Configure data source

What this exercise is about

The objective of this lab is to guide you though creating a data source and a database.

Lab requirements

List of system and software required for the student to complete the lab

- WebSphere Integration Developer V6.2 installed and updated with latest fixes

- WebSphere Process Server V6.2 test environment installed and updated with latest fixes

What you should be able to do

- Create a JDBC Provider from the administrative console

- Create a data source

- Configure the data source to create a data base and test the data base connection

Exercise instructions

Some instructions in this lab are specific for Windows® platforms. If you run the lab on a platform other than Windows, you will need to run the appropriate commands, and use appropriate files (for example .sh in place of .bat) for your operating system. The directory locations are specified in the lab instructions using symbolic references as follows:

IBM WEBSPHERE ADAPTER 6.2 – LAB EXERCISE

Reference variable	Windows location	Linux® location
<WID_HOME>	C:\Program Files\IBM\WebSphere\WID62	
<WPS_HOME>	C:\<WID_HOME>\runtimes\bi_v62	
<LAB_FILES>	C:\Labfiles62	/tmp/LabFiles62
<WORKSPACE>	<LAB_FILES>\Adapter\workspace	
<TEMP>	C:\temp	/tmp

Windows users: When directory locations are passed as parameters to a Java™ program such as EJBdeploy or wsadmin, you must replace the backslashes with forward slashes to follow the Java convention. For example, replace C:\Labfiles62\ with C:/Labfiles62/.
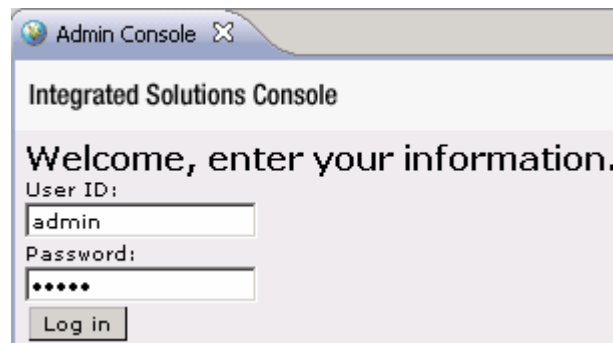
Part 1: Use WebSphere Process Server administrative console to configure data sources

In this part of the lab, you will make use of WebSphere Process Server administrative console to create the required JDBC Provider and the data source that are used by the adapter to configure itself to the end point.

____ 1.   Start WebSphere Integration Developer with any <WORKSPACE>

____ 2.   Start the WebSphere Process Server

    __ a. Select the **Servers** view

    __ b. Right-click the row that contains **WebSphere Process Server v6.2 at localhost** and select **Start** from the context menu

    __ c. Wait until the server status shows as **Started**

____ 3.   Right-click the row that contains WebSphere Process Server v6.2 at localhost and select **Administration > Run administrative console** from the context menu

____ 4.   From the administrative console, enter **User ID** and **Password** click **Log in**

____ 5. Expand **Resources > JDBC** on the left navigation panel of Administrative console and select **JDBC Providers**

____ 6. On the JDBC Provider page, select **Node=<NODE_NAME>,Server=server1** from the drop down list

____ 7. Still on the JDBC Provider page, click **New** to create a new JDBC Provider

____ 8. For Step 1: Create new JDBC provider, enter these:

__ a. For **Database type**, select **Derby** from the drop down list

__ b. For **Provider type**, select **Derby JDBC Provider** from the drop down list

__ c. For **Implementation type**, select **Connection pool data source** from the drop down list

__ d. For **Name**, enter **Adapters Derby JDBC Provider**

__ e. Click **Next**

__ f. Review the summary and click **Finish**

__ g. Click the **Save** link at the top of the JDBC Provider page to save your changes

__ h. You will now see a new entry **Adapters Derby JDBC Provider** under JDBC Providers list:

JDBC providers

JDBC providers

Use this page to edit properties of a JDBC provider. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment. Learn more about this task in a guided activity. A guided activity provides a list of task steps and more general information about the topic.

⊟ Scope: Cell=**widCell**, Node=**widNode**, Server=**server1**

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, see the scope settings help

Node=widNode, Server=server1 ▾

⊞ Preferences

New   Delete

Select	Name ↕	Scope ↕	Description ↕
☐	Adapters Derby JDBC Provider	Node=widNode,Server=server1	Derby embedded non-XA JDBC Provider. This provider is only configurable in version 6.0.2 and later nodes
☐	Derby JDBC Provider	Node=widNode,Server=server1	Derby embedded non-XA JDBC Provider
☐	Event_Derby_JDBC_Provider	Node=widNode,Server=server1	Derby JDBC Provider (XA) for the Event Server
Total 3			

_____ 9.   Create a new data source

__ a. Click **Adapters Derby JDBC Provider**

__ b. Under **Additional Properties**, click **Data sources**

JDBC providers > **Adapters Derby JDBC Provider**

Use this page to edit properties of a JDBC provider. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment.

Configuration

General Properties

* Scope
cells:widCell:nodes:widNode:servers:server1

* Name
Adapters Derby JDBC Provider

Additional Properties

▪ Data sources

▪ Data sources (WebSphere Application Server V4)

__ c. From the Data sources page, click **New**

__ d. For Step1, enter these:

1) Data source name: **Adapter**

2) JNDI name: **jdbc/Adapter**

Create a data source

Create a data source

→ **Step 1: Enter basic data source information**

Step 2: Enter database specific properties for the data source

Step 3: Summary

Enter basic data source information

Set the basic configuration values of a data source for association with your JDBC provider. A data source supplies the physical connections between the application server and the database.

Requirement: Use the Data sources (WebSphere(R) Application Server V4) console pages if your applications are based on the Enterprise JavaBeans(TM) (EJB) 1.0 specification or the Java(TM) Servlet 2.2 specification.

Scope

cells:widCell:nodes:widNode:servers:server1

JDBC provider name

Adapters Derby JDBC Provider

* Data source name

Adapter

* JNDI name

jdbc/Adapter

Component-managed authentication alias and XA recovery authentication alias

Select a component-managed authentication alias. The selected authentication alias will also be set as the XA recovery authentication alias if your JDBC Provider supports XA. If you choose to create a new J2C authentication alias, the wizard will be canceled.

(none)

Next   Cancel

__ e. Click **Next**

__ f. For Step2, enter these:

    1) For **Database name**, enter **AdapterDB**

    2) **Uncheck** the box next to **Use this data source in container managed persistence (CMP)**

Create a data source

Create a data source

Step 1: Enter basic data source information	**Enter database specific properties for the data source**
→ **Step 2: Enter database specific properties for the data source**	Set these database-specific properties, which are required by the database vendor JDBC driver to support the connections that are managed through this data source. * Database name AdapterDB ☐ Use this data source in container managed persistence (CMP)
Step 3: Summary	

Previous   Next   Cancel

    __ g. Click **Next**

    __ h. Click **Finish** on the Summary page

____ 10.   Configure the data source to create the data base

    __ a. Click **Adapter** from the data sources page

    __ b. Under **Additional Properties**, click **Custom properties**

JDBC providers > **Adapters Derby JDBC Provider** > **Data sources** > **Adapter**

Use this page to edit the settings of a data source that is associated with your selected JDBC provider. The data source object supplies your application with connections for accessing the database.

Configuration

Test connection

General Properties

* Scope
cells:widCell:nodes:widNode:servers:server1

* Provider
Adapters Derby JDBC Provider

* Name
Adapter

JNDI name
jdbc/Adapter

Additional Properties

  ■ Connection pool properties

  ■ WebSphere Application Server data source properties

  ■ Custom properties

__ c. From the Custom properties page, click **createDatabase**

JDBC providers > **Adapters Derby JDBC Provider** > **Data sources** > **Adapter** > **Custom properties**

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.

⊞ Preferences

New   Delete

Select	Name ◇	Value ◇	Description ◇	Required
☐	shutdownDatabase		If set to the string 'shutdown', this will cause the database to shutdown when a java.sql.Connection object is obtained from the Data Source. E.g., If the Data Source is an XADataSource, a getXAConnection ().getConnection() is necessary to cause the database to shutdown	false
☐	dataSourceName		Name for ConnectionPooledDataSource. Not used by the Data Source object. Used for informational purpose only.	false
☐	description		Description of the Data Source. Not used by the Data Source object. Used for informational purpose only.	false
☐	connectionAttributes		Connection attributes specific to Cloudscape. Please see Cloudscape documentation for a complete list of features.	false
☐	createDatabase		If set to the string 'create', this will cause a new database of DatabaseName if that database does not already exist. The database is created when a connection object is obtained from the Data Source.	false

Total 5

__ d. From the createDatabase page, enter **create** for **Value** field

JDBC providers > Adapters Derby JDBC Provider > Data sources > Adapter > Custom properties > createDatabase

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.

Configuration

General Properties

✱ Scope

cells:widCell:nodes:widNode:servers:server1

☐ Required

Name

createDatabase

Value

create

Description

If set to the string 'create', this will cause a new database of DatabaseName if that database does not already exist. The database is created when a

Type

java.lang.String ▾

[Apply] [OK] [Reset] [Cancel]

__ e. Click **OK**

__ f. Click **Save** link at the top of the data sources page to save your changes

____ 11. Test the connection

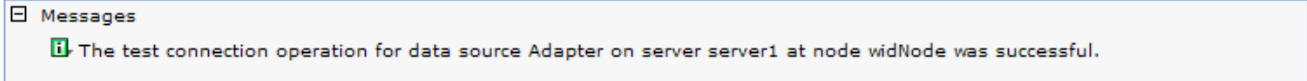__ a. From the left navigation panel of administrative console, expand Resources > JDBC and click Data sources

__ b. From the data sources page on the right side, check the box next to Adapter and click Test connection from the top

[New] [Delete] [Test connection] [Manage state...]

Select	Name ◇	JNDI name ◇	Scope ◇	Provider ◇	Description ◇	Category ◇
☑	Adapter	jdbc/Adapter	Node=widNode,Server=server1	Adapters Derby JDBC Provider	New JDBC Datasource. This Datasource type is only configurable in version 6.0.2 and later nodes	

__ c. You should see this success message from the top of your screen:

⊟ Messages

ℹ The test connection operation for data source Adapter on server server1 at node widNode was successful.

____ 12. Log out of the administrative console and close it.

What you did in this exercise

In this lab, you created a JDBC Provider from the administrative console and then created a data source under it. Then you continued to configure the data source to create a data base and finally tested the database connection.