

# Database Configuration

Database Configuration:

[Start SQLServer Database Configuration](#)

## Summary of Database Configuration tasks:

- **[Step 1:](#)** Ensure the creation of a Web Application in the WebSphere Application Server.
- **[Step 2:](#)** Create the SAMPLE database ( Create a SAMPLE tablespace in Oracle).  
The SAMPLE database contains the data used by all Samples and is separate from the database used by IBM's WebSphere Application Server. We use the database name SAMPLE in these instructions but you can name the database as you desire.
- **[Step 3:](#)** Create a user named **wsdemo** for the SAMPLE database. The wsdemo user is used to read from and write to the SAMPLE database. (For DB2, you will also create a **wsdemo** system user).
- **Step 4:** Create the DataSource Object.  
The DataSource is used by the Sample applications to access the database, SAMPLE.
  - **[Step 4 - SubStep 1:](#)** Create a JDBC Driver
  - **[Step 4 - SubStep 2:](#)** Define the DataSource
  - **[Step 4 - SubStep 3:](#)** Install the driver
- **Step 5:** Run the database servlet.  
New tables are added to the SAMPLE database and are populated with appropriate data.

# SQLServer Database Configuration

Step 1

Step 2

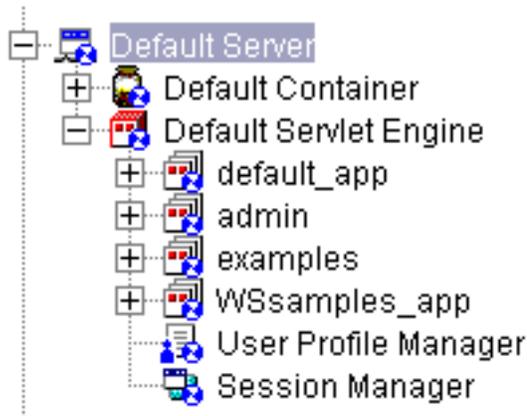
Step 3

Step 4

Step 5

## Step 1: Ensure the existence of the WSamples\_app web application

1. Open IBM WebSphere Application Server Administrator Console.
2. Click View → Topology.
3. Expand the tree through your system hostname, the Default Server, and the servletEngine.
4. Ensure that the WSamples\_app web application exists within the servletEngine. It should look like this:



5. If WSamples\_app does not exist, then [create a WSamples\\_app Web application](#).



- To run the Samples, it may be necessary to specify a fully qualified path name in the Application Server's Host Aliases list.
    1. Open IBM WebSphere Application Server Administrator Console.
    2. Click View → Topology.
    3. Expand the tree once and choose "default\_host" towards the bottom of the tree. You will see the "Virtual Host: default\_host" window open in the right pane of the window.
    4. Select the "Advanced" tab from the right pane.
    5. Locate the "Host Aliases" list. You should see your machine's "short name" on the list (for instance, "myhost").
    6. If your fully qualified host name -- myhost.mycompany.com for instance -- is not there, then scroll the aliases list down to a blank text field, type in your fully qualified host name, and choose "Apply".
    7. If you added a fully qualified host name, then you need to stop and start the the Application Server's Default Server.
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Create

Step 2

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## Step 1: Create the WSamples\_app Web application

1. Open WebSphere Application Server's Administrator Console.
2. Choose Console → Tasks → Create a Web Application.
3. **Web Application:**

- *Web Application Name:* Type in WSamples\_app
- *Enable File Servlet:* Ensure this is selected.
- *Serve Servlets By Classname:* Select this option.
- *JSP Version:* Select Enable JSP 1.0

Click Next.

4. **Application Resources:** Select Nodes → <hostname> → Default Server → DefaultServletEngine. Click Next.

### 5. Web Application:

- *Web Application Name:* WSamples\_app should be displayed.
- *Description:* Type a description (optional).
- *Virtual Host:* default\_host should be displayed.
- *Web Application Web Path:* This is the URL path to the directory on the HTTP server. (For example, http://<hostname> /WebSphereSamples.) Type in /WebSphereSamples.

Click Next.

6. **Web Application:** Ensure settings for the document root and classpath.

- Document Root: <Application Server Install Directory>\AppServer\hosts\default\_host\WSamples\_app\web
- Classpath: <Application Server Install Directory>/AppServer/hosts/default\_host/WSamples\_app/servlets

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**Step 2**



[Step 3](#)



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## Step 2: Create the SAMPLE Database

- Create the SAMPLE database.

Use SQLServer's Enterprise Manager GUI, or using SQLServer's Query Analyzer, execute this command to create the sample database. The command is shown on multiple lines for clarity, but should be entered as one command:

```
1. create database SAMPLE
   on primary
   (name = 'SAMPLE',
    filename = '<Some_Dir>\SAMPLE_Data.mdf',
    size = 10MB,
    maxsize = 30 MB,
    filegrowth = 5MB)
   log on
   (name = 'SAMPLE_Log',
    filename = '<Some_Dir>\SAMPLE_Log.ldf',
    size = 5MB,
    maxsize = 20MB,
    filegrowth = 5MB)
```

### Note:

- The **filename** is the actual path to an OS file.
- **<Some\_Dir>** should be an *existing* directory -- a common place is "**<SQLServer\_Root>\data**" -- on the SQLServer server. The command creates the file "SAMPLE\_Data.mdf" and "SAMPLE\_Log.ldf" in the directory specified.

Please see SQLServer documentation for more information on SQLServer's Enterprise Manager and Query Analyzer tools.



- Alternatively, you can create a database with any name you choose. Whatever name you give it, specify the same database name in Steps 3 and 4 when you create the corresponding DataSource object.
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**Step 3**



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## Step 3: Create a SQLServer User for the SAMPLE database

- Create a SQLServer user named **WSDEMO** with a password of **wsdemo1**, for the SAMPLE database.

Use SQLServer's Enterprise Manager GUI, or type this command into SQLServer's Query Analyzer:

```
1. sp_addlogin WSDEMO, wsdemo1, SAMPLE
```

Next, add the user to the database and grant user permissions. Use SQLServer's Enterprise Manager GUI or execute each of these commands, separately, in SQLServer's Query Analyzer:

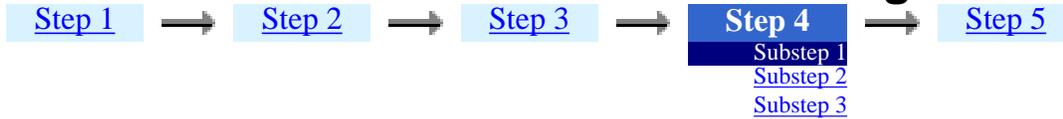
```
1. use SAMPLE
2. sp_grantdbaccess WSDEMO
3. grant all to WSDEMO
```

Please see SQLServer documentation for more information on SQLServer's Enterprise Manager and Query Analyzer tools.



- Be sure you use *all lower case* letters when creating the **wsdemo1** password.
  - The **WSDEMO** username is shown in all uppercase, but can be entered in either upper or lower case.
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## Step 4: Create a DataSource Object

### Substep 1: Create a JDBC Driver

1. In the IBM WebSphere Application Server Administrative Console, select the Types view.
2. Right-click JDBCDrivers.
3. From the pop-up menu, select Create.
4. Use these values in the subsequent dialog:
  - **Name:** Enter an arbitrary name for the driver, such as `SQLServerSampleDriver`
  - **Implementation class:** Select `com.merant.sequelink.jdbc.SequeLinkDriver`  
Note: This assumes that you are using Merant's SequeLink 5.0 drivers.
5. **URL prefix:** Type `jdbc:sequelink`
6. **JTA Enabled:** Select false.
7. Click OK.
8. Go to [Substep 2](#)

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**Step 4**



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[Substep 1](#)

**Substep 2**

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## Step 4: Create a DataSource Object

### Substep 2: Define the DataSource

1. In the Types view, right-click DataSources.
2. From the pop-up menu, select Create.
3. Use these values in the subsequent dialog:
  - **Name:** Type `sample`, in lower case
  - **Database name:** Type  
`//<hostname>:<portnumber>;databaseName=SAMPLE`  
Be sure to enter the actual hostname for the **<hostname>** field.  
The port number "19996" is the default port number used by SequeLink but it can be altered during the installation process. Use the default port number or the port number that was specified during the SequeLink install.
  - **Driver:** Select the JDBC driver you created in Step 4-SubStep 1:  
`SQLServerSampleDriver`
4. Optionally you can use the Advanced tab to specify pooling parameters for the DataSource or you can accept the defaults.
5. Click OK.
6. Go to [Substep 3](#)



- The name of the DataSource must be *sample* but the name of the database should match the one that you entered in Step 2. The Samples use the DataSource named *sample* to connect to a database and the DataSource uses the database name to connect to the particular database; therefore, the Samples do not directly use the database name to connect to the database.
  - The DataSource will be stored as "sample" in the `/jdbc` directory. In the servlet files, we specify "jdbc/sample" as the DataSource object and the code uses this to attach to the database. (In the ConnPoolTest servlet, we use this directory as the JNDI lookup name to locate this DataSource object as specified in its properties file, `ConnPoolTestStrings.properties`.)
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## Step 4: Create a DataSource Object

### Substep 3: Install the driver

1. In the IBM WebSphere Application Server Administrative Console, select the Topology view.
2. Expand the directory tree.
3. Locate and right-click the driver you created in Step 4-SubStep 1.
4. From the pop-up menu, select Install.
5. In the subsequent dialog:
  - Select the node on which to install the driver.
  - Click Browse to find the file containing the driver. It is likely to be located in:  
<Merant\_SequeLink\_Root>\sljc\driver\lib\sljc.jar  
Note: This assumes that you are using Merant SequeLink 5.0 drivers.
6. Click Install.



- To start the connection, you may need to stop and start the Default Server in the Application Server Administrator Console. To do this:
    1. Select the Topology view
    2. Expand the tree until the Default Server is displayed
    3. Right-click on the Default Server and choose "Stop"; the wheel icons indicating the server's status should be red and white
    4. Once the server is stopped, right-click again and choose "Start"; the wheel icons indicating the server's status should be blue and white
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**Step 5**

## Step 5: Run the Database Servlet

The servlet creates and configures the tables in the SAMPLE database by using *wsdemo*'s authorities.

**User:** WSDemo  
**Password:** \*\*\*\*\*  
**Database:** SQLServer  
**DataSource  
Name:**

This is the DataSource object that you created in Step 4, substep 2. The default is assumed to be jdbc/sample.

### Poll Sample Question:

Enter a question for the Poll sample.  
A "Yes" or "No" question is recommended.