Configure a 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 V7.0 installed and updated with latest fixes

- WebSphere Process Server V7.0 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:

Reference variable	Windows location	Linux® location
<WID_HOME>	C:\Program Files\IBM\WebSphere\WID70	
<WPS_HOME>	C:\<WID_HOME>\runtimes\bi_v70	
<LAB_FILES>	C:\Labfiles70	/tmp/LabFiles70
<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:\Labfiles70\ with C:/Labfiles70/.
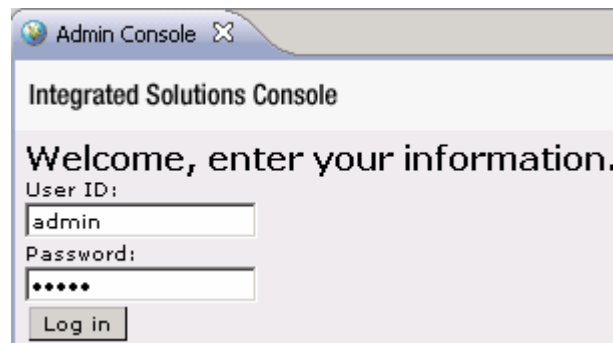
Part 1: Use WebSphere Process Server administrative console to configure data sources

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 v7.0 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 v7.0 at localhost and select **Administration > Run administrative console** from the context menu
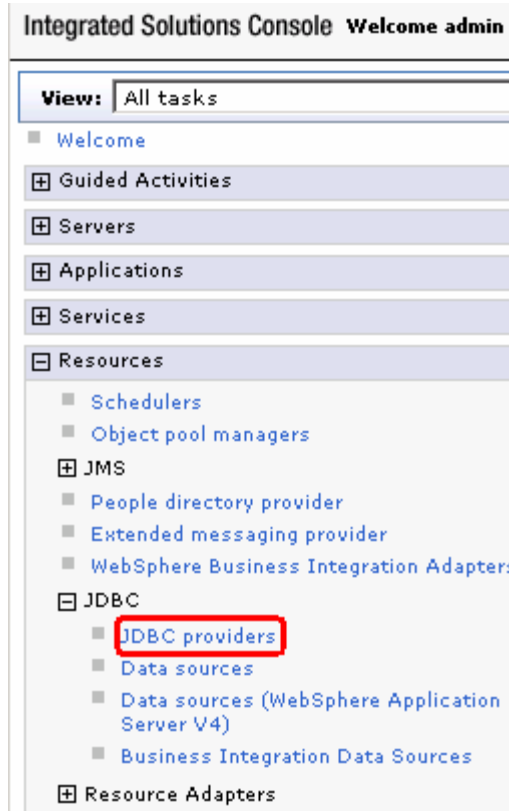

____ 4.   From the administrative console, enter **User ID** and **Password** click **Log in**
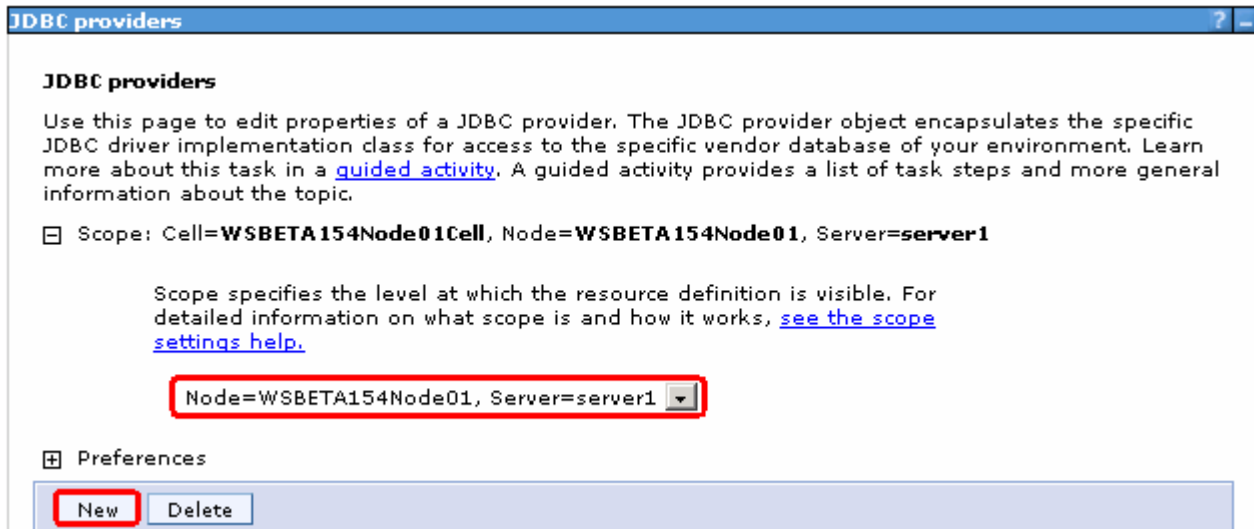
____ 5.   Expand **Resources > JDBC** on the left navigation panel of Administrative console and select **JDBC Providers**
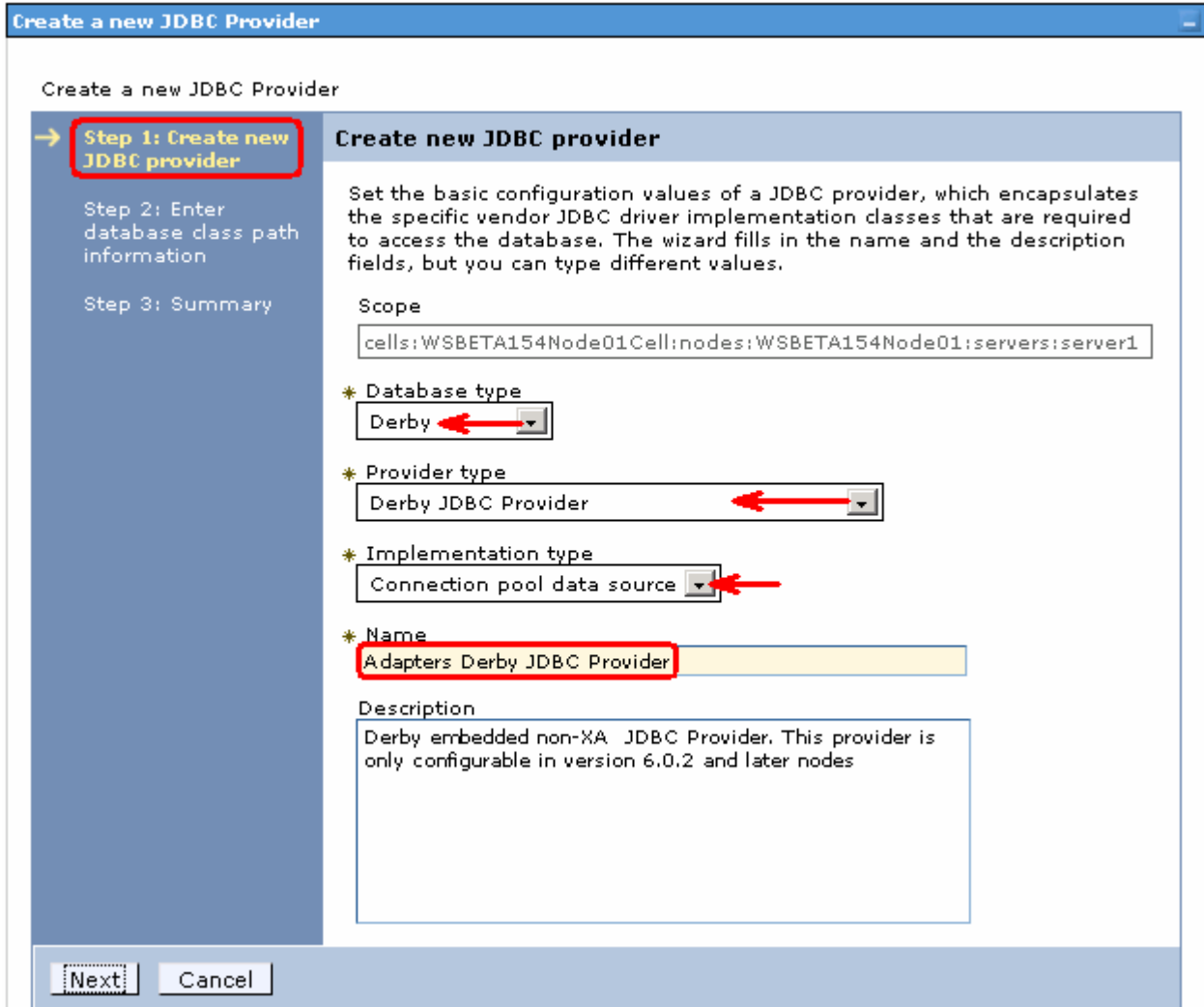

____ 6.   On the JDBC Provider page, select **Node=<NODE_NAME>,Server=server1** from the drop down list

____ 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:

Select	Name ↕	Scope ↕	Description ↕
	You can administer the following resources:		
☐	Adapters Derby JDBC Provider	Node=WSBETA154Node01,Server=server1	Derby embedded non-XA JDBC Provider. This provider is only configurable in version 6.0.2 and later nodes

_____ 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 Java Database Connectivity (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:WSBETA154Node01Cell:nodes:WSBETA154Node01:servers:server1
```

❋ Name

```
Adapters Derby JDBC Provider
```

Additional Properties

▪ Data sources

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

JDBC providers

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

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

⊞ Preferences

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

__ 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: Setup security aliases

Step 4: Summary

Enter basic data source information

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

Requirement: Use the Datasources (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:WSBETA154Node01Cell:nodes:WSBETA154Node01:servers:server1

JDBC provider name

Adapters Derby JDBC Provider

* Data source name

Adapter

* JNDI name

jdbc/Adapter

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)**

__ 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**

WBPMv70_AdapterConfigureDatasourceTask.doc

__ 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				

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　　　__ 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
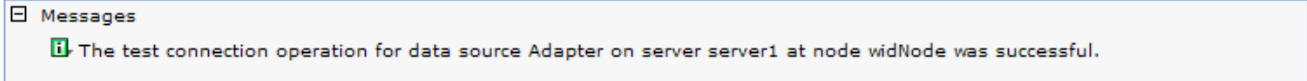
____ 11.　Test the connection

　　　__ 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
ⓘ 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.