Oracle® Fusion Middleware

WebLogic Tuxedo Connector Quick Start Guide for Oracle WebLogic Server

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> **Note:** For more detailed information on how to configure the Oracle WebLogic Tuxedo Connector for this Oracle WebLogic Server release, see *WebLogic Tuxedo Connector Administration Guide for Oracle WebLogic Server*.

This document describes how to use the Oracle WebLogic Server console to configure Oracle WebLogic Tuxedo Connector so that Oracle WebLogic Server can interoperate with Tuxedo Releases 6.5 and higher.

1 Contents

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2 Where to Find Oracle WebLogic Tuxedo Connector Samples

For this release of Oracle WebLogic Tuxedo Connector (WTC), samples are available on the Oracle Technology Network web site. Create a `wtc` directory within the samples directory of your WebLogic Server installation. Download the WTC samples to this directory. To run the samples referenced in this document, you must download the simpapp and simpserv samples.

3 Configuring the Oracle WebLogic Tuxedo Connector

> **Note:** This section summarizes how to configure the Oracle WebLogic Tuxedo Connector on a Windows platform. UNIX users can adapt the instructions by making appropriate substitutions such as replacing the "\" with "/" and ".cmd" with ".sh".

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This example extends the Oracle Tuxedo `simpapp` application to run over Oracle Tuxedo Domains (TDomains). This allows clients of the `TOUPPER` service to run on either the Oracle Tuxedo server or the Oracle WebLogic Server `examplesServer`. The example provides the following services:

- `TOUPPER`: An Oracle Tuxedo service that converts a string to upper case. A Oracle WebLogic Server client invokes the `TOUPPER EJB` and connects to the Oracle Tuxedo `TOUPPER` service.

- `Tolower`: A service implemented by an EJB in Oracle WebLogic Server. The client for the `Tolower` service runs on Oracle Tuxedo.

The following sections describe how to configure Oracle WebLogic Tuxedo Connector using the Administration Console:

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3.1 Build the Simpapp Example

> **Note:**   You may want to enable tracing to monitor Oracle WebLogic Tuxedo Connector. See "Monitoring the WebLogic Tuxedo Connector" in *WebLogic Tuxedo Connector Administration Guide for Oracle WebLogic Server*.

Use the following steps to build the `simpapp` example:

1. Boot your Oracle WebLogic examplesServer.

2. Open a new shell window and set environment variables using the `SAMPLES_HOME\domains\examples\setExamplesEnv.cmd` file.

3. Change directories to the location where you have downloaded the simpapp sample. For example, `SAMPLES_HOME\server\examples\src\examples\wtc\atmi\simpapp` directory.

4. Build the `wtc_toupper.jar` file using ant. This will deploy the EJB on Oracle WebLogic Server. Enter the following command: `ant`

5. Change directories to the location where you have downloaded the simpserv sample. For example, `SAMPLES_HOME\server\examples\src\examples\wtc\atmi\simpserv` directory.

6. Build the `wtc_tolower.jar` file. This will deploy the EJB on Oracle WebLogic Server. Enter the following command: `ant`

7. Launch the WebLogic Server Administration Console in your browser. Use the following URL: `http://your_machine:7001/console`. Replace *your_ machine* with the IP address for your machine or your machine name.

8. In the navigation tree, click **Deployments** and confirm that the `wtc_ tolower.jar` and `wtc_toupper.jar` are deployed.

3.2 Create a WTC Service

Use the following steps to create and configure a WTC service using the Oracle WebLogic Server Administration Console:

1. Expand Interoperability and select **WTC Servers** in the navigation tree.

2. On the WTC Servers page, click **New**.

3. On the Create a New WTC Server page, enter the name of your WTC Service in the **Name** field. Example: `mySimpapp`

4. Click **OK**.

5. Your new WTC Service appears in the WTC Servers list.

3.3 Create a Local Oracle Tuxedo Access Point

> **Note:** When configuring the Network Address for a local access point, the port number used should be different from any port numbers assigned to other processes. Example: Setting the Network Address to `//mymachine:7001` is not valid if the Oracle WebLogic Server listening port is assigned to `//mymachine:7001`.

Use the following steps to configure a local Oracle Tuxedo access point:

1. In the WebLogic Server Administration Console, expand **Interoperability** and select WTC Servers.

2. On the WTC Servers page, click the name of a WTC Service, such as mySimpapp, to access the settings page.

3. Click the **Local APs** tab.

4. Enter the following values for the following fields on the WTC Local Access Points page:

   Access Point: `myLocalAp`

   AccessPoint ID: `TDOM2`

   Network Address: the network address and port of your local access point

   Example: `//123.123.123.123:5678`

5. Click **OK**.

6. If you are connecting to a Tuxedo 6.5 domain, do the following:

   a. Click the **Connections** tab.

   b. Set the Interoperate field to **Yes**.

   c. Click **Save**.

3.4 Create a Remote Oracle Tuxedo Access Point

Use the following steps to configure a remote Oracle Tuxedo access point:

1. In the WebLogic Server Administration Console, expand **Interoperability** and select WTC Servers.

2. On the WTC Servers page, click the name of a WTC Service, such as mySimpapp.

3. Click the **Remote APs** tab.

4. Enter the following values for the following fields on the WTC Remote Access Points page:

    Access Point: `myRemoteAP`

    AccessPoint ID: `TDOM1`

    Local Access Point: `myLocalAp`

    Network Address: the network address and port of your remote access point

    Example: `//123.123.123.123:1234`

5. Click **OK**.

3.5 Create Exported Services

Use the following steps to configure an exported service:

1. In the WebLogic Server Administration Console, expand **Interoperability** and select WTC Servers.

2. On the WTC Servers page, click the name of a WTC Service, such as mySimpapp.

3. Click the **Exported** tab.

4. Enter the following values for the following fields on the WTC Exported Services page:

    Resource Name: `TOLOWER`

    Local Access Point: `myLocalAp`

    EJB Name: `tuxedo.services.TOLOWERHome`

    Remote Name: `TOLOWER`

5. Click **OK**.

3.6 Create Imported Services

Use the following steps to configure an imported service:

1. In the WebLogic Server Administration Console, expand **Interoperability** and select WTC Servers.

2. On the WTC Servers page, click the name of a WTC Service, such as mySimpapp.

3. Click the **Imported** tab.

4. Enter the following values for the following fields on the WTC Imported Services page:

    Resource Name: `TOUPPER`

    Local Access Point: `myLocalAp`

Remote Access Point List: `myRemoteAP`

Remote Name: `TOUPPER`

5. Click **OK**.

3.7 Target mySimpapp to the examplesServer

1. In the WebLogic Server Administration Console, expand **Interoperability** and select WTC Servers.

2. On the WTC Servers page, click the name of a WTC Service, such as mySimpapp.

3. Click the **Targets** tab.

4. Click the checkbox for the **examplesServer**.

5. Click **Save**.

3.8 Register TDOM1 as an Oracle WebLogic Server User

Use the following steps to register TDOM1 as an Oracle WebLogic Server user:

1. Click **Security Realms** in the navigation tree.

2. Click **myRealm**.

3. Click on **Users and Groups** tab.

4. Click **Users**.

5. Click **Lock & Edit**.

6. Click **New**.

7. In the Create a New User page, do the following:

    a. Add **TDOM1** in the **Name** field.

    b. Enter and confirm a password.

    c. Click **OK**.

8. Click **Release Configuration**.

4 Configuring Oracle Tuxedo

Use the following steps to configure your Oracle Tuxedo domain:

1. Your PATH environment variable needs to include the path of your C compiler. Use set PATH to check the status and add the path if necessary.

2. Copy the `simpapp` example from your Oracle Tuxedo installation and create a working Oracle Tuxedo `simpapp` directory.

3. Change directories to your working Oracle Tuxedo `simpapp` directory.

4. Set environment variables using the `setEnv.cmd` located at TUXDIR. Update the following parameters:

    TUXDIR - base directory of the TUXEDO Software

    APPDIR - base directory of the sample program

5. Build the clients:

```
buildclient -o simpcl -f simpcl.c
buildserver -o simpserv -f simpserv.c -s TOUPPER
```

6. Copy the `ubbdomain` and `dom1config` files from the `SAMPLES_`
   `HOME\server\examples\src\examples\wtc\atmi\simpapp` directory to
   your Oracle Tuxedo `simpapp` directory.

7. Copy the `tolower.c` file from the `SAMPLES_`
   `HOME\server\examples\src\examples\wtc\atmi\simpserv` directory to
   your Oracle Tuxedo `simpapp` directory.

8. Modify the `ubbdomain` for your Oracle Tuxedo environment. This includes
   setting the path names for `APPDIR`, `TUXCONFIG`, and `TUXDIR` and setting the
   machine name. Replace all `<braced>` items with information for your
   environment.

   Example:

   ```
   APPDIR="\home\me\simpapp"
   TUXCONFIG="\home\me\simpapp\tuxconfig""
   TUXDIR="\usr\tuxedo"
   ```

9. Load the `ubbdomain` file: `tmloadcf -y ubbdomain`

10. Modify the `dom1config` for your Oracle Tuxedo environment. This includes
    creating log devices and updating the network addresses.

    Example:

    ```
    DMTLOGDEV="d:\my_apps\tlog"
    AUDITLOG="d:\my_apps\aud"
    TDOM1 NWADDR="//TuxedoMachine:1234"
    TDOM2 NWADDR="//WTCMachine:5678"
    ```

11. Load the `dom1config` file.

    ```
    set BDMCONFIG=d:\mydomain\simpapp\bdmconfig
    dmloadcf -y dom1config
    ```

12. Build the `tolower` client

    ```
    buildclient -f tolower.c -o tolower
    ```

13. Boot the Tuxedo domain

    ```
    tmboot -y
    ```

5 Run the Example

Run each client to demonstrate interoperability between Oracle Tuxedo and Oracle
WebLogic Server.

5.1 Oracle WebLogic Server to Oracle Tuxedo Interoperability

Start an Oracle WebLogic Server client from the directory location to which you
downloaded the samples. For example, `SAMPLES_`
`HOME\server\examples\src\examples\wtc\atmi\simpapp` directory to
invoke the `TOUPPER EJB` and connect to the Oracle Tuxedo `TOUPPER` service. Use
the following command:

```
ant simpapp
```

The Oracle Tuxedo service replies to your Oracle WebLogic Server application with:

```
Buildfile: build.xml
simpapp:
run_client:
     [java] Beginning statefulSession.Client...
     [java] Creating Toupper
     [java] converting HelloWorld
     [java] converted to: HELLOWORLD
     [java] End statefulSession.Client...
BUILD SUCCESSFUL
```

5.2 Oracle Tuxedo to Oracle WebLogic Server Interoperability

Run the `tolower` client from the Oracle Tuxedo `simpapp` directory to invoke the Tolower EJB and return the results to the client. Use the following command:

```
tolower ALLSMALL
```

The Oracle WebLogic Server service replies to your Oracle Tuxedo client with:

```
Returned string is: allsmall
```

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