
HP Software



Unified Correlation Analyzer Installation and Configuration Guide

Edition: 1.5

For the HP-UX Itanium Operating System

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Preface

This document provides installation and configuration information on the Unified Correlation Analyzer (UCA) product Manufacturing Release 1.0.

In its first version the Unified Correlation Analyzer is delivered bundled with the 'TeMIP integration' which is currently the only integration available.

This document therefore does not only cover the installation of the UCA server but covers also the installation and configuration of the 'TeMIP Integration' made of the TeMIP collector and the TeMIP remote handler.

Intended Audience

This document is aimed at the following personnel. Prior knowledge of TeMIP is a prerequisite to fully appreciate its contents.

- TeMIP Customers
- Solution Architects
- System Integrators
- Solution Developers
- Software Development Engineers

Supported Software

The supported software referred to in this document is as follows:

Product Version	Operating Systems
Unified Correlation Analyzer V1.0	HP-UX 11.31 for Itanium

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.

Acronyms and definitions

The following acronyms are used in this documentation:

Acronym	Definition
ER	Early release (Beta version of the product)
FM	TeMIP Functional Module
MO	Managed Object
MR	Manufacturing Release
MSL	Management Specification Language
OC	Operation Context
OS	Operating System
TeMIP	Telecommunications Management Information Platform
UCA	Unified Correlation Analyzer

Associated Documents

- *HP UCA Advanced Configuration and Troubleshooting Guide*
- *HP UCA User Guide*
- *HP UCA Installation and Configuration Guide*
- *HP UCA TeMIP Integration*

For a full list of TeMIP user documentation, refer to Appendix A of the TeMIP Product Family Introduction.

- HP TeMIP Client Installation and Configuration Guide
- HP TeMIP Web Services Installation and Configuration Guide
- HP TeMIP Software Customization Guide.
- TeMIP-Service Manager OSSJ Trouble Ticket Liaison – Installation & Configuration Guide
- TeMIP-Service Manager OSSJ Trouble Ticket Liaison - TeMIP Liaison Adapter System Integration Guide
- HP Service Manager – Installation Guide

Support

Please visit our HP Software 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
- Updates
- Problem reporting
- Training information
- Support program information

Chapter 1

Unified Correlation Analyzer License

1.1 Obtaining a UCA License

A license key password is required to use Unified Correlation Analyzer. Licensing is managed with AutoPassJ (automatically installed with the UCA installation. You must obtain a license key to be able to start using the product).

The standard process for a released product is the following:

The system administrator of the product must go to the **Webware** site and download the perpetual license to use the product. To request perpetual license passwords, you need the following items:

- Entitlement Certificate, which contains the HP product number and order number.
- IP address of the server.
- Your company or organization information.

The best way to obtain product licenses is through the web site: www.webware.hp.com

You can also contact the HP Password Center by using fax, email, or phone. This information is available on the Password Request Form and the License Entitlement Certificate. In order to obtain product licenses, you need the License Entitlement Certificate.

1.2 License Policy

License policy is based on the total number of object you can manage in your UCA topology. According to your needs, you will pick licenses from several ranges. To change the range, you need to get all maximum licenses.

Description	HP Product Number/description	Nb Objects per token	Nb max of tokens
<10K Objects	JA336AA HP Unified Correl Ana 10K/1000 Objs LTU	1000	10
From 10K to <1M Objs	JA337AA HP Unified Correl Ana 1M/10K Objs LTU	10K	99
From 1M to <5M Objs	JA338AA HP Unified Correl Ana 5M/100K Objs LTU	100K	40
From 5M to <20M Objs	JA339AA HP Unified Correl Ana 20M/1M Objs LTU	1M	15

Example:

- 5 000 objects → 1 token JA336AA
- 1 200 000 objects → 10 tokens JA336AA + 99 JA337AA + 2 JA338AA
- 20 000 000 objects → all possible tokens to all ranges

1.3 Using the web site

Follow these steps to obtain your product licenses:

1. Go to **www.webware.hp.com**. This links you to the web site - HP Password delivery service.
2. Select **Generate password(s)** on the Webware licensing menu.
3. Type your order number in the **Order number** text box. Your order number is found on the License Entitlement Certificate - Password Request Form (HP Order Number).
4. Click **'Next'**.
5. Select the product you are requesting a password for on the Product selection form by clicking the check box for the product, and then click **'Next'**.
6. Select the product(s) for which you want to request password(s), and then click **'Next'**.
7. For each product you selected, type the number of Licenses To Use (LTUs) - limited by number of LTUs available for the order:
 1. Server host name
 2. IP address for the system where the software is installed
8. Click **'Next'**.
9. Provide all required information on the Member sign-in form, and then click **'Sign-In'**.
10. Provide all required information on the Address information form, and then click **'Next'**.
11. The Receive Permanent Password Certificate form displays a copy of your Permanent Password Certificate. It also offers additional delivery options for your certificate.

You should also receive an email containing your password certificate(s) and license key/password file attachment(s).

Unified Correlation Analyzer Installation

2.1 Prerequisites

This chapter lists all hardware and software prerequisites for UCA V1.0.

2.1.1 Hardware prerequisites

Software	Version
HP-UX for Itanium	11.31

2.1.2 Software prerequisites

2.1.2.1 UCA server system

Software	Version
Java	1.6

Note

Java 1.6 is required on the UCA server. This prerequisite still exists even if UCA is on the same system than TeMIP, since the TeMIP Third Party Product V6 package does not provide Java 1.6 (but 1.5).

2.1.2.2 TeMIP server system

Software	Version
TeMIP Framework V6	TFRV600 Level 1 with latest mandatory patches
TeMIP Third Party Product V6	TPPV600 Level 2
TeMIP Web Server North Bound Interface V6	TWSV600 Level 1 with mandatory patches (PHSS_40056 or any superseding patch)

Notes

Please visit our HP Software Support Online site at:

<http://www.hp.com/go/hpsoftwaresupport> to get TeMIP software packages, related documentation and/or patches.

2.1.2.3 TeMIP Client

Software	Version
TeMIP Client V6.1 Level 1 for Windows or later	6.1

Note

Alarm Navigation feature will be enabled only if an UCA server is correctly installed and if you correctly configure the new UCA attribute. It is mandatory to add a specific configuration setting to %TEMIP_CLIENT_HOME%\HistoryAHSsystem.conf

See 2.3.1.2 - TeMIP Client Configuration for more details.

2.1.2.4 Java 1.6

JDK 1.6 is required if this UCA server will be used to develop user actions. Otherwise, only the JRE 1.6 is required.

To check if you already have Java installed:

```
# swlist | grep Java
```

You should get an output similar to the following:

```
Java60JDK          1.6.0.02.00      Java 6.0 JDK for HP-UX
Java60JRE          1.6.0.01.01      Java 6.0 JRE for HP-UX
```

The latest JDK package for HP-UX can be downloaded (for free) from www.hp.com/go/java

It is traditionally installed in /opt/java6.

2.1.2.5 Mozilla Firefox on HP-UX

The UCA GUIs are web-based, and you therefore need a web browser to use them. Although you can access to the UCA server from your favorite browser on Windows or any other system, it is still convenient to have the browser running on the UCA host (especially for the "open file" dialog box, if the file to load is on the UCA host).

You can obtain the firefox browser for HP-UX at the following location:

www.hp.com/go/java .

Once installed, make sure that the Java plug-in is correctly configured. The following symbolic link must eventually be created manually:

```
/opt/firefox/plugins/libjavaplugin_oji.sl ->
/opt/java6/jre/plugin/IA64N/mozilla/libjavaplugin_oji.sl
```

Check also that Java is enabled in the browser:

Edit -> Preferences -> Content -> "Enable Java"

Finally, if firefox prompts to open or save ".jsp" or ".jnlp" pages instead of displaying them, check the "Do this automatically..." box.

Then, open the 'Edit -> Preferences -> Content -> File Types -> Manage' window, and choose "Modify action" for the .jsp or .jnlp file type.

In the "Open With" field, select the `/opt/java6/jre/bin/javaws` application. These pages will then be directed to the Java Web start application.

Note

Prefer a UNIX user with a local home directory (like uca) to launch the browser (`/opt/firefox/firefox` command).

If the home directory (as specified in the \$HOME environment variable) is on NFS, the process may hang.

2.1.3 Disk space prerequisites

Prior to install UCA, a local disk space of 140 Mb is required in order to uncompress the two pieces of the UCA kit.

Then, installation and setup of UCA will require the following available disk space:

UCA server (including TeMIP integration and PostgreSQL depot file)

Directory	Description	Space required
/opt	Release tree	171 Mb
/var	Data tree	0.4 Mb

Optional: PostgreSQL support

Directory	Description	Space required
/usr	Release tree	52 Mb
/var	Data tree	30 Mb (minimum – final size depending on the number of UCA instances)

2.2 Installation

2.2.1 Preliminary configuration

1. Create a local "uca" user on the system.

The uca account must exist with a \$HOME directory containing at least a .login or a .profile file.

The following super user command should create an acceptable uca user:
useradd -g < your group name here > -m -d /home/uca -s /bin/csch uca

NOTE: to properly run setup phases we recommend to avoid any interactive commands in the .login or .profile files, otherwise a “su – uca” command may be blocking.

This account must define the \$JAVA_HOME environment variable and have the PATH include \$JAVA_HOME/bin.

2. If you plan using PostgreSQL as your UCA database, Create a local "postgres" user on the system

UCA 1.0 supports PostgreSQL and Oracle databases. This step is therefore only required in case PostgreSQL is selected to host the UCA database.

The UCA kit embeds the PostgreSQL open source product and the UCA setup procedure installs it for you automatically.

The installation and configuration of the PostgreSQL DataBase is silently made by the uca setup script. Nevertheless, the ‘postgres’ account must exist prior to the installation. It must be created with a \$HOME directory containing at least a .login or a .profile file.

The following command (run with super user privileges) should create an acceptable postgres user:

```
# useradd -g <your group name here> -m -d /home/postgres -s /bin/csch postgres
```

3. Check /usr/local directory

PostgreSQL installation will be done in /usr/local directory. This directory must exist and is required to be a local directory (not an NFS mounted directory).

4. Get a UCA license key?

Running UCA requires a license key. Please refer to Chapter 1.1 - Obtaining a UCA License for the detailed procedure.

5. Do you have privileged user permissions?

The UCA setup will require root privileges. Be sure you can login as the root user.

6. Case of Oracle database

UCA supports Oracle as internal database. For the UCA setup wizard to succeed in configuring UCA on top of Oracle the following information is required:

- Have an Oracle server up and running with a database created (the tablespace will be created by the wizard).

- The name of the Oracle server (the local hostname will be used as default)
- The listening port of the Oracle server (1521 will be used as default)
- The database name ('uca' by default)
- The tablespace location (\$UCA_HOME/oradata will be used as default. Note that this value must be changed if the Oracle server is not located on the local host)

2.2.2 Install and configuration

2.2.2.1 Running the UCA server installation and configuration wizard

As stated before UCA 1.0 is bundled with the 'TeMIP integration'. The installation wizard for this version therefore covers the installation of both the UCA server and the TeMIP integration modules. In the case the TeMIP server runs on the same system, the wizard will also perform the TeMIP configuration (Dictionary enhancement for alarm objects).

In case PostgreSQL is selected as UCA Database, since it is embedded in the UCA V1.0 kit, the installation wizard will insure a proper installation of this Database.

Important Notes

- Due to some HP-UX swinstall restrictions, we advise copying the UCA kit tar file to a local repository of the system (i.e. /tmp) and proceeding with the installation from there.

Please avoid NFS mounted directories.

1. Log in as root
2. Un-tar the provided UCA core tar file (UCA-HP-UX-kit-V1.0-00.tar) in a local directory (/tmp)


```
# cd <location_where_kit_is_extracted>
# tar xvf <location_where_kit_is_stored>/UCA-HP-UX-kit-V1.0-00.tar
```

3. If the system does not host a TeMIP director

Some additional installation will be required on the TeMIP system. Go to section "2.3.1.1 Additional configuration in the case UCA is not installed on the TeMIP system" for more details.

4. Go to the extracted directory.

```
# cd <location_where_kit_is_extracted>/Unified-Correlation-Analyzer
```

5. Run the installation wizard.

```
# ./install.sh
```

This script will install the required packages depending on the choices made during the installation process.

Possible choices are:

```
Do you want to install the PostgreSQL package for UCA? [Y]
```

Answer 'N' either if a PostgreSQL server is already available on your system or if you choose to use Oracle as the UCA database.

By answering 'Y' the wizard will install the UCA packages for PostgreSQL. At configuration time, the setup tool of this package will configure the PostgreSQL product and associated dependencies if required.

The UCA Product embeds the Oracle JDBC driver which is used in the case Oracle is chosen as UCA database. The Oracle JDBC driver is distributed under license agreement. The license terms must be accepted by the UCA user before continuing installation.

For that purpose the installation wizard displays the following:

```
The UCA product delivers the Oracle JDBC driver. for using it you must accept the Oracle license terms. Please read the license terms from the file ./READFIRST/ojdbc_license.txt
```

```
Do you accept the license terms? [Y]
```

```
Read carefully the content of the specified file and respond 'Y' to the question if you accept the license terms. Responding 'N' will stop the installation wizard.
```

Then the installer proceeds with the installation of the required pieces of software (this will install UCA engine and the TeMIP integration modules).

Finally it searches for a TeMIP installation and in this case it proposes a last installation phase:

```
Do you want to install TeMIP MSL file for UCA (TeMIP dictionary update will only be done at setup time)? [Y]
```

By answering 'Yes' the wizard will install the specific TeMIP customization for UCA. You should respond 'Yes' only if the system on which you are installing UCA also hosts TEMIP. If TeMIP should be running on another system, then refer to 2.3.1.1 Additional configuration in the case UCA is not installed on the TeMIP system.

6. Run the setup wizard.

```
# ./setup.sh
```

The UCA setup wizard asks the necessary UCA user dependent configuration information (license, host names) and configures other UCA properties with the default values. This setup script covers the configuration of the PostgreSQL database, the UCA engine, and the TeMIP adapter (collector and remote handler).

This wizard offers several options that are specified through usage of arguments at the command line.

Possible arguments:

-h gives some help

-a automatic mode (non interactive): required

information are retrieved from the files `./.uca_defaults` for the UCA Engine and TeMIP adapters (Collector and RemoteHandler), and `./.uca3PP_defaults` for PostgreSQL

-v verbose mode

-logfile specifies the setup log file. Otherwise default logfile is used: `/var/adm/UCA_install/uca_setup.log.xxxx` (Where xxxx is the date and time at which the `./setup.sh` was run).

Setup phase 1: PostgreSQL configuration.

If the choice was made to install the PostgreSQL at installation time, this phase configures the PostgreSQL database. If the database was already configured on your system, nothing more is done by the script.

Setup phase 2: UCA engine configuration.

This phase covers the UCA engine configuration itself, it will:

1. **Update the uca user profile files.**
2. **Finalize UCA properties and configuration files setting.**

If the wizard detects a previous installation of UCA, it displays a notice and proposes to restore existing configuration files as below:

```
----- INFORMATION -----
UCA product has already been installed and configured on
this system.
You can choose to keep the previous configuration by
restoring the configuration files otherwise existing
configuration will be lost and default values used.

Do you want to restore configuration files from
previous installation? [Y]
```

By answering 'Yes' the wizard will restore archived configuration files. The retrieved configuration data will be used as default values during the configuration.

By answering 'No' the wizard will proceed to a new install by proposing the factory default values.

UCA supports configurations with redundant systems in order to provide 'High Availability' (or 'Resilience').

The wizard first asks the UCA configuration:

```
Is your UCA solution made of two redundant systems
(Resilience)? [N]
```

By answering 'No' the wizard will calculate and propose for confirmation the UCA server hostname according to the system information.

By answering 'Yes' the wizard will ask to the user complementary information in order to figure out the UCA primary server and the UCA secondary server hostnames:

```
Is this system (xxxx) the primary UCA Server (A server)
or the secondary server (B server)? (A | B) [A]
```

By answering 'A' the wizard will set the primary server hostname with the local system hostname and then asks:

```
ENTER the secondary (B) UCA Server DNS or IP address
here: [none]
```

While answering 'B' the wizard will set the secondary server hostname with the local system hostname and then asks:

```
ENTER the primary (A) UCA Server DNS or IP address here:
[<local_hostname>]
```

3. Configure the UCA database

If the UCA software package for PostgreSQL has been installed, PostgreSQL is proposed as the UCA database by default.

```
INFO: UCA PostgreSQL package is installed and configured.
UCA will be configured to access a PostgreSQL database.
Do you confirm (Y|N)?
```

By answering 'Yes' the wizard will configure UCA for using the PostgreSQL database. The database will be created without asking more questions.

By answering 'No' (Or in the case the PostgreSQL package was not previously installed) the wizard will configure UCA for using an Oracle DataBase. In such case additional information will be required:

The wizard will proposed the following default values:

```
Oracle admin login identifier :
  adminUserName      : system
  adminUserPassword  : manager
jdbc data :
  hostname           : localhost
  port               : 1521
  database Name      : uca
tablespace information :
  tablespace dir     : /opt/uca/oradata
Do you confirm this is the data to use [Y]
```

If one of these values does not feat your needs respond 'N' (no) to the question, the wizard will then ask your setting for all the Oracle configuration values.

When your configuration is done the wizard will check the database connectivity. In case of failure the wizard will ask the configuration again. In case of success, the UCA database will be created.

In the case the UCA product has been previously setup on the system, the wizard checks if the database already exists (This stands for both postgresQL and Oracle). In such case a question similar to the following is asked:

```
INFO: A PostgreSQL UCA DB already exists...
Do you want to re-create the UCA Database (and lose existing
data)? [N]
```

By answering 'Yes' the wizard will drop the existing database and will re-create a brand new one. Warning! In such case all the UCA data will be lost (inventory, rules, events, etc...)

By answering 'No' the wizard will keep the existing database as it is without applying any change.

4. Configure the UCA automatic startup

```
Do you want to activate the automatic restart of UCA at
reboot time? [N]
```

By answering 'Yes' the wizard make the UCA system starting automatically at system boot.

This option is recommended on production systems.

Setup phase 3: UCA TeMIP Adapters configuration.

This phase performs configuration of both the TeMIP collector and the TeMIP remote handler. Several data need to be entered by the user:

TeMIP user name:

This is the name of the TeMIP user used for TeMIP Web service connection. This must be a valid user on the targeted TeMIP system.

TeMIP user password:

This is the password associated to the TeMIP user.

TeMIP machine name:

This is the fully qualified hostname of the TeMIP system (can be the local system name if TeMIP is running locally).

TeMIP instance name:

This is the instance name of the global TeMIP Class (usually .temip.xxx_temip where xxx is the TeMIP short system name).

TWS server port:

This is the TCP port used by the TeMIP Web Service Client. Default value is 7180 but this may change depending on your TeMIP configuration.

Ask your TeMIP administrator, or check the TeMIP TWS installation documentation.

TeMIP Operation context list:

This is the list of TeMIP Operation context(s) that the UCA collector will monitor. These Operation Contexts are the sources of UCA event collection.

Setup phase 4: TeMIP dictionary update.

If the wizard detects that the TeMIP software package for UCA has been installed (case UCA server is also a TeMIP server), since updating TeMIP dictionary may be a long operation, the wizard will ask if it is the appropriate moment to proceed to or to postpone the operation.

```
Do you want to update TeMIP dictionary now? [Y]
```

By answering 'No' the wizard will remind possible options to complete the setup later:

```
You chose to postpone update of the TeMIP dictionary.
Please proceed to as soon as possible. At least
before starting UCA!
There are 2 options, you can either
1/ call the temip_uca_setup.sh tool provided in
the TeMIP-for-UCA kit
or
2/ issue the following command from
/usr/opt/temip/bin directory:
# ./temip_activate TFR.TFRUCACAOV6007I
and then restart TeMIP Alarm Handling with
the following TeMIP command:
TeMIP> restart mcc 0 application 631
```

By answering 'Yes' the wizard will proceed to the TeMIP dictionary update and once it is completed will ask if this is the appropriate time to restart the TeMIP Alarm Handling FM.

```
Do you want to restart TeMIP Alarm Handling FM now? [Y]
```

By answering 'Yes' the wizard will restart the TeMIP Alarm Handling FM otherwise it will be the UCA integrator's responsibility to restart the TeMIP Alarm Handling FM at a later time.

2.3 Installing the License Key

After receiving a password certificate by email and once you have installed and configured UCA software packages, you will need to install the license key by manual cut/paste in the UCA license file at location:
`/var/opt/uca/license/HP_UCA_License.txt`

1. Cut the license key from the mail you received:

Example:

```
ZCRC A9AA H9PY CHVZ V5A4 HW6N Y9JL KMPL B89H MZVU DXAU 2THY EST
L862 BEAU VSVY KJVT D5KM ENWW DRZR N6CJ 6HGC Q9S9 LB2K AARX CL4R
M2NX 32C2 JX3E FRRX N4ZF BQWF 3QU4 PAYF TS44 BEZF 3HBB ZPEL
"testHPUCA JA339AA HP Unified Correl Analyzer 20M/1M Objects LTU"
```

2. Paste it in the license file
`/var/opt/uca/license/HP_UCA_License.txt`
3. Start the UCA Server
4. Go to the Help Menu of the UCA System Manager console
Chose "License details" item to check your license capacity.

Note

If the minimal license check fails, the UCA Server will be shut down automatically.

2.3.1.1 Additional configuration in the case UCA is not installed on the TeMIP system

This package must be installed on the TeMIP side (i.e. on the system where TeMIP is installed).

1. Log in as root
2. Un-tar the provided UCA TeMIP adapter tar file (TeMIP-6.0-UCA-V1.0-00-HP-UX-kit.tar) in a local directory (*/tmp*)

```
# cd <location_where_kit_is_extracted>
# tar xvf <location_where_kit_is_stored>/TeMIP-6.0-UCA-V1.0-00-HP-UX-kit.tar
```
3. Go to the extracted directory.

```
# cd <location_where_kit_is_extracted>/TeMIP-for-UCA
```
4. Run the installation wizard.

```
# ./temip_uca_install.sh
```
5. Run the setup wizard.

```
# ./temip_uca_setup.sh
```

Since updating TeMIP dictionary may be a long operation, the TeMIP setup wizard will ask if it is the appropriate moment to proceed to or to postpone the operation.

```
Do you want to update TeMIP dictionary now? [Y]
```

By answering 'No' the wizard will remind possible options to complete the setup later:

```
You chose to postpone update of the TeMIP dictionary.
Please proceed to as soon as possible. At least
before starting UCA!
There are 2 options, you can either
1/ call the temp_uca_setup.sh tool provided in
the TeMIP-for-UCA kit
or
2/ issue the following command from
/usr/opt/temip/bin directory:
# ./temip_activate TFR.TFRUCACAOV6007I
and then restart TeMIP Alarm Handling with
the following TeMIP command:
TeMIP> restart mcc 0 application 631
```

By answering 'Yes' the wizard will proceed to the TeMIP dictionary update and once it is completed will ask if this is the appropriate time to restart the TeMIP Alarm Handling FM.

```
Do you want to restart TeMIP Alarm Handling FM now? [Y]
```

By answering 'Yes' the wizard will restart the TeMIP Alarm Handling FM otherwise it will be the UCA integrator's responsibility to restart the TeMIP Alarm Handling FM at a later time.

2.3.1.2 TeMIP Client Configuration

After the TeMIP Client installation, **it is mandatory to modify the TeMIP Client configuration file to indicate the new attributes** to take in account for the navigation in correlated alarms.

By default, the attribute “**Children**” (Identifier MCC_K_AO_CHILDREN = 10052) and “**Parents**” (Identifier MCC_K_AO_PARENTS = 10051) are created. These attributes are in charge of storing links between alarms parents/children.

You need to add in %TEMIP_CLIENT_HOME%\HistoryAHSsystem.conf and %TEMIP_CLIENT_HOME%\RealtimeAHSsystem.conf the following section.

```
[UCA]
MCC_K_AO_CHILDREN = 10052
MCC_K_AO_PARENTS = 10051
[ End UCA]
```

2.3.1.3 End of installation and Configuration

At this stage UCA should be ready to use with default configuration.

Some utilities exist to start and stop UCA properly. Please refer to section 2.5 – “Starting / Stopping UCA” for details.

Note

If you are a UCA new comer, we recommend that you follow the "hello world" problem detection example, as described in the *HP UCA TeMIP integration* document.

This is a very didactic example, with screenshots, to learn how to start and use the product, along with TeMIP.

2.4 Disk organization

2.4.1 Installation Directory

The UCA product is installed in /opt/uca directory. This directory is commonly named UCA_HOME in the document.

Following sub-directories are present in the UCA_HOME directory after installation:

Directory	Description
PostgreSQL	Directory containing PostgreSQL installation kit
3rdparty	Embedded tomcat
archives	Archives
bin	UCA binaries and scripts
collector_TeMIP	The TeMIP collector directory
docs	Documentation directory
examples	Some examples
import	Directory used to store CSV files imported from UCA GUI
inventory	Inventory
jars	The UCA core product jars files
logs	The UCA logging directory
license	The UCA license directory
models	May be used as a convenient storage location for any model files, including XMI, XML or ArgoUML 'zargo' files.
properties	Directory containing UCA core product configuration files
remoteHandler_TeMIP	The TeMIP remote handler directory
rules	When rules are deployed using the Scenario Manager GUI, the automatically generated JBoss Rules source (.drl) files will appear in this directory.
scripts	UCA core product scripts directory

sql	Database configuration scripts
src	Root directory for all sample source code.
database	Link to PostgreSQL table space in Data directory (when postgres is configured as the UCA database)
oradata	Link to Oracle table space in Data directory (when oracle is configured as the UCA database and the Oracle server is local)
utilities	Some utilities scripts
wars	The UCA core product web application war files deployed in the embedded tomcat
xmldata	When the inventory data is loaded into the state mesh at start-up, all the inventory data is converted to XML files – one for each class. This directory contains these XML files.

Note

Files in UCA_HOME must not be modified. All configuration updates have to be done in Data directory.

2.4.2 Data directory

The UCA data directory aims at storing UCA variable data such as (database content, log files, configuration files). The UCA Data directory is located at /var/opt/uca.

Following sub-directories are installed in the UCA Data Directory:

Directory	Description
3rdparty	Tomcat configuration files
collector_TeMIP	TeMIP collector configuration files
license	UCA licensing configuration files
logs	UCA log files
properties	UCA core configuration files
remoteHandler_TeMIP	TeMIP remoteHandler configuration files
database	PostgreSQL Database tablespace
oradata	Oracle Database table space

2.5 Starting / Stopping UCA

UCA must be started or stopped from the 'uca' user account.

Then log in as 'uca' before using any of the following commands.

2.5.1 Starting UCA (server and TeMIP adapters)

1. Use the `/opt/uca/bin/uca_start` script for starting the UCA server.
This command will start the TomcatServer 'minimal web server' and the UCA engine. Once started the UCA engine will also start and monitor automatically the TeMIP adapter processes (TeMIP Collector and TeMIP RemoteHandler)

Typical `uca_start` logging is the following:

```
# uca_start
TomcatServer started at Wed Dec 16 11:44:05 CET 2009
Starting Tomcat ...
starting UCA...
RMI host process started
RMI Logging service started
FiredRulesUIServer web service started
MeshUIServer web service started
NotificationUIServer web service started
NotificationManager web service started
RMI Topology service started
EventManager web service started
DataCollector web service started
RulesServer web service started
VPs initialised.
#
```

UCA processes can be shown by using the `uca_show` command as follow:

```
# uca_show
UCA processes :
23698 /opt/java6/bin/IA64N/java -DUCA_TEMIPREMOTEHANDLER -Duca.
23637 /opt/java6/bin/IA64N/java -DUCA_TOMCAT -Djava.util.loggin
23614 /opt/java6/bin/IA64N/java -DUCA_TOMCATSERVER -cp /opt/uca
23696 /opt/java6/bin/IA64N/java -DUCA_TEMIPCOLLECTOR -Duca.home
23655 /opt/java6/bin/IA64N/java -DUCA_RMI_SERVICE_HOST -Xmx500m
#
```

2. By using a web browser (such as Internet Explorer or Firefox) on a client machine, check that the UCA home page is accessible by navigating to the URL:

```
http://<UCA server hostname>:18080/uca
```

where `<UCA_server_hostname>` is the DNS name or IP address of the UCA server machine.

Note

This home page proposes two buttons (see *HP UCA User Guide* for details):

‘Applications’ – accesses to all authorized applications, according to role, e.g. the Scenario Manager and / or the Mesh Viewer.

‘Manager’ – invokes the System Manager GUI. A user must have manager role privileges to invoke this GUI.

3. Click on the ‘Manager’ button.
4. Enter `system` as the username and `system` as the password.

Note

Once logged in as 'system', it is strongly recommended that the username and / or password for the 'system' user are changed.

See *HP UCA User Guide* for the procedure to change user's details for the particular 'system' user.

5. Follow the 'Problem detection example (hello world)' chapter of the *HP UCA TeMIP Integration* document to proceed to the first deployment of a model in UCA.

2.5.2 Stopping UCA (server and TeMIP adapters)

- Run the following script:

```
/opt/uca/bin/uca_stop
```

This command will first stop the UCA engine and TeMIP adapter then stop the associated Tomcat server.

2.6 Quick troubleshooting

2.6.1 License

If you have some trouble at startup with the licensing, it is recommended to check these solutions.

Error	Solution
Invalid or empty License file	The License file is missing or not updated correctly with the license key. Please check: <ol style="list-style-type: none">1. <code>/var/opt/uca/license/HP_UCA_License.txt</code>2. Check the <code>/var/opt/uca/properties/autopassj.properties</code> file exists. This file should be updated to specify absolute paths to the required license file.
License Failed	Check you get the correct license key according to your needs. You can check the number of loaded objects in UCA and the Capacity you get from your license key.

2.6.2 Communication Ports

The following table is a list of ports used by the UCA server in its default configuration. If one of these ports is already used on your system, this may prevent the UCA server from running properly. Then check that these ports are available before trying running UCA.

Ports	Comments
-------	----------

18080	TCP non-SSL HTTP/1.1 Connector (tomcat port)
8005	TCP tomcat server port
18081	TCP port used by the minimal Web server used for starting/stopping Tomcat
18082	TCP port used by the RMI Registry and all UCA server RMI services
18083	TCP port used by the RMI Registry and all Collector RMI services
6666	TCP port that the UCA server DataCollector listens on for incoming events
8999	JMX port used by the tomcat server
9999	JMX port used by TeMIP collector

What to do if one of these ports is already used on the UCA server?

Ports	How to change?
18080	Edit the file <code>/opt/uca/3rdparty/apache-tomcat-5.5.23/conf/server.xml</code> Replace the value 18080 by a value from your choice
8005	Edit the file <code>/opt/uca/3rdparty/apache-tomcat-5.5.23/conf/server.xml</code> Replace the value 8005 by a value from your choice
18081	Edit the file <code>/opt/uca/properties/uca.properties</code> Replace the value 18081 by a value from your choice
18082	Edit the file <code>/opt/uca/properties/uca.properties</code> Replace the value 18082 by a value from your choice
18083	Edit the files: <code>/opt/uca/collector_TeMIP/configuration/temipcollector.properties</code> <code>/opt/uca/remoteHandler_TeMIP/configuration/temipremotehandler.properties</code> Replace the value 18083 by a value from your choice
6666	Edit the files: <code>/opt/uca/properties/uca.properties</code> <code>/opt/uca/collector_TeMIP/configuration/temipcollector.properties</code> Replace the value 6666 by a value from your choice
8999	Cannot be changed in this release
9999	Define the uca user environment variable <code>UCA_JMX_PORT</code> with the desired port value

Advanced UCA configuration

3.1 PostgreSQL setup tool

This tool allows performing configuration operations for the PostgreSQL Database.

Launch the PostgreSQL setup tool as follow:

```
# cd /opt/uca/3PP/postgreSQL
# ./uca_pgsql_setup.sh
```

The PostgreSQL setup tool main menu is the following:

```
Setup script for PostgreSQL for HP Unified Correlation Analyzer
-----
Select one of the following options:

  0) Exit UCA PostgreSQL configuration tool

  1) Full UCA PostgreSQL installation:
      installation, configuration, initialization and start

  2) PostgreSQL server starting
  3) PostgreSQL server stopping

  4) PostgreSQL server status

Function to execute (or help):
```

Options description:

0) Exit UCA PostgreSQL configuration tool

This option terminates the current script execution.

1) Full UCA PostgreSQL installation:

installation, configuration, initialization and start

This option runs the following steps:

- Checking of the postgres user existence

- Augmentation of the postgres environment variables
- Install of PostgreSQL depot file
- Install of required hpux32 libraries if required
- PostgreSQL configuration files installation (change of mode...)
- PostgreSQL database initialization
- PostgreSQL server starting

2) UCA PostgreSQL server starting

This option executes the PostgreSQL start command.

3) UCA PostgreSQL server stopping

This option executes the PostgreSQL stop command.

4) Checking of UCA PostgreSQL server status

This option gives the status of the PostgreSQL server through a pgsq command.

3.2 UCA server setup tool

This tool allows performing configuration operations for the UCA core product.

Launch the UCA engine setup tool as follow:

```
# cd /opt/uca/utilities
# ./uca_setup.sh
```

The UCA core setup tool main menu is the following:

```
Setup script for HP Unified Correlation Analyzer
-----

Select one of the following options:

0) Exit UCA configuration tool

1) Full UCA configuration

Following options refer to specific steps of
the "Full UCA configuration":

2) Files installation and configuration phase
3) Hostname substitution
4) Database configuration

Next options are utilities for later management:

5) Force properties archiving
6) Environment and Installation check
7) Automatic restart activation
8) Automatic restart deactivation

* Function to execute (or help):
```

Options description:

0) Exit UCA PostgreSQL configuration tool

This option terminates the current script execution.

1) Full UCA configuration

This option runs the complete steps:

- Checking of the uca user existence
- Augmentation of the uca environment variables
- UCA configuration files installation (change of mode, archiving...)
- Configuration of the UCA DataBase

2) Files installation and configuration phase

This option only runs steps usually done at subset configuration-install phase:

- Checking of the uca user existence
- UCA configuration files installation (change of mode, archiving...)

3) Hostname substitution

This option substitutes the "localhost" pattern with the UCA host name in TomCat configuration files.

4) Database configuration

This option only runs the Configuration of the UCA DB.

5) Force properties archiving

This option forces to archive current configuration files (properties, xml and some txt files) in "last_archive" subfolder of "archives" folders located under directories of /var/opt/uca. If a "last_archive" directory already exists its files are moved into an "archive.<today_date>" directory prior to received current versions of configuration files.

6) Environment and Installation check

This option checks the environment variables and displays all the installed UCA subsets.

7) Automatic restart activation

This option creates all soft links required by the system when booting to restart automatically the UCA server.

8) Automatic restart deactivation

This option deletes all soft links required by the system when booting to restart automatically the UCA server.

3.3 UCA server advanced configuration

UCA itself is configured by means of the property values defined in the `uca.properties` file. This file is located in the `properties` sub-directory beneath the UCA installation directory. This section describes each of the properties.

The `uca.properties` file consists of a set of key/value pairs. Each pair is defined on a separate line. The key and value is separated with a colon character and whitespace before or after the colon is ignored. Blank lines and all lines whose first non-blank character is “#” are also ignored.

Note: If any of the property values are changed, UCA must be re-started for these changes to take effect (see the UCA User Guide for details).

Property	Values	Comments
system.version	The HP -supplied version number for UCA	The UCA version number. Do not modify this.
system.mode	Standalone or resilient	Defines the operating mode for a resilient configuration. For a non-resilient configuration use “standalone” otherwise use “resilient”.
customer.id	An integer starting at 0. Supplied by HP .	The unique id for each UCA customer. The id "0" is reserved for HP .
license.id	Supplied by HP .	The unique license key specific to a host name for the customer.
tomcatserver.port	Defaulted to 18081	The TCP port used by the minimal Webserver used for starting/stopping Tomcat.
collector.port	Defaulted to 6666	The TCP port that the DataCollector listens on for incoming events.
server.identifier	A or B	The identifier for the server in a resilient configuration. Ignored for a non-resilient configuration.
inactivity.timeout	Defaulted to 100	The event activity timeout in seconds, used by the DataCollector. Used in resilient mode.
heartbeat.timeout	Defaulted to 20	The heartbeat activity timeout in seconds. Used in resilient mode.
report.events	Defaulted to true	The flag to control the reporting of events received by the Topology Server. This should be set to true for testing & development and false for production use.
embuffer.maxim um	Defaulted to 8192	The maximum size in bytes of the Event Manager buffer.
socket2filterpipe.s ize	Defaulted to 4096	The socket-to-pipe buffer size in bytes used by the DataCollector.
modeldata.maxtra nsfersize	Defaulted to 10	The maximum size in MB of a model data file allowed for upload from the System Manager GUI client to the manager server.
wars.directory	Defaulted to wars	The wars sub-directory name, under the directory specified by the <code>\$UCA_HOME</code>

Property	Values	Comments
		environment variable. The subdirectory name should not include any 'slashes'.
import.directory	Defaulted to import	The import sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
xmldata.directory	Defaulted to xmldata	The xmldata sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
log.directory	Defaulted to logs	The log sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
scripts.directory	Defaulted to scripts	The scripts sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
rules.directory	Defaulted to rules	The rules sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
archives.directory	Defaulted to archives	The archives sub-directory name, under the directory specified by the \$UCA_HOME environment variable. The subdirectory name should not include any 'slashes'
log.maxsize	Defaulted to 5120	The maximum file size for the pre and post-filter event log and exception log, specified in Kbytes. Note that for the filter logging, 10,000 alarms takes approximately 5120 Kbytes of log file space.
rmiregistry.port	Defaulted to 18082	The port to be used by the RMI Registry and all RMI services. If unspecified or invalid, this defaults to 1099.
rmihost.polldelay	Defaulted to 10	The poll delay in seconds used by the RMI Service Host process. This currently has no function.
rmihost.arguments	-Xmx500m -Xsslm -Dsun.lang.ClassLoader.allowArraySyntax=true	The 'java' command line arguments used for starting the RMI Service Host process. Do not modify.
rmiservice.host	RMIService_Host	The RMI service host service name. UCA will automatically prefix this service name with <code>://:port/</code> where port is the value of <code>rmiregistry.port</code> above. Do not modify.
event.service	Event_Service	The 'Internal' RMI Event service. UCA will automatically prefix these service names with <code>://:port/</code> where port is the value of <code>rmiregistry.port</code> above. Do not modify.
topology.service	Topology_Service	The 'Internal' RMI Topology service. UCA

Property	Values	Comments
		will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
firerulesui.service	FiredRulesUI_Service	The 'Internal' RMI Fired Rules service. UCA will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
notificationui.service	NotificationUI_Service	The 'Internal' RMI Notification UI service. UCA will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
meshui.service	MeshUI_Service	The 'Internal' RMI Mesh UI service. UCA will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
notification.service	Notification_Service	The 'Internal' RMI Notification service. UCA will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
logging.service	Logging_Service	The 'Internal' RMI Logging service. UCA will automatically prefix these service names with //:port/ where port is the value of rmiregistry.port above. Do not modify.
datacollector.webservice	datacollector/service	The name of the DataCollector web service. Do not modify.
eventmanager.webservice	eventmanager/service	The name of the EventManager web service. Do not modify.
rulesserver.webservice	rulesserver/service	The name of the RulesServer web service. Do not modify.
meshuiserver.webservice	meshuiserver/service	The name of the MeshUIServer web service. Do not modify.
notificationuiserver.webservice	notificationuiserver/service	The name of the NotificationUIServer web service. Do not modify.
firerulesuiserver.webservice	firerulesuiserver/service	The name of the FiredRulesUIServer web service. Do not modify.
notificationmanager.webservice	notificationmanager/service	The name of the NotificationManager web service. Do not modify.
database.dbms	oracle or postgresql	Specifies whether UCA will use the Oracle or PostgreSQL dbms.
modeldb.schema	Defaulted to UCA	The Model database schema name. This is used during the generation of the Model database from the Metamodel. Note that changing the default value of 'UCA' will require customisation of the UCA SQL setup scripts.
modeldb.tablespace	Defaulted to uca	The Model database tablespace name. This is used during the generation of the Model database from the Metamodel. Note that

Property	Values	Comments
		changing the default value of 'uca' will require customisation of the UCA SQL setup scripts.
modeldb.owner	Defaulted to uca	The Model database owner name. This is used during the generation of the Model database from the Metamodel. Note that changing the default value of 'uca' will require customisation of the UCA SQL setup scripts.
modeldb.servicestate	Defaulted to IN_SERVICE	The default service state value used for the objects in the Model database. This is used during the generation of the Model database from the Metamodel.
db.username	Defaulted to uca	The database username used for connecting to the database via JDBC. This should match with the connectionName value in the Tomcat server.xml file.
db.password	Defaulted to uca	The database password used for connecting to the database via JDBC. This should match with the connectionName value in the Tomcat server.xml file.
jdbc.driver	org.postgresql.Driver	The PostgreSQL JDBC driver name. Note that for Oracle, the JDBC driver does not need to be defined. Do not modify.
models.database	For PostgreSQL: jdbc:postgresql://localhost/uca For Oracle: jdbc:oracle:thin:@localhost:1521:uca	The PostgreSQL or Oracle Model database connection URL. Note that currently all the database connection strings must be identical and share the same database.
events.database	For PostgreSQL: jdbc:postgresql://localhost/uca For Oracle: jdbc:oracle:thin:@localhost:1521:uca	The PostgreSQL or Oracle Events database connection URL. Note that currently all the database connection strings must be identical and share the same database.
notifications.database	For PostgreSQL: jdbc:postgresql://localhost/uca For Oracle: jdbc:oracle:thin:@localhost:1521:uca	The PostgreSQL or Oracle Notification database connection URL. Note that currently all the database connection strings must be identical and share the same database.
manager.database	For PostgreSQL: jdbc:postgresql://localhost/uca For Oracle:	The PostgreSQL or Oracle Manager database connection URL. Note that currently all the database connection strings must be identical and share the same database.

Property	Values	Comments
	jdbc:oracle:thin:@localhost:1521:uca	
flush.eventdb	Defaulted to true	Flag to control whether the Event database is emptied on start-up. Note that this must be set to true in resilient configuration when an NMS resynchronization is used.
flush.notificationdb	Defaulted to true	Flag to control whether the Notification database is emptied on start-up. This is normally used in resilient configuration.
pool.connections	3	The initial number of connections per database used for connection pooling. 3 is adequate for most servers, but this may be set to 4 or 5 for a slow server.
date.timezone	Defaulted to GMT	The JAVA name for the system-wide timezone to use.
timeout.topologyservice	Defaulted to 600	The timeout in seconds allowed for starting the RMI Topology Service at system start-up.
timeout.clearmemory	Defaulted to 600	The timeout in seconds allowed for clearing the working memory via the System Manager GUI - Tools tab.
loopdetector.maxentries	Defaulted to 0	The maximum number of Fired Rule Actions to retain in the loop detector history list. If this is set too high then false positives may occur. If this is set too low then looping rules may not be detected. A value of 10 is a reasonable compromise. If this is set to 0, loop detection is disabled.
loopdetector.maxduration	Defaulted to 1000	The maximum age, in microseconds, of Fired Rule Actions to retain in the loop detector history list. If this is set too high then false positives may occur. If this is set too low then looping rules may not be detected. The value to use will depend on various factors including the rules themselves and the speed of the server. It is good practice to start high (eg. a number of milliseconds) and reduce the value (eg. to sub millisecond) until all false positives have been eliminated.
gui.beep	Defaulted to false	If true, the GUIs will emit a beep when a warning message is displayed in the status bar area. If false, no sound will be emitted.
meshviewer.failedbackground	Defaulted to 255,0,0	The background colour used for failed events displayed in the Mesh Viewer. Values are specified as a comma-separated list of Red, Green and Blue components in the range 0 to 255. If not defined, this defaults to red.
meshviewer.failedforeground	Defaulted to 255,255,255	The foreground colour used for failed events displayed in the Mesh Viewer. Values are

Property	Values	Comments
		specified as a comma-separated list of Red, Green and Blue components in the range 0 to 255. If not defined, this defaults to white.
meshviewer.degradedbackground	Defaulted to 255,200,0	The background colour used for degraded events displayed in the Mesh Viewer. Values are specified as a comma-separated list of Red, Green and Blue components in the range 0 to 255. If not defined, this defaults to orange.
meshviewer.degradedforeground	Defaulted to 0,0,0	The foreground colour used for degraded events displayed in the Mesh Viewer. Values are specified as a comma-separated list of Red, Green and Blue components in the range 0 to 255. If not defined, this defaults to black.
meshviewer.maxrows	Defaulted to 1000	The maximum number of rows to display in the Mesh Viewer. This should not be too large as a very big table in a client GUI will use a lot of memory. If unspecified, a value of 1000 will be used.
platform.root1.path	Default: //	The primary root path from which the free disk space is calculated. The value is maintained as an attribute of the "System" object.
platform.root2.path	Default: //	The secondary root path from which the free disk space is calculated. The value is maintained as an attribute of the "System" object.
platform.tablesize.max	Defaulted to 42949672960	The maximum tablesizesize in bytes from which the tablespace free % is calculated. The value is maintained as an attribute of the "System" object.
platform.update.interval	Defaulted to 30000	The platform attribute polling interval in milli-seconds.
rule.function.package	Defaulted to: com.sidonis.statewise.server.topologyserver.functions	This allows custom rule functions to replace the default rule package. Together with the rule.function.className property, this creates a fully qualified class name. Note that a constraint exists on the package name in that it cannot contain the JBoss Rules keyword 'rules'.
rule.function.className	Defaulted to: ExampleUserRuleFunctions	This allows custom rule functions to replace the default rule class. Together with the rule.function.package property, this creates a fully qualified class name. Any class name specified should always refer to a class that extends the abstract class com.sidonis.statewise.server.topologyserver.functions.UserRuleFunctions
event.update.repo	Defaulted to false	This allows updates on cleared events to be

Property	Values	Comments
rt_cleared		reported in the exception log.
statistics.recording	Defaulted to false	This allows the dynamic statistics recording in the database to be turned on and off.
automatic.update.handling	Defaulted to false	This option turns on or off the automatic handling of update and terminate events. Such events bypass the filters and mappings to automatically enter the system.
maximum.resync.event.age	Defaulted to: 30	The maximum number of days old an event can be before it is excluded from resynchronisation. For example the default value of 30 will exclude all events, when resynchronising, with an originating time older than the current date less 30 days Set this property to zero to resynchronise all events regardless of age.
log.dynamic.object.creation	Defaulted to: true	This property allows the suppression of logging the creation of dynamic mesh objects. In it certain scenarios the creation of dynamic object is expected and therefore it needlessly fills up the log files. By default, however, logging should be turned on as the creation of dynamic objects indicates missing inventory entries.

3.4 TeMIP Collector configuration

This tool allows performing configuration operations for the UCA TeMIP Collector.

Launch the TeMIP Collector configuration tool as follow:

```
# cd /opt/uca/collector_TeMIP/utilities
# ./ucaCOLT_setup.sh
```

The UCA TeMIP Collector configuration tool main menu is the following:

```
Setup script for HP UCA TeMIP Collector
-----

Select one of the following options:

0) Exit UCA TeMIP Collector configuration tool
1) Full UCA TeMIP Collector configuration
2) Force configuration files archiving

* Function to execute (or help):
```

Options description:

0) Exit UCA PostgreSQL configuration tool

This option terminates the current script execution.

1) Full UCA TeMIP Collector configuration

This option runs the complete steps:

- Augmentation of the uca environment variables if not a monolithic system
- UCA TeMIP Collector configuration files installation (change of mode, archiving...)
- Configuration of the UCA TeMIP Collector

2) Force configuration files archiving

This option forces to archive current TeMIP Collector xml and properties files.

Note

The UCA TeMIP Collector is fully described in the *HP UCA TeMIP Integration* document. One mandatory and important configuration property of the TeMIP Collector is the list of TeMIP Operation Contexts that are listened to feed UCA with alarms.

This list of Operation Contexts is usually configured with the setup tool but you can change it at any time (please refer to the *HP UCA TeMIP Integration* document).

A subsequent execution of the setup tool will reuse the last value that can therefore be modified.

3.5 TeMIP remote Handler configuration

This tool allows performing configuration operations for the UCA TeMIP remoteHandler.

Launch the TeMIP remoteHandler configuration tool as follow:

```
# cd /opt/uca/remoteHandler_TeMIP/utilities
# ./ucaRHT_setup.sh
```

The UCA TeMIP remoteHandler configuration tool main menu is the following:

```
Setup script for HP UCA TeMIP Remote Handler
-----

Select one of the following options:

0) Exit UCA TeMIP Remote Handler configuration tool
1) Full UCA TeMIP Remote Handler configuration
2) Force configuration files archiving

* Function to execute (or help):
```

0) Exit UCA PostgreSQL configuration tool

This option terminates the current script execution.

1) Full UCA TeMIP Remote Handler configuration

This option runs the complete steps:

- Augmentation of the uca environment variables if not a monolithic system
- UCA TeMIP Remote Handler configuration files installation (change of mode, archiving...)
- Configuration of the UCA TeMIP Remote Handler

2) Force configuration files archiving

This option forces to archive current TeMIP Remote Handler xml and properties files.

Chapter 4

Unified Correlation Analyzer un-installation

4.1 Unified Correlation Analyzer un-installation

It is assumed that the UCA server has been stopped prior to proceeding with the un-installation of the UCA product.

As root, either from the directory 'Unified-Correlation-Analyzer' extracted from the UCA tar file, or from /opt/uca/utilities execute the script:

```
# ./uninstall.sh
```

This script will allow the user to uninstall UCA, PostgreSQL and TeMIP components.

Then,

Do you want to uninstall UCA software packages? [Y]

By answering 'Y' the wizard will remove all the software packages of the UCA kit. Directories and modified files of the UCA release tree (/opt/uca) are not removed in accordance with the swremove command strategy.

Also, in case of a 'Y' answer the wizard then asks:

Do you want to remove all UCA data and configuration files? [N]

By answering 'Y', in addition to /var/adm/UCA_install the wizard will remove the /var/opt/uca directory where modified versions of configuration files are stored. In this case a future installation of UCA will not benefit from the previous installation (no Archive).

The wizard will also remove the UCA database from PostgreSQL (or Oracle depending on de configuration) if any.

If it detects that PostgreSQL is installed, the wizard will then propose several options:

Do you want to uninstall PostgreSQL software package (Be sure that no other application uses PostgreSQL)? [N]

By answering 'Y' the wizard states that PostgreSQL software package has to be removed. Note that at this stage it is not yet stated if databases managed by PostgreSQL will be deleted too.

So, in case of a 'Y' answer the wizard then asks:

Do you want to remove PostgreSQL data (Be careful, if you answer Yes another application may lose data definitively)? [N]

By answering 'Y', the wizard will drop all the PostgreSQL databases (remove of \$PGDATA i.e. ``rm /var/opt/pgsql/data`` in UCA standard installation) and will uninstall PostgreSQL as well.

By answering 'N', data will be kept for later reuse while the PostgreSQL software is uninstalled. This is typically the case when upgrading the PostgreSQL software.

Finally, the wizard searches for UCA files for TeMIP system. If it finds UCA MSL files then it asks:

Do you want to uninstall TeMIP package for UCA MSL files (Note: UCA MSL will not be unloaded from TeMIP dictionary. UCA MSL is required to correctly access Alarm Objects from UCA.)? [Y]

By answering 'Y' the wizard will uninstall the TeMIP software package containing UCA MSL files.

Although UCA is uninstalled, UCA MSL definitions are not unloaded from the TeMIP dictionary as they are required to correctly display information of the TeMIP Alarm Objects created for new or modified alarms from UCA.

Note

After uninstalling UCA you can keep uca and postgres user accounts for future use. If you wish a complete cleanup of the system then you can delete the users as shown below:

```
# userdel uca
# userdel postgres
# rm -rf /home/postgres /home/uca
```

In this case you should also delete the UCA Release Tree (be careful if you developed your own Value Pack(s) under this file hierarchy):

```
# rm -rf /opt/UCA-V10I /opt/uca
```

4.2 Additional step in case UCA is not installed on the TeMIP system

In the case UCA is not installed on the TeMIP system, log in as root on the TeMIP system and run the HP-UX command below in order to uninstall the unique TeMIP component for UCA:

```
# swremove TFR.TFRUCACAOV6006I
```

This command uninstalls the TeMIP software package containing MSL files for UCA.

4.3 Keeping MSL definitions for UCA in the TeMIP dictionary

Note that after removing the TeMIP software package for UCA, MSL definitions will **not** be removed from the TeMIP dictionary.

Although the TeMIP `mcc_msl` command can be used to remove these definitions, it is not recommended to proceed with this last step. Indeed, these MSL definitions will be required even after UCA un-installation when accessing TeMIP Alarm Objects that have been correlated or created by UCA.

Chapter 5

Troubleshooting

The following table lists common problems encountered under various categories, such as during installation, logging on, starting up etc. For each category, there is a description of the problem and its likely resolution(s).

Generally, when trouble-shooting any problem, the first place to look for diagnostic information are the following log files:

The UCA main exception log file and the Tomcat log files. These are viewable from the Diagnostics tab in the System Manager GUI.

The Topology Server and RMI Service Host 'standard output' and 'standard error' log files in the `/opt/uca/logs` directory.

Also, for many problems, a clean re-start of UCA is often a good starting point.

Please refer to section 2.5 - "Starting / Stopping UCA" for instructions.

Category	Problem	Resolution
Installation	When UCA setup runs the PostgreSQL <code>setup.sql</code> script, I get following error messages: "ERROR: language "plpgsql" does not exist" and "psql:/opt/uca/sql/postgresql/setup.sql:63: ERROR: could not access file "\$libdir/plpgsql": No such file or directory" "	Ensure that there are no other installations of PostgreSQL on the server platform that are interrupting the behaviour of the UCA database e.g. HP Network Node Manager. If there are other installations of PostgreSQL, use a different port for PostgreSQL other than the default 5432 during installation or by editing the PostgreSQL <code>data/postgresql.conf</code> file. In addition, there are 2 UCA configuration files that need to be changed to cater for the non-default port – <code>uca.properties</code> and the JDBC Realm part of the <code>Tomcat server.xml</code> file.
Installation	When UCA setup runs the PostgreSQL <code>setup.sql</code> script, I get several errors including "tablespace location must be an absolute path"	In the <code>setup.sql</code> script, ensure that <code>TABLESPACE</code> location is correct. For the UCA Release Tree standard location the corresponding Tablespace location value is: <pre>CREATE TABLESPACE uca OWNER uca LOCATION '\opt\uca\database';</pre>
Logging on	When I first try to start the UCA Manager using the system/system username/password combination, I get the "Invalid username/password combination - try again" web page.	Perform a complete clean re-start of UCA (refer to section 2.5). Check that Tomcat is still running (see Start-up resolutions below). Check that the system/system username/password has not been changed. Check that you do not have Caps Lock on. Check the db table 'mg_users'. For

		<p>PostgreSQL, from the command line, issue the following:</p> <pre>>psql -U uca Password for user uca: <<enter a password of uca here>> Welcome to psql 8.2.4, the PostgreSQL interactive terminal. Type: \copyright for distribution terms \h for help with SQL commands \? for help with psql commands \g or terminate with semicolon to execute query \q to quit uca=> select * from mg_users; username password -----+----- system system (1 row)</pre> <p>Ensure that the database properties in <code>uca.properties</code> have been correctly defined and that the JDBC Realm section of Tomcat's <code>server.xml</code> is properly configured.</p> <p>Also ensure that there are no other installations of Oracle or PostgreSQL on the server platform that are interrupting the behaviour of the UCA database</p>
Logging on	<p>The <code>system/system</code> username/password gets rejected when I try to login from the System Manager GUI and in my Tomcat window I get the following error:</p> <pre>org.apache.catalina.realm.JDBCRealm getPassword SEVERE: Exception performing authentication org.postgresql.util.PSQLException: ERROR: relation "mg_users" does not exist</pre>	<p>Ensure that the JDBC Realm section in the <code>/opt/uca/3rdparty/apache-tomcat-5.5.23/conf/server.xml</code> file has the correct database connection username and password (the default is '<code>uca</code>' and '<code>uca</code>'). These values should match those configured in the <code>uca.properties</code> file and within the PostgreSQL and Oracle UCA setup scripts.</p>
Start-up	<p>When I go to the UCA home page, I get a 'connection refused' message.</p>	<p>Perform a complete clean re-start of UCA (refer to section 2.5).</p> <p>If you then issue <code>./tomcatserver.sh</code> from a terminal and no error message is displayed, then tomcat has started properly.</p> <p>There will not be any new files in the <code>/opt/uca/logs</code> directory until UCA has been started up. If Tomcat has started up, some tomcat log files will appear in the <code>/opt/uca/3rdparty/apache-tomcat-5.5.23/logs</code> directory. If tomcat is started, you should be able to enter the default Tomcat home page URL (e.g. http://localhost:18080) in your browser. If the page is displayed then tomcat is working correctly. Then you should be able to open the UCA homepage at http://yourhostname:18080/uca/ where <code>yourhostname</code> is the hostname that matches the provided license Id.</p> <p>If tomcat is not starting for some reason, kill all java processes and execute the tomcat start-up shell script directly – <code>cd to</code></p>

		<p><code>/opt/uca/3rdparty/apache-tomcat-5.5.23/bin</code> and enter <code>./startup.sh</code> and look at any error messages that may appear.</p> <p>Remember that UCA uses port 18080 by default for Tomcat, so all the URLs must specify this port</p>
Start-up	<p>When the UCA Manager GUI is started, I get a Java WebStart error dialog with:</p> <p><u>General tab:</u> An error occurred while launching/running the application.</p> <p><u>Unexpected exception:</u> java.lang.Exception</p> <p><u>Exception tab:</u> java.lang.Exception at com.sun.javaws.Launcher.continueLaunch(Unknown Source) at</p>	<p>An incorrect version of the Java runtime might be being used on the machine where the GUIs are being run from. Check that you have Java 6 JRE installed and that it is accessible. From the command line check the version of Java by typing 'java -version'. Also check that the correct version of javaws (java WebStart) is being used - it must be from the same java installation. If the JRE on the machine that is running the GUIs is for a 64-bit java version, then you will have to install the 32 bit version as well, as this is the only version that includes javaws.</p> <p>Check also that the PATH environment variable is pointing to the correct JRE.</p>
Start-up	<p>When I try to start UCA from the System Manager GUI, I get an RMI Topology service error:</p> <pre>*** RMI Topology service failed to start: RMI failure communicating with RMIServiceHostError unmarshaling return header; nested exception is: java.net.SocketException: Connection reset ***</pre>	<ul style="list-style-type: none"> - Check if there is a firewall that might be blocking some ports, in particular port 18082. - Ensure that you are running as uca user - Ensure that you installed PostgreSQL with root privilege. - Check the JAVA_HOME environment variable is set correctly - Ensure that you installed the Java 6 SDK (not the JRE) on the server - Exit all UCA GUIs, shutdown tomcat and make sure you have no Java processes running. - Ensure that nothing is using port 18082 (or 1099). <p>Double-check that all the environment variables are set correctly.</p>
Start-up	<p>How do I perform a complete 'clean' re-start of UCA?</p>	<ul style="list-style-type: none"> - If UCA is not already shutdown, perform a shutdown from the System Manager GUI. - Kill the tomcat and tomcatserver processes - Check that all other UCA java processes are terminated, in particular the RMI Service Host process, if present. Check by using "ps -al grep java" - Clear out the web browser's page cache. - Close the web browser.

		<ul style="list-style-type: none"> - Clear the Java WebStart application cache. To do this you can run the Control Panel by launching the ControlPanel executable file. In the Java 2 SDK, this file is located at: <SDK installation directory>/jre/bin/ControlPanel <p>It is also located at: <SDK installation directory>/bin/ControlPanel</p> <ul style="list-style-type: none"> - Select “Settings...” in the Temporary Internet Files part of the General tab, then select “Delete Files ...”. Leave the checkboxes ticked and click OK. - Delete all directories underneath /opt/uca/3rdparty/apache-tomcat-5.5.23/work (note: not the work directory itself) - Run tomcatserver.sh to start the ‘minimal web server’. - Start the web browser and go to the UCA home page. <p>Start the UCA System Manager GUI. Once started, click on “Startup”.</p>
Start-up	<p>The following type of error message appears in the exception log:</p> <pre>Failed to obtain the operating system mxbean</pre>	<ul style="list-style-type: none"> - This is a problem with an RMI connection to the tomcat mxbean, which reports the Java VM stats such as heap usage, etc. - The problem could have a number of root causes: <ul style="list-style-type: none"> ▪ a) The rmiregistry process is not being started by the RMIServiceHost process within UCA (check to see if there is another rogue rmiregistry process running with the UCA system stopped) ▪ b) There could be a port conflict for the port 8999. Perform a netstat and see if another process is using this port number. ▪ c) The CATALINA_OPTS environment variable is not set correctly with the jmx options. If the system is auto-started at boot-time, ensure the environment variables are being set correctly in the start-up scripts
Rules and Actions	I have logging enabled on my rule actions and the fired rules database table contains millions of rows. What’s wrong.	It is likely that one or more rule is looping. Stop UCA, change the loopdetector.maxentries and loopdetector.maxduration property values, as described in chapter 3.3, and then re-start UCA
Rules and	I cannot deploy the rules to the server. Once the rule file is loaded, the validate	Ensure that each of the properties.base files were copied to the corresponding.properties file

Actions	button is disabled. Also I cannot edit any rule - the view/modify action dialog does not open.	<p>extensions</p> <p>If you are using custom actions, ensure that the correct jar file has been copied to the /opt/uca/3rdparty/apache-tomcat-5.5.23/shared/lib directory.</p>
Topology Server	<p>I am seeing out of memory error messages in the eventlog_topologyserver_stderr.log file, like this:</p> <pre>Exception in thread "Thread-6" java.lang.OutOfMemoryError: Java heap space</pre>	<p>Something has caused the RMI service host process heap space to be exhausted. This may arise for several reasons, such as a very large rule set or a very large amount of auto-archived data. The RMI Service Host process may run out of memory during archiving if very large quantities of data are being archived. For archived data, check the number of rows in the nt_* and ev_event database tables and/or the size of the XML files in the archive directory. If very large amounts of data are being auto-archived, check that all the Rule actions are not all being logged to the database. If the heap size needs increasing, then stop UCA and Tomcat, adjust the value of the "-Xmx500m" part of the rmihost.arguments property in uca.properties file. E.g. to increase it to 1GB, use "-Xmx1024m"</p>
GUI Applications	<p>I have a message at the bottom of the Scenario Manager and Mesh Viewer GUIs that says:</p> <pre>"Could not retrieve initialisation data - check server is running"</pre>	<ul style="list-style-type: none"> - Shutdown UCA and Tomcat - Ensure that each of the properties.base files were copied to the corresponding .properties file extensions. <p>Re-start Tomcat and UCA.</p>
GUI Applications	<p>There are no menu options in the Mesh Viewer GUI to inject an individual alarm or a file of alarms.</p>	<p>Ensure that the username/password used to access the UCA applications web page is associated with a user that has 'tester' role.</p>
GUI Applications	<p>How do I develop an application to make an XMLRPC web services call to UCA?</p>	<p>The following examples use localhost, but you may have some other hostname or IP address. These examples show how to use XMLRPC from a Java program and a Python program to make a simple XMLRPC call to the updateMesh method in the rulesserver.</p> <p>You would need to make sure that your Java application has statewise-common.jar (in /opt/uca/3rdparty/apache-tomcat-5.5.23/shared/lib) in its class path as well as the XMLRPC jars (in /opt/uca/3rdparty/xmlrpc-3.0/lib, but you don't need the 3 xxx-sources jars). The Java program uses the high-level WebServiceClient.doRpcAsync() UCA API call to invoke the web service.</p> <p><u>Sample Java code:</u></p> <pre>// The URI for the rules server service String service = "http://localhost:18080/rulesserver/service";</pre>

		<pre>// Dummy argument needed for the updateMesh call (note XMLRPC needs args // passed in an array) Object[] params = new Object[] { new String("dummy") }; // The timeout in seconds for the asynchronous XMLRPC call final int timeout = 120; // Set a valid manager-role username and password WebServiceImpl.setUsername("system"); WebServiceImpl.setPassword("system"); // make the web service call to update the Mesh try { // This method executes a remote procedure call which blocks until // either it // completes successfully or the request times out. final Object result = WebServiceImpl.doRpcAsync(service, "ruleserver.updateMesh", params, timeout); if (result != null) { String err = (String) result; // do something with the error ... } } catch (TimeoutException e) { // The request timed out } catch (XmlRpcException e) { // An XMLRPC exception } catch (MalformedURLException e) { // A malformed URL exception } catch (Throwable e) { // A remote server error } </pre> <p><u>Sample Python script to do the same thing:</u></p> <pre>import sys from xmlrpclib import ServerProxy, Error # set host/port and a valid manager-role username and password host_and_port = "localhost:18080" username = "system" password = "system"</pre>
--	--	--

		<pre># get server proxy service = "http://" + username + ":" + password + "@" + host_and_port + "/rulesserver/service" server = ServerProxy(service) # send XMLRPC command try: result = server.rulesserver.updateMesh("dummy") if result != '': print result sys.exit(-1) except Error, v: print "\nXMLRPC ERROR:", v sys.exit(-1)</pre> <p>To make a basic XMLRPC call - all you need to do is use the appropriate URL (eg http://localhost:18080/eventmanager/service) and the call you want eg. <code>eventmanager.reportSyntheticMasterAlarm</code>.</p> <p>Remember that no calls to the web applications will work unless UCA has been started. However one exception to this is the <code>managerserver</code> web application which runs as soon as Tomcat is started.</p>
Network	<p>When I disconnect my client PC from the network and try to start UCA I get the following error in the System Manager GUI:</p> <pre>*** RMI Logging Service failed to start; RMI failure communicating with RMI Service Host Exception creating connection to: xx.xx.xx.xx; nested exception java.net.NoRouteToHostException: No route to host: connect ***</pre>	<p>UCA can run independently of a network. Check if the PC is configured so that it's address needs to be resolved externally. If the system needs a network to resolve its IP address then either re-connect the system to the network or enter the computer's name into the <code>/etc/host</code> file - edit the <code>/etc/hosts</code> file and add</p> <pre>127.0.0.1 your.full.hostname.net</pre> <p>(don't delete any existing entries, including '127.0.0.1 localhost').</p> <p>You do not need to re-boot for this to take effect. However, when you re-connect your system to your network, you should remove this line again otherwise it may cause you address resolution problems on your network</p>
RemoteHandler RemoteCollector	<p>When the remote handler/collector is started, the following error appears in the console:</p> <pre>Not authorized XmlRpcException</pre>	<p>Create a user with 'manager' role called 'remote' using the System Manager GUI and re-start the remote handler/collector.</p>

