BEA WebLogic Server™

WebLogic Tuxedo Connector Quick Start Guide

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Note: For more detailed information on how to configure the WebLogic Tuxedo Connector for this WebLogic Server Release, see the *WebLogic Tuxedo Connector Programmer's Guide* at http://e-docs.bea.com/wls/docs81/wtc_admin/index.html.

The following sections describe how to use the WebLogic Server console to configure WebLogic Tuxedo Connector to allow WebLogic Server to interoperate with Tuxedo Releases 6.5 and higher:

- Configuring the WebLogic Tuxedo Connector
- Configuring Tuxedo
- Run the Example

Configuring the WebLogic Tuxedo Connector

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

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

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

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

- Build the Simpapp Example
- Create a WTC Service
- Create a Local Tuxedo Access Point
- Create a Remote Tuxedo Access Point
- Create Exported Services
- Create Imported Services
- Target mySimpapp to the examplesServer
- Register TDOM1 as a WebLogic Server User

Build the Simpapp Example

Note: You may want to enable tracing to monitor WebLogic Tuxedo Connector. See Monitoring the WebLogic Tuxedo Connector located at http://e-docs.bea.com/wls/docs81/wtc_admin/troubleshooting.html.

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

1. Boot your 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 your `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 WebLogic Server. Enter the following command: `ant`
5. Change directories to the `SAMPLES_HOME\server\examples\src\examples\wtc\atmi\simpserv` directory.
6. Build the `wtc_tolower.jar` file. This will deploy the EJB on WebLogic Server. Enter the following command: `ant`

7. Launch the 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→ EJB Modules and confirm that the `wtc_tolower.jar` and `wtc_toupper.jar` are deployed.

Create a WTC Service

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

1. Click Services in the navigation tree.

2. Right-click WTC.

3. Click Configure a New WTC Service.

4. Enter the Name of your WTC service in the Name field. Example: `mySimpapp`

5. Click Create.

6. Your new WTC Service appears in the navigation tree.

Create a Local 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 WebLogic Server listening port is assigned to `//mymachine:7001`.

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

1. Click mySimpapp in the navigation tree.

2. Click the Contents tab.

3. Select Local APs and click Configure a new Local Tuxedo Access Point.

4. Enter the following values for the following fields on the General tab:

   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 Create.
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 Apply.

Create a Remote Tuxedo Access Point

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

1. Click mySimpapp in the navigation tree.
2. Click the Contents tab.
3. Select Remote APs and click Configure a new Remote Tuxedo Access Point.
4. Enter the following values for the following fields on the General tab:

   Access Point: `myRemoteAP`

   AccessPoint ID: `TDOM1`

   Local Access Point: `myLocalAp`

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

   Example: `//123.123.123.123:1234`
5. Click Create.

Create Exported Services

Use the following steps to configure an exported service:

1. Click mySimpapp in the navigation tree.
2. Click the Contents tab.
3. Select Exported and click Configure a new Exported Service
4. Enter the following values for the following fields on the General tab:

Resource Name: `TOLOWER`

Local Access Point: `myLocalAp`

EJB Name: `tuxedo.services.TOLOWERHome`

Remote Name: `TOLOWER`

5. Click Create.

Create Imported Services

Use the following steps to configure an imported service:

1. Click mySimpapp in the navigation tree.
2. Click the Contents tab.
3. Select Imported and click Configure a new Imported Service
4. Enter the following values for the following fields on the General tab:

   Resource Name: `TOUPPER`

   Local Access Point: `myLocalAp`

   Remote Access Point List: `myRemoteAP`

   Remote Name: `TOUPPER`

5. Click Create.

Target mySimpapp to the examplesServer

1. Click mySimpapp in the navigation tree.
2. Click the Target and Deploy tab.
3. Click the checkbox for the `examplesServer`.
4. Click Apply

Register TDOM1 as a WebLogic Server User

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

1. Click Security in the navigation tree.

2. Click Realms.
3. Click myRealm.
4. Click on Users.
5. Click the Configure a new User.
6. In the General tab, do the following:
   a. Add TDOM1 in the Name field.
   b. Enter and validate a password.
   c. Click apply.

Configuring Tuxedo

Use the following steps to configure your 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 Tuxedo installation and create a working Tuxedo `simpapp` directory.
3. Change directories to your working 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 Tuxedo `simpapp` directory.
7. Copy the `tolower.c` file from the `SAMPLES_HOME\server\examples\src\examples\wtc\atmi\simpserv` directory to your Tuxedo `simpapp` directory.

8. Modify the `ubbdomain` for your Tuxedo environment. This includes setting the pathnames 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 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
    ```

Run the Example

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

WebLogic Server to Tuxedo Interoperability

Start a WebLogic Server client from the `SAMPLES_HOME\server\examples\src\examples\wtc\atmi\simpapp` directory to invoke the `TOUPPER EJB` and connect to the Tuxedo `TOUPPER` service. Use the following command:

```
ant run
```

The Tuxedo service replies to your WebLogic Server application with:

```
Buildfile: build.xml
run:
[java]
[java] Beginning statefulSession.Client...
[java]
[java] Creating Toupper
[java]
[java] converting allcaps
[java] converted to: ALLCAPS
[java]
[java] End statefulSession.Client...
[java]
BUILD SUCCESSFUL
```

Tuxedo to WebLogic Server Interoperability

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

```
tolower ALLSMALL
```

The WebLogic Server service replies to your Tuxedo client with:

```
Returned string is: allsmall
```