IBM Maximo Enterprise Adapter for SAP Applications
Version 7 Release 6

Installation Guide

IBM

Contents

Chapter 1. Planning to deploy Maximo Enterprise Adapter for SAP Applications

Maximo® Enterprise Adapter for SAP Applications 7.6 must be installed with IBM® Maximo Asset Management 7.6. Your environment can also include IBM Maximo Asset Management Multitenancy 7.6.

System requirements for Maximo Enterprise Adapter for SAP Applications

Before you install Maximo Enterprise Adapter for SAP Applications, your environment must meet all of the hardware and software requirements.

Administrative user rights are required for the installation of Maximo Enterprise Adapter for SAP Applications.

The installation program requires access to the middleware servers that are installed with Maximo Asset Management to complete the installation.

Enterprise system

You install Maximo Enterprise Adapter for SAP Applications 7.6 on the administrative workstation where Maximo Asset Management 7.6 is installed.

Maximo Enterprise Adapter for SAP Applications requires configuration of the integration framework. Refer to Configuring the integration framework for more information.

Maximo Asset Management Multitenancy

Maximo Enterprise Adapter for SAP Applications 7.6 can be installed with Maximo Asset Management Multitenancy 7.6.

If Maximo Enterprise Adapter for SAP Applications is installed in a Maximo Asset Management Multitenancy environment, Maximo Enterprise Adapter for SAP Applications is enabled for all tenants except the system provider tenant.

A complete list of hardware and software requirements is available in the System Requirements section of the Maximo Asset Management wiki.

Installation overview

The installation of Maximo Enterprise Adapter for SAP Applications 7.6 involves installing the product and configuring the software.

Before you begin

Ensure that Maximo Asset Management 7.6 is installed on the computer where you are installing Maximo Enterprise Adapter for SAP Applications 7.6.

For more information, see the installation topics in the Maximo Asset Management 7.6 IBM Knowledge Center.

For information about upgrading to Maximo Asset Management 7.6, see the Maximo Upgrade Resources website.

Procedure

1. Back up the middleware servers and the administrative workstation.
2. Prepare the application server:

Application server	Task
WebSphere® Application Server	Ensure that the application server is started. The installation program connects to the application server by using the login information that you specify. If you have configured Maximo Asset Management to use J2EE application security for authentication and user and group management, you must manually create an LDAP group named PMCFGADM within your LDAP directory and populate it with users defined in the LDAP repository. Maximo Enterprise Adapter for SAP Applications requires this group, but it is not created automatically during the installation process.
WebLogic Server	Ensure that the application server (MAXIMOSERVER) is stopped. If the application server is running, stop the server and wait a few minutes before you start the installation program. If the application server is not stopped, the installation process stops.

3. Install Maximo Enterprise Adapter for SAP Applications.
4. Update the database and build and deploy the Maximo EAR files by using the configuration program.
5. If you use Oracle WebLogic Server, or if you deferred the configuration step, manually update the Maximo database and build and deploy the Maximo enterprise archive (EAR) files.

Configuration overview

You can use the Maximo Asset Management configuration program to configure a new deployment.

The configuration program is launched automatically when the installation program is complete.

When you complete the configuration program, the Maximo Enterprise Adapter application starts automatically.

If you do not use the configuration program to automatically configure the product, you must manually update the database and build and deploy the enterprise archive (EAR) files.

Restriction: If your environment includes Oracle WebLogic Server, you must manually deploy the EAR files. The configuration program does not deploy the EAR files on WebLogic Server.

When the installation and configuration steps are complete, you can customize Maximo Enterprise Adapter to suit your needs.

Chapter 2. Installing Maximo Enterprise Adapter for SAP Applications

You must install Maximo Enterprise Adapter for SAP Applications in the same directory where Maximo Asset Management is installed.

Procedure

1. If you have configured Maximo Asset Management to use J2EE application security for authentication and user and group management, you must manually create an LDAP group named PMCFGADM within your LDAP directory and populate it with users defined in the LDAP repository. Maximo Enterprise Adapter for SAP Applications requires this group, but it is not created automatically during the installation process.

2. Download the Maximo Enterprise Adapter for SAP Applications product software from IBM Passport Advantage® and extract the installation image to a local directory.

3. Start the launchpad by double-clicking the `launchpad` file. If your computer is a Windows system, use the `launchpad64.exe` file. If your computer is a UNIX or Linux system, use the `launchpad.sh` file.

4. On the Install IBM Maximo Enterprise Adapter for SAP Applications pane, click **Install**.

5. After you accept the terms in the license agreement, select the option to use the existing package group **IBM Tivoli's process automation suite**.

6. Complete the installation program. You are notified that the packages were installed successfully.

7. Select **IBM Tivoli process automation engine configuration utility**, and click **Finish** to start the Maximo Asset Management configuration program.

8. Optional: If you are installing Maximo Enterprise Adapter for SAP Applications on Maximo Asset Management Multitenancy, you must update the `ejb-jar.xml` and `ibm-ejb-jar-bnd.xml` files before you continue with the configuration steps.

    a. Open a system command prompt.

    b. Change directory to *install_home*`\maximo\applications\maximo\mboejb\ejbmodule\META-INF` and edit the `ejb-jar.xml` file by adding the following information.

    ```
    <!-- MEA MDB  -->

        <message-driven id="MessageDriven_JMSContQueueProcessor_1">
          <ejb-name>JMSContQueueProcessor-1</ejb-name>
          <ejb-class>psdi.iface.jms.JMSContQueueProcessor</ejb-class>
          <transaction-type>Container</transaction-type>
          <message-destination-type>javax.jms.Queue</message-destination-type>
          <env-entry>
            <env-entry-name>MESSAGEPROCESSOR</env-entry-name>
    <env-entry-type>java.lang.String </env-entry-type>
    <env-entry-value>psdi.iface.jms.QueueToMaximoProcessor</env-entry-value>
          </env-entry>
        </message-driven>
    <message-driven id="MessageDriven_JMSContQueueProcessor_2">
          <ejb-name>JMSContQueueProcessor-2</ejb-name>
          <ejb-class>psdi.iface.jms.JMSContQueueProcessor</ejb-class>
          <transaction-type>Container</transaction-type>
          <message-destination-type>javax.jms.Queue</message-destination-type>
    ```

```
        <env-entry>
          <env-entry-name>MESSAGEPROCESSOR</env-entry-name>
   <env-entry-type>java.lang.String </env-entry-type>
   <env-entry-value>psdi.iface.jms.QueueToMaximoProcessor</env-entry-value>
          </env-entry>
        </message-driven>

    <!-- MEA MDB -->

    <container-transaction>
        <method>
          <ejb-name>JMSContQueueProcessor-1</ejb-name>
          <method-name>*</method-name>
        </method>

        <trans-attribute>Required</trans-attribute>

      </container-transaction>
     <container-transaction>
        <method>
          <ejb-name>JMSContQueueProcessor-2</ejb-name>
          <method-name>*</method-name>
        </method>

        <trans-attribute>Required</trans-attribute>

      </container-transaction>
```

   c. Save and close the `ejb-jar.xml` file.

   d. Edit the `ibm-ejb-jar-bnd.xml` file by adding the following information.

```
<!-- MEA MDB -->
  <ejbBindings xmi:type="ejbbnd:MessageDrivenBeanBinding"
xmi:id="MessageDrivenBeanBinding_1" activationSpecJndiName="intjmsact_<tenant>">
    <enterpriseBean xmi:type="ejb:MessageDriven"
href="META-INF/ejb-jar.xml#MessageDriven_JMSContQueueProcessor_1"/>
  </ejbBindings>
  <ejbBindings xmi:type="ejbbnd:MessageDrivenBeanBinding"
xmi:id="MessageDrivenBeanBinding_2" activationSpecJndiName="intjmsact_<tenant>">
    <enterpriseBean xmi:type="ejb:MessageDriven"
href="META-INF/ejb-jar.xml#MessageDriven_JMSContQueueProcessor_2"/>
  </ejbBindings>
```

   e. Save and close the `ibm-ejb-jar-bnd.xml` file.

9. On the home screen, select **Update Database and Build and Deploy Application EAR Files**. If your application is running, you are prompted to stop the application before the database task can run. Select **OK**.

10. From the Apply Deployment Operations panel, select the options appropriate for your environment, and then click **Finish**

Option	Description
WebSphere	Select the options for applying changes to the database, and automatically building and deploying application EAR files.
WebLogic	Select the options for applying changes to the database and automatically building the application EAR files. You cannot deploy application EAR files to WebLogic using the Maximo Asset Management configuration program.

11. When the installation is complete, verify that the Maximo Enterprise Adapter for SAP Applications component was installed. Log in to Maximo Asset Management and view the system information from the **Help** menu.

Automatically building and deploying the EAR files

If you deferred the configuration step during installation, you can use the configuration program to update the Maximo database and build and deploy the EAR files.

Before you begin

Ensure that the installation of Maximo Enterprise Adapter is complete.

Procedure

1. Start the configuration program by double-clicking the `ConfigUI` file in the *install_home*/`ConfigTool` directory.
2. On the home screen, select **Update Database and Build and Deploy Application EAR Files**.
3. Complete the configuration program.

Manually building and deploying the EAR files

If you do not use the configuration program, you must complete manually update the Maximo database and build and deploy the EAR files. If your deployment uses Oracle WebLogic Server, you must also complete the manual steps.

Building the EAR files

To deploy the product, you must update the Maximo database and build and deploy the Maximo EAR and Maximo help system EAR files.

Procedure

1. Update the Maximo database by changing to the *install_home*\maximo\tools\maximo directory and running the **updatedb** command.
2. Update languages by running the **TDToolkit** command.
3. Build the EAR file by changing to the *install_home*\maximo\deployment directory and running the **buildmaximoear** command.

Option	Description
WebSphere Application Server	`buildmaximoearwas8`
WebLogic Server	`buildmaximoear`

4. Build the help system EAR file by changing to the *install_home*\maximo\deployment directory and running the **buildmxiehsear** command.

Deploying the EAR files on WebSphere Application Server

If you did not use the configuration program, you must manually deploy the Maximo EAR files on WebSphere Application Server. Deploying the EAR files starts the application server.

Before you begin

- Update the Maximo database and build the EAR files.
- Ensure that the application server is started.

About this task

The EAR files are installed on WebSphere Application Server during the Maximo Asset Management installation.

Replace the parameters in the command syntax with the values in your deployment. For more information, see "Command syntax for deploying EAR files on WebSphere Application Server."

Procedure

1. Deploy the Maximo EAR file by opening a command prompt and running the following command:

   websphere_home\jacl\solutions\DeployApplication.[bat|sh] *WASAdminUserName*
   WASAdminPassword "MAXIMO" *WASNodeName WASApplicationServerName*
   "*install_home*\maximo\deployment\default\maximo.ear" *WASVirtualHost*
   WASWebServerName

2. Deploy the Maximo help system EAR file by opening a command prompt and running the following command:

   websphere_home\jacl\solutions\DeployApplication.[bat|sh] *WASAdminUserName*
   WASAdminPassword "MAXIMOIEHS" *WASNodeName WASApplicationServerName*
   "*websphere_home*\maximo\deployment\default\maximoiehs.ear" *WASVirtualHost*
   WASWebServerName

Command syntax for deploying EAR files on WebSphere Application Server

You use parameters in the command syntax when you manually deploy the EAR files on WebSphere Application Server.

Parameters

WASAdminUserName
: A WebSphere Application Server Network Deployment account with deployment privileges.

WASAdminPassword
: The password of the user who is specified in the *WASAdminUserName* parameter.

WASNodeName
: The name of the WebSphere Application Server Network Deployment node.

WASApplicationServerName
: The name of the WebSphere Application Server Network Deployment application server.

WASVirtualHost
: The name of the WebSphere Application Server Network Deployment virtual host.

WASWebServerName
: The name of the WebSphere Application Server Network Deployment web server.

Deploying the EAR files on WebLogic Server

After you build the EAR files, you must deploy them from the WebLogic Server console. Deploying the EAR files starts the application server.

Before you begin

- Update the Maximo database and build the EAR files.
- On Windows: If the MAXIMOSERVER server is not running, start it from a command prompt.
- On UNIX: Ensure that the WebLogic Server daemon is running.

To view the WebLogic Server console, a Java™ virtual machine must be installed.

About this task

The Maximo EAR files are installed on WebLogic Server during the Maximo Asset Management installation.

Procedure

1. Change to the `mydomain` directory:

Operating system	Location
Windows	From a command prompt, change to the following directory: *weblogic_home*\ `user_projects\domain\mydomain`
UNIX	From a command prompt, change to the following directory: *weblogic_home*/ `mxadmin/oracle/user_projects/domains/` `mydomain`

2. Start WebLogic Server by running the following command:

Operating system	Command
Windows	`startWebLogic.cmd`
UNIX	`./startWebLogic.sh`

3. Specify the WebLogic Server user name and password.
4. Log in to the WebLogic Server console at `http://hostname:7001/console`.
5. In the WebLogic Server console, follow the instructions to deploy the `maximo.ear` file and the `maximoiehs.ear` file.

Installing silently

You can install Maximo Enterprise Adapter silently from the command line to perform an unattended installation based on predefined settings.

Before you begin

You must complete a successful installation of Maximo Enterprise Adapter to produce a response file that can be used to silently install Maximo Enterprise Adapter. You can create a silent installation response file by opening a command prompt, setting the `record` environment variable, and then starting the Maximo Enterprise Adapter installation program through the Maximo Enterprise Adapter launchpad. The response file is generated in the home directory of the user that started the program.

Alternatively, you can use one of the sample response files that are provided on the product media and modify the sample file.

If the response file was created on a different system, ensure that all values that are recorded in the response file are valid for the target system. Ensure that the path values that were defined when the response file was created are still valid for the target system. For example, you might need to update the repository location parameter values to indicate the correct path for product and middleware installation images.

If you are installing the product in a directory different from the path used during creation of the response file, update the **installLocation** parameter value. If you update the value for the **installLocation** parameter, you must also provide a new value for the **profile id** parameter.

Procedure

1. Copy the response file and the Maximo Enterprise Adapter files to the Maximo Asset Management administrative workstation.
2. Open a command prompt and change directory to the location of the Installation Manager program that is appropriate for your operating system.

Option	Description
Windows	`cd C:\Program Files\IBM\Installation Manager\eclipse\tools`
Linux and UNIX	`cd /opt/IBM/InstallationManager/eclipse/tools/`

3. Silently start the Installation Manager program.

   ```
   imcl -input responsefilename
   -log logfilename -acceptLicense
   ```

   The **-input** parameter determines the response file to use, for example, `/SI/tpaeInstallerRsp20130716105258.xml`. The **-log** parameter determines where log files are written, for example, `/tmp/linuxDB2WASMAM_Log.xml`. You must include the full path when you specify the response and log files.
4. After Maximo Enterprise Adapter is installed, update Maximo Asset Management configuration and then rebuild and redeploy the application EAR file from the command line.

Option	Description
WebSphere Application Server	Run the **reconfigurePae** command.

	Install_Home`\ConfigTool\scripts\`
	`reconfigurePae -action updateApplication`
	`[-updatedb]`
	`[-deploymaximoear]`
	`[-deployhelpear]`
	`[-wasuser userid]`
	`[-waspwd password]`

Option	Description

WebLogic Server	1. Run the **reconfigurePae** command.
	
	`Install_Home\ConfigTool\scripts\`
	`reconfigurePae -action`
	`updateApplication [-updatedb]`
	
	2. Build the application EAR files.
	
	`cd install_home\maximo\deployment`
	`buildmaximoear // build Maximo EAR`
	`buildmxiehsear // build Maximo`
	`        // help EAR`
	
	3. Deploy the application EAR files manually to the application server.

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