

# **Getting Started with Universal Command Agent for SOA - MQ Connector**

Universal Agent 7.8.x

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# 1 Objective

The objective of this document is to assist in the following activities regarding the Universal Command Agent for SOA: MQ Connector:

- Installing Universal Agent for SOA 6.4.x, which is comprised of:
  - Universal Command Agent for SOA
  - Universal Event Monitor for SOA
- Running Universal Command Agent for SOA with an MQ Connector.

## 2 Installation Requirements

The following is required for running Universal Command Agent for SOA with an MQ Connector:

- Universal Agent 6.2.0.0 or later (32-bit package); installed, licensed, and running.
- MQ Environment version 6 or later, with working queues.
- MQ Client jar files for native communication to MQ must be in the following path:

```
/opt/universal/uac/container/webapps/axis2/WEB-INF/lib
```

```
com.ibm.mq.commonservices.jar  
com.ibm.mq.jar  
com.ibm.mq.pcf.jar  
com.ibm.mq.headers.jar  
com.ibm.mq.jmqi.jar  
connector.jar
```

The MQ Client for Java version 7.0 package with the latest fix pack is recommended.

When using a MQ CCDT to establish connections to queue managers, 7.0.1.3 or later is highly recommended.

### 3 Installation

**Note**

These instructions describe installation of the Universal Agent for SOA 6.4.x for AIX package.

Universal Agent for SOA 6.4.x is packaged as a compressed tar file.

The name of the Universal Agent for SOA 6.4.x package file has the following format:

**sb-soa-6.4.1.0-aix-5.3.tar.Z**

(The name assumes product maintenance level 6.4.1.0 for Universal Agent for SOA 6.4.x.)

To unpack and install Universal Agent for SOA, perform the following steps:

<p><b>Step 1</b></p>	<p>Create a directory (or select an existing directory) in which to save the package file.</p>
<p><b>Step 2</b></p>	<p>Save the package file into that directory.</p>
<p><b>Step 3</b></p>	<p>Uncompress and extract the installation files in the current working directory. The command to extract the files is:</p> <div data-bbox="363 1258 1541 1377" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <pre>zcat sb-soa-6.4.1.0-aix-5.3.tar.Z   tar xvf -</pre> </div> <p>If your operating system does not support the <b>zcat</b> command, use the following command:</p> <div data-bbox="363 1532 1541 1650" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <pre>gunzip sb-soa-6.4.1.0-aix-5.3.tar.Z</pre> </div> <p>The output of the <b>gunzip</b> command provides the following <b>tar</b> file:</p> <pre>tar -xvf sb-soa-6.4.1.0-aix-5.3.tar</pre>

<p><b>Step 4</b></p>	<p>After the extraction is complete, run the installation script, <b>upsinst</b>, which executes the <b>installp</b> command:</p> <div data-bbox="365 309 1541 427" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>./upsinst</pre> </div> <p>An installation log is written to file <b>install.log</b> in the current directory. <b>upsinst</b> automatically restarts the Universal Broker daemon, <b>ubrokerd</b>, at the end of the install.</p>
<p><b>Step 5</b></p>	<p>From the <a href="#">license file</a> that was sent to you by Stonebranch, Inc., add the license information to the following file:  <b>/etc/universal/uacs.conf</b></p>
<p><b>Step 6</b></p>	<p>Recycle Universal Broker using the following commands (cd to <b>/opt/universal/ubroker</b>)</p> <p>First:</p> <div data-bbox="365 815 1541 934" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>./ubrokerd stop</pre> </div> <p>Then:</p> <div data-bbox="365 1088 1541 1207" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>./ubrokerd start</pre> </div>

**Step 7**

Use [Universal Query](#) (cd to /opt/universal/bin) to validate that the Universal Application Container Server component of Universal Command Agent for SOA 6.4.x is running:

**uquery -host localhost** (or the name of your server)

The output should have the following format:

```

Component ID.....: 1360109684
Component Name.....: uac (Server)
Component Description.....: Universal Application Container Server
Component Version.....: 6.4.x Level 1 Release Build 101
Component Type.....: uac
Component Process ID.....: 23331000
Component Start Time.....: 18:14:42
Component Start Date.....: 02/05/15
Component Command ID.....: uac
Component State.....: REGISTERED
Component MGR UID.....:
Component MGR Work ID.....:
Component MGR Host Name...:
Component MGR IP Address..:
Component MGR Port.....:
Component Comm State.....: ESTABLISHED
Component Comm State Time.: 18:14:44
Component Comm State Date.: 02/05/15
Component MGR Restartable.: NO
Component Comment.....:
    
```

## 4 MQ Environment Verification

Verify that you have a working MQ environment. You must define the following MQ values, as these are needed for the Universal Command Agent for SOA jobs that you will submit: `queuemanager`, `queueName`, and `channel`.

You now can run jobs in MQ using the Universal Command Agent for SOA: MQ Connector.

## 5 Running a Universal Command Agent for SOA Job on z/OS Connecting to MQ Connector

### Step 1

Create the UCMD Manager JCL. This provides the UCMD Manager options, references to the MQ Connector options, and the payload. It has the following format:

```
//XXXXXXXX JOB CLASS=A,MSGCLASS=X,NOTIFY=&SYSUID
000002 /*
000003 /*******
000004 /*MQ queue test for Publish
000005 /*UCMD is the proc that calls UC Manager
000006 /*LOGON is the DD with userid and passwd (can use encrypted)
000007 /*SCR is the script that contains the MQConnector information
000008 /* to connect to an MQ Broker*
000009 /*UNVIN provides the payload for the SCRIPT in SCR*
000010 /*******
000011 /*
000012 /*      JCLLIB ORDER=LIB.V3207.UNV.UNVCONF
000013 /*
000014 //UCMD   EXEC UCMDPRC
000015 //LOGON  DD DISP=SHR,DSN=USER123.UAC.LOGON(USER)
000016 //SCR    DD DISP=SHR,DSN=USER123.UAC.SCR(MQPUB)
000017 //UNVIN  DD DISP=SHR,DSN=USER123.UAC.PYL(MQPYL)
000018 //UNVOUT DD SYSOUT=*
000019 //UNVERR DD SYSOUT=*
000020 //SYSIN  DD *
000021 -s scr
000022 -script_type SERVICE*
000023 -i ucaserver -f logon
```

<p><b>Step 2</b></p>	<p>Create the MQ Connector Command Options Data Set Member.</p> <p>This member contains the <a href="#">UCA for SOA command options</a> for the MQ Connector that specifies the required information to submit a job to the MQ environment. It is referenced with the <b>SCR</b> ddname and has the following format:</p> <pre style="border: 1px solid black; padding: 10px;">-protocol mq -mep Publish -mqhost MQHOST -mqueueuanagername MyQueueManager -mqueueuename UpsQaQueue -mqchannel UpsQaChannel -timeoutsec 120</pre> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Note</b></p> <p>If the port on which the MQ Broker is listening has been changed from its default value (1414), you must include the <a href="#">-mqport</a> option to specify the current port.</p> </div>
<p><b>Step 3</b></p>	<p>Create the Payload Data Set Member. This member contains the MQ message and is read in via STDIN.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>Note</b></p> <p>The <b>LRECL</b> length depends on the job it describes. Verify that your data set member record length can accommodate the maximum line length of your message.</p> </div> <p>Example:</p> <pre style="border: 1px solid black; padding: 10px;">000001 000002 Hello...this is a payload in an MQ message.</pre>

## 6 Running a Universal Command Agent for SOA Job on UNIX Connecting to MQ Connector

### Step 1

Create the UCMD script file (**Mqopt**) to contain the the [UCA for SOA command options](#) for the MQ Connector that specifies the required information to submit a job to the MQ environment.

```
Mqopt contains:  
-protocol mq  
-mep Publish  
-mqhost MQHOST  
-mqqueueanagername MyQueueManager  
-mqqueueaname UpsQaQueue  
-mqchannel UpsQaChannel  
-timeoutsec 120
```

#### Note

If the port on which the MQ Broker is listening has been changed from its default value (1414), you must include the [-mqport](#) option to specify the current port.

#### MQPayload.xml

```
Hello...this is a payload in an MQ message.*
```

**Step 2**

From a command prompt, execute the following command to send a message to an MQ Queue:

```
ucmd -script Mqopt -script_type SERVICE -i ucaserver -u user -w user < MQPayload.xml
```

You can also execute the command using the Universal Command options for STDIN (-I for input and -F for file):

```
ucmd -script Mqopt -script_type SERVICE -i ucaserver -u user -w user -I -F  
MQPayload.xml
```

**Example output:**

```
MQ message published successfully on destination UpsQaQueue.
```