL	Extract Transform Load
SM	Service Manager
UI	User Interface
Web UI	Web User Interface

1.5 Support

Please visit our HPE Software Support Online Web site at <https://softwaresupport.hpe.com/> for contact information, and details about HPE Software products, services, and support.

The Software support area of the Software Web site includes the following:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information.

1.6 Document history

Table 3: Document history

Edition	Date	Description
1.0	Jul 2016	First version.

Chapter 2

Introduction

2.1 Product Goals

HPE Universal SLA Manager offers a complete and scalable SLA Management solution including:

- Services and SLAs design and repository
- Generic service models, service metrics and SLA clauses design and store capability.
- Automates creation, administration and reporting for high numbers of SLAs.
- Allows integration into existing environment / workflow for automated, secured and efficient dataload and synchronization
- High volume SLAs compliance calculation and reporting
- Business impact for Service Operation for easy and reliable cost management
- Manage financial risks through proactive penalty prediction.
- Data Collection framework for Data Records, Performance Metrics, Tickets and Exclusions
- Telco grade engines to compute real time SLA compliance status.
- Customer portal for end-user reports against contractual agreements and management analytics reports.
- Near real time monitoring of SLA clauses compliance with trending information.
- Root cause analysis available in web UI and Reporting, from SLA to individual downtimes and incidents.
- Support Service Improvement Plan process with SLA history related data and reports.
- Open and easy-to-use Business Objects Universe for developing any reports based on USLAM data model.
- A new end user community portal called 'MyUSLAM'. This highly customizable portal embeds several USLAM portlets used to build private or public business dashboards, extending business metrics visibility to business managers, end customers and partners.

2.2 Product Content

The USLAM product delivers four software kits:

USLAM SERVICES

The USLAM Services package contains different modules that the administrator can install either together or separately on different hosts (Linux only):

- *Data Collection framework*
A framework that can host and run any number of data collectors from the supported types. USLAM V4.3 supports data collectors for data records, performance records, tickets and exclusions
- *Calculation Engines*
The core USLAM engines for real time SLA calculation, compliance assessment and SLA business impact calculation
- *Repository Manager (incl. dataload tools)*

The USLAM single and central repository that stores all objects like templates, definitions, services, customers and SLAs.

- *Web UI*

Comprehensive Web User Interface allowing the management and monitoring of SLAs, from an operational and business impact standpoint. It also manages USLAM users and monitors the result of the dataload tools.

- *Action Executors*

A framework that can host any number of action executors. USLAM provides standard SNMP and SMTP Action Executors.



NOTE: In this version, the Web UI is deployed on the same system as the Repository Manager

USLAM ETL

The USLAM ETL package is used to build and regularly update the datamart that stores and organizes the historical data of the SLAs.

It is powered by SAP Business Objects Data Services (embedded in the USLAM ETL package) and is available on Linux only.

USLAM REPORTING

The USLAM Reporting packages offer a complete Reporting solution, including a predefined end-user SLA Intelligence Portal and a set of predefined standard reports (Operational, Contractual, Audit...). It provides an open and easy-to-use BO universe design to ease the production of customized reports. The package also includes a tool that you can schedule for automatic publishing of contractual reports.

It is powered by SAP Business Objects BI Platform (embedded in the USLAM Reporting software) and is available on Windows only.

The USLAM Reporting solution consists in three packages:

- HPE USLAM Reporting Software (powered by Business Objects BI Platform).



NOTE: This package must not be installed if you already have a Business Object Enterprise server installed

- HPE USLAM Universe and Standard Reports
- HPE USLAM Report Publisher

MYUSLAM PORTAL

The MyUSLAM package offers a new end user community portal powered by Liferay Portal 6.1.1.

This highly customizable portal embeds several USLAM portlets usable to build private or public business dashboards, extending business metrics visibility to business managers, end customers and partners.

Chapter 3

Software Prerequisites

3.1 Software Prerequisites

Table 4: Software Prerequisites

Edition	Date	Description
Windows Server	2008 32bit or 64 bits	For: - HPE USLAM Reporting - HPE USLAM Reports publisher - (optionally) MyUSLAM portal
Red Hat Linux 6.5 64-bit	6.5 (*)	For: - HPE USLAM Services - HPE USLAM ETL - (optionally) MyUSLAM portal
Oracle Server	Oracle 12c Or Oracle 11g Rel 2 (11.2.0.4) (*)	Only if selected DB vendor is not Enterprise DB – Postgres Plus Advanced Server (PPAS)
Oracle Client for Linux 64-bit	Oracle 12c Or Oracle 11g Rel 2 (11.2.0.4) (*)	
Oracle Client for Windows 32-bit	Oracle 12c Or Oracle 11g Rel 2 (11.2.0.4) (*)	
Enterprise DB - Postgres Plus Advanced Server (PPAS)	9.3 (*)	Only if selected DB vendor is not Oracle
Internet Explorer or Firefox or Google Chrome	9.0 or upper 27.0 or upper 32.0 or upper	

(*) HPE successfully tested specified servers versions. Hewlett Packard Enterprise supports Incremental releases of the specified versions defined by the last number in the server name when they are available, but Hewlett Packard Enterprise may not have tested them. Hewlett Packard Enterprise will document exceptions in support.

Chapter 4

Installation and Upgrade

4.1 Kit

The installation kits bundled with HPE USLAM 4.3 software are:

Setup File Name	Usage
HPE_USLAM_Services.bin	Use this setup to install USLAM Services (Linux)
HPE_USLAM_ETL.bin	Use this setup to install USLAM ETL (Linux)
HPE_USLAM_BOE.tar	Untar this archive to install USLAM Reporting software (Windows) Note: Once untar-ed, the setup executable is under Windows/Disk1/InstData/VM/HPE_USLAM_BOE.exe
HPE_USLAM_Reporting.biar	Import this file into Business Objects to install the HPE USLAM Universe and Standard Reports
HPE_USLAM_Report_Publisher.exe	Use this setup to install USLAM Reports Publisher (Windows)
HPE_USLAM_MyUSLAMPortal.bin	Use this setup to install MyUSLAM Portal (Linux)
HPE_USLAM_MyUSLAMPortal.exe	Use this setup to install MyUSLAM Portal (Windows)

4.2 Code Signing

Below mentioned procedure* allows you to assess the integrity of the delivered Product before installing it, by verifying the signature of the software packages.

Pick the signature (.sig) file shipped along with the product and use following GPG command
`gpg --verify <product.sig> <product>`

Example: `gpg --verify VPNSVP-X51-3A.zip.sig VPNSVP-X51-3A.zip`

Note: Look for the comments shown below in the command output

Good signature from "Hewlett Packard Enterprise Company RSA-2048-14 <signhp@hpe.com>"

If you are not familiar with signature verification using GPG and intended to verify HPE Product signature, follow the steps given below.

1. Check whether gnupg gpg is installed on the system. If no, install gnupg gpg
2. Configure GPG for accepting HPE signature. The steps are the following:
 - a. Log as root on your system
 - b. Get the hpePublicKey from following location:

<https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=HPLinuxCodeSigning> and save it as hpPublicKey.pub

Note that the hpePublicKey file will be located in the root's home directory.

- c. Follow the instruction found at above URL in the "Verification using GPG" section.

**HPE strongly recommends using signature verification on its products, but there is no obligation. Customers will have the choice of running this verification or not as per their IT Policies.*

4.3 Installation

4.3.1 HPE USLAM Service

Please refer to the *HPE USLAM Installation and Configuration Guide* for detailed information about the installation requirements and the installation procedures.

4.3.2 USLAM License

After installation, USLAM Product will automatically activate a trial license for 90 days (InstantOnLicense). After expiration of this date, you will need a commercial license to continue using the product.

4.3.2.1 Obtaining a USLAM License

A license key password is required to use HPE Universal Service Level Agreement Manager (USLAM). To get a license, please access the following web site:

<https://h20575.www2.hpe.com/mysoftware/>

If you need further online help to startup with licensing, you can refer to :

<https://h20575.www2.hpe.com/mysoftware/contact/downloadPDF>

Licensing Support can be obtained in

<https://h20575.www2.hpe.com/mysoftware/contact/softwareContact>

4.3.2.2 Installing a USLAM License

If the USLAM license expires, it will not be possible to restart the USLAM services after a stop. To update the USLAM license, you will be required to perform the following steps:

1. Get a new license file for USLAM.
2. Stop USLAM services.
3. Edit and copy / paste the license key to the license file available under `<INSTALL_DIR>/license.txt`, then save the modified file.
4. Test the license using the license tool `<INSTALL_DIR>/bin/uslam_license`. This tool will list all installed licenses and perform a validity check. See the HPE USLAM Administration Guide for more details about this tool.
5. Restart USLAM services.

For more information about obtaining a license, stopping or starting USLAM services, please refer to the *HPE USLAM Installation and Configuration Guide*.

4.3.3 Starting USLAM

After the installation and configuration of USLAM Services (and before starting USLAM Services):

1. If you need to manage a high volume of SLA (ex: 250K), you must configure some of the USLAM parameters before starting USLAM.

Please refer to the *HPE USLAM Support Matrix* document.

2. In case the platform integrates with the HPE SM7 database configured in a specific time zone, you must configure some of the USLAM parameters before starting USLAM.

Please refer to the *Installation and Configuration Guide*.

3. Go to `<InstallDir>/bin` and type `uslam_start.sh` to start USLAM.

Then, execute the following command to check if USLAM started correctly.

```
<InstallDir>/jboss/bin/twiddle.sh get "jboss.system:type=Server" Started
```

When this command returns: “*Started=true*”, it means that USLAM is started.

Starting from this point, you can:

Launch the USLAM Web UI at <http://<yourserver>:8080/sla-repository>

Run the USLAM dataload tool located at `<InstallDir>/bin/uslam_load.sh`

4.3.4 HPE USLAM ETL

Please refer to the *HPE USLAM Installation and Configuration Guide* for detailed information about the installation requirements and the installation procedures.

4.3.5 Starting USLAM

Please refer to the *HPE USLAM Installation and Configuration Guide* for detailed information about the installation requirements and the installation procedures.

Chapter 5

Enhancements and CR Fixes

5.1 Enhancements

5.1.1 Compared to previous version

Compared to **HPE USLAM V4.2.1**, this **USLAM V4.3 Release** supports the following new features:

SLA Item Desynchronization

It is possible inside an SLA to terminate a single SLA item without terminating the SLA, and to start a new SLA Item at a date different from the SLA start date.

Java API enhancements: Support SLA, Customer, Service creation via Java-API

In addition to the `uslam_load` tool loading XML file, it is possible to load a new business instance (SLA, Customer, Service) using the Java API.

Cross-Launch for direct access to SLA, SLA Clause

A customization of the URL allows to trigger directly the Agreement Status Snapshot screen with a pre-loaded filter for any combination of SLA Id, Service Id, customer Id and reference date.

Smart Card authentication support

USLAM user interfaces can retrieve the user credential in the http header using a Trust-Loading mechanism.

Service definition Update without Service versioning for optional attributes

It is possible to add new optional attributes on any service component described in the Service Definition without having to change the calculation model

Search and filter based on service components attributes

The USLAM Operational UI allows to filter based on service or service component attribute's value

Oracle 12 Support

5.2 CR Fixes

This USLAM V4.3 maintenance release fixes the following list of defects present in the USLAM V4.2.1:

#	Components	Description
3224	Repository Manager	Error when gathering LPS statistics

Chapter 6

Problems and Limitations

6.1 Known Problems

#	Components	Description
CR#3326	BIF Engine	<p>The strategy of calculation in BIFE is based on the snapshot. When the source data is changed before the check point in the past, the result of BIFE will not be impacted. It's reasonable for reference period but in reporting period, BIFE should use another way to check if it's impacted, since when the reporting period is 'Daily' which causes BIFE miss the update before the check point although they are in the same reference period.</p> <p><u>Customer impact:</u> In some cases <u>Frequency:</u> Low <u>Workaround:</u> no</p>

6.2 Known Limitations

This section includes issues and defects we known in USLAM.

Temporary workarounds for some issues are also included in this section.

#	Components	Description
1821	Data loader	<p>Worst or Best aggregation rule for an SLO of type Incident should be rejected as an invalid model by the Data Loader.</p> <p><u>Workaround:</u> Fix the model in XML files</p>
2531	Universe	<p>Universe does not indicate if the BIF parameter for a clause is global or specific to the clause.</p> <p><u>Workaround:</u> None</p>
2751	Engines	<p>There are 2 use cases where the DR KQI Engine display the ERROR message "Cannot find any model" when it should not.</p> <p>Case 1: a Data Record is consumed which impacts a monitored resource which was removed from an Service Instance version to another</p> <p>Case 2: USLAM consumes a Data Record but clauses impacted by this data record are marked as 'Unselected' in the Service Offering. You can safely ignore this message.</p> <p><u>Workaround:</u> None</p>
2972	Engines	<p>In case of conditional SLOs, using the same Objective Identifiers in two different SLIs definition causes wrong KQI calculation</p> <p><u>Workaround:</u> In the SLR definition, make sure that all Objective IDs are different (regardless of the SLI they belong to) when you define the conditional SLOs of your SLIs</p>
3001	MyUSLAM Portlets	<p>The Agreement Status Snapshot portlet shows bad performances in case of High number of SLAs. From 15s to 30s (depending on the search criteria) for 50K SLAs.</p>

		<u>Workaround:</u> None
3071	ETL	With specific Ticket KQI custom rules using non-standard tables, JB_Fct_Ticket_Event can fail. <u>Workaround:</u> Make sure that all tables used by your custom ticket KQI rules (in the USLAM Services schema) are also available in the datamart schema.
3101	Repository Manager	Error message is not clear (“Internal error”) when loading a Service Offering XML file containing a dynamic objective that references an attribute that does not exist. <u>Workaround:</u> None
3308	Repository Manager	In original design, terminate an SLA/items, add new items and update SLA/items are 3 independent operation in Loading tool. In the future Repository Manger will integrate them in order to facilitate user’s operation. <u>Enhancement</u>
3332	BIF Engine	Add the capacity to BIFE to keep the history snapshot instead of removing everything when a history raw data is changed. <u>Enhancement</u>

Chapter 7

Troubleshooting

This section includes the different operations that you can perform to trace different errors during several stages of the USLAM lifecycle.

More details are available in the *HPE USLAM Administration guide*.

7.1 Tracing

For debug and investigation purpose, you might need to activate some additional traces on specific components.

To do that:

For USLAM Services (Engines + UI):

Please edit the file `jboss-log4j.xml` located at `<installDir>/jboss/server/default/conf` and find the section named “Limit categories”.

Then, for each USLAM component, you can change the priority value of the relevant component to INFO or DEBUG.

It is not required to stop or restart the USLAM Services to change the debug level.

For MyUSLAM portlets:

Follow instructions in the *HPE USLAM Administration guide*

7.2 Viewing Logs

For USLAM Services (Engines + UI), log files are located at `<installDir>/jboss/server/default/log`.

For MyUSLAM portlets, log files are located at `<installDir>/jboss/standalone/log`.

Chapter 8

Product Documentation

We ship guides and manuals as PDF files.

The set of documentation includes the following (please refer to these documents from last major release USLAM V4.2, no change in this release)

- *HPE Universal SLA Manager Installation and Configuration Guide*
- *HPE Universal SLA Manager Administration Guide*
- *HPE Universal SLA Manager Support Matrix*
- *HPE Universal SLA Manager User Guide*
- *HPE Universal SLA Manager Modeling and Integration guide*: this guide is available on demand, please contact USLAM-Product-Management@hpe.com