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IBM Order Capture Business Component

Installation Guide for AIX

Version 1.1

... A member of the WebSphere Business Components family

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 8.

First Edition (November 2000)

This edition applies to version 1.1 of IBM Order Capture Business Component (program number 5639-M22), and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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IBM Order Capture Business Component Version 1.1 AIX Installation Guide

The IBM Order Capture Business Component is deployed as a WSBC Advanced Component (AC). This document describes the installation and the setup required to use the Order Capture AC on AIX.

Installation prerequisites

The following are the prerequisites for installing Order Capture files.

Software

The Order Capture installation has an dependency on IBM WebSphere Business Components Studio, version 1.1. You must install WSBC Studio before installing any Order Capture files on your workstation. It is recommended that you install the WebSphere® Application Server before installing WSBC Studio.

Hardware

The Order Capture AC installation procedure does not have any additional hardware prerequisites for installation other than those required by WSBC Studio.

AIX installation

To install Order Capture Business Component 1.1 on AIX, first install WSBC Order Capture Business Component 1.1 on Microsoft® Windows NT using the instructions in the *IBM Order Capture Business Component Installation Guide* on the CD. Once installation is complete, follow the steps below to install on AIX:

1. Zip up the directory, using a tool that provides directory structure support.

2. Create a `wsbc` directory on AIX (for example: `mkdir /usr/wsbc`). This directory will be the $WSBC_HOME directory.

3. FTP the NT installation zip file to that directory.

4. Extract the NT installation zip file using directory structure support.

5. Copy the `AIXScripts.zip` file to the same $WSBC_HOME directory, and extract the zip file using directory structure support. This zip file contains Korn shell scripts for setting up the database and environment, as well as scripts for running the WSBC AC tools.

Configure the NT installed files

The following subsections describe the changes that must be made to four configuration files (`WSBCconfig.ini`, `SFConfig.ini`, `Global.name.OCAC.OrderContainers.DB2,` and `Global.name.DB2`) for AIX-specific information.

WSBCconfig.ini file

In the `$WSBC_HOME/WSBCconfig.ini` file, change the `WSInstallBase` line to point to where the WebSphere Application Server is installed, and change the `InstallBase` line to point to the $WSBC_HOME directory. The result might look like the following:

```
. . .

WSInstallBase=/usr/WebSphere/AppServer

. . .

InstallBase=/usr/wsbc

. . .
```

SFConfig.ini file

In the `$WSBC_HOME/SFConfig.ini` file, change the `InstallBase` line, the `sfenv` line, and the `SFSchemaMapPreferences` line to match the $WSBC_HOME directory, and change the `GSM_host` line for your specific machine name. The result might look like the following:

```
. . .

sfenv=/usr/wsbc/com/ibm/sf/etc/sfenv.ini

. . .

InstallBase=/usr/wsbc

. . .

GSM_host=machine_name.company.com

. . .

SFSchemaMapPreferences=/usr/wsbc/preferences/schemamap

. . .
```

Global.name.OCAC.OrderContainers.DB2 file

In the `$WSBC_HOME/com/ibm/sf/etc/Global.name.OCAC.OrderContainers.DB2` file, change the location of the SML files for your specific location.. The result might look like the following (without the line breaks):

```
. . .

OrderHeaderContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,
native,SinglePhase,/usr/wsbc/com/ibm/sf/db/db2,1000

omPricesContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,
native,SinglePhase,/usr/wsbc/com/ibm/sf/db/db2,2000

omDiscountsContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,
native,SinglePhase,/usr/wsbc/com/ibm/sf/db/db2,2000

OrderPriceDetailContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,
native,SinglePhase,/usr/wsbc/com/ibm/sf/db/db2,2000

#OrderRequestedDetailContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,
native,SinglePhase, /usr/wsbc/com/ibm/sf/db/db2,2000

. . .
```

Global.name.DB2 file

In the `$WSBC_HOME/com/ibm/sf/etc/Global.name.DB2` file, change the location of the SML files for your specific location.. The result might look like the following(without the line break):

```
. . .
SFDefaultContainer=*_OCACServer,com.ibm.sf.gf.RdbContainer,OCAC,DB2,Native,
SinglePhase,/usr/wsbc/com/ibm/sf/db/db2,4000
. . .
```

Configure the AIX script files

Edit the `$WSBC_HOME/bin/setwsbcenv.sh` file to specify the installation locations of WebSphere, DB2®, and WebSphere Business Components.

```
. . .
WAS_HOME=/usr/WebSphere/AppServer
. . .
WSBC_HOME=/usr/WebSphere/AppServer/wsbc
. . .
DB2_HOME=/home/db2inst1/sqllib
. . .
```

This script is used by other scripts to set the WebSphere and the WSBC home directory. The `$WSBC_HOME/bin/setwsbcenv.sh` script can also be used to set up the client classpath.

Order Capture Advanced Component

This information is provided as a reference for those customers who will be using the Order Capture AC in their application. It includes the .jar files, classpaths, and DB2 setup that are required.

.jar files

The following are the Java™ packages for the WSBC Order Capture AC:

- **ACOrderCaptureEJBDeployed.jar** Contains the standard EJB Deployed .jar file

- **ACOrderCaptureEJBClient.jar** Contains the standard EJB Client .jar file

- **ACOrderCaptureEJB.jar** Contains the standard EJB .jar file

- **ACOrderCaptureCommon.jar** Contains the definitions for the argument classes and must be in the classpath for the client (if using the object-oriented Order Capture interfaces), the WebSphere Application Server, and the SanFrancisco™ servers

- **ACOrderCaptureServer.jar** Contains the internal implementation of the Order Capture AC and must be in the classpath for the WebSphere EJB server and the SanFrancisco servers

- **ACOrderCaptureServerSF.jar** Contains the internal implementation of the Order Capture AC and must be in the classpath for the SanFrancisco servers

Configure the classpaths

There are several paths that you must add before your application can be deployed and run. Each of these is described below.

System classpath

Add the $WSBC_HOME into your system CLASSPATH environment variable; for example:

```
CLASSPATH=/usr/wsbc:$CLASSPATH
export CLASSPATH
```

System path

Ensure that the path to the WSBC bin directory is in your system PATH environment variable; for example:

```
PATH=/usr/wsbc/com/ibm/sf/bin:$PATH
export PATH
```

Dependent classpath

The dependent classpath is a text box that you can view by clicking on the node in the WebSphere Administrator's Console. This classpath is only used to deploy an Enterprise JavaBean™ (EJB) and the classpath may be deleted after the EJB's deployment. Placing a value in the text box is equivalent to adding the value in the `admin.config` file. When deploying the Order Capture AC, set the dependent classpath as follows (without any line breaks):

```
$WSBC_HOME/Services/BaseServices/ACEI18NEJBClient.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureEJBClient.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureEJB.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureCommon.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureServerSF.jar:
$WSBC_HOME/Services/BaseServices/jmxri.jar:
```

```
$WSBC_HOME/Services/BaseServices/ACServicesServer.jar:
$WSBC_HOME/Services/BaseServices/ACServicesSMClient.jar:
```

Server classpath

The server classpath is in the server's command line arguments text box. The value of the classpath is used by the running EJB. For any class that is not found, an exception will show up in the logs disguised as a remote exception.SF, which is needed for SFException. Set the server classpath to the following value (without any line breaks):

```
-classpath
$WSBC_HOME;
$WSBC_HOME/Services/BaseServices/ACEI18NEJBClient.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureEJBClient.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureEJB.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureServer.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureCommon.jar:
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureServerSF.jar:
$WSBC_HOME/Services/BaseServices/jmxri.jar:
$WSBC_HOME/Services/BaseServices/ACServicesServer.jar:
$WSBC_HOME/Services/BaseServices/ACServicesSMClient.jar:
$WSBC_HOME/Services/BaseServices/ACServicesEJBClient.jar:
```

Web application classpath

This classpath is set on the Web application under the WSBC servlet engine. It is used by the servlet that the client application starts, and requires several Open Applications Group Interface Specification (OAGIS) .jar files, and SanFrancisco. The value of the Web application classpath is as follows:

```
$WSBC_HOME/Services/BaseServices/ACEI18NEJBClient.jar
$WSBC_HOME/Services/BaseServices/jmxri.jar
$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureCommon.jar
```

Command line classpath

The command line classpath is used to prime the SanFrancisco part of Order Capture, start and stop the System Management Beans, start and stop the components, and run the data setup. The value for the command line classpath can be set by modifying the $WSBC_HOME/bin/setwsbcenv.sh file and adding the following commands to the CP=$CP list (without any line breaks):

```
CP=$CP:$WSBC_HOME/Services/BaseServices/ACServicesEJBClient.jar;
CP=$CP:$WSBC_HOME/Services/BaseServices/ACServicesClient.jar;
CP=$CP:$WSBC_HOME/Services/BaseServices/ACServicesServer.jar;
CP=$CP:$WSBC_HOME/ACFeatures/Components/OrderCapture/ACOrderCaptureServerSF.jar
```

Modify the admin.config file

Modify the *$WAS_HOME/bin/*admin.config file as follows:

1. Close the WebSphere Administrator's Console.

2. Shut down the IBM WS AdminServer Service.

3. Open the *$WAS_HOME/bin/*admin.config file in a text editor. Find the line in this file that starts with the following string:

   ```
   com.ibm.ejs.sm.adminserver.classpath
   ```

   Assuming that $WSBC_HOME is /usr/wsbc, append to this line the following string (without the line breaks):

```
:/usr/wsbc:
/usr/wsbc/ACFeatures/Components/OrderCapture/ACOrderCaptureServerSF.jar:
/usr/wsbc/ACFeatures/Components/OrderCapture/ACOrderCaptureCommon.jar:
/usr/wsbc/ACFeatures/Samples/OrderCapture/OCS.jar:
/usr/wsbc/Services/BaseServices/ACServicesEJBClient.jar:
/usr/wsbc/Services/BaseServices/ACServicesClient.jar:
/usr/wsbc/Services/BaseServices/ACServicesServer.jar:
/usr/wsbc/Services/BaseServices/jmxri.jar
```

4. Save the `admin.config` file.

Deploy the Order Capture AC

The Order Capture AC has the following Beans:

- OrderCapture

- OrderCaptureFulfillment

- OrderCaptureMaintenance

In addition to these Beans, the Order Capture AC requires that the following AC Services Beans also be deployed in WebSphere:

- LocalizableTextResourceAccessor

- ACCommandTarget

- MBeanServerConnector

To deploy the AC Services Beans, see "Deploy AC Services EJBs in WebSphere Application Server" in the *IBM WebSphere Business Components Studio Version 1.1 Installation Guid*e, in the "Advanced Component Services" section, under "Deploy the AC Services in WebSphere Application Server." You can then use the same instructions to deploy the three Order Capture Beans, using the ACOrderCaptureEJBDeployed.jar file. Deploy these three Beans in the same WebSphere server (the default is WSBC Server) where the AC Services Beans were deployed.

Note: If you choose not to use the default install path during the installation, you must make a manual change to the DTDPath. After Order Capture is deployed, the System Management Console can be used to change the value of the DTDPath to point to the appropriate directory in the installation path that contains the DTDs. Refer to "Add .jar files for the AC System Management Console's classpath" and "Configure the System Management Console" in the *IBM WebSphere Business Components Studio Version 1.1 Installation Guide* for further information.

Run the AC Deployment Tool

The AC Deployment Tool can be used for the Order Capture AC. This tool will register the necessary names in JNDI so that the Order Capture AC functions can be accessed. (The AC Deployment Tool does not actually deploy any EJB's.) The tool uses the default deployment descriptor file provided with the Order Capture AC. When you run the AC Deployment Tool you will need to verify or change some of the default values.

To run the tool:

1. Start the AC Deployment Tool, using the `runDeploymentTool.sh` file from the `$WSBC_HOME/tools/bin` directory, and load the ACOrderCaptureServer.jar file.

2. On the **General** tab, verify the **Instance Name** field. This will be the name used to reference the AC. If this is changed, the modelMBeanDescriptor name in the Order Capture `ACImplementation.xml` in the `ACOrderCaptureServer.jar` file will have to be changed.

3. On the **General** tab, verify the **Global Context URL** and **Global Context Factory** values are correct. You will not normally have to change these fields.

4. Select each function group. In the Function Group pane, verify the **Function Group Registered Name** field. This field must match the JNDI home name for the deployed EJB Session Bean. There are three EJBs for Order Capture: OrderCaptureMaintenance, OrderCaptureFulfillment, and OrderCapture. Verify that all three of these match their JNDI home names.

5. For each function name in each function group, verify the **Target Registered Name**. Click on the function name and in the AC Function pane check the **Target Registered Name**. This name must match the JNDI home name for the ACCommandTarget deployed EJB. Check each function.

6. From the menu bar select **Action > Set Preferences**. In the URL field change the value to `IIOP://localhost:900/`. Click **OK**.

7. Verify the AC by selecting the instance node and selecting **Actions > Verify AC instance** from the menu bar.

8. Once the verification is successful, deploy the AC by selecting the AC instance node and selecting **Actions > Deploy AC Instance** from the menu bar.

OrderCapture.ini file

You can add an .ini file to the `$WSBC_HOME/com/ibm/wsbc/ac/OrderCapture` directory. The name of the .ini file should be the same as the company name attribute set on the Order Capture AC. (For example, if your company name attribute is OrderCaptureCompany, then the .ini file name should be `OrderCaptureCompany.ini`.) The company name attribute can be viewed or changed using the System Management Console.

The .ini file contains a list of .xml files that are to be processed as part of the initial OrderCapture AC setup. Using the System Management Console, you can run the CreateData() method on the OrderCapture AC. When this method is run the first time, the Order Capture AC will look for the .ini file and will process each .xml file listed in order. This is a one-time initialization. The format of the lines in the .ini file are:

```
//usr//wsbc//xml//OC_setup_1.xml
//usr//wsbc//xml//OC_setup_2.xml
```

The full path and file name is required for each .xml file name.

Setup for DB2

To set up DB2 for use with the Order Capture AC, follow the steps below. These instructions assume that DB2 is installed and you are authorized to create tables in DB2.

1. Set up the classpath for DB2 by using the following command:

    ```
    . $WSBC_HOME/bin/setwsbcenv.sh
    ```

2. Initiate the DB2 database setup, provided that DB2 is installed and you are authorized to create tables in DB2, by using the following command:

    ```
    $WSBC_HOME/com/ibm/sf/bin/db2/SetupOCAC-DB2.sh
    ```

3. Prime SanFrancisco for DB2 by using the following command:

    ```
    $WSBC_HOME/com/ibm/sf/bin/db2/PrimeOCAC-DB2.sh
    ```

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