Oracle® Fusion Middleware

Installing Oracle Team Productivity Center Server

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This document introduces the Oracle Team Productivity Center Server and describes how to plan and complete an installation.

This document contains the following sections:

1 Introduction to Oracle Team Productivity Center Server

Oracle Team Productivity Center is an Oracle JDeveloper feature that provides access to a set of application life cycle management (ALM) tools.

Oracle Team Productivity Center also presents information about the latest builds undergoing development. A build dashboard and build summary present at-a-glance information about the status of development builds, with links to let you quickly find the details of issues that interest you in the latest build.

For more information about Oracle Team Productivity Center Server, see "Introduction to Oracle Team Productivity Center" in *Developing Applications with Oracle Team Productivity Center*.

2 Planning Your Oracle Team Productivity Center Server Installation

This section helps you to prepare your system for the Oracle Team Productivity Center Server installation.

It contains the following sections:

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2.1 Knowing the Terminology

Before installing the Oracle Team Productivity Center Server, understand the terms that are used to manage the server during and after installation.

Table 1   Terminology Used to Manage Oracle Team Productivity Center

Term	Description
Client	The developer's Integrated Development Environment (in this case Oracle JDeveloper) which when connected to the server, facilitates interaction with team members, selecting work items, tracking project development, and so on.
Server	The software that manages the connections between the Team Productivity Center features in Oracle JDeveloper and data repositories (such as a bug database, directory of product features and specifications, and so on).
Connector	The element that defines the data structures and user interface between Oracle Team Productivity Center and a given data repository. For example, presenting a list of bugs from the bug tracking tool in Oracle JDeveloper requires a connector to the bug tracking tool. For more information on this, see the online help for developing a connector.
Plug-in	Oracle Team Productivity Center uses two distinct plug-ins, Hudson and CruiseControl, for each automated build system. The plug-ins are generated in the folders that you create during the installation. They facilitate automated build system, and send data to Oracle Team Productivity Center.

> **Note:**   You can install Oracle Team Productivity Center Server without installing a connector at the same time. You can also install a connector or generate a plug-in at a later time after the installation of the server.

2.2 Verifying Your System Requirements for Installing Oracle Team Productivity Center Server

For information about recommended CPU, memory, display, and hard drive configurations, see *Oracle Fusion Middleware System Requirements and Specifications*

For the most current information about software that is certified for use with Oracle Team Productivity Center, see the following documentation on Oracle Technology Network (OTN):
http://www.oracle.com/technetwork/developer-tools/jdev/documentation/index.html.

2.3 Understanding the Prerequisites for Installing Oracle Team Productivity Center Server

Before you run the installer, ensure that the following prerequisites are met:

- Ensure that you have all user privileges that you require to access the database that Oracle Team Productivity Center Server is associated with, before beginning the installation.

    For example, if you are using an Oracle database, ensure that you have the privileges to the Connect and Resource options.

    To enable user privileges, run the following command in SQLPlus:

    ```
    create user user_ID identified by password; grant connect, resource to user_ID
    identified by password with admin option;
    ```

    For example,

    ```
    create user tpcadmin identified by welcome1; grant connect, resource to
    tpcadmin identified by welcome1 with admin option;
    ```

    > **Note:** For the Oracle JDeveloper installer in Japanese language, ensure that the database supports the appropriate character set. For example, if Oracle Database is the database on which Oracle JDeveloper is installed, ensure that the following settings are made:
    >
    > ```
    > Database Character Set = AL32UTF8
    > National Character Set = UTF8
    > ```

- The product distribution is available as a platform-independent `.jar` file. Obtain the software from the following location on OTN: http://www.oracle.com/technetwork/developer-tools/tpc/downloads/index.html

- If you are using Oracle WebLogic Server as the installation server, ensure that you install and configure Oracle WebLogic Server 12*c* (12.1.2.0.0). Also, make sure that the version of the database on which you plan to install Oracle Team Productivity Center, is supported.

    See the following documentation on Oracle Technology Network (OTN): http://www.oracle.com/technetwork/developer-tools/jdev/documentation/index.html.

- Ensure that the repositories that you plan to install are of supported versions.

    See the following documentation on Oracle Technology Network (OTN): http://www.oracle.com/technetwork/developer-tools/jdev/documentation/index.html.

- Ensure that you have downloaded and installed the required JDK on the system. For information about the JDK versions, see "Installing a JDK" in *Planning an Installation of Oracle Fusion Middleware*.

- Set the `JAVA_HOME` variable and `PATH` variable before installing Oracle Team Productivity Center.

    To set the `JAVA_HOME` variable

From a command line interface (that is, a Linux or DOS command shell), enter the following command, substituting the JAVA_HOME directory of the installation system where indicated:

```
setenv JAVA_HOME location_of_java_home
```

For example:

On a Windows system with JDK 7 Update 15 installed in the `Program Files` directory on the `C:\` drive, enter the following command:

```
set JAVA_HOME C:\Program Files\Java\jdk1.7.0_15
```

On a Linux system with JDK 7 Update 15 installed, enter the following command:

```
setenv JAVA_HOME /home/Java/jdk1.7.0_15
```

To set the PATH variable

To set the PATH variable, enter the following command:

```
setenv PATH JAVA_HOME/bin:$PATH
```

3 Installing Oracle Team Productivity Center Server

The Oracle Team Productivity Center installer can perform the following functions:

- Perform the initial installation of the server.

- Install or update connectors that the existing server installation needs to access (such as project tracking software, or a feature or specification repository).

- Install or update plug-ins on the Test/Build systems (Hudson and CruiseControl) that the existing Oracle Team Productivity Center Server can access.

The following sections describe how to install the Oracle Team Productivity Center Server:

- Starting the Installer

- Navigating the Installation Screens

You can choose to install the Oracle Team Productivity Center Server as a new installation or as an update to an existing server. The software for both the scenario is the same. However, the steps for installing the server depend on whether you are creating a new installation or upgrading an existing one. Instructions for installing a new server or updating an existing one are included in Section 3.2, "Navigating the Installation Screens".

3.1 Starting the Installer

The Oracle Team Productivity Center Server installation package is a JAR file. The package can be installed on Windows, Linux, or Mac OS X platforms that meet the Oracle JDeveloper standard requirements. The installation system must also be running a Java EE application server, on which the Oracle Team Productivity Center server will run when installed.

Installation begins from the command line; after launching the installer, it will continue with a sequence of installation screens containing selections as the installer proceeds with the installation.

> **Note:** Ensure that the path to the command does not contain any whitespace.

To start the installer:

1. Navigate to the directory that contains the Oracle Team Productivity Center installation file, `tpcinstaller.jar`.

2. Verify whether the environment variables `JAVA_HOME` and `PATH` are set properly.

3. Launch the installer by entering the following command:

   `java -jar tpcinstaller.jar`

The installation program begins to install the software.

See Section 3.2 for a description of each installation program screens.

3.2 Navigating the Installation Screens

The installation program displays a series of screens. Depending on whether you are installing Oracle Team Productivity Center for the first time, or updating an existing installation, the responses you give to the screens might change.

On launching the installer, the Welcome screen is displayed. The panel on the LHS of this screen displays the installation screens that you would see as you proceed with the installation.

Navigate the installation screens as described in the following topics:

Task 1 Select the components of Oracle Team Productivity Center that you want to install

Select one or more components on the Installation Components screen:

Combination	Description
Team Productivity Center Server	Select this option to install the Oracle Team Productivity Center Server framework and database schema.
Connectors	Select this option to install connectors for information repositories you will use with Oracle Team Productivity Center. You will select the individual connectors, and the source from which you want to install these connectors, in a later step.
	Note: You cannot add repositories through the client (Team Administration screen) without installing the connectors.
Test/Build Plugins	Select this option to install the test/build plug-ins into the test/build systems. These plug-ins add test and build summary information required to integrate the systems into Oracle Team Productivity Center, such as the build dashboard and build summary screens.

Task 2 Provide the database details

On the Database Connection screen, provide the details of the database on which you want to create schemas for Oracle Team Productivity Center.

> **Note:** This screen appears only if you select **Team Productivity Center Server** or **Connectors** or both, on the Installation Components screen.

The following table describes the elements that appear on the screen:

Element	Description
Connection Type	You can connect using Generic JDBC or Oracle JDBC.
	If you select **Generic JDBC**, the installer prompt you to enter the information about drivers to the database.
	If you select **Oracle (JDBC)**, you do not have to enter information about drivers.
Driver Library	This field appears when you select **Generic JDBC** from the list of connection type.
	Enter the path to the location of the driver library:
	`oracle_home/oracle_common/module/mysql-connector-java-commercial-5.1.22/mysql-connector-java-commercial-5.1.22-bin.jar`.
Driver Class	This field appears when you select **Generic JDBC** from the list of connection type.
	Enter the driver class of the generic JDBC:
	`com.mysql.jdbc.Driver`
JDBC URL	Enter the JDBC URL for the database connection used by this server:
	JDBC URL for Generic JDBC
	`mysql://local_host:3306/database_name`
	For example,
	`msql://hostname.example.com:3306/database.example.com`
	JDBC URL for Oracle JDBC
	`jdbc:oracle:thin:@local_host:1521:sid`
	For example,
	`jdbc:oracle:thin:@hostname.example.com:1521:orcl`
Username	Enter the user name to the database connection.
Password	Enter the password to the database connection

Click **Test Connection** to verify the database connection details that you provided.

> **Note:** If the version of Oracle Team Productivity Server that you are trying to install already exists on the database, a message such as the following is displayed:
>
> ```
> You already have version 12.1.2.0.40.66.59 of the Team Productivity
> Center server installed. Click on the Next button if you would like
> to install connectors of the same version or test plugins.
> ```

You can proceed with the installation only after the verification is complete. The **Next** button is enabled only after the test is successful.

Task 3 Specify the Administrator Account details

On the Administrator Account screen, specify a user name and password for the Oracle Team Productivity Center administrator account. The password must contain at least eight characters.

> **Note:**
>
> - This screen appears only during the initial installation of Oracle Team Productivity Center, and after the database connection details are verified by the installer.
>
> - You must make a note of the user name and password you choose to enter here; you will need this information to update the Oracle Team Productivity Center server or connectors.

The account name need not be the same as the Oracle Team Productivity Center database. Ensure that you follow safe, high-security password guidelines while creating your password.

Task 4 Specify the application server type and location

On the Application Server Location screen, specify the application server type and its location.

> **Note:**
>
> - This screen appears only if you select **Team Productivity Center Server** or **Connectors** or both, on the Installation Components screen.
>
> - The screen is shown only after the installer verifies the database connection details that you provide on the Database Connection screen.

Select one of the following server types:

- WebLogic
- Tomcat
- Glassfish

The following table describes the elements on the screen:

Element	Description
Application Server Location	Enter a fully qualified path to the application server location. You can enter the path manually or click **Browse** to navigate to the location in the local file system.
	For example:
	■ On a Windows system running the Oracle WebLogic server, the application server location is:
	`C:\`*`weblogic_home`*`\user_` `projects\domains\`*`domain_name`*`\autodeploy`
	■ On a Windows system running the Apache Tomcat application server version 6.0.16, the application server location is:
	`C:\apache-tomcat-6.0.16\webapps`
	■ On a Windows system running the Glassfish server, the application server location is:
	`C:\glassfish-3.1.1\glassfish\domains\domain` `1\applications`
JMS Port	The value 61616 is set, by default. Ensure that you enter the correct value of the JMS port that applies to the application server that you have selected.

> **Note:** You must make a note of the application server path that you enter during the initial installation. You will need this information for updating an existing installation of Oracle Team Productivity Center. Ensure that you use the same path of the application server location, used during the first installation. The file `otpc.war` that is created after you install Oracle Team Productivity Center server for the first time, must be present to update the server or connectors successfully.

Task 5 Specify the connector source

Use the Connector Source screen to specify the source location that hosts the connector bundle files.

> **Note:** This screen appears only if you select **Connectors** on the Installation Components screen.

Use one of the following methods:

Method1: Check for Updates Using Update Centers

1. Select **Search Update Centers**.

2. The options **Oracle Fusion Middleware Products** and **Official Oracle Extensions and Updates** are selected, by default.

   To receive updates about open source, partners extensions, and other automatic updates for the current version of Oracle JDeveloper, select the other options available on the screen.

> **Note:** The wizard needs an internet connection to search for updates. Verify the proxy settings by click **Proxy Settings...**, to check and edit the internet connectivity on your system.
>
> To avoid manually searching for updates, select **Automatically check for updates at startup**.

To add more update centers to the existing list, click **Add...**, enter the name and location of the update center, and click **OK**.

3. Click **Next** to proceed.

Method 2: Install Updates Using Files from Your Local System

1. Select **Install From Local File**.

2. Use **Browse** to locate the directory where the ZIP files are downloaded.

3. Click **Next** to proceed.

Task 6 Select the updates that you want to install

The Connectors screen displays a list of updates available for installation. Select the updates that you want to install. To select all updates, click **Select All**.

> **Note:** The populated list displays the connectors developed by Oracle, in addition to connectors supported by Oracle and third-party connectors, such as Rally.
>
> You can include the connectors manually by using the **Use Local File** option available on the Connector Source screen.

Task 7 Test plug-ins

Use the Plugins screen to test the plug-ins and specify the path to deploy these plug-ins. You can select either one or both of the following plug-ins:

- Hudson
- CruiseControl

On selecting the plug-ins, the fields in the Team Productivity Center Connection section are enabled. The following table describes the fields in this section:

Element	Description
Server Address	The IP address on which Oracle Team Productivity Center is installed, is displayed in this field. Verify the information shown, by default.
Port	Enter the port used by the Oracle Team Productivity Center Server
SSL	If your server uses a Secure Socket Layer (SSL) connection, select the check box labeled SSL.
Username (disabled)	The username of the administrator account is displayed here.
Password (disabled)	The password of the administrator account is displayed here.

Task 8 Review the installation summary

The Installation Summary screen displays a list of components that you are about to install. Review the details displayed on this screen, and click **Install**. The Installation Progress screen is displayed. This screen shows you the status of the installation.

Task 9 Complete the installation process

The Installation Complete screen displays the results of the installation process. If the installation results displays errors, you have to restart the installation process by launching the wizard.

3.3 Next Steps After Installing Oracle Team Productivity Center Server

After completing the installation download the connector extension in Oracle JDeveloper.

To download the extension in Oracle JDeveloper, do the following:

1. Open the Oracle JDeveloper application, click **Help**, then select **Check for Updates** from the list of help topics. The **Check for Updates** wizard opens.

2. Search for updates using one of the following methods:

   To Check for Updates Using Update Centers

   a. Select **Search Update Centers**.

   b. The options Oracle Fusion Middleware Products and Official Oracle Extensions and Updates are selected, by default.

      To receive updates about open source, partners extensions, and other automatic updates for the current version of Oracle JDeveloper, select the other options available on the screen.

      Note: The wizard needs an internet connection to search for updates. Verify the proxy settings by click **Proxy Settings...**, to check and edit the internet connectivity on your system.

      To avoid manually searching for updates, select **Automatically check for updates at startup**.

      To add more update centers to the existing list, click **Add...**, enter the name and location of the update center, and click **OK**.

   c. Click **Next** to proceed.

   To Install Updates Using Files from Your Local System

   a. Select **Install From Local File**.

   b. Use Browse to locate the directory in which the updates are downloaded.

   c. Click **Next** to proceed. The **Select updates to install** screen is displayed.

3. The **Select updates to install** screen displays the available updates. Select the Oracle Team Productivity Center related updates.
   Click **Next**. The **Download** screen is displayed.

> **Note:** You can install the selected updates only if you have configured the proxy settings correctly. If the installer detects incorrect proxy settings, it prompts you to edit the settings.

4. The Download screen confirms that the wizard is installing the updates that you selected. You can stop the installation of the updates by clicking **Stop**. After the installation is complete, click **Next**. The Summary screen is displayed.

5. The **Summary** screen displays the updates that you installed.

The online Help for Oracle Team Productivity Center contains instructions for the administrator on how to set up Oracle Team Productivity Center inside Oracle JDeveloper.

For Oracle WebLogic Server, the MySQL JDBC driver is installed in the folder *WLS_home*/wlserver/server/lib in the weblogic.jar file. You need not include the drivers as they are automatically picked by the installer during the installation.

If you plan to use a JDBC driver other than Oracle and MySQL, specifically one that is not installed with the Oracle WebLogic Server folder, see "Using JDBC Drivers with WebLogic Server" in A*dministering JDBC Data Sources for Oracle WebLogic Server*.

> **Note:** If you use a WebLogic Server domain for TPC server installation, copy the driver to your *JDEV_HOME*/user_projects/domains/*domain*/lib folder instead.
>
> If you are using Oracle JDeveloper Studio, the MySQL JDBC driver is available at *JDEV_HOME*/oracle_common/modules/mysql-connector-java-commercial-5.1.22/mysql-connector-java-commercial-5.1.22-bin.jar.

4 Installing an Oracle Team Productivity Center Connector

To installing a connector launching the Oracle Team Productivity Center installer, as described in Section 3.1, "Starting the Installer". Select the information from the installer screens as described in Section 3.2, "Navigating the Installation Screens".

Note that you can also use the installer to update an Oracle Team Productivity Center connector. If you install a higher version of the connector from the one that has already been installed, the installer will overwrite the earlier version and install the higher version in its place.

The following sections describe how to install an Oracle Team Productivity Center connector:

- Section 4.1, "Installing Connectors"
- Section 4.2, "Setting Up Repositories for Default Connectors"

4.1 Installing Connectors

For information about how to use the Oracle Team Productivity Center installation wizard to install connectors, see Section 3.1, "Starting the Installer" and Section 3.2, "Navigating the Installation Screens".

Connect to the data repository of the connectors after the installation is complete.

4.2 Setting Up Repositories for Default Connectors

You need to setup the Atlassian JIRA, Microsoft Project, Rational Team Concert, and Bugzilla connectors for Oracle Team Productivity Center before connecting Oracle Team Productivity Center to them. The following sections describe the steps that you need to follow to setup the connectors:

- Section 4.2.1, "Setting Up the JIRA Repository"

- Section 4.2.2, "Setting Up a Microsoft Project Repository"

- Section 4.2.3, "Setting Up a Rational Team Concert Repository"

- Section 4.2.4, "Setting Up a Bugzilla Repository With REST API Enabled"

4.2.1 Setting Up the JIRA Repository

This section describes how to set up the JIRA connector.

Enable the remote API of the JIRA server to connect the connector to the Oracle Team Productivity Center server.

To enable the Remote API of the JIRA Server, follow these steps:

1. Log in to the JIRA server as a root user.

2. Click **Administration**. The Administration page is displayed.

3. From the pane on the LHS of the page, locate the **Global Settings** group, and click **General Configuration**. Then, click **Edit Configuration** that is located at the bottom of the page.

4. In **Options**, locate **Accept remote API calls,** and click **ON**.

This enables the Remote API settings of the JIRA Server.

4.2.2 Setting Up a Microsoft Project Repository

The MS Project Server connector of Oracle Team Productivity Center connector supports the following user authentications used by Project Server:

- windows

- forms

To configure forms authentication for Project Server 2007, see the following article on MSDN:

http://technet.microsoft.com/en-us/library/cc197472(office.12).aspx

4.2.3 Setting Up a Rational Team Concert Repository

Oracle Team Productivity Center's OSLC (Open Services Lifecycle Collaboration) connector for RTC (Rational Team Concert) supports the two user authentications used by the RTC server: basic and forms.

To configure forms authentication for RTC, refer to the following article:

http://jazz.net/library/techtip/75

If you cannot access the host name of the RTC server, you can connect to the server using its IP address.

To connect to the RTC server using its IP address, do the following:

1. Log in to the Rational Team Concert server using the administrator credentials.

2. Click the server link on top of the navigation bar.

3. On the left pane, select **Advanced Properties** located in **Configuration Properties**.

4. Locate the entry for `com.ibm.team.repository.servlet.internal.ServletConfigurationService`

5. Double-click **Host Name**.

6. Enter the IP address of the server.

4.2.4 Setting Up a Bugzilla Repository With REST API Enabled

Oracle Team Productivity Center's Bugzilla connector supports access to Bugzilla repository with REST API enabled. For more information about how to connect to Bugzilla with REST API enabled, refer to the following article:

https://wiki.mozilla.org/Bugzilla:REST_API

5 Installing Oracle Team Productivity Center Server on an Oracle WebLogic Server Production Domain

To install Oracle Team Productivity Center Server on a production Oracle WebLogic Server, complete the following steps:

Step 1 Configure Oracle WebLogic Server Production Domain

For information about how to configure an Oracle WebLogic Server production domain, see Section 5.1.

Step 2 Install Oracle Team Productivity Center Server

For information about how to install Oracle Team Productivity Center Server, see Section 3.1.

Step 3 Deploy the otpc.war file to the Oracle WebLogic Server Production Domain

For more information about how to deploy the otpc.war file to the Oracle WebLogic Server production domain, see Section 5.2

5.1 Configuring Oracle WebLogic Server Production Domain

To install Oracle Team Productivity Center on an Oracle WebLogic Server production database, you need to configure an Oracle WebLogic Server domain using the Oracle Fusion Middleware Configuration Wizard.

This section contains the following topics:

- Starting the Oracle WebLogic Server Configuration Wizard

- Navigating the Configuration Wizard Screens to Configure the Domain

- Starting the Administration Server

5.1.1 Starting the Oracle WebLogic Server Configuration Wizard

To begin domain configuration, navigate to the *ORACLE_HOME*`/oracle_`
`common/common/bin` directory and start the WebLogic Server Configuration Wizard.

On UNIX or Linux operating systems, enter the following command:

`./config.sh`

On Microsoft Windows operating systems:

`./config.cmd`

5.1.2 Navigating the Configuration Wizard Screens to Configure the Domain

Follow the instructions in this section to configure the domain using the Configuration
Wizard.

Task 1 Select the Domain Type and Domain Home Location

On the Configuration Type screen, select **Create a New Domain**.

In the New Domain Location field, specify your Domain home directory.

Task 2 Select the Configuration Templates

On the Templates screen the **Basic WebLogic Server Domain** templates is selected, by
default. Proceed by clicking **Next**.

Task 3 Configure the Administrator Account

On the Administrator Account screen, specify the user name and password for the
default WebLogic Administrator account for the domain. This account is used to boot
and connect to the domain's Administration Server.

> **Tip:** You must make a note of the user name and password you
> choose to enter here; you will need this to be able to start and access
> the Administration Server.

Task 4 Specify the Domain Mode and JDK

On the Domain Mode and JDK screen:

- Select **Production Mode** in the Domain Mode field.

- Select **Oracle HotSpot JDK** in the JDK field.

Task 5 Review Your Configuration Specifications and Configuring the Domain

The Configuration Summary screen contains the detailed configuration information
for the domain you are about to create. Review the details of each item on the screen
and verify that the information is correct.

You can go back to any previous screen if you need to make any changes, either by
using the Back button or by selecting the screen in the navigation pane.

Domain creation will not begin until you click **Create**.

Task 6 Write Down Your Domain Home and Administration Server URL

The Configuration Success screen will show the following items about the domain you
just configured:

- Domain Location

- Administration Server URL

Click **Finish** to dismiss the configuration wizard.

5.1.3 Starting the Administration Server

After configuration is complete, to access the tools with which you can manage your domain, start the Administration Server. Do the following:

On UNIX operating systems, run:

```
./startWebLogic.sh
```

On Windows operating systems, run:

```
startWebLogic.cmd
```

You will be prompted for the login credentials of the Administrator user as provided on the Administrator Account screen in Task 3.

> **Tip:**   For more information about starting the Administration Server, see "Starting and Stopping Administration Servers" in *Administering Oracle Fusion Middleware*.

5.2 Deploying otpc.war to Oracle WebLogic Server Production Domain

To deploy the `otpc.war` file to the domain that you configured, using the Oracle WebLogic Server Administration Console:

1. Using the Administration Server URL that you obtain after configuring the domain, log in to Oracle WebLogic Server administration console. Provide the Oracle WebLogic Server Administrator user name and password.

   See Section 5.1.2 for information about how to create a domain and obtain the Oracle WebLogic Administrator Server user name and password.

2. Select **Deployments** from the Domain Structure panel located on the LHS of the screen.

3. Click **Lock & Edit** from the Change Center panel located on the LHS of the screen, to edit the Deployments page settings.

4. On the Deployments page, click **Install**. Specify the path to the `otpc.war` file. The file is located in the `tpc_home` directory that is created after you install Oracle Team Productivity Server.

   Click **Next**.

5. Verify the options shown on the Install Application Assistant page. Click **Next**.

6. Verify the optional settings. Click **Next**.

7. Click **Finish** to confirm the settings displayed on the Install Application Assistant.

8. Click **Save**. The following confirmation message is displayed:

   ```
   Settings updated successfully from WebLogic Server.
   ```

9. Click **Activate Changes** from the Change Center panel on the LHS of the screen, to activate deployment changes. The following message is displayed:

   ```
   All changes have been activated.
   ```

10. Select **Deployments** from the Domain Structure panel.

11. In the Deployments list, select **otpc Deployment**. Click **Start**. Select **Service all requests**, and click **Yes** on the Start Deployments page. The following message is displayed:

```
otpc application has Active state.
```

Refresh the Oracle WebLogic Server Administration Console page before you start the Oracle Team Productivity Server.

6 Deploying otpc.war on Other Server Instances

You can replicate a newly installed Oracle Team Productivity Center server to another server instance without changing the settings provided during the initial Oracle Team Productivity Center server installation.

For example, to move an `otpc.war` file that is deployed on an Apache Tomcat server instance to a Glassfish server instance on a different machine, without changing the settings provided during the initial Oracle Team Productivity Center server installation, follow these steps:

1. On the Apache Tomcat server instance, locate the `otpc.war` file that is generated during the installation process.

On an Apache Tomcat server location, the `otpc.war` file can be located at:

```
C:\Program Files\apache-tomcat-7.0.12main\webapps
```

On a Glassfish server instance, the `otpc.war` file can be located at:

```
C:\Program Files\glassfish-3.1.1\glassfish\domains\domain1\applications\__
internal\otpc
```

On an Oracle WebLogic Server instance, the `otpc.war` file can be located at:

```
C:\JDEV_HOME\user_projects\domains\tpc_domain\autodeploy
```

2. Deploy the `otpc.war` file to the target server instances. Do the following:

- To deploy the `.war` file on an Apache Tomcat instance, copy the file to the following location on the instance:

  ```
  C:\Program Files\apache-tomcat-7.0.12main\webapps
  ```

- To deploy the `.war` file on a Glassfish server instance, do the following:

  a. Copy the file to the following location on the target instance:

  ```
  C:\Program Files\glassfish-3.1.1\glassfish\bin
  ```

  b. Run the following command to start the domain:

  ```
  asadmin start-domain
  ```

  c. Deploy the `otpc.war` file by executing the following command:

  ```
  asadmin deploy optc.war
  ```

- To deploy the `.war` file on an Oracle WebLogic Server instance, see "Deploying Applications" in *Administering Oracle Fusion Middleware*.

7 Configuring Email Notification on Server Instances

This section describes how to configure email notifications on server instances using JNDI and JavaMail.

It contains the following sections:

- Configuring Email Notification on a Tomcat 7.0 Server Instance
- Configuring Email Notification on an Oracle WebLogic Server Instance
- Configuring Email Notification on a Glassfish Server Instance

> **Note:** Ensure that the `otpc.war` file is deployed on your server before you configure email notifications on your server instance.

7.1 Configuring Email Notification on a Tomcat 7.0 Server Instance

To configure email notifications on your Tomcat 7.0 server instance, do the following:

1. Find the `context.xml` file located in *tomcat_home*`/webapps/otpc/META-INF`.

2. Open the file using a text editor, and edit the content as shown in Example 1.

Example 1   Editing the context.xml file

```
<Context path="/otpc">
   <Resource name="mail/Session" auth="Container"
            type="javax.mail.Session"
            mail.smtp.host="internal-mail-router.example.com"/>

<!--- the setting below is for the mail server that needs user authentication.
 <Resource name="mail/Session" auth="Container"
            type="javax.mail.Session"
            username="user_email"
            password="password"
            mail.user="user_email"
            mail.from="user_email"
            mail.transport.protocol="smtp"
            mail.smtp.host="host.example.com"
            mail.smtp.auth="true"
            mail.smtp.port="465"
            mail.smtp.socketFactory.class= "javax.net.ssl.SSLSocketFactory"
            mail.smtp.starttls.enable="true"/>
-->
 </Context>
```

3. Save the changes that you made in the `context.xml` file.

4. Find the `web.xml` file located in *tomcat_home*`/webapps/otpc/WEB-INF`.

5. Open the file using a text editor, and edit the content as shown in Example 2.

Example 2   Editing the web.xml file

```
<resource-ref>
      <description>
        Resource reference to a factory for javax.mail.Session instances that may
be used for sending electronic mail messages, preconfigured to connect to the
```

```
appropriate SMTP server.
      </description>
      <res-ref-name>
        mail/Session
      </res-ref-name>
      <res-type>
        javax.mail.Session
      </res-type>
      <res-auth>
        Container
      </res-auth>
    </resource-ref>
```

6. Save the changes you made in the web.xml file.

7. Find the following .jar files located in *tomcat_home*/webapps/otpc/WEB-INF/lib:

   - javax.mail_1.2.0.0_1-4-1.jar

   - avax.activation_2.0.0.0_1-1.jar

8. Move the .jar files to the following location in your *tomcat_home*:

   tomcat_home/lib

7.2 Configuring Email Notification on an Oracle WebLogic Server Instance

To configure email notifications on your Oracle WebLogic Server instance, do the following:

1. Create an Oracle WebLogic Server domain, *tpc_domain*. See "Creating and Configuring a WebLogic Domain" in *Installing and Configuring Oracle WebLogic Server and Coherence*.

2. Start the Administration Server. See "Starting the Administration Server" in Installing and Configuring Oracle WebLogic Server and Coherence.

3. Log in to the administration console.

4. In the Domain Structure panel on the LHS of the console, click **services** located in *tpc_domain*, and then click **Mail Sessions**.

5. To create a mail session, click **New**, and enter the following information about the mail server:

   - Name of the Mail Session: tpcMailSession

   - JNDI Name: tpcMailSession

   - JavaMail Properties:

     ```
     mail.smtp.port=465
     mail.user=<User email>
     mail.smtp.auth=true
     mail.smtp.host=host.example.com
     mail.smtp.password=<User password>
     mail.smtp.socketFactory.class=javax.net.ssl.SSLSocketFactory
     username=<User email>
     mail.from=<User email>
     mail.smtp.user=<User email>
     mail.transport.protocol=smtp
     ```

The email server settings are saved in **Mail Sessions** in the location *WLS_ DIR*\user_projects\domains\tpc_domain\config\config.xml, as shown in Example 3.

Example 3   Settings in the config.xml File After Changing the Mail Server Settings in the WLS Administration Console

```
<domain>
  <mail-session>
    <name>tpcMailSession</name>
    <notes xsi:nil="true"></notes>
    <target>AdminServer</target>
    <deployment-order>1000</deployment-order>
    <jndi-name>tpcMailSession</jndi-name>
<properties>mail.smtp.user=john@example.com;...
</properties>
  </mail-session>
</domain>
```

Click **Next** to continue.

6. Select **AdminServer**, and click **Finish** to save the changes.

7. Restart the Administration Server.

7.3 Configuring Email Notification on a Glassfish Server Instance

To configure email notifications on your Glassfish server instance, do the following:

1. Log in to the Glassfish administration console.

2. In the Common Tasks panel located on the LHS of the console, click Resources, and then click **JavaMail Sessions**.

3. Click **New** to configure a mail server, and enter the following information:

   - JNDI Name: tpcMailSession

   - Mail Host: *mail_server_name*

   - Default User: *user_email_account*

4. Click **Add Property** located in **Additional Properties**, and enter the following properties:

Elements	Values
mail.smtp.port	465
mail.user	*user_email*
mail.smtp.auth	true
mail.smtp.host	*host.example.com*
mail.smtp.password	*user_password*
mail.smtp.socketFactory.class	javax.net.ssl.SSLSocketFactory
username	*user_email*
mail.from	*user_email*
mail.transport.protocol	smtp

Elements	Values
mail.smtp.starttls.enable	true

The email settings are save in **Resources** in the location *GLASSFISH_DIR*\glassfish\domains\domain1\config\domain.xmlas shown in

Example 4   Settings in the domain.xml File After Changing the Mail Server Settings in the Glassfish Server Console

```
<domain>
  <mail-session>
    <name>tpcMailSession</name>
    <notes xsi:nil="true"></notes>
    <target>AdminServer</target>
    <deployment-order>1000</deployment-order>
    <jndi-name>tpcMailSession</jndi-name>
<properties>mail.smtp.user=john@example.com;...
</properties>
  </mail-session>
</domain>
```

Click **OK** to save the configuration settings.

5. Restart the server.

8 Installing and Running Plug-Ins for Oracle Team Productivity Center Server

This section contains the following topics:

- Section 8.1, "Installing and Configuring Hudson Test Data Collector"

- Section 8.2, "Installing and Running CruiseControl Test Collection"

8.1 Installing and Configuring Hudson Test Data Collector

The Hudson extensible continuous integration server collects test results and makes them available to Oracle Team Productivity Center Server.

8.1.1 Installing and Configuring Hudson Test Data Collector

- Installing Hudson Test Data Collector

- Configuring Hudson Test Data Collector to Transfer Data to Oracle Team Productivity Center Server

Installing Hudson Test Data Collector

To install the Hudson plug-in on Oracle Team Productivity Center Server, do the following:

1. Using the Hudson user interface, navigate to **Manage Plugins** that is located in **Manage Hudson**. Click **Advanced**.

2. In **Upload Plugin**, provide the path to the HudsonTpcPlugin.hpi file. Click **Upload**.

3. Restart Hudson to install the plug-in.

4. To verify that the Hudson Team Productivity Center plug-in is installed properly, click **Installed**. A list of installed plug-ins is displayed. Verify whether the uploaded plug-in shows in the list.

Configuring Hudson Test Data Collector to Transfer Data to Oracle Team Productivity Center Server

To configure the Hudson data test collector to transfer data to Oracle Team Productivity Center server, do the following:

1. Navigate to **Project Dashboard** in Hudson, and click **Configure** for the carbon-dating project that you want to configure. The Project Configuration screen is displayed.

2. On the Project Configuration screen, select **Publish test results to Oracle Team Productivity Center**.

3. Click the help icon on the RHS of each item in the list for details about the Oracle Team Productivity Center Test Data publisher.

4. Select **Publish test results to Oracle Team Productivity Center** located at the top of the help screen to include Oracle Team Productivity Center Data Publisher for post builds. The Publisher prompts you to enter the following information:

   - **TPC Server URL**

   - **Username**

   - **Password**

5. Enter the details and click **Test Connection**. The wizard verifies the information provided, and displays the message, `Connection established`.

   Note: At this stage of the configuration, you can also configure the unit test results with Oracle Team Productivity Center. However, this is optional.

   ---

6. Save the configuration settings.

8.2 Installing and Running CruiseControl Test Collection

The CruiseControl continuous integration tool collects test results and makes them available to Oracle Team Productivity Center Server.

8.2.1 Obtaining the Software

To obtain the software, complete the following steps:

1. Download the CruiseControl `.zip` file that is available on the following website:

   http://sourceforge.net/projects/cruisecontrol/files/CruiseControl/

   Obtain the latest version of the software.

2. Extract the contents of the zip file to your local folder.

8.2.2 Installing and Running CruiseControl

To install and run the CruiseControl plug-in for Oracle Team Productivity Center Server, do the following:

1. Generate the Test Plug-in for CruiseControl using the Oracle Team Productivity Center Server installer. For more information, see Section 3, "Installing Oracle Team Productivity Center Server".

   You can specify the deployment folder to be the same as your CruiseControl install directory located in your Oracle Team Prod, or any other directory of your choice.

2. Create an ANT Publisher plug-in for your CruiseControl configuration file, `config.xml`. See Example 5.

Example 5   ANT Publisher Plug-In for TPC Test Collector Invocation

```
<antpublisher anthome="apache-ant-1.7.0" antworkingdir="."
buildfile="tpc-test-collector.xml" uselogger="false" usedebug="true"
usequiet="false" target="publish"/>
```

> **Note:**   The version of Apache ANT might differ with different versions of CruiseControl.
>
> Example 5 shows CruiseControl version 2.8.4 that uses Apache-ANT version 1.7.0. If you use a different version of CruiseControl, you need to modify the `anthome` attribute to point to your Apache-ANT home.
>
> If you install Oracle Team Productivity Center Test Collector to a folder other than the CruiseControl install directory, you need to modify the `buildfile` attribute to point to your CruiseControl install directory.
>
> For example, if you installed the TPC Test Collector on Windows to `%CCDIR%\myTPC` folder, you need to specify the `buildfile` attribute as:
>
> `buildfile="myTPC\tpc-test-collector.xml"`.

---

3. Add the ANT Publisher you created in step 2 to the list of publishers for your CruiseControl project, in `config.xml`.

   Using the `connectfour` sample project as an example, modify the existing publisher tags as shown in this example:

Example 6   Add ANT publisher to list of publishers

```
<publishers>
    <onsuccess>
        <artifactspublisher
         dest="artifacts/$project.name"
         file="projects/$project.name/target/$project.name.jar"/>
    </onsuccess>
    <antpublisher
     anthome="apache-ant-1.7.0"
     antworkingdir="."
     buildfile="tpc-test-collector.xml"
     uselogger="false"
     usedebug="true"
     usequiet="false"
     target="publish"/>
</publishers>
```

4. Specify the modifications you need to make to trigger a build. You can use `filesystem` or `svn` to trigger the project build.

Example 7 and Example 8 illustrate both use cases:

Example 7   Trigger a build with filesystem

```
<modificationset quietperiod="30">
    <filesystem folder="projects/${project.name}"/>
 </modificationset>
```

Example 8   Trigger a build with svn

```
<modificationset quietperiod="30">
    <svn localWorkingCopy="projects/${project.name}"/>
 </modificationset>
```

> **Note:**   If you use SVN, make sure you configure your Subversion repository to point to the `projects/${project.name}` folder so that Subversion triggers a build any time a check-in is performed.
>
> For other version control systems, see instructions at `http://cruisecontrol.sourceforge.net/main/configxml.html#modificationset`.

5. Schedule the build and test collection.

Using the ANT builder as an example, the schedule element builds the project and collects test data every 300 seconds:

Example 9   Schedule build with Apache ANT

```
<schedule interval="300">
    <ant anthome="apache-ant-17.0"
     buildfile="projects/${project.name}/build.xml"/>
</schedule>
```

For more information about the `config.xml` settings, see:

http://cruisecontrol.sourceforge.net/main/configxml.html

6. Start CruiseControl using the `cruisecontrol.bat` file located in the install folder.

If you install CruiseControl as a service, you can use the Windows service created to start the CruiseControl.

9 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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Oracle customers have access to electronic support through My Oracle Support. For information, visit

http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are
hearing impaired.