# BEA WebLogic Server™

## WebLogic Tuxedo Connector Quick Start Guide

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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 in WebLogic Server Release 7.0, see the *WebLogic Tuxedo Connector Programmer's Guide* at http://e-docs.bea.com/wls/docs70/wtc_admin/index.html.

The following sections describe how to configure WebLogic Tuxedo Connector to allow WebLogic Server Release 7.0 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 TDomains. This allows clients of the `TOUPPER` service to run on either Tuxedo 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:


- Set the TraceLevel
- Build the Simpapp Example
- Create a WTCServer MBean
- Create a Local Tuxedo Domain
- Create a Remote Tuxedo Domain
- Create Exported Services
- Create Imported Services
- Deploy the WTCServer MBean
- Register TDOM1 as a WebLogic Server User


# Set the TraceLevel

**Note:** For more information on `TraceLevel`, see Monitoring the WebLogic Tuxedo Connector located at http://e-docs.bea.com/wls/docs70/wtc_admin/Install.html.

TraceLevel is a WebLogic Server Property. Update the `JAVA_OPTIONS` variable in the *`SAMPLES_HOME`*`\server\config\examples\startExamplesServer.cmd` file. Example:

```
JAVA_OPTIONS=-Dweblogic.wtc.TraceLevel=100000
```

where 100,000 specifies the maximum level of WebLogic Tuxedo Connector tracing.

# Build the Simpapp Example

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

1. Boot your WebLogic examplesServer.
2. Open a new shell window and change directories to your `SAMPLES_HOME\server\src\examples\wtc\atmi\simpapp` directory.
3. Set environment variables using the `SAMPLES_HOME\server\config\examples\setExamplesEnv.cmd` file.
4. Build the `wtc_toupper.jar` file using ant. Enter the following command: `ant`
5. Change directories to the `SAMPLES_HOME\server\src\examples\wtc\atmi\simpserv` directory.
6. Build the `wtc_tolower.jar` file. Enter the following command: `ant`
7. Click Deployment→EJB and check to see that the `wtc_tolower.jar` and `wtc_toupper.jar` are deployed.

# Create a WTCServer MBean

Use the following steps to create and configure a WTCServer MBean using the WebLogic Server Console:

1. Click the Services Node.
2. Right-click the WebLogic Tuxedo Connector Node.
3. Select Configure a New WTCServer.
4. Enter the Name of your WTCServer in the Name field. Example: `mySimpapp`
5. Click Create.

# Create a Local Tuxedo Domain

**Note:** When configuring the Network Address for a Local Tuxedo Domain, 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 domain:

1. Right-click Local WLS Domains.
2. Select Configure a New WTCLocalTuxDom.
3. Enter the following values for the following fields on the General tab:

   Access Point: `TDOM2`

   AccessPoint ID: `TDOM2`

   Network Address: <*the network address and port of your local Tuxedo domain*>
   Example: `//123.123.123.123:5678`
4. Click Create.
5. 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 Domain

Use the following steps to configure a remote Tuxedo domain:

1. Right-click Remote Tuxedo Domains.
2. Select Configure a New WTCRemoteTuxDom.
3. Enter the following values for the following fields on the General tab:

   Access Point: `TDOM1`

AccessPoint ID: `TDOM1`

Local Access Point: `TDOM2`

Listen Address: *<the network address and port of the remote Tuxedo domain>*
Example: `//123.123.123.123:1234`

4. Click Create.

# Create Exported Services

Use the following steps to configure an exported service:

1. Right-click Exported Services.
2. Select Configure a New WTCExport.
3. Enter the following values for the following fields on the General tab:

   Resource Name: `TOLOWER`

   Local Access Point: `TDOM2`

   EJB Name: `tuxedo.services.TOLOWERHome`
4. Click Create.

# Create Imported Services

Use the following steps to configure an imported service:

1. Right-click Imported Services.
2. Select Configure a New WTCImport.
3. Enter the following values for the following fields on the General tab:

   Resource Name: `TOUPPER`

   Local Access Point: `TDOM2`

   Remote Access Point List: `TDOM1`
4. Click Create.

# Deploy the WTCServer MBean

Use the following steps to deploy the WTCServer Mbean to examplesServer:

1. Click `mySimpapp`.
2. Click Targets.
3. Select `examplesServer`.
4. Click the right-arrow button.
5. Click Apply

# Register TDOM1 as a WebLogic Server User

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

1. Click on the Security node.
2. Click on Realms.
3. Select your default security Realm.
4. Click on Users.
5. Click the Configure a new User text link.
6. Click DefaultAuthenticator
7. 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\src\examples\wtc\atmi\simpapp` directory to your Tuxedo `simpapp` directory.
7. Copy the `tolower.c` file from the `SAMPLES_HOME\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"
    DMTLOGNAME="DMTLOG_TDOM1"
    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 -v -f tolower.c -o tolower
    ```

13. Boot the Tuxedo domain

    ```
    tmboot -y
    ```

14. Verify all processes have started using the `tmadmin psc` command.The following domain processes should have booted:

- `DMADM`, `GWADM`, and `GWTDOMAIN`
- The `TOUPPER` service offered by the `simpserv` server
- The `TOLOWER` service is offered by the `GWTDOMAIN` server

# 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\src\examples\wtc\atmi\simpapp` directory to invoke the `TOUPPER EJB` and connect to the Tuxedo `TOUPPER` service. Use the following command:

```
run.cmd allcaps
```

The Tuxedo service replies to your WebLogic Server application with:

```
Returned string is: ALLCAPS
```

# 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
```