
hp Unified Correlation Analyzer



Unified Correlation Analyzer For Event Based Correlation

Inference Machine

Version 3.2

Installation Guide

Edition: 1.0

For Windows and Linux (RHEL 5.9 & 6.5) Operating Systems

April 2015

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Preface

The intention of this document is to gather all the information about HP UCA for EBC Inference Machine installation and uninstallation.

Product Name: Unified Correlation Analyzer for Event Based Correlation Inference Machine

Product Version: 3.2

Kit Version: V3.2

Intended Audience

The intended audience of this guide is primarily developers (customers or HP consultants) wanting to create an Inference Machine Value Pack (with Problem Detection and/or a Topology State Propagator) in UCA for EBC.

Prerequisites

It is highly recommended to have some basic knowledge of UCA for EBC before reading this document.

The reader is advised to read first the “HP UCA for Event Based Correlation – Installation Guide”.

Software Versions

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

The software versions referred to in this document are as follows:

Product Version	Supported Operating systems
UCA for Event Based Correlation Server Version 3.2	<ul style="list-style-type: none"> • HP-UX 11.31 for Itanium • Red Hat Enterprise Linux Server release 5.9 & 6.5
UCA for Event Based Correlation Channel Adapter Version 3.2	<ul style="list-style-type: none"> • HP-UX 11.31 for Itanium • Red Hat Enterprise Linux Server release 5.9 & 6.5
UCA for Event Based Correlation Software Development Kit Version 3.2	<ul style="list-style-type: none"> • Windows XP / Vista • Windows Server 2007 • Windows 7 • Red Hat Enterprise Linux Server release 5.9 & 6.5
UCA for Event Based Correlation Inference Machine Kit Version 3.2	<ul style="list-style-type: none"> • Windows XP / Vista • Windows Server 2007 • Windows 7 • Red Hat Enterprise Linux Server release 5.9 & 6.5

Table 1 - Software versions

Typographical Conventions

Courier Font:

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

Italic Text:

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

Bold Text:

- To introduce new terms and to emphasize important words.

Associated Documents

The following documents contain useful reference information:

References

[R1] *Unified Correlation Analyzer for Event Based Correlation Reference Guide*

[R2] *Unified Correlation Analyzer for Event Based Correlation Value Pack Development Guide*

[R3] *Unified Correlation Analyzer for Event Based Correlation Installation Guide*

[R4] *Unified Correlation Analyzer for Event Based Correlation User Interface Guide*

[R5] *Unified Correlation Analyzer – Clustering and HA Guide*

[R6] *UCA for EBC JavaDoc - Inference Machine*
(C:\%UCA_EBC_DEV_HOME%\apidoc\inference-machine\index.html)

[R7] *UCA for EBC Inference Machine User Guide*

Support

Please visit our HP Software Support Online Web site at <https://softwaresupport.hp.com/> 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.

Chapter 1

Introduction

The Inference Machine Development Kit contains the Eclipse environment (including plug-ins) to develop an Inference Machine Value Pack, with Problem Detection and/or Topology State Propagator scenarios.

The Inference Machine Development Kit is an extension of the UCA EBC Development Kit.

Please note that the deployment of an Inference Machine Value Pack is not covered in this document.

☞ Please refer to the [R2] *Unified Correlation Analyzer for Event Based Correlation Value Pack Development Guide* for information on how to deploy an UCA EBC Value Pack.

☞ Please refer to [R7] *UCA for EBC Inference Machine User Guide* for information on Inference Machine Value Pack.

1.1 Licensing

The UCA for EBC Inference Machine Development Kit contains two distinct licensed products:

- UCA for EBC Problem Detection product
- UCA for EBC Topology State Propagator product

The following table shows the link between UCA for EBC Inference Machine product names (i.e. type of license key) and UCA for EBC features:

Product name (i.e. type of license key)	Enabled UCA for EBC features
UCA for EBC Problem Detection Value Pack	UCA for EBC Problem Detection Framework
UCA for EBC Topology State Propagator Value Pack	UCA for EBC Topology State Propagator Framework

Table 2 - UCA for EBC Inference Machine products names and features

For the product numbers associated with the product names or for any questions related to licensing, please contact your local HP sales representative or HP partner.

1.2 Disk requirements

The disk requirements for the UCA for EBC Inference Machine Development Kit are described in Table 3 – Disk Requirements for UCA for EBC Inference Machine Development Kit.

Type	Disk requirements
Temporary disk space	6 MB minimum: 2.5 MB minimum for the uca-esp-im-packaging-3.2 msi.zip/linux.tar file 3.5 MB minimum for the UCA-EBC-DEVIM-V3.2-00B msi/noarch.rpm file (expanded from the above file)
Permanent disk space	10 MB minimum for UCA for EBC Inference Machine Development Kit V3.2 installed on the system

Table 3 – Disk Requirements for UCA for EBC Inference Machine Development Kit

1.3 Software prerequisites

The UCA for EBC Inference Machine Development Kit is installed on top of the UCA for EBC Development Kit. It brings the ability to create UCA for EBC Problem Detection and/or Topology State Propagator scenarios in the same or in separate Value Packs.

Product	Version	Operating System
UCA for EBC Inference Machine Development Kit	3.2	Windows or Linux
Java	Java 1.7	Windows or Linux

Table 4 – Software Prerequisites for UCA for EBC Inference Machine Development Kit

Note that UCA for EBC V3.2 Server, UCA for EBC V3.2 Topology Extension, UCA for EBC V3.2 Development Toolkit, and UCA for EBC V3.2 Value Packs support both Java 1.6 and Java 1.7.

However, UCA for EBC V3.2 Inference Machine Development Toolkit supports only Java JRE/JDK 7 (Version 1.7.0 or later), as seen in Table 4.

The JAVA_HOME environment variable must be set before using UCA for EBC Inference Machine Development Kit:

On Windows:

In the *Control Panel*, *Open System Properties*, open the *Advanced* tab and click *Environment Variables*, then set the JAVA_HOME environment variable according to the location of your JDK:

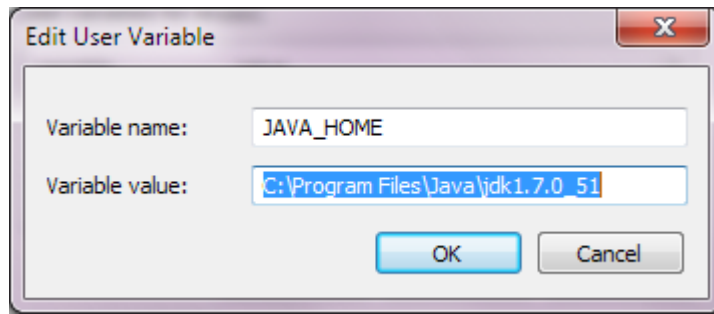


Figure 1 - Setting the JAVA_HOME environment variable on Windows systems

In case Java is not yet installed on your system, the latest JRE/JDK package for Microsoft Windows operating systems can be downloaded (for free) from <http://java.com/en/download/manual.jsp>.

On Linux:

Depending on your shell, and on the location of the Java JRE/JDK software, please use one of the following commands to set the JAVA_HOME environment variable:

Example for **cs**h-like shell:

```
$ setenv JAVA_HOME /usr/java/jdk1.7.0_51
```

Example for **sh**-like shell:

```
$ export JAVA_HOME=/usr/java/jdk1.7.0_51
```

To check if you already have Java installed:

```
$ rpm -qa | grep jdk
```

Red Hat Enterprise Linux Server comes with OpenJDK Java VM. You should get an output similar to the following:

```
java-1.7.0-openjdk-1.7.0.9-2.3.4.1.el6_3.x86_64  
java-1.7.0-openjdk-devel-1.7.0.9-2.3.4.1.el6_3.x86_64
```


You can also download (for free) the latest Java packages (HotSpot Java VM) from Oracle from <http://java.com/en/download/manual.jsp>. If this is installed (usually under /usr/java), you should get an output similar to the following:

```
jdk-1.7.0_51-fcs.x86_64
```

Installation

This chapter explains how to install the Inference Machine Development Kit.

The UCA for EBC Inference Machine Development Kit is installed on top of the UCA for EBC Development Kit. So you need to install the UCA for EBC Development Kit prior to installing the UCA for EBC Inference Machine Development Kit.

 Please refer to the [R3] *Unified Correlation Analyzer for Event Based Correlation Installation Guide* for information on how to install the UCA for EBC Development Kit.

2.1 On Windows

The UCA for EBC Inference Machine Development Kit is provided by the file `uca-evp-im-packaging-3.2-msi.zip`.

Prior to installing the kit, make sure you have administrator rights.

Then, follow the steps below:

- Unzip `uca-evp-im-packaging-3.2-msi.zip` into a temporary directory (using `winzip`, `7zip`, etc..)
- Double-click on `UCA-EBC-DEVIM-V3.2-00B.msi`
- Accept the terms of the license agreement
- For destination folder, use the same location as the one defined by `%UCA-EBC-DEVTOOLKIT%`
- Click Install, then Finish

Note: if installation fails because of a previous installation of same package, you'll need to uninstall the installed package first.

2.2 On Linux

The UCA for EBC Inference Machine Development Kit is provided by the file `uca-evp-im-packaging-3.2-linux.tar`.

Prior to install the kit, make sure you are root (*) and an `uca` user is created on your system. In case `uca` user is not created, you can create one:

- `# groupadd uca`
- `# useradd -g uca -s /bin/bash -m uca`

Then, follow the steps below:

- # cd `a temporary directory of your choice`
- # tar xvf uca-evp-im-packaging-3.2-linux.tar
- # ./install-uca-ebc-im.sh [-r <root_directory>]

The destination folder can be specified with `-r` option and should be set to the one used by UCA-EBC-DEVTOOLKIT package, known as `$UCA_EBC_DEV_HOME`, where default is `/opt/UCA-EBC-DEV`

Note:

Unlike on Windows:

- There is no sub directory for the version.
- The above installation steps automatically uninstall any previous installation of that same package if needed. However, any previous UCA-EBC-DEVPD package should be uninstalled before if the `$UCA_EBC_DEV_HOME` is the same as the one used by UCA-EBC-DEVPD.

(*) Note for Linux users who do not have root access:

You will need to setup your RPM database in a directory with write access: let's suppose `$HOME/.rpmdb` which is the default directory used by UCA-EBC Server kits as well

- \$ echo %_dbpath \$HOME/.rpmdb > \$HOME/.rpmmacros

Post-installation

2.3 TeMIP as NMS

This post-installation step is optional. It only applies if, and only if, the target for your Inference Machine Value Packs is TeMIP:

TeMIP come package with a project called TPD containing all registered Custom Alarm Object Fields. For the UCA for EBC Inference Machine Value Packs to function, the following new user-defined TeMIP Alarm Object attributes need to be added to the TeMIP Dictionary on the system(s) hosting your TeMIP director(s):

- **PB** (Latin1String: id=10100): This attribute defines the category of the alarm: ProblemAlarm (parent) and ServiceAlarm (parent), SubAlarm (child), SubProblemAlarm (parent and child) and SubServiceAlarm (parent and child), Candidate (not yet a child) just for Problem Detection case, Alarm (no more a child or a parent).
- **Grouping Keys** (Latin1String: id=10101): This attribute is used by TPD to support real-time parent<->children navigation in the TeMIP Client.
- **Number of Cleared Alarms** (Unsigned32: id=10102)
- **Number of Total Alarms** (Unsigned32: id=10103)

- **Number of Acknowledged Alarms** (Unsigned32: id=10005)
- **Number of Outstanding Alarms** (Unsigned32: id=10006)

Those attributes are available on:

Linux

TFR (TeMIP framework) V61L Maintenance Release

HP-UX

PHSS_ 43236 E-Patch on HP-UX IA platform (TFR V6.1)

Solaris

TEMIPTFRSOL_00349 E-Patch on SUN Solaris platform

These user-defined fields are easily added through the dedicated tool (on the machine where the TeMIP server runs)

temip_ah_user_defined_attr (located in */usr/opt/temip/bin*) and the project TPD is configured by running the following command:

```
# temip_ah_user_defined_attr -project TPD
```

To check the data defined in the TPD, by checking your *temip_ah_user_defined_attr.data* at the following location:

```
usr/opt/temip/mmtoolkit/mssl/temip_ah_user_defined_attr.data
```

Output should be look like the following:

```
...
PROJECT TPD
  ATTRIBUTE
    name="PB"
    id=10100
    type=Latin1String
    settable=Y
    archived=YES
    summarized=Y
    event=Y
    createAO=Y
    SA=Y
    createSA=Y
  END ATTRIBUTE
  ATTRIBUTE
    name="Grouping Keys"
    id=10101
    type=Latin1String
    settable=Y
    archived=YES
    summarized=Y
    event=Y
    createAO=Y
    SA=Y
    createSA=Y
```

```

END ATTRIBUTE
ATTRIBUTE
  name="Number of Cleared Alarms"
  id=10102
  type=Unsigned32
  settable=Y
  archived=YES
  summarized=Y
  event=Y
  createAO=Y
  SA=Y
  createSA=Y
END ATTRIBUTE
ATTRIBUTE
  name="Number of Total Alarms"
  id=10103
  type=Unsigned32
  settable=Y
  archived=YES
  summarized=Y
  event=Y
  createAO=Y
  SA=Y
  createSA=Y
END ATTRIBUTE
ATTRIBUTE
  name="Number of Acknowledged Alarms"
  id=10005
  type=Unsigned32
  settable=Y
  archived=YES
  summarized=Y
  event=Y
  createAO=Y
  SA=Y
  createSA=Y
END ATTRIBUTE
ATTRIBUTE
  name="Number of Outstanding Alarms"
  id=10006
  type=Unsigned32
  settable=Y
  archived=YES
  summarized=Y
  event=Y
  createAO=Y
  SA=Y
  createSA=Y
END ATTRIBUTE
END PROJECT

```

To have the confirmation that the attributes listed above are correctly added in the Dictionary, the following command can be executed:

```
# temp_ah_user_defined_attr
```

Output should be showing the following:

```

----- User Defined Attributes -----
-----
[##]          Pres. Name = MSL ID :          Data Type -   Symbol
Settable
[ 1] PB = 10100 :          Latin1String ->
AO_PB
[ 2] Grouping Keys = 10101 : Latin1String ->
AO_GROUPING_KEYS
[ 3] Number of Cleared Alarms = 10102 : Unsigned32 ->
AO_NUMBER_OF_CLEARED_ALARMS
[ 4] Number of Total Alarms = 10103 : Unsigned32 ->
AO_NUMBER_OF_TOTAL_ALARMS
[ 5] Number of Acknowledged Alarms = 10005: Unsigned32->
AO_NUMBER_OF_ACKNOWLEDGED_ALARMS [ 6] Number of Outstanding Alarms =
10006: Unsigned32 -> AO_NUMBER_OF_OUTSTANDING_ALARMS

```

You can alternatively check the dictionary

```
# mcc_dap_browser&
```

Then

```
operation_context->alarm_object->partition->user_defined
```

2.4 Code signing

This post-installation step is optional. However, HP strongly recommends using signature verification on its products, but there is no obligation. Customers will have the choice of running this verification or not as per their IT Policies.

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

1) Install the **GnuPG** tool

- Get the gpg software for Windows from The GnuPG website You will easily find it in the Binaries subsection
- Verify the downloaded SW via its SHA1 checksum if it is a first installation or via its associated signature if a previous version were already installed
- Install the downloaded Software the usual way
- Start a cmd.exe to have a windows shell

2) Download hpPublicKey

- Open command prompt
- Browse to the bin directory in the **GnuPG** installed folder
- Get the hpPublicKey from following location:
<https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPLinuxCodeSigning>
- Follow the instruction found at web page

- Save it as **hpPublicKey.pub**

3) Import gpg-hpPublicKey.pub

Type:

```
gpg --import <location of HPSignClient installed directory>\gpg-hpPublicKey.pub
```

4) Verify the signed binary

Type:

```
gpg --verify <Problem Detection.sig > <Problem Detection .zip >*. 
```

The output should be as shown similar to one given below.

```
gpg: Signature made Wed Nov 17 12:32:46 2010 IST using DSA key ID 2689B887
gpg: Good signature from "Hewlett-Packard Company (HP Codesigning Service)"
gpg: WARNING: This key is not certified with a trusted signature!
gpg:          There is no indication that the signature belongs to the
owner.
Primary key fingerprint: FB41 0E68 CEDF 95D0 6681 1E95 527B C53A 2689 B887
```

NOTE: message “Good signature from “Hewlett-Packard Company (HP Codesigning Service)” “indicates the code sign verification is successful.

Chapter 3

Uninstallation

This chapter explains how to uninstall the Inference Machine Development Kit.

3.1 On Windows

Right-click on UCA-EBC-DEVIM-V3.2-0A.msi and choose Uninstall.

3.2 On Linux

Given that `$UCA_EBC_DEV_HOME` usually refers to `/opt/UCA-EBC-DEV`

```
# $UCA_EBC_DEV_HOME/bin/uninstall-uca-ebc-im
```

Enter the index number (usually 0) and press Enter.