Installing MCA Services on WebLogic 8.1

Version 2004.5

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Contents

1 Introduction

This document describes the steps required to deploy Multi Channel Architecture (MCA) Services on a BEA WebLogic 8.1.0 application server. The terms MCA Services and Foundation Services are interchangeable. MCA Services encompasses the Financial Process Integrator engine and the Statemachine. The steps required are:

- Extracting the MCA Services files.
- Configuring the database.
- Configuring BEA WebLogic.

Document Conventions

In the procedures described in this document the following assumptions are made:

On Windows:

- WebLogic is installed in the `d:\bea\weblogicXX` location.
- Oracle is installed in the `d:\oracle` location.
- The CD-ROM drive is attached to the `e:` drive.

On UNIX platforms:

- WebLogic is installed in the location: `/opt/bea/weblogicXX`. This is referred to as the WebLogic root directory.
- `$ORACLE_HOME` points to the location where Oracle has been installed, that is, in a standard installation `$ORACLE_HOME` is set to `/opt/oracle/OraHome1/.`
- The CD-ROM drive is mounted at `/mnt/cdrom.`

Your machine configuration may differ so adjust the values in the examples to your machine configuration.

Supported Environment

The MCA Services release for WebLogic 8.1 supports the following server and client environments:

Server Environment

AppServer	AppServer OS	RDBMS	RDBMS Server OS
BEA WebLogic 8.1	Solaris 8	Oracle 9.0.1	Solaris 8

Client Environment

Client OS	Client J2SE
	Sun J2SE 1.4.2 JRE

Installation Prerequisites

- The target server machine must be clean, that is, not running any other WebLogic applications, including any previous version of MCA Services.
- BEA WebLogic 8.1.0 must be correctly installed and configured.
- Oracle 9.0.1 or later must be correctly installed and configured.
- The Java utilities `java, javac, jar` must be available at the command line.

2 Installing on WebLogic 8.1

Extracting the MCA files

The MCA Services installation files for WebLogic 8.1 are available in the following location on the Installation CD:

- packs\FoundationServices200453WebLogic81forOracle.jar

Extracting on Windows

Extract the MCA Services installation files to a temporary folder and type the following commands at a command prompt:

```
mkdir d:\tmp\siebel
cd /d d:\tmp\siebel
jar xvf e:\packs\foundationservices_install.jar
```

where *foundationservices_install.jar* is the name of the JAR file to be installed – refer to the installation file names in the introduction.

Extracting on UNIX

Extract the MCA installation files to a temporary folder and type the following commands in a console:

```
mkdir /tmp/siebel
cd /tmp/siebel
jar xvf /mnt/cdrom/packs/foundationservices_install.jar
```

where *foundationservices_install.jar* is the name of the JAR file to be installed – refer to the installation file names in the introduction.

Configuring the Database

This section details the procedures specific to MCA Services that are required when configuring a database server. The procedure shows you how to create the database tables, the users, and schemas.

Oracle uses a file named `tnsnames.ora` to read database connection configurations. Add the following entry to the end of the host's `tnsnames.ora` file.

```
BANKFRM =
```

```
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(Host = hostname)(Port = 1521))
      (CONNECT_DATA = (SID = ORCL))
  )
```

where *hostname* is the name of your Oracle database server.

Configuring on Windows

Type the following command at a command prompt:

```
notepad D:\oracle\ora90\network\ADMIN\tnsnames.ora
```

Scroll to the end of the file and add the BANKFRM entry to the file.

Configuring on Unix

Type the following commands in a console:

```
cd $ORACLE_HOME
vi network/admin/tnsnames.ora
```

Scroll to the end of the file and add the BANKFRM entry to the file.

Creating the MCA Services Tables

To build the necessary tables to deploy MCA Services, you must run the database script bankframemca.sql within Oracle to create the proper schemas in the database.

Prerequisites

Before you run this script you must obtain the following information from the Oracle database administrator:

- The Oracle sys user password.
- The name of the Oracle database server's temporary tablespace. Running the MCA Services script can produce errors such as:

```
delete from BANKFRM.EJBGROUP_MEMBERS
                    *
ERROR at line 1:
ORA-00942: table or view does not exist
```

These errors are normal and you should ignore them. They are produced because the script always ensures it has an empty table space.

Creating the Tables on Windows

Start SQL Plus:

```
sqlplus sys/password@bankfrm
```

where *password* is the Oracle `sys` user password.

Run the script:

```
@'d:\tmp\siebel\FoundationServices\deploy\database\oracle\bankframemca.sql'
```

Creating the Tables on Unix

Start SQL Plus:

```
$ORACLE_HOME/bin/sqlplus sys/password@bankfrm
```

where *password* is the Oracle `sys` user password.

Run the script:

```
@'/tmp/siebel/FoundationServices/deploy/database/oracle/bankframemca.sql'
```

Inserting the Sample Data

Insert the sample data as follows:

Inserting on Windows

Start SQL Plus:

```
sqlplus bankfrm/bankfrm@bankfrm
```

Run the script:

```
@'d:\tmp\siebel\FoundationServices\deploy\database\oracle\txnsampledata.sql'
```

Inserting on Unix

Start SQL Plus:

```
$ORACLE_HOME/bin/sqlplus bankfrm/bankfrm@bankfrm
```

Run the script:

```
@'/tmp/siebel/FoundationServices/deploy/database/oracle/txnsampledata.sql'
```

Creating the Default MCA Services Routes

Create the default MCA routes as follows:

Creating the Routes on Windows

Start SQL Plus:

```
sqlplus bankfrm/bankfrm@bankfrm
```

Run the script:

```
@'d:\tmp\siebel\FoundationServices\deploy\database\oracle
defaultroutes.sql'
```

Creating the Routes on Unix

Start SQL Plus:

```
$ORACLE_HOME/bin/sqlplus bankfrm/bankfrm@bankfrm
```

Run the script:

```
@'/tmp/siebel/FoundationServices/deploy/database/oracle/defaultroutes.sql
'
```

Changing the User Password

The MCA Services database user has explicit ownership of the database tables in the schema used. For security reasons, you must change the database user password from its default `bankfrm`.

Make a note of the new password, as you will be required to set the JDBC Connection Pool Password to this value later.

Changing the Password on Windows

Start SQL Plus:

```
sqlplus bankfrm/bankfrm@bankfrm
```

Enter the command:

```
alter user bankfrm identified by newpassword;
```

where *newpassword* is the new user password.

Changing the Password on Unix

Start SQL Plus:

```
$ORACLE_HOME/bin/sqlplus bankfrm/bankfrm@bankfrm
```

Enter the command:

```
alter user bankfrm identified by newpassword;
```

where *newpassword* is the new user password.

Deploying MCA Services on WebLogic

To start WebLogic from a clean installation it is necessary to create a domain. To do this you must start WebLogic in console mode. When run in console mode, the Configuration Wizard is executed in a text-based environment.

To start the Configuration Wizard in console mode:

1. Log in to the target system on which the product installation resides.

2. Open a command-line shell.
3. Go to the \common\bin subdirectory of the product installation directory. For example cd c:\bea\weblogicxx\common\bin.
4. Run one of the following scripts to start the Configuration Wizard in console mode:
   ```
   Windows: config.cmd -mode=console
   UNIX: sh config.sh -mode=console
   ```

To finish creating your domain, respond to the prompts in each section by entering the number associated with your choice or by selecting Enter to accept the default. The arrow (—>) indicates the value currently selected. To quit the Configuration Wizard, enter exit in response to any prompt. To review or change your selection, enter previous at the prompt.

To deploy MCA Services on the WebLogic application server, edit the server start script as described in the following sections and start the application server:

Deploying on Windows

Add the following to startWLS.cmd before the java command:

```
set PATH=WL_HOME\server\bin\oci901_8;%PATH%
```

where *WL_Home* is the home directory of the WebLogic installation.

Deploying on UNIX

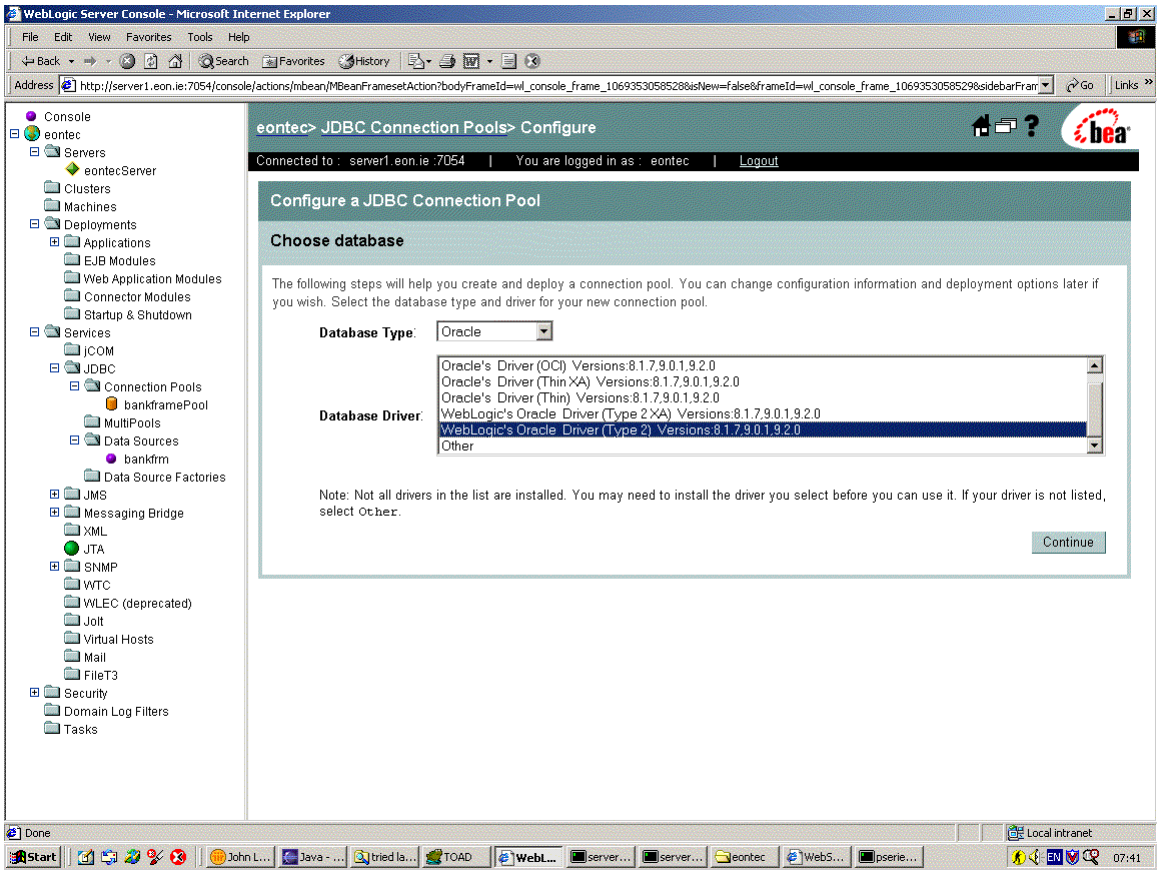
Add the following to startWLS.sh before the java command:

```
set PATH=WL_HOME/server/bin/oci901_8;%PATH%
```

where *WL_Home* is the home directory of the WebLogic installation.

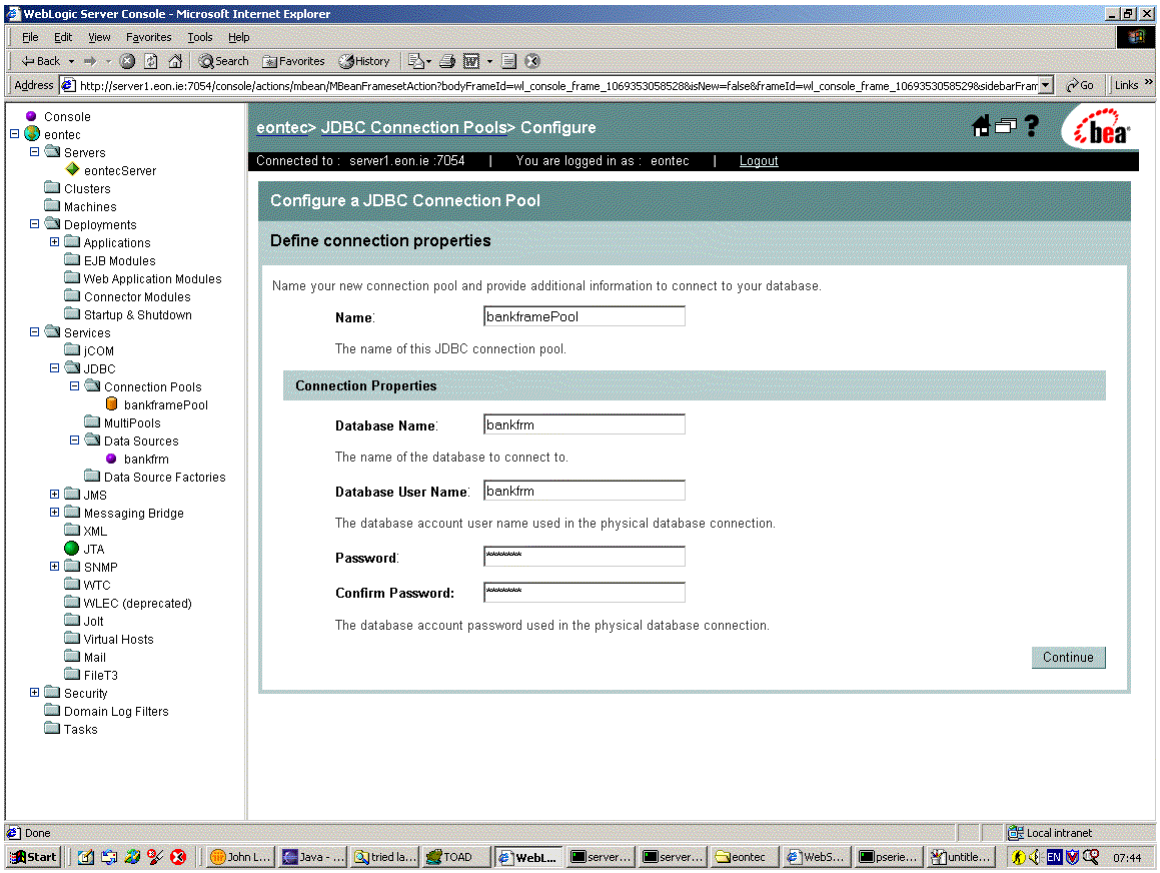
Configuring the Connection Pool

In the web console of the application server, the `bankframePool` must be configured. Navigate to the Services >JDBC > Connection Pools screen:



- Click WebLogic's Oracle Driver Type 2
- Click Continue.

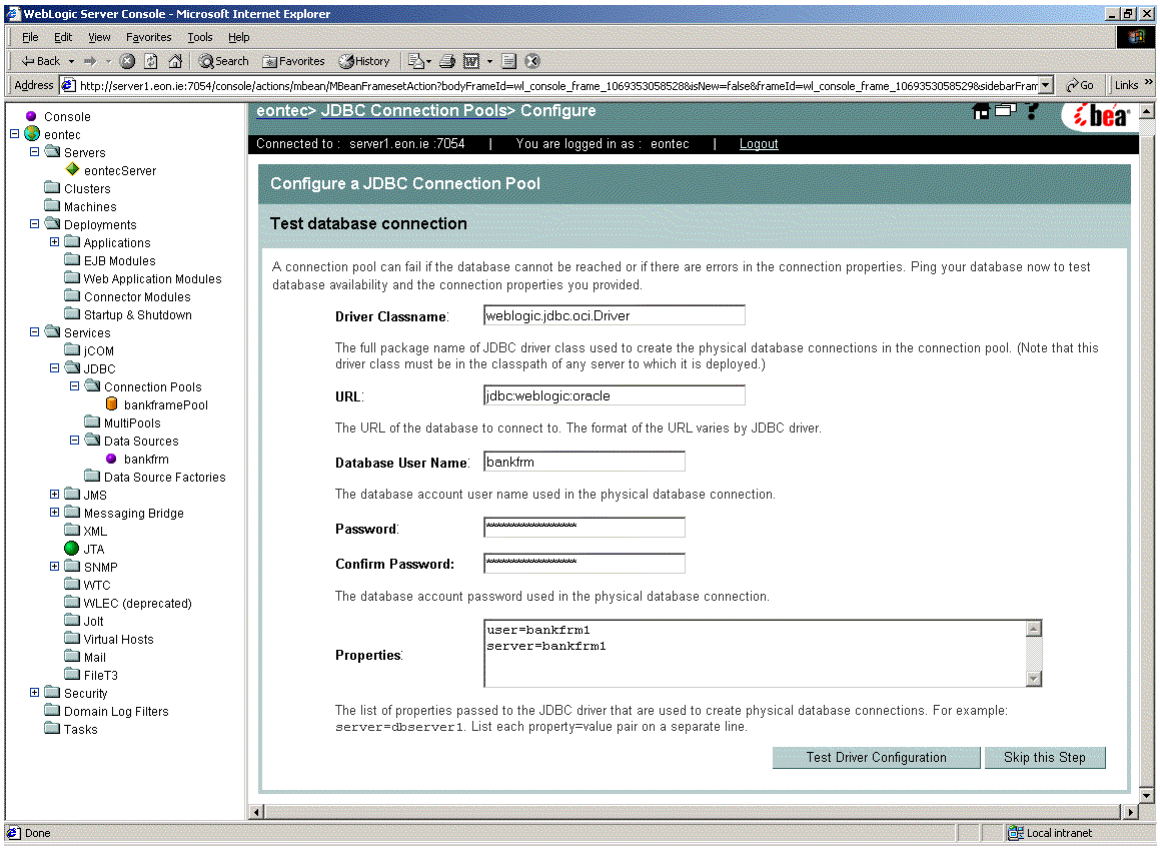
The following screen displays:



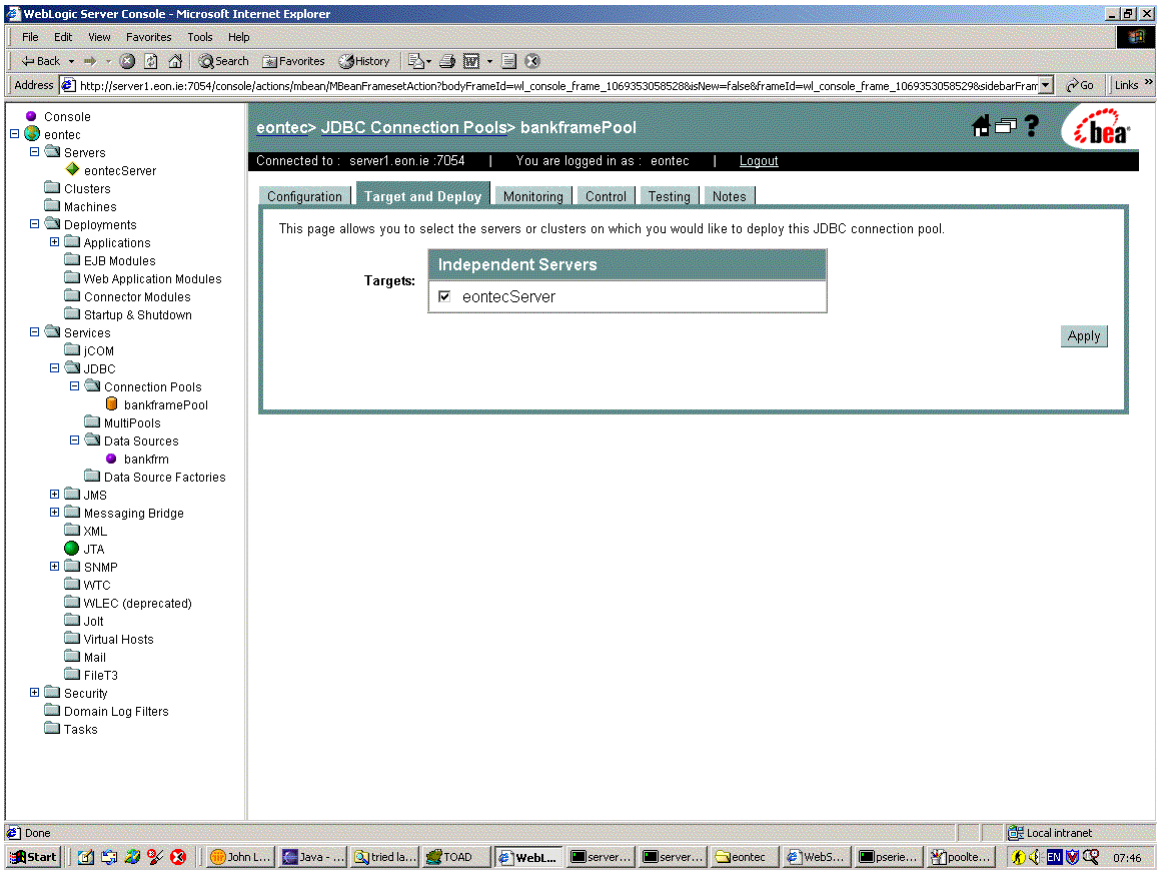
Configure the following settings:

- Name: bankframePool
- Database Name: bankfrm
- Database User Name: bankfrm
- Password: bankfrm
- Confirm Password: bankfrm

Click Continue and the following screen displays:



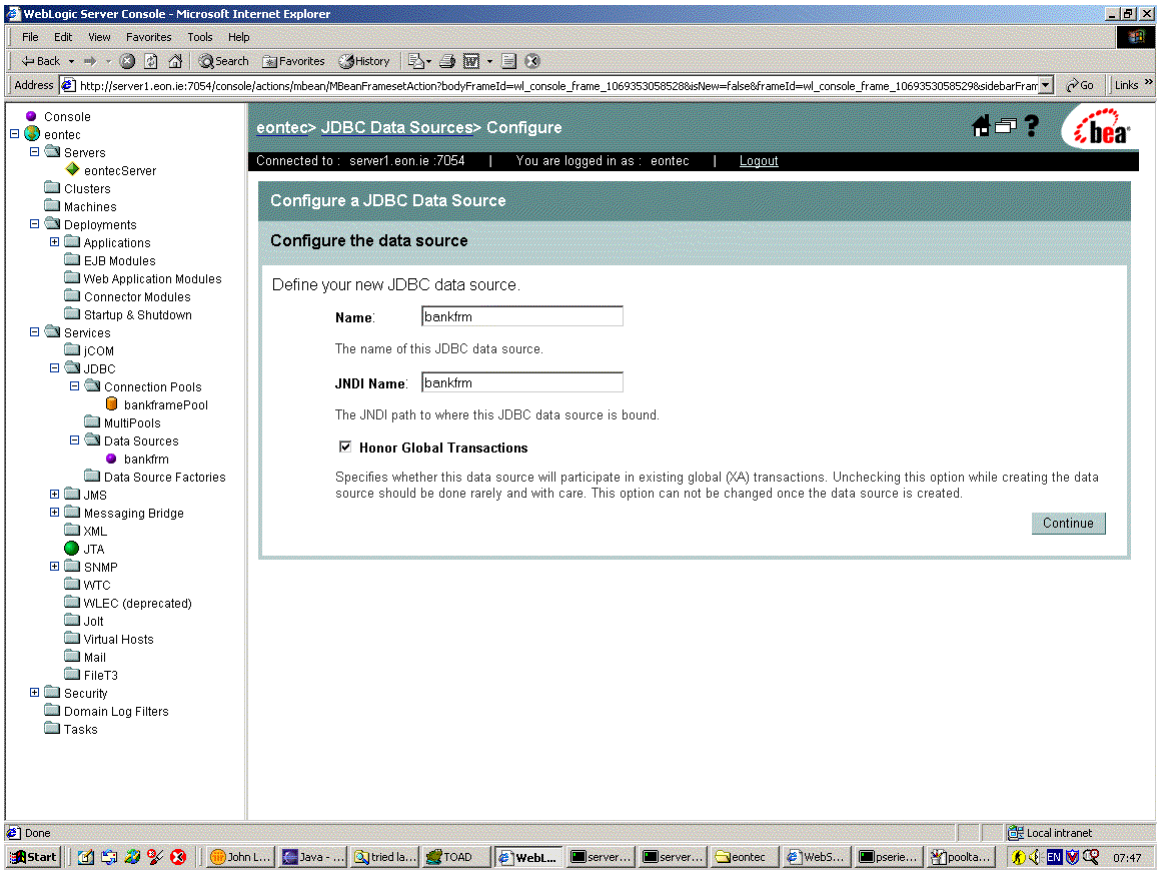
Click Test Driver Configuration to ensure the connection is set up properly. The following screen displays:



Select the server to which you want to apply the connection pool and click Apply.

Configuring the Data Source

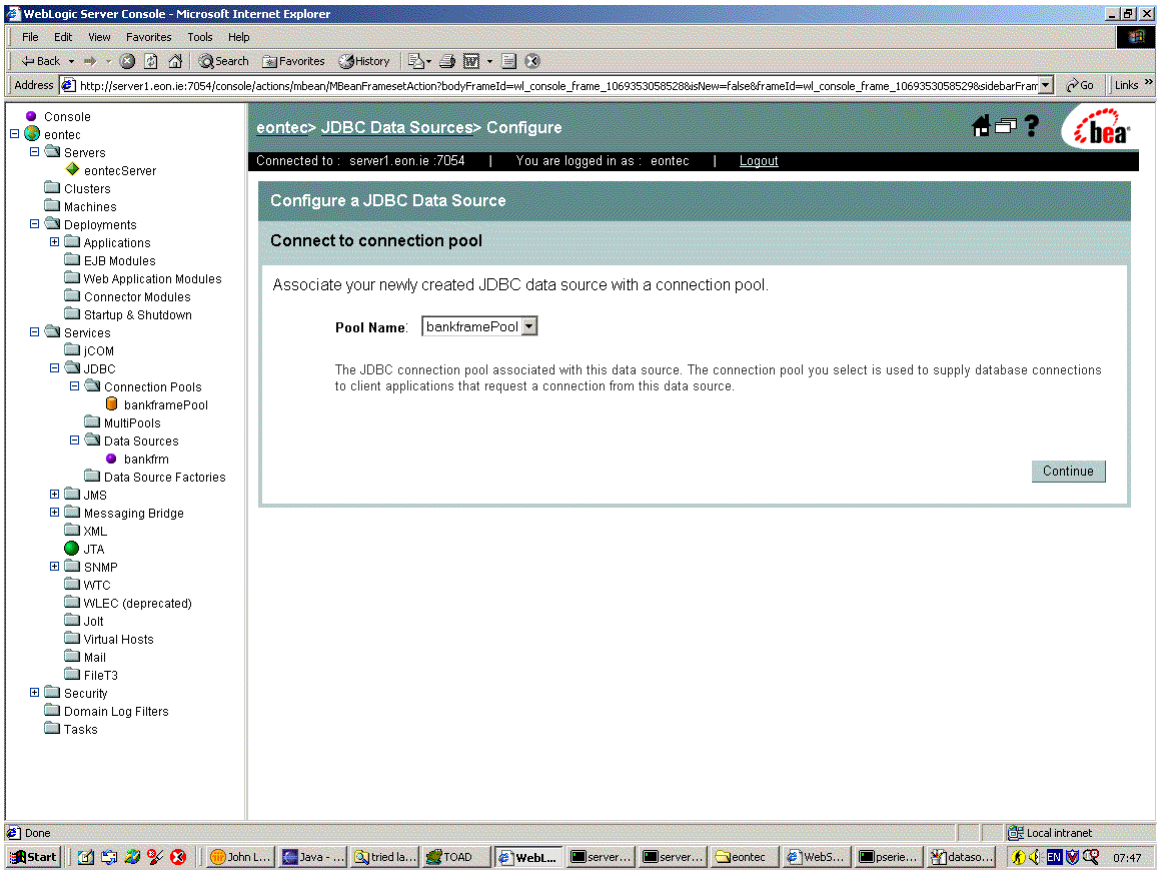
Navigate to the Services > JDBC > Data Sources > Configure the data source screen:



Configure the following:

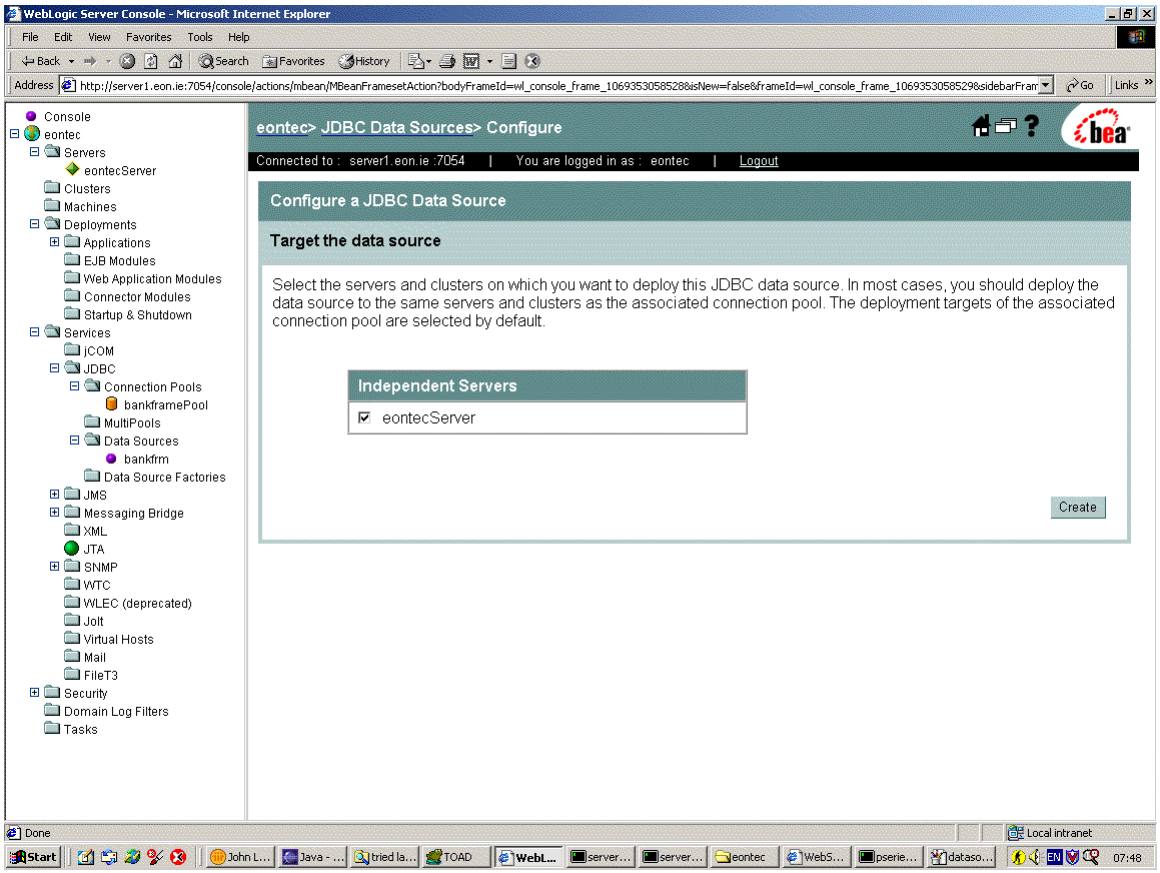
- Name: bankfrm
- JNDI Name: bankfrm

Click Continue and the following screen displays:



- Select bankframePool from the drop-down list.
- Click Continue.

The following screen is displayed:



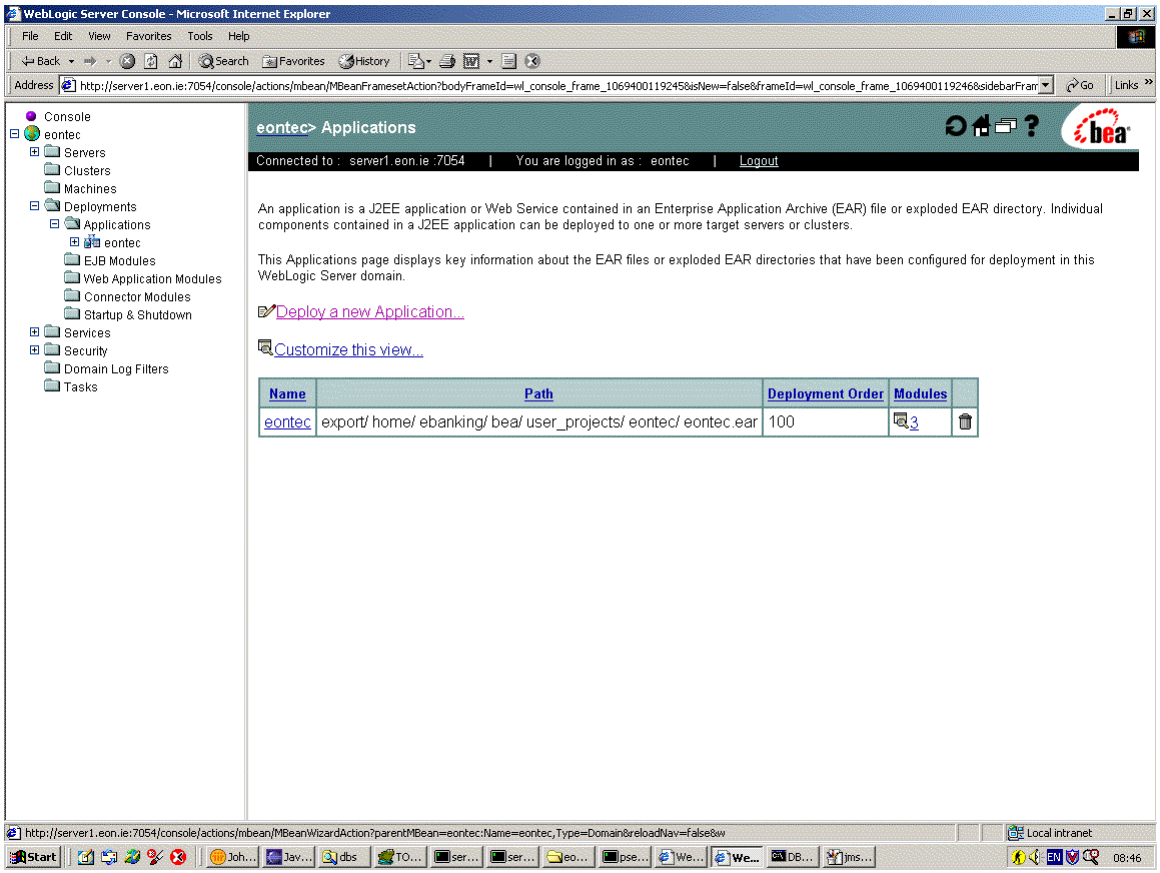
Select the server to which you want to apply the data source and click Create.

Updating Properties Files

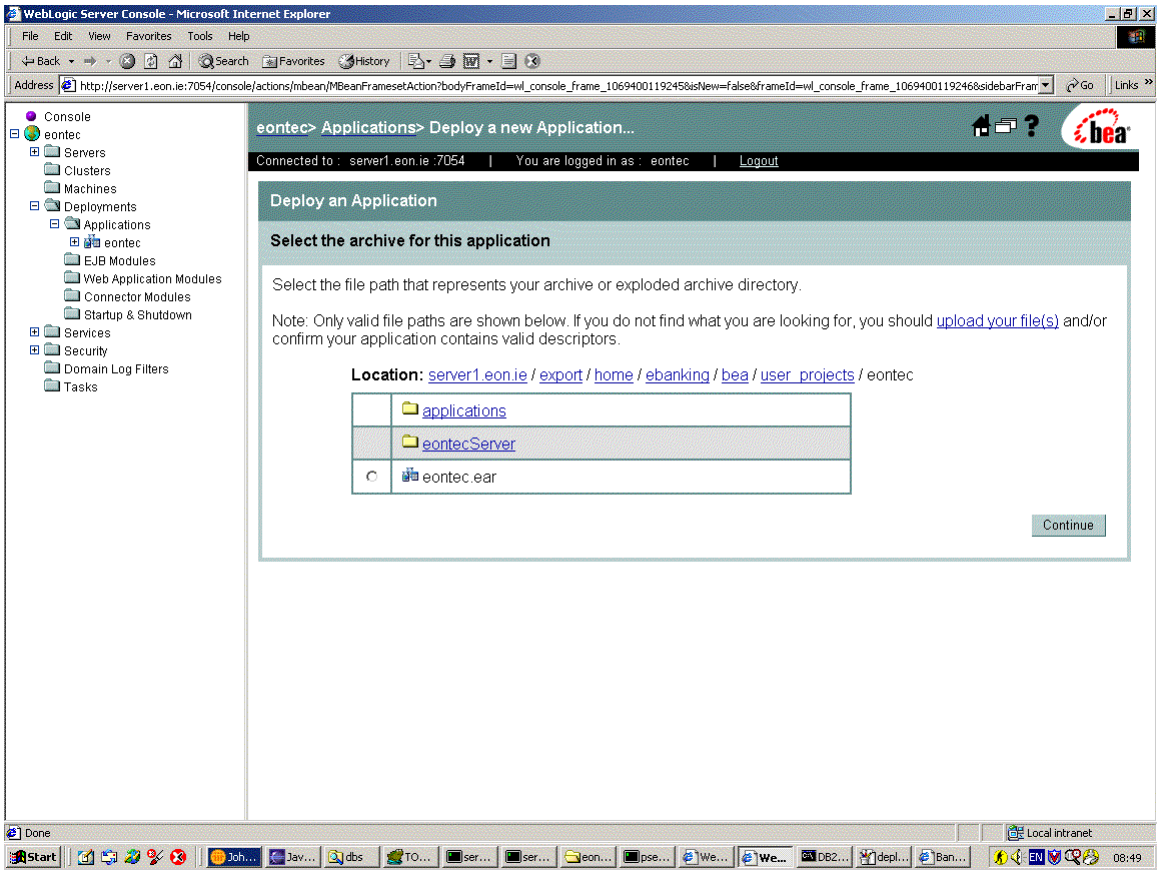
Update the files `BankframeResources.properties` and `TestCustomerData.properties` located in the eontec.ear file. To do this, refer to the Configuring MCA Services documentation.

Configuring the Enterprise Archive (EAR) file

Navigate to the Deployments > Applications screen:

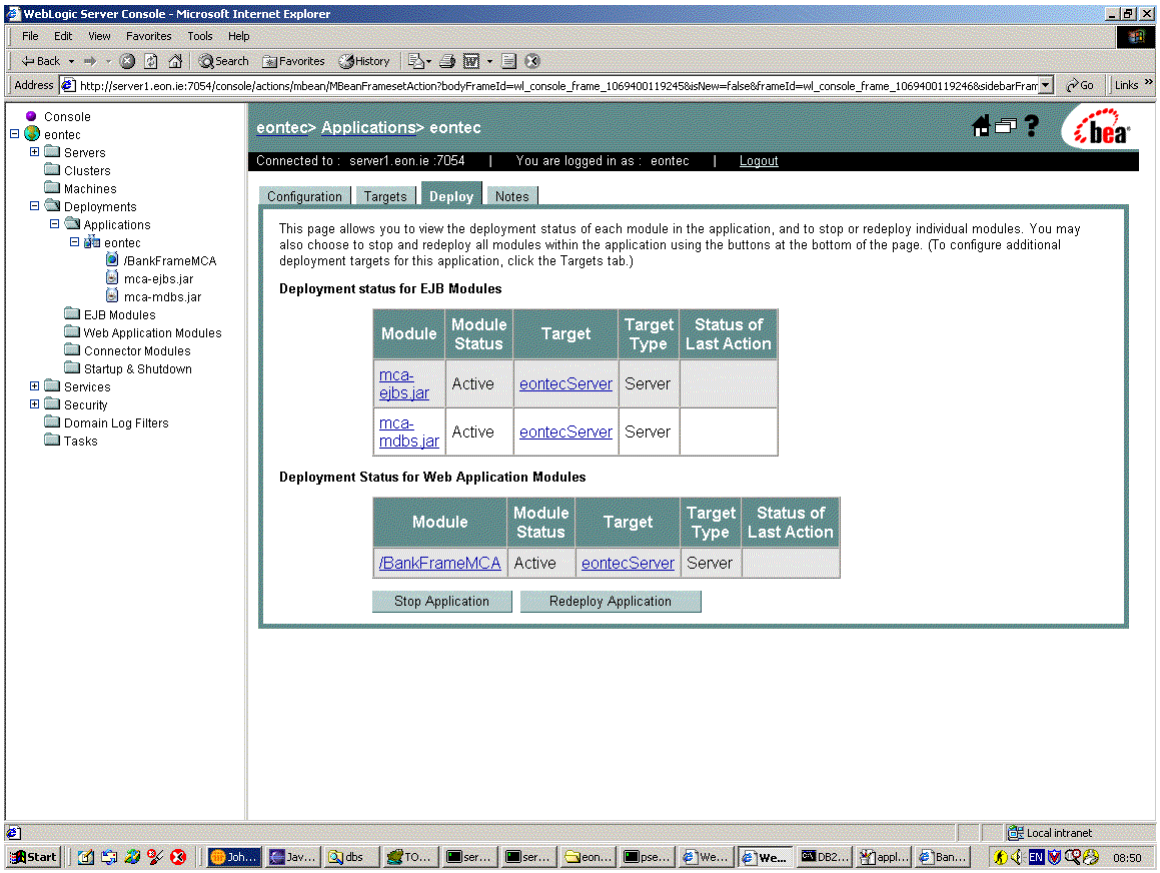


Click Deploy a new Application and the following screen displays:



- Browse to where the EAR file is saved on the application server host and select the EAR file.
- Click Continue.

The following screen then displays:



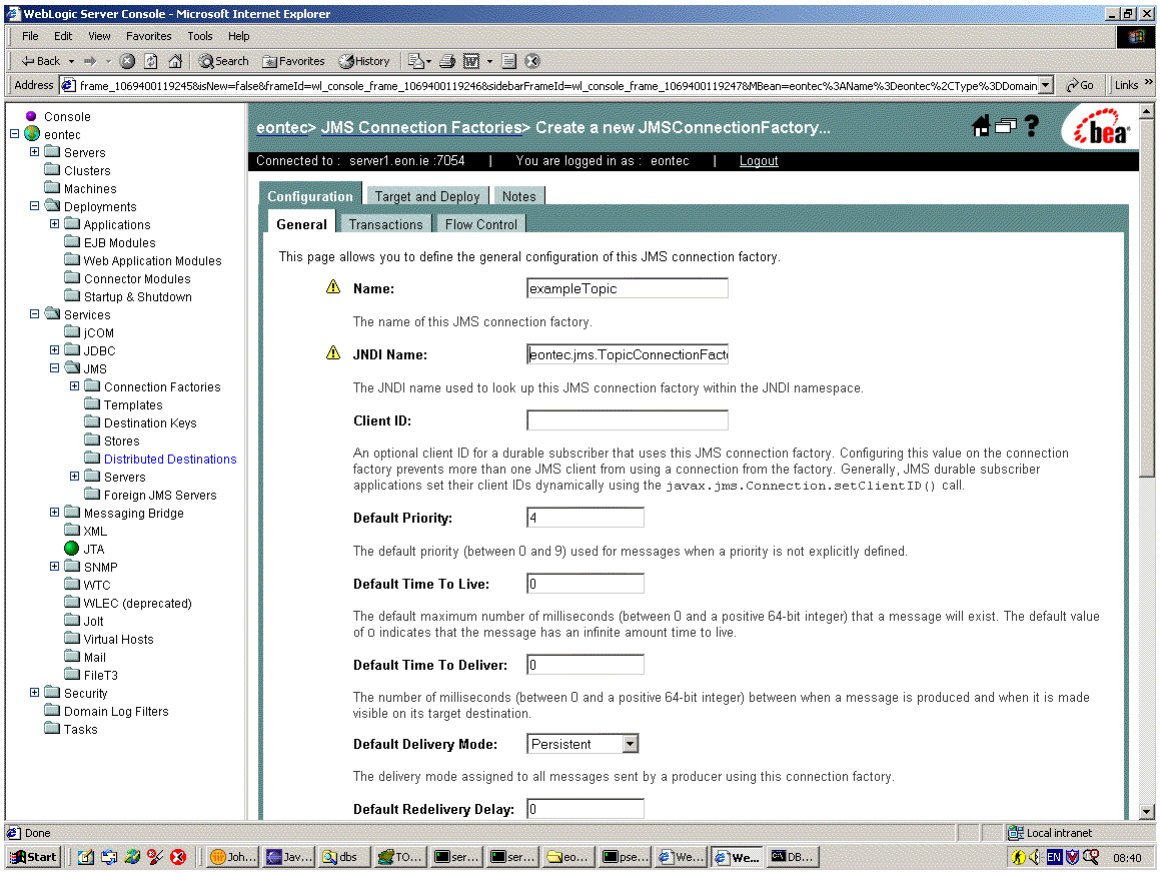
Click Deploy. The application is deployed when the Module Status column for each Module displays Active.

Configuring Java Message Service (JMS)

To configure JMS settings for a single instance of the WebLogic server, perform the steps described in the following sections.

Creating the JMS Connection Factory

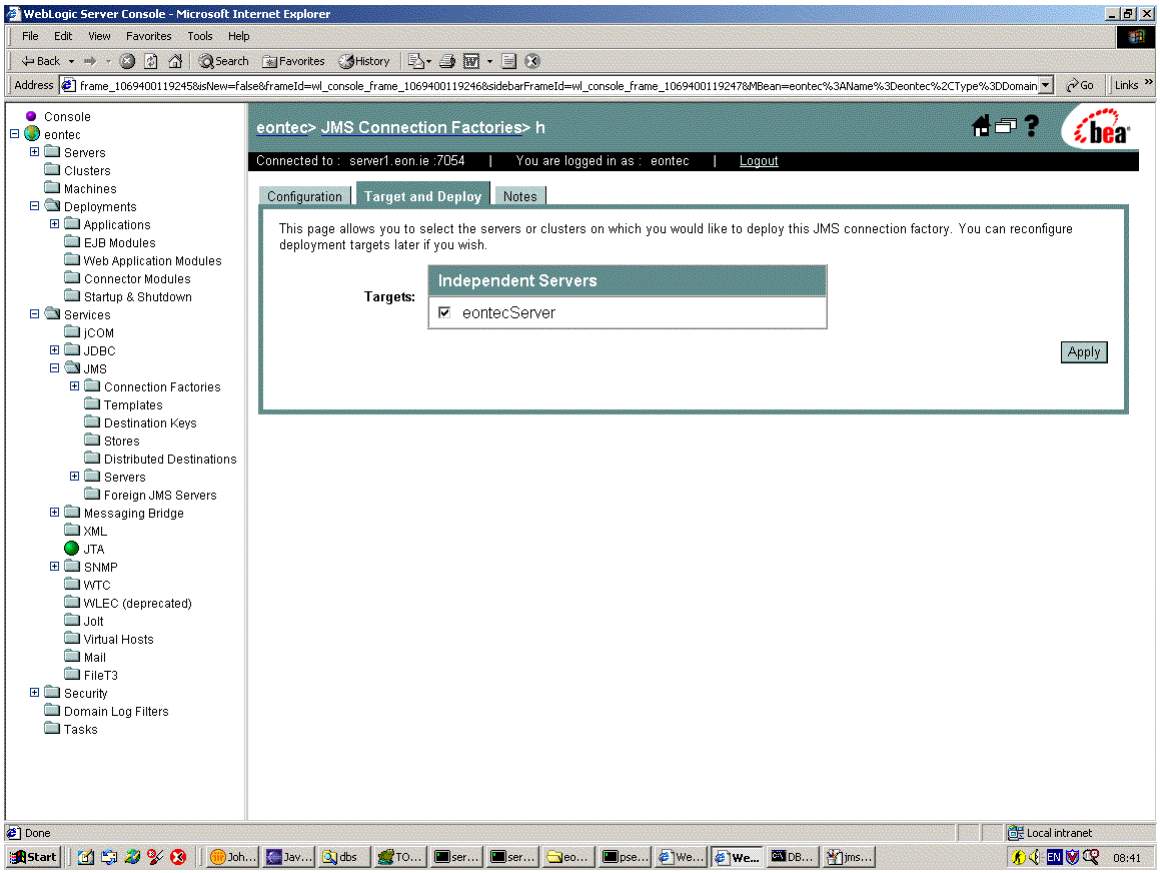
Navigate to the Services > JMS > Connection Factories > Configure a new JMS Connection Factory screen:



Configure the following:

- Name: exampleTopic
- JNDI Name: eontec.jms.TopicConnectionFactory
- Click Create.

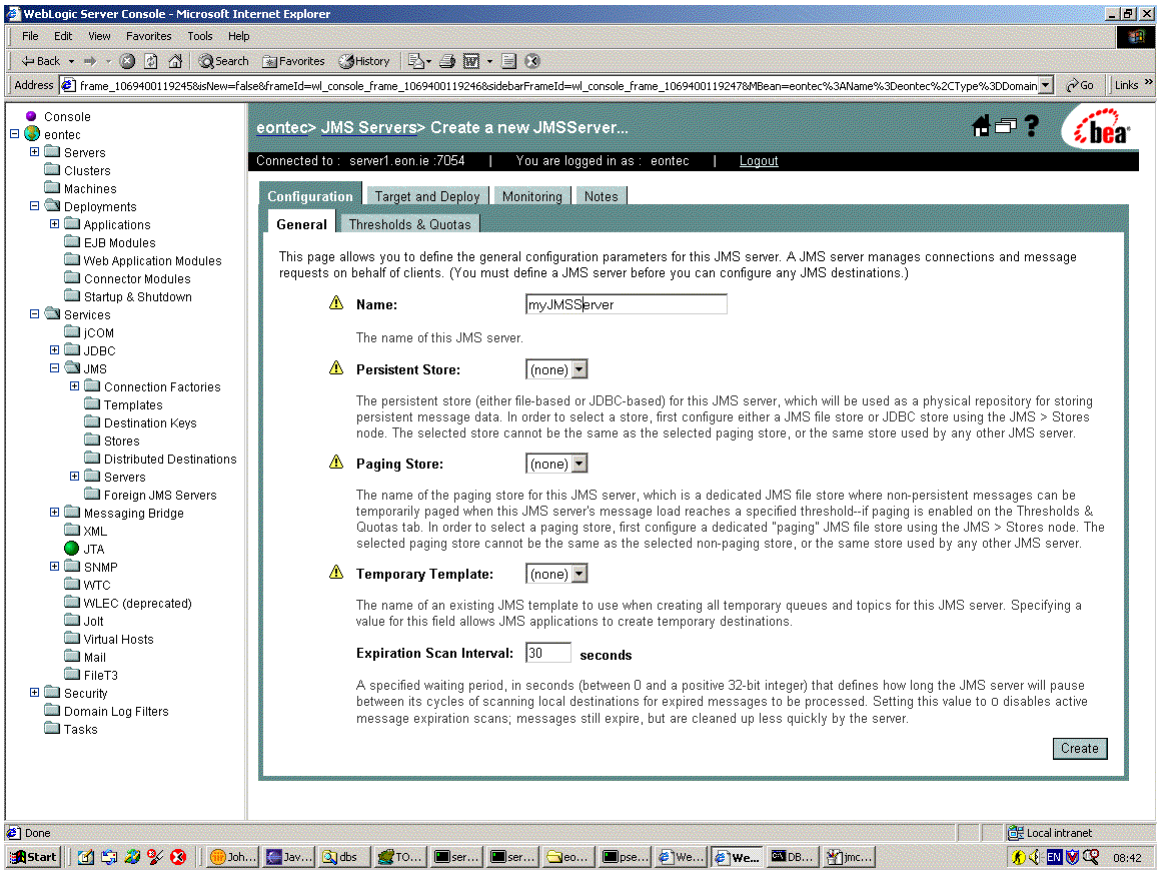
The following screen displays:



- Select the server to which you want to apply the connection factory.
- Click Apply.

Creating the JMS Server

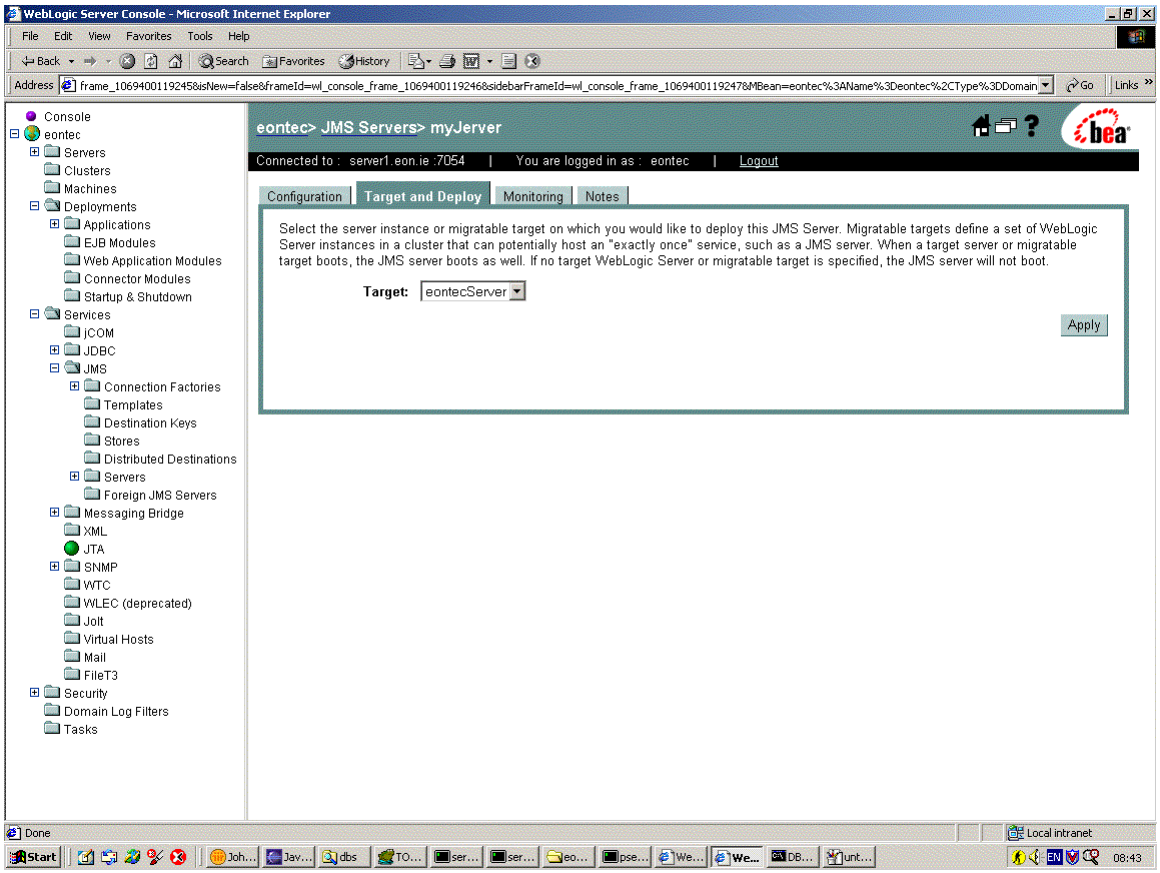
Navigate to the Services > JMS > Servers > Configure a new JMS Server screen:



Configure the following:

- Name: myJMSServer
- Click Create.

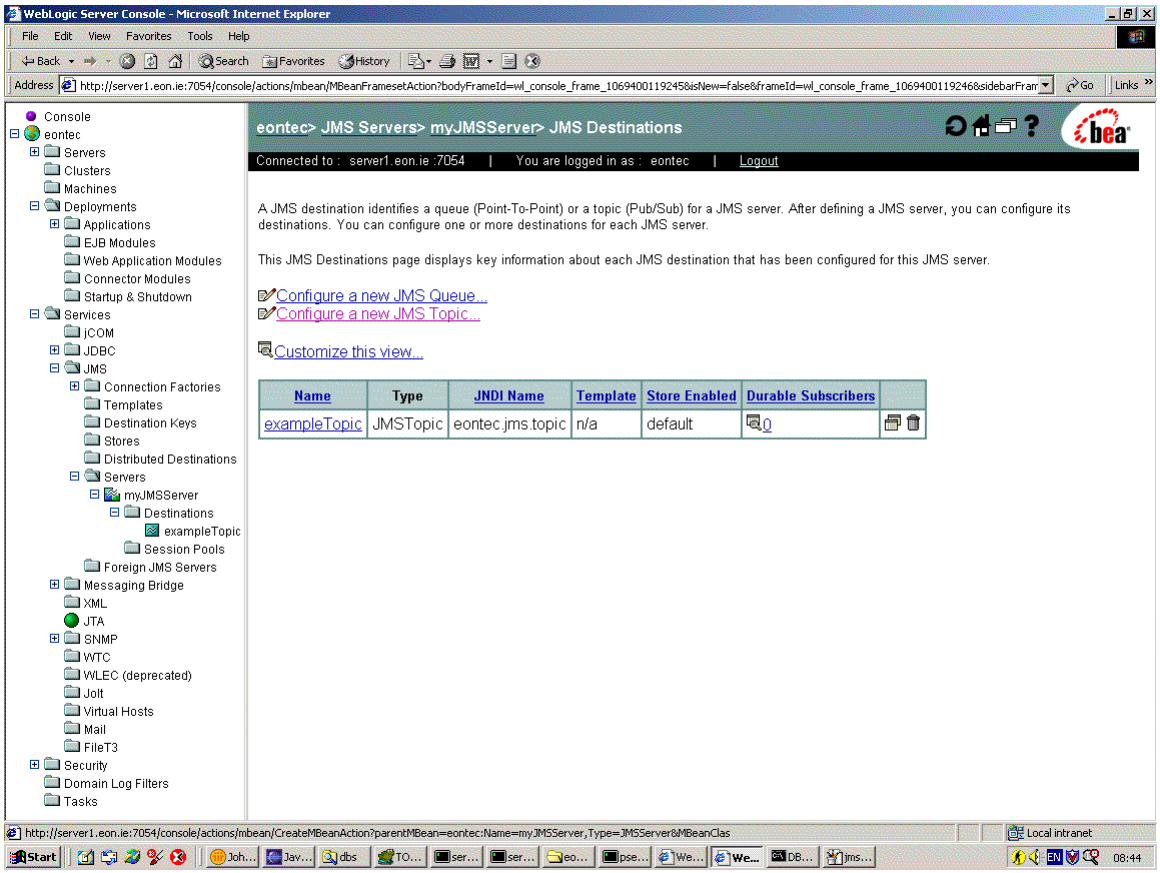
The following screen displays:



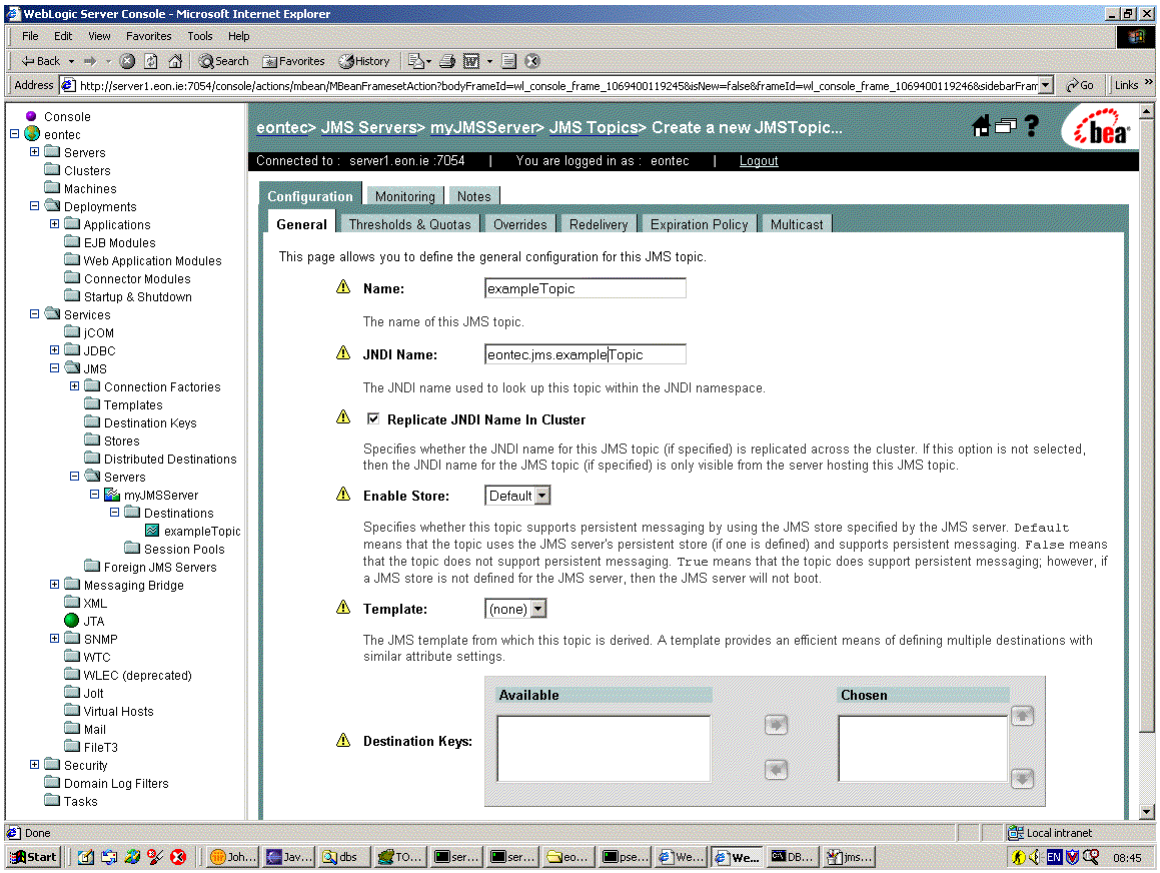
- Select the server to which you want to apply the JMS server.
- Click Apply.

Creating the JMS Topic

Navigate to the Services> JMS> Server > myJMSServer > Destinations screen:



Click Configure a new JMS Topic. The following screen displays:



Configure the following:

- Name: exampleTopic
- JNDI Name: eontec.jms.topic
- Click Create.

The JMS settings are now configured.