Procedure for Switching Database Servers

Document version 1

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Overview

This is a procedure for switching a working WebSphere Portal v5.0 server from one database server to another. Use this document for backup and recovery procedures or for moving a portal through the staging to development process. This procedure works with both clustered and single node WebSphere Portal installations.

The general flow of the process is:

- Stop WebSphere Portal on the application server machine.
- Start the server1 application on the application server machine.
- Backup all WebSphere Portal databases.
- Restore the WebSphere Portal databases on the second database server.
- Reconfigure WebSphere Portal to use the databases on the second database server.
- Restart WebSphere Portal on the application server machine.

There are minor variances in the process of reconfiguring the databases based upon the specific Relational Database Server. The differences are covered in this documentation.

Obtain database assistance from your company DBA if you do not have experience in operating your database server.
Assumptions

- The procedure only supports switching between homogenous database servers. Switching between unlike database servers is not supported.
- Two separate database servers are used in support of this procedure.
- Both database servers are loaded with the same version of the Relational Database software.
- The WebSphere Portal databases use the same names on both servers.
- The same userids and groups that will be used to access the WebSphere Portal databases exist on both database servers and have the same database privileges.
- The WebSphere Portal databases are clones or exact copies having been made by the native database backup database and restore database commands.
- Only off-line backups are employed with this procedure.
- 24x7 availability of the portal is not required.
1. The Database Client code on the WebSphere Portal server contains entries for the Database Server at Site A and the Database Server at Site B. This is accomplished with the following commands:

   db2 => catalog tcpip node SiteA remote SiteA.yourco.com server 50000 with “Primary DB server”
   db2 => catalog tcpip node SiteB remote SiteB.yourco.com server 50000 with “Secondary DB server”

2. The WebSphere Portal databases on the Site A database server are cataloged on the WebSphere Portal server using the following commands:

   db2 => catalog database wps50 at node SiteA
   db2 => catalog database wpcp50 at node SiteA
   db2 => catalog database fdbk50 at node SiteA

3. Follow these steps to switch between the database servers:

   o Open a command prompt and change to directory `<was_root>/bin`.
   o Enter the following command: `stopServer WebSphere_Portal`
   o Open a **DB2 UDB Command Line** window and uncatalog the WebSphere Portal databases at the WebSphere Portal server using the following commands:

     db2 => uncatalog database wps50
     db2 => uncatalog database wpcp50
     db2 => uncatalog database fdbk50

4. At the primary database server, make a backup of the WebSphere Portal databases using the DB2 UDB backup database command.

5. Move the backup file to the second database server.

6. Restore the WebSphere Portal databases using the DB2 UDB restore database command.
7. At the WebSphere Portal server, catalog the WebSphere Portal databases on
the second database server using the following commands:

```sql
db2 => catalog database wps50 at node SiteB
db2 => catalog database wpcp50 at node SiteB
db2 => catalog database fdbk50 at node SiteB
```

8. Change to directory `<was_root>/bin` and enter the following command:
   ```sh
   startServer WebSphere_Portal.
   ```

9. Confirm WebSphere Portal is operating with the databases on the new database
    server.
Oracle Process

1. Open a command prompt and change to directory `<was_root>/bin`.

2. Enter the following commands:
   ```
   startServer server1
   StopServer WebSphere_Portal
   ```

3. Backup all WebSphere Portal databases on the first database server using the export utility.

4. Move the `.dmp` file to the second database server

5. Restore the WebSphere Portal databases on the second database server using the import utility.

6. Follow these steps to reconfigure WebSphere Portal to use the databases on the second database:
   a. Access the WebSphere Application Server Admin Console by pointing your browser to http://<yourco.com>:9090/admin, where yourco.com is the name of the WebSphere Application Server node.

   b. Follow these steps for all data sources in general:
      1. Navigate to the Custom Properties screen under JDBC Providers.
      2. Select the current hostname in the URL parameter.
      3. Change the Value parameter with the hostname of the new database server.

   **NOTE:** This should be repeated for all defined data sources.

   c. Follow these steps specifically for the wps50DS data source:
      1. Change the location of the wps50DS data source by going to **Custom Properties** starting at **Resources** and following this path:

         JDBC Providers > wps50JDBC > Data Sources > wps50DS > Custom Properties >
2. Once at Custom Properties, click **URL**.

**Custom Properties**

Custom properties that may be required for Resource Providers and Resource Factories. For example, most database vendors require additional custom properties for data sources that will access the database.

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IniSection</td>
<td></td>
<td>The entry name which is Oracle CDF server.</td>
</tr>
<tr>
<td>URL</td>
<td><a href="mailto:jdbc.oracle.thin@oracle.yourco.com">jdbc.oracle.thin@oracle.yourco.com</a>:1521/wps3</td>
<td>This is a required property indicating the database Data Source will connect as jdbc.oracle.thin@local.</td>
</tr>
<tr>
<td>dataSourceName</td>
<td></td>
<td>The name of the Data Source.</td>
</tr>
</tbody>
</table>

**Figure 1:** Illustration of selection of URL parameter.

3. Change Oracle machine name in the Value text box:

**Configuration**

**General Properties**

<table>
<thead>
<tr>
<th>Scope</th>
<th>cells/invm/nodes/invm</th>
<th>The scope of the configured resource. This value indicates the configuration location for the configuration file.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>true</td>
<td>(Y)</td>
</tr>
<tr>
<td>Name</td>
<td>URL</td>
<td>(Y) Name associated with this property (for example, PortNumber and ConnectionURL).</td>
</tr>
<tr>
<td>Value</td>
<td><a href="mailto:jdbc.oracle.thin@oracle.yourco.com">jdbc.oracle.thin@oracle.yourco.com</a></td>
<td>(Y) Value associated with this property in this property set.</td>
</tr>
<tr>
<td>Description</td>
<td>This is a required property. The URL indicating the database from which the Data Source will obtain connections, such as jdbc.oracle.thin@localhost:1521/sample.</td>
<td>(Y) Text to describe any bounds or well-defined values for this property.</td>
</tr>
<tr>
<td>Type</td>
<td>java.lang.String</td>
<td>(Y) Fully qualified Java type of this property. (Java.lang.Integer, java.lang.Byte).</td>
</tr>
</tbody>
</table>

**Figure 2:** Illustration of Value parameter.

4. Click **OK** to commit the change.

d. Follow these steps specifically for the wmmDS data source:

1. Change the location of the wmmDS data source by going to the **Custom Properties** starting at **Resources** and following this path:

**JDBC Providers > wps50JDBC > Data Sources > wmmDS > Custom Properties > URL.**

**Figure 3:** Illustration of selection of URL parameter.
Enter the hostname of the new database server in the **Value** parameter.

**Figure 4:** Illustration of change to Value parameter.

4. Click **OK** to commit the change.

e. Follow these steps specially for the feedbackDS data source:

1. Change the location of the feedbackDS data source by going to the **Custom Properties** starting at **Resources** and following this path:

   **JDBC Providers** > wpcp50JDBC > **Data Sources (Version 4)** > feedbackDS >

2. Once at Custom Properties, click **URL**.

   **Figure 5:** Illustration of selection of URL parameter.

3. Enter the hostname of the new database server in the **Value** parameter.

   **Figure 6:** Illustration of change to Value parameter.

4. Click **OK** to commit the change.

   **NOTE:** Repeat these steps for the persDS and wcmDS Version 4 data sources using the following paths:

   **JDBC Providers** > wpcp50JDBC > **Data Sources (Version 4)** > persDS >

   and

   **JDBC Providers** > wpcp50JDBC > **Data Sources (Version 4)** > wcmDS >

f. Save all changes.

g. Change to directory `<was_root>/bin` and enter the following command: `startServer WebSphere_Portal`.

h. Confirm that **WebSphere Portal** is operating with the databases on the new database server.
SQL Server Process

1. Open a command prompt and change to directory <was_root>/bin.

2. Enter the following commands:
   
   startServer server1
   stopServer WebSphere_Portal

3. Backup all WebSphere Portal databases on the first database server using the backup database command.

4. Move the backup file to the second database server.

5. Restore the WebSphere Portal databases on the second database server using the restore database command.

6. Follow these steps to reconfigure WebSphere Portal to use the databases on the second database:
   
   a. Access the WebSphere Application Server Admin Console by pointing your browser to http://<yourco.com>:9090/admin, where yourco.com is the name of the WebSphere Application Server node.
   
   b. Follow these steps for all data sources in general:
      
      1. Navigate to the Custom Properties screen under JDBC Providers.
      2. Select the current hostname in the serverName parameter.
      3. Change the Value parameter with the hostname of the new database server.

      NOTE: This should be repeated for all defined data sources.

   c. Follow these steps specifically for the wps50DS data source:
      
      1. Change the location of the wps50DS data source by going to the Custom Properties starting at Resources and following this path:

         JDBC Providers > wps50JDBC > Data Sources > wps50DS > Custom Properties >
2. Once at Custom Properties, select the hostname displayed in the **Value** field of the serverName parameter.

![Figure 7: Illustration of selection of serverName parameter.](image1)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Description</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>databaseName</td>
<td>wps50</td>
<td>This is a required property. The database name. For example, enter sample to make your Data Source point to sample.</td>
<td>true</td>
</tr>
<tr>
<td>serverName</td>
<td>SQLServer2.yourco.com</td>
<td>This is a required property. The TCPIP address of the Sequelink server in dotted format or host name format.</td>
<td>true</td>
</tr>
<tr>
<td>portNumber</td>
<td>1433</td>
<td>This is a required property. The TCPIP port number where MS SQL Server resides.</td>
<td>true</td>
</tr>
</tbody>
</table>

3. Enter the hostname of the new database server in the **Value** parameter.

![Figure 8: Illustration of change to Value parameter.](image2)

4. Click **OK** to commit the change.

   d. Follow these steps specifically for the wmmDS data source:

   1. Change the location of the wmmDS data source by going to the **Custom Properties** starting at **Resources** and following this path:

   **JDBC Providers** > **wps50JDBC** > **Data Sources** > **wmmDS** > **Custom Properties**
2. Once at Custom Properties, click the hostname displayed in the Value field of the serverName parameter.

<table>
<thead>
<tr>
<th>serverName</th>
<th>sqlserver1.yourco.com</th>
<th>This is a required property. The TCP/IP address of the Sequel Link server in dotted format or hostname format.</th>
<th>true</th>
</tr>
</thead>
</table>

Figure 9: Illustration of selection of serverName parameter

3. Enter the hostname of the new database server in the Values parameter.

<table>
<thead>
<tr>
<th>Value</th>
<th>sqlserver2.yourco.com</th>
<th>Value associated with this property in this property set</th>
</tr>
</thead>
</table>

Figure 10: Illustration of change to Value parameter

4. Click OK to commit the change.

e. Follow these steps specifically for the feedback5 data source:

1. Change the location of the feedback5 data source by going to the Custom Properties starting at Resources and following this path:

   JDBC Providers > wpcp50JDBC > Data Sources > feedback5 > Custom Properties >

2. Once at Custom Properties, click the hostname displayed in the Value field of the serverName parameter.

<table>
<thead>
<tr>
<th>serverName</th>
<th>sqlserver1.yourco.com</th>
<th>This is a required property. The TCP/IP address of the Sequel Link server in dotted format or hostname format.</th>
<th>true</th>
</tr>
</thead>
</table>

Figure 11: Illustration of selection of serverName parameter

3. Enter the hostname of the new database server in the Values parameter.

<table>
<thead>
<tr>
<th>Value</th>
<th>sqlserver2.yourco.com</th>
<th>Value associated with this property in this property set</th>
</tr>
</thead>
</table>

Figure 12: Illustration of change to Value parameter

4. Click OK to commit the change.
NOTE: Repeat these steps for the feedbackDS, persDS and wcmDS Version 4 data sources following these paths:

- JDBC Providers > wpcp50JDBC > Data Sources (Version 4) > feedbackDS >
  and
- JDBC Providers > wpcp50JDBC > Data Sources (Version 4) > persDS >
  and
- JDBC Providers > wpcp50JDBC > Data Sources (Version 4) > wcmDS >

f. Save all changes.

g. Change to directory `<was_root>/bin` and enter the following command:
   `startServer WebSphere_Portal`.

h. Confirm **WebSphere Portal** is operating with the databases on the new database server.
Resources
