HP Customer Experience Assurance V4.5

Release Notes

Edition: 1.0

Date: March 2014

HP Customer Experience Assurance V4.5 is an OEM of the FlowSight Application Release 4.5 from Zhilabs S.L. This document contains references to FlowSight which is identical to HP Customer Experience Assurance.

Contents

Preface

These release notes describe critical information related to the HP CEA product for version 4.5.

Product Name: HP Customer Experience Assurance

Product Version: 4.5

Software kit Build number: 4.5.3-48149

Please read this document before installing or using this software.

Support

Please visit our HP Software Support Online Web site at www.hp.com/go/hpsoftwaresupport for contact information, and details about HP 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.

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.

1   HP CEA 4.5 DESCRIPTION

1.1   OPERATING SYSTEM SOFTWARE VERSIONS

The term LINUX is used as a generic reference to the operating system, unless stated otherwise.

HP CEA 4.5 is supported in the following Linux versions:

Product version	Supported Operating System
HP CEA 4.5	• Suse SLES SP1 for x86 machines

Table 1. Software Versions

1.2   SUPPORTED HARDWARE

The software delivered is supported on the following systems:

Product version	Supported Hardware
HP CEA 4.5	• HP Proliant DL380 G7 and G8 • HP Proliant BL460 G7 and G8

Table 2. Supported Hardware

1.3   HP CEA 4.5 CORE PACKAGES

The software is delivered with the following core packages:

FlowSight package	
HP CEA base platform package	flowsight-base-nwi-standard-4.5.3-48149.noarch.rpm
HP CEA binary package	flowsight-bin-nwi-4.5.3-48149.x86_64.rpm
HP CEA standard configuration package	flowsight-config-nwi-4.5.3-48149.noarch.rpm
HP CEA standard Graphical User Interface	flowsight-gui-standard-4.5.3-48149.x86_64.rpm
HP CEA Wizard binary package	flowsight-bin-wizard-4.5.3-48149.x86_64.rpm
HP CEA Wizard scripts package	flowsight-scripts-wizard-4.5.0-44501.noarch.rpm
HP CEA Wizard Configuration package	flowsight-config-wizard-4.5.0-44501.noarch.rpm
HP CEA Device Database package (DEVICE DB)	flowsight-device-db-nwi-4.5.0-44501.noarch.rpm

Table 3. HP CEA software versions

1.4 THE MBBQOE APPLICATION PACKAGES

HP CEA 4.5 includes specific configuration packages for the MBBQoE (data) Application Package.

HP CEA package	
HP CEA Data configuration package (BASE PACKAGE)	flowsight-config-pkg-mbbqoe-base-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (NETWORK ACCESSIBILITY PACKAGE)	flowsight-config-pkg-mbbqoe-network-accessibility-app-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (NETWORK ACCESSIBILITY PACKAGE)	flowsight-config-pkg-mbbqoe-network-accessibility-dns-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (NETWORK ACCESSIBILITY PACKAGE)	flowsight-config-pkg-mbbqoe-network-accessibility-session-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (NETWORK ACCESSIBILITY PACKAGE)	flowsight-config-pkg-mbbqoe-network-accessibility-signalling-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (NETWORK NIC PACKAGE	flowsight-config-pkg-mbbqoe-nic-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (WEB BROWSING PACKAGE)	flowsight-config-pkg-mbbqoe-web-browsing-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (STREAMING PACKAGE)	flowsight-config-pkg-mbbqoe-streaming-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (FILE SHARING PACKAGE)	flowsight-config-pkg-mbbqoe-file-sharing-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (EMAIL PACKAGE)	flowsight-config-pkg-mbbqoe-email-4.5.3-48149.noarch.rpm
HP CEA Data configuration package (GUI TABLES)	flowsight-config-pkg-mbbqoe-gui-4.5.3-48149.noarch.rpm

Table 4. HP CEA data packages

1.5 THE CUSTOMER INTELLIGENCE PACKAGES FOR MBBQOE

HP CEA 4.5 includes specific configuration packages for the Customer Intelligence (Marketing) Packages for the MBBQoE application:

HP CEA package	
HP CEA Marketing Binary for 3G users over 2G	flowsight-bin-pkg-3g2g-4.5.3-48149.x86_64.rpm
HP CEA Marketing basic binary for the Marketing Reports	flowsight-bin-pkg-marketing-4.5.3-48149.x86_64.rpm
HP CEA Marketing Binary for the user statistics package	flowsight-bin-pkg-users-statistics-4.5.3-48149.x86_64.rpm
HP CEA Marketing configuration for the 3G users over 2G package	flowsight-config-pkg-3g2g-4.5.3-48149.noarch.rpm
HP CEA Marketing basic configuration.	flowsight-config-pkg-marketing-4.5.3-48149.noarch.rpm
HP CEA Marketing Configuration	flowsight-config-pkg-marketing-customer-4.5.3-48149.noarch.rpm

Table 5. HP CEA marketing packages

1.6 DEPENDENCIES SOFTWARE VERSIONS

The following Open source packages and HP CEA proprietary packages are mandatory to install and operate with the HP CEA 4.5 release:

RPM filename	Software dependencies
HP CEA base platform package	monit (5.2.5_zl1), sysstat (8.1.5-7.9.56), openssh (5.1p1-41.31.36), pbzip2 (1.1.5-13.1), inotify-tools (3.13-5.1), incron (0.5.9-3.1), libcap1 (1.10-6.10), libcap-progs (2.11-2.15), smartmontools (5.38.0.20081027-2.14), dialog (1.1-27.22), vlan (1.9-62.22), ethtool (6-78.28.19)
HP CEA binary packages (except wizard)	flowsight-base, java-1_6_0-openjdk (1.6.0.0_b17-64.1), jeval (0.9.4-zl_1), jython (2.5.2-zl_1), python-pycrypto (2.3-6.1), gwt (2.0.3-zl_1), python-pysnmp (4.1.16c-1.5), net-snmp (5.4.2.1-8.2.1), python-pyasn1 (0.0.13-5.4), python-beautifulsoup (3.0.8.1-8.1), python-paramiko (1.7.7.1-12.1), jline (0.9.94-zl_1), libpcap (1.1.1-20100507_zl_1), syslog4j (0.9.46-zl_1), jna (3.3.0-zl_1), commons-compress (1.2-zl_1), snmp4j (2.0.3-zl_1)
HP CEA binary package (wizard only)	flowsight-base, java-1_6_0-openjdk (1.6.0.0_b17-64.1), jeval (0.9.4-zl_1), JPype (0.5.4.2-20121105_zl_1), jython (2.5.2-zl_1), python-pycrypto (2.3-6.1), gwt (2.0.3-zl_1), python-pysnmp (4.1.16c-1.5), net-snmp (5.4.2.1-8.2.1), python-pyasn1 (0.0.13-5.4), python-beautifulsoup (3.0.8.1-8.1), python-paramiko (1.7.7.1-12.1), jline (0.9.94-zl_1), libpcap (1.1.1-20100507_zl_1), syslog4j (0.9.46-zl_1), jna (3.3.0-zl_1), commons-compress (1.2-zl_1), snmp4j

	(2.0.3-zl_1)
HP CEA GUI package	flowsight-base, tomcat6-HP CEA (6.0.20-zl_4), java-1_6_0-openjdk (1.6.0.0_b17-64.1), jline (0.9.94-zl_1), webgui-offline-resources (20101105-zl_1), xmlstarlet (1.0.1-3.15), commons-compress (1.2-zl_1), log4j-mini (1.2.15-26.27)
HP CEA Configuration packages	flowsight-bin

Table 5. Software dependencies

2   NEW FEATURES IN HP CEA 4.5

2.1   ENHANCEMENTS COMPARED TO PREVIOUS RELEASE

HP CEA 4.5 introduces the following main features compared to the HP CEA 4.4 previous release:

Dashboard Composer
Denominators
Kanji support (Japanese characters)
Thresholding Alarms
Distributions Functions
Report - Enable X-axis to be sorted by alphabetical order
Subscriber Group Segmentation
Report - Timeline Chart Y Axis adaptive and fixed visualization
Self-Management traps
Large Number Element Queries
New definition for Streaming KQIs (already available for Wizard)
Improved widget resizing which makes it easier for the final end user
GUI Improvements
New "weekly" summarization
New KQI for "Round Trip Time"
CSV decimal separator depends now on locale
Multiple User Monitoring

2.2   THRESHOLD ALARMING INSTALLATION

To activate the functionality you just need to change the extension from *threshold.cfg.install* (in the installation directory) to *threshold.cfg* prior to the normal installation.

In HP CEA 4.5, the threshold configuration is common to all the mediation servers. Additionally a new parameter is included: *confidence* which is a save time (in seconds) that prevents the generation of false alarms while the data process is not finished.

The default parameters are these:

```
threshold threshold
 directory   /opt/zl/nwi/var/traps
 table      inbox-fact
 interval    864000
 jitter     900
 schedule    /workflow/schedule/never
 description  "Operator inbox"
 confidence   900
```

When defining the thresholds you should take into account that the threshold will be checked in each of the mediation servers. This requires special attention to accumulative parameters such as volume or http transactions. When configuring the minor and major threshold, take in mind the amount of traffic managed by each mediation server.

3 SUMMARY OF FEATURES

3.1 APPLICATIONS

Application description	Specific features related to this application
Customer Experience Management: • HP CEA for Subscriber Level (100% subscribers base).	• Customer Experience Indicators • NetSearch • Widgets
Network intelligence	• Node KPIs and KQI aggregator • Network & Service Path discoverer • Handset discoverer • NetSearch • Report wizard
Customer Intelligence: • HP CEA for Market Intelligence.	

Table 5. Application description

Application description	Available in 4.5	In HP CEA Packages
Customer Experience Management	*yes*	HP CEA package for MbbQoE
Network intelligence	*yes*	HP CEA package for MbbQoE
Customer Intelligence	yes	HP CEA package for Marketing

Table 6. Application availability in packages

Applications Packs/content	Network Intelligence	Customer Experience Management	Customer Intelligence
MBB QoE	*yes*	*yes*	*yes*
Voice QoE	*no*	*no*	*no*
Fixed or Mobile Traffic Analysis from Radius & DPI	*no*	*no*	*no*
Web and Video Optimization	*no*	*no*	*no*

Table 7. Applications vs packages matrix

3.2 BASE PLATFORM

Feature description	Available in 4.5	In HP CEA Packages
Distributed framework & engine (including adding a server on the fly)	*yes*	HP CEA package for MbbQoE
Built-in high availability	*yes*	HP CEA package for MbbQoE
Distributed Zstore	*yes*	HP CEA package for MbbQoE
Analytics algorithms	*yes*	HP CEA package for MbbQoE
Obfuscation/users roles	*yes*	HP CEA package for MbbQoE
Self mgt traps	*yes*	
Mib	*yes*	HP CEA package for MbbQoE
Agent	*no*	
Alarm wizard	*yes*	HP CEA package for MbbQoE
Application traps triggering	*yes*	HP CEA package for MbbQoE
Self mgt including self mgt alarms	*yes*	
task-rule provides a fully configurable rule-engine	*yes*	HP CEA package for MbbQoE

Table 8. Core platform feature list

3.3 GUI

Feature description	Available in 4.5	In HP CEA Packages
Operator inbox	*yes*	HP CEA GUI package for MbbQoE
Network inspector	*yes*	HP CEA GUI package for MbbQoE
Formula editor	*yes*	HP CEA GUI package for MbbQoE
Report wizard	*yes*	HP CEA GUI package for MbbQoE
Dashboard composer	*yes*	HP CEA GUI package for MbbQoE
Customer Experience Console for 2nd level	*yes*	HP CEA GUI package for MbbQoE
NetSearch	*yes*	HP CEA GUI package for MbbQoE

Table 9. GUI feature list

3.4 COLLECTORS

Feature description	Associated collectors	Available in 4.5	In HP CEA Packages
Generic collectors	DSV file collector ASN.1/BER collector XML Collector AVP Collector Massive syslog collector	*Yes*	HP CEA package for MbbQoE
Performance collectors	Performance counters XML collector Performance counters collector via Complex Element Manager	*No*	
Performance collectors	Performance counters SNMP collector	yes	HP CEA Core
User profile collectors	MSIDSN-Dataplan mapping file collector User profile LDAP/LDIF collector	*yes*	HP CEA package for MbbQoE
AAA collectors	RADIUS Authentication and Authorization	*no*	

Feature description	Associated collectors	Available in 4.5	In HP CEA Packages
	log file collector		
	Diameter AAA log file collector		
DNS collectors	DNS log file collector	*yes*	HP CEA package for MbbQoE
Probe collectors	Probe XDR file collector	*yes*	HP CEA package for MbbQoE
SGSN&GGSN collectors	3GPP S-CDR file collector	*no*	
	3GPP G-CDR file collector		
	SGSN log file collector		
	GGSN log file collector		
	SGSN XDR collector via complex Element Manager		
	GGSN XDR collector via complex Element Manager		
Policy and charging collectors	DPI XDR file collector	*no*	
	PCRF event and policy log file collectors		
	OCS XDR file collector		
Optimizer collectors	Web/video Optimizer XDR file collector	*no*	

Table 10. Collector list

4 SOFTWARE LICENCE KEY

4.1 FOR PRODUCTION SYSTEMS

The HP CEA Core License keys for production systems are obtained from the HP Software Licensing portal: www.hp.com/software/licensing.

Customers actually receive an Electronic Delivery Receipt which includes a direct link to the Licensing Portal with the Entitlement Order Number (EON) already pre-populated.

License activation allows customers requesting and receiving electronic license keys to unlock the HP CEA Core software product that HP delivers upon purchase order.

4.2 FOR NON PRODUCTION SYSTEMS

To get HP CEA Core License keys for non-production systems (such as Test or Development or Cold standby systems), customers should contact the HP Software Support Online: www.support.openview.hp.com. The Support Agreement Identifier (SAID) purchased with the HP CEA Core production licenses will have to be provided.

Please note that the pre-requisite to obtaining support for HP CEA Non-Production licenses is a **valid support contract** covering the Production license copies of products.

5 MIGRATION FROM RELEASE 4.4

HP CEA V4.5 is bringing new capabilities including refinements in the way HP CEA KPIs are calculated. As such, the migration of the historical data of a HP CEA V4.4 deployment to HP CEA V4.5 will be addressed through a dedicated migration project which must be scoped and quoted as per Customers' requirements. Please contact your HP Sales representative.

6 INSTALLATION INSTRUCTIONS

The installation instructions are explained in the HP CEA 4.5 Installation Guide. There are, however, some guidelines that should be taken into account to configure the system properly.

Once everything is installed, check the following steps:

- Run /opt/zl/nwi/bin/setup and configure all the values. Defaults should be fine.
- Configure the master server for nwi.
- If the wizard is installed, do the following:
  - Configure the master server for the wizard.
  - Run /opt/zl/wizard/bin/setup –g <gui-host> -w <list of hosts>
  - <gui-host> is the actual name of the machine holding the GUI, not localhost.
- Run /opt/zl/gui/bin/setup-gui. Several things to take into account
  - Configure the machine running the master server there. Default port for the frontend is 1999, the master server. The frontend runs in /m0/zen5/zstore-frontend. Username is admin, password is zhilabs.
  - Configure the machine running the wizard's master server Frontend is in /mwizard/zen5/zstore-frontend, on port 19990. Username is admin, password zhilabs.
  - Configure the local machine. Default port is 1974. The frontend runs in /m0/zen5/zstore-frontend. Username is admin, password is zhilabs.
  - On the second page, check that the path of the installation corresponds to /opt/zl/nwi.
  - Check that the google key points to the correct location: /opt/zl/nwi/etc/gui/google-maps.key

Check the persist-preferences switch if you want your preferences to remain between executions.

7 FIXED PROBLEMS

This section lists problems that have been fixed since last release HP CEA 4.4. Only critical and major problems are reported.

- Fix bug #38 – Wrong top calculations
  - Tops were not calculated properly.
- Fix bug #59 – Differences between wizards online for site
  - There were consistency problems for online wizards and preconfigured reports for the site dimension.
- Fix bug #89 – Session sort for a field not working
  - The sorting of the sessions table was not working for fields other than the start-time.
- Fix bug #198 - Shaw shape graph the same wizard report shows different results
  - The wizard reports where sometimes showing saw shape graphs, and there were errors in the consistency check.
- Fix bug #275 – Partial errors in wizard's servers
  - Distributed wizards were not working properly some of the times.
- Fix bug #295 – Difference throughput values for same period in consecutive days
  - Throughput reports were yielding different values on consecutive days.
- Fix bug #350 – Difference between wizard and online for Model
  - Inconsistencies for Model between wizard and preconfigured reports.
- Fix bug #352 – One day summarization consistency errors
  - Summarizations by day consistency problems.
- Fix bug #400 – No file-sharing or streaming for blackberry.net APN
  - There were problems with blackberry APN for streaming and file-sharing.
- Fix bug #419 – No cell name information on subscriber sessions
  - The cell name field was empty in the subscriber sessions.
- Fix bug #494 – Top for site report not working
  - The top sites reports were not working
- Fix bug #526 - Differences DEN/PDF for started streaming flows
  - Fixed some PDF / Denominator discrepancies calculations.
- Fix bug #548 – Problems in wizards online for cell/http_transactions
  - http_transactions were not being calculated properly
- Fix bug #549 – Rat-type inconsistencies for wizards
  - The wizards and preconfigured reports were showing discrepancies for rat-type.
- Fix bug #552 – Wizard online report with no regular data
  - The wizards online were not working properly.
- Fix bug #588 – Wizard with no data after 5 days.
  - Fixed the wizard setup script so it detects this kind of errors.
- Fix bug #606 – No wizards launched
  - Problems in distributed environments when launching wizards.
- Fix bug #609 – File-system problems

- o   The flush of the wizard was causing lots of log messages to be written
- Fix bug #724 – Add protection against root executions in external-merger
  - o   The external-merger should be run as user Zhilabs, not root.
- Fix bug #787 – Mistake in header subscriber table
  - o   There was a cosmetic error in the subscriber table.
- Fix bug #816 – Compactation executed twice
  - o   The external-merger was not protected against concurrent executions.
- Fix bug #827 – Fragmentation problems
  - o   Fixed the compactation process so there is no fragmentation in the zstore.
- Fix bug #828 - fix concurrency issues in external-merger-lock.sh
  - o   The external-merger was not behaving correctly with several of them running at the same time.
- Fix bug #831 – PDF tables not flushed in dataflow shutdown
  - o   The PDF tables were not flush when shutting down the dataflow, so some data might be lost.
- Fix bug #850 - Specimen indicators seems to be always summarized by avg
  - o   The specimen indicators were not using the correct summarization function.
- Fix bug #869 - Signaling wizard is always shown as Missed mediations
  - o   Signaling wizards were not working in a distributed environment
- Fix bug #923 - Mstrsrv ignores some samples
  - o   The master server was ignoring some of the results in certain error conditions.
- Fix bug #934 – Execute config check after wizard setup
  - o   There were times when the setup of the wizard was failing and the setup script was not showing any error.
- Fixed google maps v3.
- Newest device-db and device-technology databases.
- Fixed self-management alarms problems..

8 KNOWN PROBLEMS

This section lists problems still present in the HP CEA 4.5 software kit:

Severity	Problem description	Workaround
Major	issues with scheduling of workflows	Proactive workflow monitoring in place, automatically activated at installation time
Major	URL alarm formatting issues which prevents from smart drilldown from Fault Manager to CEA	Drilldown has to be done manually
Major	Thresholds not activated by default	Needs to be activated manually See section #Threshold Alarming Installation
Major	Differences between wizard reports and the equivalent pre-configured reports in certain periods of time	None – Contact HP support to get updates about resolution plan
Major	Differences between values in denominators and Distribution Functions	None – Contact HP support to get updates about resolution plan
Major	Values for 'File U/D Mean Date Rate' should be higher than 'Values for File U/D Effective Date Rate'	None – Contact HP support to get updates about resolution plan

Table 12. Known problems

Please contact the HP Support to get information about HP CEA 4.5 last patches and last maintenance releases.