BEA WebLogic Server®

WebLogic Tuxedo Connector Quick Start Guide

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CHAPTER 1

WebLogic Tuxedo Connector Quick Start Guide

Note: For more detailed information on how to configure the WebLogic Tuxedo Connector for this WebLogic Server Release, see the *WebLogic Tuxedo Connector Administration Guide* at http://e-docs.bea.com/wls/docs91/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:

- Where to Find WebLogic Tuxedo Connector Samples
- Configuring the WebLogic Tuxedo Connector
- Configuring Tuxedo
- Run the Example

Where to Find WebLogic Tuxedo Connector Samples

For this release of WebLogic Tuxedo Connector (WTC), samples are available on the BEA dev2dev website under Code Share. 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 from the WebLogic Server 9.0 Code Share postings.

`http://`tuxedo-connector.projects.dev2dev.bea.com/

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/docs91/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 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 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 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 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. 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.

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. In the 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.

Create a Remote Tuxedo Access Point

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

1. In the 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.

Create Exported Services

Use the following steps to configure an exported service:

1. In the 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.

Create Imported Services

Use the following steps to configure an imported service:

1. In the 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.

Target mySimpapp to the examplesServer

1. In the 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.

Register TDOM1 as a WebLogic Server User

Use the following steps to register TDOM1 as a 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.

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 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 Tuxedo `TOUPPER` service. Use the following command:

```
ant simpapp
```

The Tuxedo service replies to your 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
```

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
```