

Oracle® Fusion Middleware

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 *Oracle Fusion Middleware 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.

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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".

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 *Oracle Fusion Middleware 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="//WTMachine: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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