

# **OSS Fault Analytics & Statistics**

Release notes

Version 1.2.0

Edition 1.0 – December 2016



**Hewlett Packard**  
Enterprise

# 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.

Printed in the US

## Trademarks

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.

HPE Vertica™, the HPE Vertica Analytics Platform™ are trademarks of Hewlett-Packard

Firefox® is a registered trademark of the Mozilla Foundation.

Google Chrome® is a trademark of Google Inc.

UNIX® is a registered trademark of The Open Group.

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.

JBoss®, Wildfly and PicketLink are registered trademarks of RedHat Inc.

# Contents

<b>Notices</b> .....	<b>1</b>
<b>Preface</b> .....	<b>4</b>
About this guide .....	4
Audience .....	4
Software versions .....	4
Typographical Conventions .....	4
Associated Documents .....	5
Support .....	5
<b>Chapter 1 Product overview</b> .....	<b>6</b>
<b>Chapter 2 Installation, Configuration, and Administration</b> .....	<b>7</b>
2.1 First installation of FAS .....	7
2.2 Upgrade from FAS 1.1.2 to 1.2 .....	7
2.3 Upgrade from FAS 1.1.1 to FAS 1.1.2 .....	9
<b>Chapter 3 FAS 1.2 enhancements &amp; CR fixes</b> .....	<b>11</b>
3.1 Enhancements .....	11
3.2 CR fixes .....	11
<b>Chapter 4 Known problems and limitations</b> .....	<b>12</b>

# List of tables

Table 1: Software versions.....	4
Table 2: Fault Analytics & Statistics 1.2 fixes.....	11
Table 3: Known problems.....	12
Table 4: Limitation.....	12

# Preface

---

## About this guide

---

This document presents the release notes of the HPE OSS Fault Analytics & Statistics product.

Product name: HPE OSS Fault Analytics & Statistics

Product version: 1.2

Product kit name: `ossa-fault-1.2.0-MR.noarch.rpm`

Please read this document before installing or using this product.

## Audience

---

This document is intended for integrators, administrators and users of HPE OSS Fault Analytics & Statistics.

## Software versions

---

**The terms Unix and Linux are used as a generic reference to the operating system, unless otherwise specified. The software versions referred to in this document are as follows:**

**Table 1: Software versions**

Product version	Supported operating systems
HPE OSS Analytics Foundation version 1.1.4	Red Hat Enterprise Linux Server release 6.8
HPE OSS Fault Analytics and Statistics version 1.2	Red Hat Enterprise Linux Server release 6.8
HPE Vertica version 7.2.3	Red Hat Enterprise Linux Server release 6.8
HPE UMB Server version 1.1 (Kafka/Zookeeper)	Red Hat Enterprise Linux Server release 6.8
HPE Unified OSS Console 2.3	Red Hat Enterprise Linux Server release 6.8
HPE TeMIP 6.2	Red Hat Enterprise Linux Server release 6.8

## Typographical Conventions

---

*Courier Font:*

- Source code and examples of file contents.
- Commands that you enter on the screen.
- Pathnames
- Keyboard key names

*Italic Text:*

- Filenames, programs and parameters.
- The names of other documents referenced in this manual.

**Bold Text:**

- To introduce new terms and to emphasize important words.

## Associated Documents

---

The following documents contain useful reference information:

*HPE OSS Analytics Foundation release notes*

*HPE OSS Analytics Foundation Installation Configuration and Administration Guide*

*HPE OSS Analytics Foundation Integration Guide*

*HPE OSS Fault Analytics and Statistics User Guide*

*HPE OSS Fault Analytics and Statistics Installation Configuration and Administration Guide*

*HPE OSS Fault Analytics and Statistics Customization Guide*

*HPE TeMIP Analytics patch readme documents*

*Kafka documentation: <http://kafka.apache.org/documentation.html>*

## 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 web site includes the following:

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

# Chapter 1

## Product overview

---

HPE OSS Fault Analytics and Statistics (FAS) is a software product that enables telecommunications service providers with the capabilities to collect and persist fault information from fault and surveillance systems, transform the data as needed and deliver actionable insight to operations staff to operate and manage their network. The actionable insight is inferred using a host of statistical and analytical techniques.

OSS FAS is positioned as an independent product, working with fault information consolidated in HPE TeMIP, as well as any other surveillance system from an independent software vendor.

OSS FAS is based on HPE OSS Analytics Foundation, complemented by a mediation layer allowing for collection of fault information in real time.

A brief summary of the key features:

- Transformation of vast amounts of alarm data received from HPE TeMIP into meaningful information
- Use of the HPE Vertica database, optimized for data warehousing, data analytics and data reporting
- Optional activation of default summarizations batch jobs in order to populate new tables containing information data about alarms (aggregation based on different time granularities and different dimensions)
- Optional default FAS reports (built with Unified OSS Console) based on those summarized tables

# Chapter 2

## Installation, Configuration, and Administration

---

Those sections describe the way to install the OSS Fault Analytics and Statistics.

Please refer to the first section if FAS has never been installed on your system; else, if you want to upgrade from a previous version, please refer to the second section.



**CAUTION:** FAS 1.2 absolutely needs to be installed on top of OSS Analytics Foundation 1.1.4. So, please, first install OSSAF 1.1.4 before continuing.

---

### 2.1 First installation of FAS

---

In case FAS has never been installed on your system, please refer to the *HPE OSS Fault Analytics and Statistics Installation, Configuration and Administration Guide* in order to understand how to install, configure, administrate, and troubleshoot the server.

### 2.2 Upgrade from FAS 1.1.2 to 1.2

---

In case FAS 1.1.2 is already installed on your system and you want to upgrade to FAS 1.2, please follow those steps:

#### 1/ Stop FAS 1.1.2

As *ossa* linux user, execute:

```
$ source /opt/ossa/bin/ossa_env.sh
$ jbossstop
```

#### 2/ Uninstall FAS 1.1.2

As *root* user, execute:

```
# rpm -ev ossa-fault-1.1.2-MP.noarch
```

#### 3/ Install FAS 1.2

```
# rpm -ivh ossa-fault-1.2.0-MR.noarch.rpm
```

#### 4/ Upgrade your datamart with new tables:

As *ossa* linux user, in the terminal where you have sourced *ossa\_env.sh*, execute:

```
$ cd ${OSSA_HOME}/ddl
$ vsql -d ${OSSA_DB_NAME_02} -h ${OSSA_DB_HOST_02} -U ${OSSA_DB_USER_02} \
-w ${OSSA_DB_PASSWORD_02} -f fault_datamart_delta_112_to_12.sql

$ vsql -d ${OSSA_DB_NAME_02} -h ${OSSA_DB_HOST_02} -U ${OSSA_DB_USER_02} \
-w ${OSSA_DB_PASSWORD_02} -f raw_event_datamart_delta_112_to_12.sql
```



```
$ vsql -h ${OSSA_DB_HOST_02} -d ${OSSA_DB_NAME_02} -U dbadmin -w <dbadminpwd> -v
  ossa_user=${OSSA_DB_USER_01} -v fas_user=${OSSA_DB_USER_02} -f
  ${OSSA_HOME}/ddl/grant_to_ossa.sql
```

## 5/ Configure FAS 1.2

As ossa linux user, execute:

```
$ source /opt/ossa/bin/ossa_env.sh
$ cd /opt/ossa/bin
$ ./ossa_config_fault.sh
```

## 6/ Start FAS 1.2

As ossa linux user, (in the terminal where you have sourced *ossa\_env.sh*) execute:

```
$ jbossstart
```

## 7/ Update your metadata, views, workspaces:

If you were using FAS 1.1.2 standard metadata, views, workspaces, you can directly upload the FAS 1.2 metadata, views, workspaces: in the terminal where you sourced *ossa\_env.sh*, as *ossa* user:

```
$ cd ${OSSA_HOME}/repo-fas/

$ ${OSSA_HOME}/bin/ossa-repo.sh loadMetadataViewsWks ${OSSA_HOME}/repo-
fas/metadata/ossa_fault_metadata.xml ${OSSA_HOME}/repo-fas/ui/views.json
${OSSA_HOME}/repo-fas/ui/workspaces.json

$ ossa-repo.sh reload
```

In case you have customized metadata, views, workspaces with FAS 1.1.2, you must do the same customization based on the new FAS 1.2 metadata, views, workspaces:

the standard FAS 1.2 metadata is located at `${OSSA_HOME}/repo-fas/FAS/metadata/ossa_fault_metadata.xml`  
the standard FAS 1.2 views are located at `${OSSA_HOME}/repo-fas/FAS/ui/views.json`  
the standard FAS 1.2 workspaces are located at `${OSSA_HOME}/repo-fas/FAS/ui/workspaces.json`

## 8/ Update your FAS batch jobs:

If you were using FAS 1.1.2 standard batch jobs, you can directly upload the FAS 1.2 batch jobs: in the terminal where you sourced *ossa\_env.sh*, as *ossa* user:

```
$ cd ${OSSA_HOME}/bin
$ ./fas_load_batchJobs.sh
```

In case you have customized batch jobs with FAS 1.1.2, you must do the same customization based on the new FAS 1.2 batch jobs:

The standard FAS 1.2 batch jobs are located at `${OSSA_HOME}/repo-fas/FAS/batch/`

## 2.3 Upgrade from FAS 1.1.1 to FAS 1.1.2

In case FAS 1.1.1 is already installed on your system and you want to upgrade to FAS 1.1.2, please follow those steps:

### 1/ Stop FAS 1.1.1

As *ossa linux* user, execute:

```
$ source /opt/ossa/bin/ossa_env.sh
$ jbossstop
```

### 2/ Uninstall FAS 1.1.1

As *root* user, execute:

```
# rpm -ev ossa-fault-1.1.1-MP.noarch
```

### 3/ Install FAS 1.1.2

```
# rpm -ivh ossa-fault-1.1.2-MP.noarch.rpm
```

### 4/ Upgrade your datamart with new tables:

As *ossa linux* user, in the terminal where you have sourced *ossa\_env.sh*, execute:

```
$ cd ${OSSA_HOME}/ddl
$ vsql -d ${OSSA_DB_NAME_02} -h ${OSSA_DB_HOST_02} -U ${OSSA_DB_USER_02} \
-w ${OSSA_DB_PASSWORD_02} -f fault_datamart_delta_112.sql
```

### 5/ In case you have already run FAS summarizations batch jobs, please **migrate OSSAF batch jobs internal tables**:

```
$ vsql -d ${OSSA_DB_NAME_01} -h ${OSSA_DB_HOST_01} -U ${OSSA_DB_USER_01} \
-w ${OSSA_DB_PASSWORD_01} -f fault_summ_cdc_delta_112.sql
```

6/ In case you have defined [specific summarization batch jobs](#), they must be **migrated**, because of the simplification which comes with the new OSSAF 1.1.3.

So, edit your summarization batch job description file and modify it according to the simplification that you can see in the default FAS summarization batch job description file

`${OSSA_HOME}/repo-fas/FAS/batch/FASsummJob.xml`.

You will notice that:

- all those properties can be removed from all the summarizations:
  - `src_maxHandledUpdatedMinutesPerSumm`
  - `src_CDCcolumn`
  - `src_CDCTYPE`
  - `src_CDCdeltaWindow`
  - `dest_CDCcolumn`
  - `dest_retentionPeriod`
- for each summarization, one flow level is removed for each category
- name of step "summProperties<Cat>\_<Gran>" is replaced by "summ<Cat>\_<Gran>"
- steps `summListCalcPeriods<Cat>_<Gran>`, `summ<Cat>_<Gran>`, `summFinalize<Cat>_<Gran>` are removed

For simplicity, the recommendation for modifying your [specific summarization batch job](#) is to take the default `FASsummJob.xml` (backup it first), and put your specific aggregations functions within each `dest_summAggregations`.

### 7/ Configure FAS 1.1.2

As `ossa linux` user, in the terminal where you have sourced `ossa_env.sh`, execute:

```
$ ${OSSA_HOME}/bin/ossa_fault_config.sh
```

## 8/ Start FAS 1.1.2

```
$ jbossstart
```

9/ In case you have defined specific summarization batch jobs, you have modified them in step 6, and thus they need now to be **reloaded into the server** now.

Here is an example of such reload (with default FAS summarization batch job):

```
$ ossa-repo.sh loadParam FAS FASsummJob.xml ${OSSA_HOME}/repo-fas/FAS/batch/FASsummJob.xml  
$ ossa-repo.sh reload  
$ ossa-batch.sh reload
```

➔ You need to replace `FASsummJob.xml` with your specific FAS summarization batch job description file.



**NOTE:** FAS 1.1.2 will use:

- the same configuration than your previous installation (it is kept even after 1.1.1 uninstallation)
- an upgraded datamart: that is why your datamart needs to be migrated, see the previous steps.

If needed, please refer to the *HPE OSS Fault Analytics & Statistics Installation, Configuration and Administration Guide* for more details on uninstallation, installation and configuration.

# Chapter 3

## FAS 1.2 enhancements & CR fixes

### 3.1 Enhancements

The main enhancements provided by version 1.2 are the following:

- FAS 1.2 relies on [OSS Analytics Foundation 1.1.4](#) and thus, benefits of batch summarization performance improvements, for both alarms and raw events.

For more information please refer to *HPE OSS Analytics Foundation release notes 1.1.4*

- FAS 1.2 relies on [UMB 1.1 Server](#) (Kafka/Zookeeper)

For more information please refer to *HPE OSS Fault Analytics and Statistics Install and Admin Guide*

- FAS 1.2 has now a complete set of **off-the-shelf standard reports**:

- Alarm Health reports
- Network Health reports
- Network Management Health reports
- Alarm Metrics comparison reports
- Seasonal/Cyclical alarm variations reports
- Alarms History reports
- TeMIP OC Active Alarms counters reports
- Raw Event Health reports
- Equipment Raw Event Health reports
- Top 10 Repeated Raw Events reports
- Top clear-based fault duration per Raw Events reports
- Raw Events History reports

For more information please refer to *HPE OSS Fault Analytics and Statistics User Guide*

### 3.2 CR fixes

The main fixes provided by version 1.2 compared to version 1.1.2 are the following:

**Table 2: Fault Analytics & Statistics 1.2 fixes**

Reference	Description of the problem	Status
CR#1122	duplicates entries for probable cause in datamart	FIXED
CR#1174	ID on dimension tables DIM_STATE, DIM_SEVERITY, DIM_ALARMTYPE are not correct	FIXED
CR#1177	persistToDB error ERROR: Duplicate MERGE key detected in join [(FAS.DIM_MANAGEDOBJECT x FAS.TMP_DIM_MANAGEDOBJECT)	FIXED
CR#1179	FAS Network Health Reports / Top 10 reports present Worst 10	FIXED
CR#1233	ossa-fault.ear installed a second time in wrong location	FIXED
CR#1234	troubleshooting tool kafka_get_alarms.sh does not work	FIXED

# Chapter 4

## Known problems and limitations

---

This section lists problems discovered during the product test campaign which will be fixed in future versions.

**Table 3: Known problems**

Reference	Component	Description	Comment
CR#1231 Low	FAS Reports	non standard colors are used for severity of alarms in TeMIP OC active alarms counters reports	Will be fixed in a future release

**Table 4: Limitation**

Component	Description	Comment
TeMIP AHFM	Resynchronization to Kafka is not supported (in case of Kafka failure)	FAS solution rely on the high availability of the Kafka cluster