

# **BlackBerry Enterprise Server for IBM Lotus Domino**

## **Disaster Recovery Guide**



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# BlackBerry Enterprise Server disaster recovery

Planning your disaster recovery strategies

Preparing for disaster recovery of the BlackBerry Enterprise Server

Preparing for disaster recovery of the BlackBerry Configuration Database

Responding to a disaster scenario

Moving forward from disaster recovery

## Planning your disaster recovery strategies

When creating disaster recovery strategies, you should consider which types of disaster scenarios might occur and how you will respond.

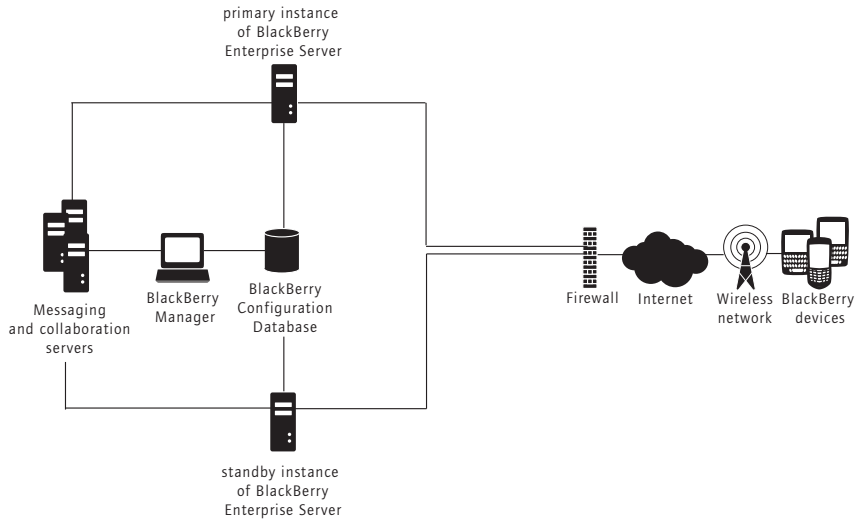
Your strategies might include levels of disaster and an assessment of which services and functionality you restore.

Visit [www.blackberry.com/knowledgecenterpublic](http://www.blackberry.com/knowledgecenterpublic) to read *Disaster Recovery Strategies for the BlackBerry Enterprise Solution* for more information about planning for disaster recovery.

## Preparing for disaster recovery of the BlackBerry Enterprise Server

You prepare for disaster recovery by creating a standby instance of the BlackBerry® Enterprise Server on a separate computer. If the primary instance becomes unavailable—for example, as a result of a hardware failure or a local network service interruption—you switch immediately to the standby instance. This switch is referred to as a *cutover process*.

You can create a standby instance of the BlackBerry Enterprise Server after a disaster scenario occurs, provided that the BlackBerry Configuration Database is available.



Primary and standby instances of the BlackBerry Enterprise Server

## Checklist: BlackBerry Enterprise Server disaster recovery requirements and considerations

### Requirements and considerations

You must have one separate computer for the standby instance of the BlackBerry Enterprise Server.

If your BlackBerry Enterprise Server environment includes the BlackBerry MDS™ Services, consider installing the BlackBerry MDS Services on a separate computer.

This configuration permits both the primary and standby instances of the BlackBerry Enterprise Server to access the same set of BlackBerry MDS Services databases, and therefore the same set of BlackBerry MDS Studio™ Applications. If you install the BlackBerry MDS Services on the same computer as the BlackBerry Enterprise Server, you must specify different BlackBerry MDS Services databases. As a result, you must publish BlackBerry MDS Studio Applications to both the primary and standby instances of the BlackBerry MDS Services.

To prevent service books and IT policies from resending during the cutover process, you must use the DomBESCutover tool to update user records in the BlackBerry Configuration Database with the name of the standby instance of the BlackBerry Enterprise Server. See the *DomBESCutover Tool User Guide* for more information about using this tool.

To obtain the DomBESCutover tool, contact BlackBerry Technical Support.

## Prepare for disaster recovery of the BlackBerry Enterprise Server

> Perform the following actions:

Action	Procedure
Install the standby instance of the BlackBerry Enterprise Server.	<ol style="list-style-type: none"> <li>1. Install the standby instance of the BlackBerry Enterprise Server using the same version, including service pack and hotfix, as the primary instance of the BlackBerry Enterprise Server. See the <i>BlackBerry Enterprise Server Installation Guide</i> for more information about installing the BlackBerry Enterprise Server.</li> <li>2. During configuration, specify the following settings to match those of the primary instance of the BlackBerry Enterprise Server: <ul style="list-style-type: none"> <li>• BlackBerry administration account</li> <li>• BlackBerry Configuration Database name</li> <li>• Service Routing Protocol (SRP) identifier and authentication key</li> </ul> </li> <li>3. At the end of the setup application, clear the <b>Start Services</b> check box.</li> </ol> <p><b>Warning:</b> Do not start the standby instance of the BlackBerry Enterprise Server. You cannot have two simultaneous connections to the wireless network using the same SRP identifier. Attempts to do so make the SRP identifier unavailable.</p>
Prevent the standby instance of the BlackBerry Enterprise Server from connecting to the BlackBerry Infrastructure.	<p>&gt; On the computer on which you created the standby instance of the BlackBerry Enterprise Server, in the Windows Services pane, set the startup type for all BlackBerry services to <b>Disabled</b>.</p>
Make the BlackBerry Enterprise Server add-in task unavailable.	<ol style="list-style-type: none"> <li>1. In the IBM® Lotus® Domino® Directory, open the configuration settings document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>3. Delete <b>BES</b> from the <b>ServerTasks</b> entry.</li> <li>4. Save and close the document.</li> <li>5. Verify that the automatic start option for the IBM Lotus Domino server is turned off.</li> </ol>
Specify access to the standby instance of the BlackBerry Enterprise Server.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the server document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. Change the server document to prevent users from accessing the computer so that replication or save conflicts in the BlackBerry state databases do not occur.</li> <li>3. Save and close the document.</li> </ol>
Create replicas of BlackBerry related databases and specify a replication cycle.	<ol style="list-style-type: none"> <li>1. On the computer on which you created the standby instance of the BlackBerry Enterprise Server, create replicas of the BlackBerry related databases that belong to the primary instance of the BlackBerry Enterprise Server. These databases reside in the following folders: <ul style="list-style-type: none"> <li>• BlackBerry Profiles database: Lotus\Domino\Data\BES</li> <li>• BlackBerry state databases: Lotus\Domino\Data\BES\State</li> </ul> </li> <li>2. Specify a replication cycle for all the databases listed in step 1 with an interval of 15 minutes to keep the databases current.</li> </ol> <p><b>Note:</b> When you add or delete users on the primary instance of the BlackBerry Enterprise Server, the replication cycle does not update the BlackBerry state databases automatically. You must manually add or delete replicas of the BlackBerry state databases on the standby instance of the BlackBerry Enterprise Server using a utility or agent.</p>

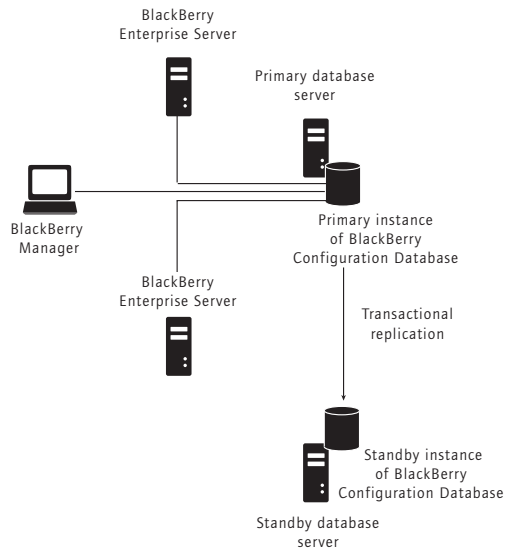
Action	Procedure
Store the DomBESCutover tool on the standby computer.	> Store the DomBESCutover tool on the computer on which you created the standby instance of the BlackBerry Enterprise Server.

## Preparing for disaster recovery of the BlackBerry Configuration Database

You prepare for disaster recovery by creating a standby instance of the BlackBerry Configuration Database on a separate database server. If the primary instance becomes unavailable—for example, as a result of a hardware failure—you switch immediately to the standby instance.

Preparing the BlackBerry Configuration Database for disaster recovery involves creating a one-way transactional replica of the BlackBerry Configuration Database from the primary database server to a standby database server. You specify the primary database server as a *publisher* of information and the standby database server as a *subscriber* to that information.

You cannot create a standby instance of the BlackBerry Configuration Database using transactional replication after a disaster scenario occurs.



Primary and standby instances of the BlackBerry Configuration Database

After you specify the publication schedule, transactional replication is designed to copy data from the primary instance of the BlackBerry Configuration Database to the standby instance of the BlackBerry Configuration Database with minimal latency. As a result, the data loss expected when switching from the primary instance to the standby instance is limited to only a few transactions.

Visit [msdn.microsoft.com/library/en-us/replsql/repltypes\\_754j.asp](http://msdn.microsoft.com/library/en-us/replsql/repltypes_754j.asp) for more information about how transactional replication works.

## Checklist: BlackBerry Configuration Database disaster recovery requirements and considerations

Requirements and considerations	
You must have one separate computer for the standby database server.	<input type="checkbox"/>
You must have one additional Microsoft® SQL Server license for the standby database server.	<input type="checkbox"/>
To support database replication, you must verify that your database environment is Microsoft SQL Server 2000 Service Pack (SP) 4 or higher. Research In Motion (RIM) does not support database replication for Microsoft SQL Server 2000 Desktop Engine (MSDE 2000) or IBM DB2® Universal Database (DB2 UDB) database environments.	<input type="checkbox"/>
To support database replication, you must configure your primary and standby database servers to permit access from remote computers.	<input type="checkbox"/>
To support database replication, you must verify that the Microsoft SQL Server Agent uses a Domain user account with local Administrator permissions as the startup account. This account must have administrative privileges on both database servers so that each Microsoft SQL Server Agent can access the shared replication folder.	<input type="checkbox"/>
To support database replication, you must verify that the shared replication folder is accessible from both database servers.	<input type="checkbox"/>
You must configure your standby database server with the same permissions required by the BlackBerry Enterprise Server that you configure on your primary database server. See the <i>BlackBerry Enterprise Server Installation Guide</i> for more information about database permissions that the BlackBerry Enterprise Server requires.	<input type="checkbox"/>
To support database replication, you must verify that your BlackBerry Configuration Database is Version 4.1 SP2 or later.	<input type="checkbox"/>
If you are using the BlackBerry database notification system, you must install the BlackBerry database notification system on both the primary and standby database servers. See the <i>BlackBerry Enterprise Server Installation Guide</i> for more information about installing the BlackBerry database notification system.	<input type="checkbox"/>
If you are upgrading the BlackBerry Configuration Database, you must delete the transactional replication and then reconfigure the transactional replication after you complete the upgrade process.	<input type="checkbox"/>
Consider the impacts of transactional replication on the performance of your primary database server. You can limit the resources required to support transactional replication by storing the replication folder on a separate computer.	<input type="checkbox"/>
Visit <a href="http://msdn.microsoft.com/library/en-us/replsql/replplan_114e.asp">msdn.microsoft.com/library/en-us/replsql/replplan_114e.asp</a> for more information about planning for transactional replication.	
Visit <a href="http://www.blackberry.com/support/downloads">www.blackberry.com/support/downloads</a> to download the database replication tools.	<input type="checkbox"/>

## Prepare for disaster recovery of the BlackBerry Configuration Database in a Microsoft SQL Server 2000 environment

> Perform the following actions:

Action	Procedure
Prevent every BlackBerry Enterprise Server in the BlackBerry Domain from connecting to the BlackBerry Configuration Database while you configure replication.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, in the Windows Services pane, stop all BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services</li> </ul> </li> <li>2. Repeat step 1 on every BlackBerry Enterprise Server that connects to the BlackBerry Configuration Database.</li> </ol>
Prepare the BlackBerry Configuration Database for replication and prevent access while you back up the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <b>primary database server name &gt; Database</b>.</li> <li>2. Right-click the BlackBerry Configuration Database and click <b>Properties</b>.</li> <li>3. On the <b>Options</b> tab, in the <b>Recovery Model</b> drop-down list, click <b>Full</b>.</li> <li>4. Select <b>Restrict Access</b>.</li> <li>5. Select <b>Single user</b>.</li> <li>6. Click <b>OK</b>.</li> </ol>
Back up the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <b>primary database server name &gt; Database</b>.</li> <li>2. Right-click the BlackBerry Configuration Database and click <b>All Tasks &gt; Backup Database</b>.</li> <li>3. Back up the BlackBerry Configuration Database to a uniquely named file (for example, <i>database_name_BKUP_yymmddhhmmss.bak</i>).</li> </ol>
Permit access to the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <b>primary database server name &gt; Database</b>.</li> <li>2. Right-click the BlackBerry Configuration Database and click <b>Properties</b>.</li> <li>3. On the <b>Options</b> tab, clear <b>Restrict Access</b>.</li> <li>4. Click <b>OK</b>.</li> </ol>

Action	Procedure
Prepare the primary database server for publication.	<ol style="list-style-type: none"><li data-bbox="594 230 1286 282">1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; <b>Replication</b>.</li><li data-bbox="594 291 1286 343">2. Right-click <b>Replication</b> and click <b>Configure Publishing, Subscribers, and Distribution</b>.</li><li data-bbox="594 352 1286 630">3. Follow the instructions on the screen to specify the following settings:<ul style="list-style-type: none"><li data-bbox="625 387 1286 439">• make the database server on which the BlackBerry Configuration Database resides its own replication distributor</li><li data-bbox="625 447 1286 543">• verify that the Microsoft SQL Server Agent uses a Domain user account with local Administrator permissions as the startup account; this account must have administrative privileges on both database servers so that each Microsoft SQL Server Agent can access the shared replication folder</li><li data-bbox="625 552 1286 604">• specify the network path to the snapshot folder; this folder must be a shared folder that each Microsoft SQL Server Agent can access</li><li data-bbox="625 612 1286 630">• use the default publication and distribution settings</li></ul></li><li data-bbox="594 638 1286 685">4. Confirm that the wizard completes successfully when the <b>Replication Monitor</b> appears in the left pane.</li></ol>

Action	Procedure
Configure the publication.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; Replication.</li> <li>2. Right-click <b>Publications</b> and click <b>New Publication</b>.</li> <li>3. Select <b>Show advanced options in this wizard</b>.</li> <li>4. Click <b>Next</b>.</li> <li>5. From the list of databases, click the name of your BlackBerry Configuration Database.</li> <li>6. Click <b>Next</b>.</li> <li>7. Select <b>Transactional publication</b> as the publication type.</li> <li>8. Click <b>Next</b>.</li> <li>9. Leave the <b>Updatable Subscription</b> options cleared.</li> <li>10. Click <b>Next</b>.</li> <li>11. Select <b>No, Subscribers receive data directly</b>.</li> <li>12. Click <b>Next</b>.</li> <li>13. Select all types of database servers that you expect to subscribe to this publication.</li> <li>14. Click <b>Next</b>.</li> <li>15. In the left pane, in the <b>Tables</b> row, click <b>Publish</b>.</li> <li>16. In the right pane, in the list of tables, clear the <b>ServiceConfig</b> and <b>ServiceTable</b> tables. These tables appear in the list only if you install the BlackBerry database notification system.</li> <li>17. Click <b>Next</b>.</li> <li>18. Review the <b>IDENTITY property not transferred to Subscribers</b> issue description. You take steps to resolve this issue when you connect to the standby instance of the BlackBerry Configuration Database in a disaster response scenario.</li> <li>19. Click <b>Next</b>.</li> <li>20. Accept or change default Publication name.</li> <li>21. Click <b>Next</b>.</li> <li>22. Select <b>Yes, I will define data filters</b>.</li> <li>23. Click <b>Next</b></li> <li>24. Select <b>Vertically, by filtering the columns</b>.</li> <li>25. Click <b>Next</b>.</li> <li>26. In the right pane, clear the column with the <b>timestamp</b> data type (for example, the <b>Lurnum</b> column).</li> <li>27. In the left pane, click the next table in the list.</li> <li>28. Repeat steps 23 and 24 for all tables in the list that contain the timestamp data type.</li> <li>29. Click <b>Next</b>.</li> <li>30. Select <b>No, allow only named subscriptions</b>.</li> <li>31. Click <b>Next</b>.</li> <li>32. Accept or change the default Snapshot Agent schedule.</li> <li>33. Click <b>Next</b>.</li> <li>34. Click <b>Finish</b>.</li> </ol>

Action	Procedure
Copy the publication into a script.	<ol style="list-style-type: none"> <li>1. In Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; Replication &gt; Publications.</li> <li>2. Right-click the publication you created and select <b>Generate SQL Script</b>.</li> <li>3. Click <b>OK</b>.</li> <li>4. Click <b>Save As</b>.</li> <li>5. In the <b>File name</b> field, type <b>bes_make_push.sql</b>.</li> <li>6. Click <b>Save</b>.</li> <li>7. Click <b>OK</b>.</li> </ol>
Configure the subscription and create the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, verify that the standby database server is present in the Microsoft SQL Server Group.</li> <li>2. If the standby database server is not present, right-click <b>SQL Server Group</b>.</li> <li>3. Click <b>New SQL Server Registration</b>. Follow the instructions on the screen to add the standby database server.</li> <li>4. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; Replication &gt; Publications.</li> <li>5. Right-click the publication you created and click <b>Push New Subscription</b>.</li> <li>6. Select <b>Show advanced options in this wizard</b>.</li> <li>7. Click <b>Next</b>.</li> <li>8. From the list of subscribers, click the standby database server name.</li> <li>9. Click <b>Next</b>.</li> <li>10. Create a new database that will be the standby instance of the BlackBerry Configuration Database.</li> <li>11. Click <b>Next</b>.</li> <li>12. Select <b>Run the agent at the Distributor</b>.</li> <li>13. Click <b>Next</b>.</li> <li>14. Select <b>Continuously</b> as your distribution agent schedule.</li> <li>15. Click <b>Next</b>.</li> <li>16. Select <b>Yes, initialize the schema and the data</b>.</li> <li>17. Select <b>Start the Snapshot Agent</b>.</li> <li>18. Click <b>Next</b>.</li> <li>19. Confirm that the Microsoft SQL Server Agent is running.</li> <li>20. Click <b>Next</b>.</li> <li>21. Click <b>Finish</b>.</li> </ol> <p><b>Note:</b> You might need to restart the Microsoft SQL Enterprise Manager to see that the subscription is active.</p>
Update the standby database server with RIM specific error messages.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Query Analyzer, connect to the standby database server.</li> <li>2. Open <b>errors.sql</b> located in the <b>Database &gt; DBInstallScripts &gt; SQL Server &gt; 4.1.2</b> folder on the installation media.</li> <li>3. Change the <b>_DATABASENAME_</b> value to use the name of the standby instance of the BlackBerry Configuration Database.</li> <li>4. Run the query.</li> </ol>

Action	Procedure
Install the BlackBerry database notification system on the standby database server, if applicable in your environment.	<p>&gt; If you installed the BlackBerry database notification system on your primary database server, install the BlackBerry database notification system on the standby database server. See the <i>BlackBerry Enterprise Server Installation Guide</i> for more information about installing the BlackBerry database notification system.</p>
Change the stored procedures on the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <b>standby database server name &gt; Database &gt; standby instance of the BlackBerry Configuration Database &gt; Stored Procedures</b>.</li> <li>2. Copy all the stored procedures in the list that start with the following prefixes: <ul style="list-style-type: none"> <li>• sp_MSdel_</li> <li>• sp_MSins_</li> <li>• sp_MSupd_</li> </ul> </li> <li>3. Paste the stored procedures into a text file named <b>make_repl_sp.sql</b>.</li> <li>4. Save and close the file.</li> <li>5. At the command prompt, switch to location of the BESDBRepl.exe tool.</li> <li>6. Type <b>BESDBRepl.exe /R make_repl_sp.sql complete_repl.sql</b>.</li> <li>7. Press ENTER.</li> <li>8. Click <b>Microsoft OLE DB Provider for SQL Server</b>.</li> <li>9. Click <b>Next</b>.</li> <li>10. Click the primary database server.</li> <li>11. Select <b>Use Windows NT Integrated Security</b>.</li> <li>12. Click the primary instance of the BlackBerry Configuration Database.</li> <li>13. Click <b>OK</b>.</li> <li>14. Type <b>exit</b>.</li> <li>15. In Notepad, open <b>complete_repl.sql</b>.</li> <li>16. Find the <b>sp_MSupd_ServerStats</b> stored procedure.</li> <li>17. Delete the following line: <pre style="margin-left: 20px;">"Id" = case substring(@bitmap,1,1) &amp; 1 when 1 then @c1 else "Id" end,</pre> </li> <li>18. Save and close the file.</li> </ol>
Delete the publication and any replication errors.	<ol style="list-style-type: none"> <li>1. In SQL Server Enterprise Manger, in the left pane, browse to <b>primary database server name &gt; Replication Monitor &gt; Replication Alerts</b>.</li> <li>2. In the right pane, delete any errors that appear.</li> <li>3. In the left pane, browse to <b>primary database server name &gt; Replication &gt; Publications</b>.</li> <li>4. Right-click the publication name and click <b>Delete</b>.</li> <li>5. Click <b>Yes</b>.</li> </ol>

Action	Procedure
Replace the standby instance of the BlackBerry Configuration Database with a restored copy of the primary instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. Copy the backup file from the primary database server to the standby database server.</li> <li>2. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>standby database server name</i> &gt; Database &gt; <i>standby instance of the BlackBerry Configuration Database</i></li> <li>3. Right-click the standby instance of the BlackBerry Configuration Database and click <b>All Tasks &gt; Restore Database</b>.</li> <li>4. Select <b>From device</b>.</li> <li>5. Click <b>Select Devices</b>.</li> <li>6. Click <b>Add</b>.</li> <li>7. Browse to the backup file that you copied from the primary database server.</li> <li>8. Click <b>OK</b>.</li> <li>9. Select <b>Restore backup set</b>.</li> <li>10. Select <b>Database - complete</b>.</li> <li>11. On the Options tab, select <b>Force restore over existing database</b>.</li> <li>12. Click <b>OK</b>.</li> </ol>
Permit access to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>standby database server name</i> &gt; Database.</li> <li>2. Right-click the standby instance of the BlackBerry Configuration Database and click <b>Properties</b>.</li> <li>3. On the <b>Options</b> tab, clear <b>Restrict Access</b>.</li> <li>4. Click <b>OK</b>.</li> </ol>
Apply the changed stored procedures to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Query Analyzer, connect to the standby database server.</li> <li>2. Connect to the standby instance of the BlackBerry Configuration Database.</li> <li>3. Open <b>complete_repl.sql</b>.</li> <li>4. Run the query.</li> </ol>
Replace the publication with the modified version.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Query Analyzer, connect to the primary database server.</li> <li>2. Open <b>bes_make_push.sql</b>.</li> <li>3. Execute the query.</li> <li>4. In SQL Server Enterprise Manger, click <b>Refresh</b> to see the modified version of the publication.</li> </ol>

Action	Procedure
<p>Configure the subscription on the modified version of the publication.</p>	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; <b>Replication</b> &gt; <b>Publications</b>.</li> <li>2. Right-click the publication you created and click <b>Push New Subscription</b>.</li> <li>3. From the list of subscribers, click the standby database server name.</li> <li>4. Click <b>Next</b>.</li> <li>5. Browse to the standby instance of the BlackBerry Configuration Database.</li> <li>6. Click <b>Next</b>.</li> <li>7. Select <b>Continuously</b> as your distribution agent schedule.</li> <li>8. Click <b>Next</b>.</li> <li>9. Select <b>No, the Subscriber already has the schema and data</b>.</li> <li>10. Click <b>Next</b>.</li> <li>11. Confirm that the Microsoft SQL Server Agent is running.</li> <li>12. Click <b>Next</b>.</li> <li>13. Click <b>Finish</b>.</li> </ol> <p><b>Note:</b> You might need to restart the Microsoft SQL Enterprise Manager to see that the subscription is active.</p>
<p>Configure a trace flag as a startup parameter so that UPDATE statements do not replicate as DELETE/INSERT statements.</p>	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Query Analyzer, connect to the primary database server.</li> <li>2. Connect to the primary instance of the BlackBerry Configuration Database.</li> <li>3. Type DBCC TRACEON (8207, -1).</li> <li>4. Run the query.</li> <li>5. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i>.</li> <li>6. Right-click the primary database server and click <b>Properties</b>.</li> <li>7. On the <b>General</b> tab, click <b>Startup Parameters</b>.</li> <li>8. In the <b>Parameter</b> field, type -T8207.</li> <li>9. Click <b>Add</b>.</li> <li>10. Click <b>OK</b>.</li> </ol> <p>Visit <a href="http://www.support.microsoft.com/kb/238254">www.support.microsoft.com/kb/238254</a> for more information about this trace flag.</p>
<p>Start the replication process.</p>	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manger, in the left pane, browse to <i>primary database server name</i> &gt; <b>Replication Monitor</b> &gt; <b>Agents</b>.</li> <li>2. Click <b>Snapshot Agents</b>.</li> <li>3. In the right pane, right-click the publication that you created and click <b>Start Agent</b>.</li> <li>4. Click <b>Miscellaneous Agents</b>.</li> <li>5. In the right pane, confirm that no errors appear.</li> <li>6. Click <b>Replication Alerts</b>.</li> <li>7. In the right pane, confirm that no errors appear.</li> </ol>

Action	Procedure
Permit every BlackBerry Enterprise Server in the BlackBerry Domain to connect to the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, in the Windows Services pane, start all BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services</li> </ul> </li> <li>2. Repeat step 1 on every BlackBerry Enterprise Server that connects to the BlackBerry Configuration Database.</li> </ol>

## Prepare for disaster recovery of the BlackBerry Configuration Database in a Microsoft SQL Server 2005 environment

> Perform the following actions:

Action	Procedure
Prevent every BlackBerry Enterprise Server in the BlackBerry Domain from connecting to the BlackBerry Configuration Database while you configure replication.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, in the Windows Services pane, stop all BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services</li> </ul> </li> <li>2. Repeat step 1 on every BlackBerry Enterprise Server that connects to the BlackBerry Configuration Database.</li> </ol>
Prepare the BlackBerry Configuration Database for replication and prevent access while you configure the publication.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, browse to <b>primary database server name &gt; Database</b>.</li> <li>2. Right-click the BlackBerry Configuration Database and click <b>Properties</b>.</li> <li>3. Click the <b>Options</b> page.</li> <li>4. In the <b>Recovery Model</b> drop-down list, click <b>Full</b>.</li> <li>5. In the <b>State</b> section, in the <b>Restrict Access</b> drop-down list, click <b>Single</b>.</li> <li>6. Click <b>OK</b>.</li> </ol>
Back up the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, browse to <b>primary database server name &gt; Database</b>.</li> <li>2. Right-click the BlackBerry Configuration Database and click <b>Tasks &gt; Back Up</b>.</li> <li>3. Back up the BlackBerry Configuration Database to a uniquely named file (for example, <i>database_name_BKUP_yymmddhhmmss.bak</i>).</li> </ol>

Action	Procedure
Restore the BlackBerry Configuration Database on the standby database server.	<ol style="list-style-type: none"> <li>1. Copy the backup file from the primary database server to the standby database server.</li> <li>2. In the Microsoft SQL Server Management Studio, in the left pane, browse to <i>standby database server name</i> &gt; Database.]</li> <li>3. Right-click Database and click Restore Database.</li> <li>4. Select <b>From device</b>.</li> <li>5. Browse to the backup file that you copied from the primary database server.</li> <li>6. Click <b>OK</b>.</li> <li>7. In the <b>To database</b> drop-down list, click the name of the BlackBerry Configuration Database.</li> <li>8. In the list of backup sets to restore, select the backup file that you copied from the primary database server.</li> <li>9. Click the <b>Options</b> page.</li> <li>10. Select <b>Overwrite the existing database</b>.</li> <li>11. Click <b>OK</b>.</li> </ol>
Update the standby database server with RIM specific error messages.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, connect to the standby database server.</li> <li>2. Open <b>errors.sql</b> located in the <b>Database &gt; DBInstallScripts &gt; SQL Server &gt; 4.1.2</b> folder on the installation media.</li> <li>3. Change the <b>__DATABASENAME__</b> value to use the name of the standby instance of the BlackBerry Configuration Database.</li> <li>4. Run the query.</li> </ol>
Permit access to the primary and standby instances of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, connect to the primary database server.</li> <li>2. Right-click the primary instance of the BlackBerry Configuration Database and click <b>Properties</b>.</li> <li>3. Click the <b>Options</b> page.</li> <li>4. In the <b>State</b> section, in the <b>Restrict Access</b> drop-down list, click <b>Multiple</b>.</li> <li>5. Click <b>OK</b>.</li> <li>6. Repeat steps 1 through 5 on the standby instance of the BlackBerry Configuration Database.</li> </ol>

Action	Procedure
Configure the publication.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, browse to <i>primary database server name</i> &gt; Replication.</li> <li>2. Right-click <b>Local Publications</b> and click <b>New Publication</b>.</li> <li>3. Select <i>primary database server will act as its own Distributor</i>.</li> <li>4. Click <b>Next</b>.</li> <li>5. In the <b>Snapshot folder</b> field, type the network location of the snapshot folder.</li> <li>6. Click <b>Next</b>.</li> <li>7. From the list of databases, click the name of your primary instance of the BlackBerry Configuration Database.</li> <li>8. Click <b>Next</b>.</li> <li>9. Click <b>Transactional publication</b>.</li> <li>10. Click <b>Next</b>.</li> <li>11. In the list of <b>Objects to publish</b>, select <b>Tables</b>, <b>Stored Procedures</b>, <b>Views</b>, and <b>User Defined Functions</b>.</li> <li>12. If the BlackBerry database notification system exists on your computer, expand <b>Tables</b>.</li> <li>13. Clear the <b>ServiceConfig</b> and <b>ServiceTable</b> tables.</li> <li>14. Click <b>Next</b>.</li> <li>15. In the Snapshot Agent security settings, select <b>Run under the following Windows account</b>.</li> <li>16. Type the username and password of a domain account with Local administrator permissions.</li> <li>17. Select <b>By impersonating the process account</b>.</li> <li>18. Click <b>OK</b>.</li> <li>19. Click <b>Next</b>.</li> <li>20. Select <b>Schedule the Snapshot Agent to run at the following times</b>.</li> <li>21. Accept or change the default schedule.</li> <li>22. Click <b>Next</b>.</li> <li>23. Select <b>Create the publication</b>.</li> <li>24. Click <b>Next</b>.</li> <li>25. In the <b>Publication name</b> field, type a name for the publication.</li> <li>26. Click <b>Finish</b>.</li> </ol>

Action	Procedure
<p>Prepare the standby database server and configure the subscription.</p>	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, connect to the standby database server.</li> <li>2. Browse to <i>standby database server name</i> &gt; Replication.</li> <li>3. Right-click <b>Local Subscriptions</b> and click <b>New Subscription</b>.</li> <li>4. From the list of publishers, click the primary database server name.</li> <li>5. From the list of databases and publications, click the publication for the primary instance of the BlackBerry Configuration Database.</li> <li>6. Click <b>Next</b>.</li> <li>7. Select <b>Run each agent at its Subscriber (pull subscriptions)</b>.</li> <li>8. Click <b>Next</b>.</li> <li>9. In the <b>Subscriber</b> column, select the standby database server.</li> <li>10. In the <b>Subscription Database</b> drop-down list, click the standby instance of the BlackBerry Configuration Database.</li> <li>11. Click <b>Next</b>.</li> <li>12. Set the distribution agent security so that you access the Snapshot Agent using a domain administrative account.</li> <li>13. Select <b>By impersonating the process account</b>.</li> <li>14. Click <b>OK</b>.</li> <li>15. Click <b>Next</b>.</li> <li>16. In the <b>Agent Schedule</b> drop-down list, click <b>Run continuously</b>.</li> <li>17. Click <b>Next</b>.</li> <li>18. In the <b>Subscription properties</b>, clear <b>Initialize</b>.</li> <li>19. Click <b>Next</b>.</li> <li>20. Click <b>Finish</b>.</li> </ol>
<p>Permit every BlackBerry Enterprise Server in the BlackBerry Domain to connect to the BlackBerry Configuration Database.</p>	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, in the Windows Services pane, start all BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services</li> </ul> </li> <li>2. Repeat step 1 on every BlackBerry Enterprise Server that connects to the BlackBerry Configuration Database.</li> </ol>

## Responding to a disaster scenario

When you respond to the loss of a BlackBerry Enterprise Server, you cut over to a standby instance that is fully operational and running with the BlackBerry services turned off.

When you respond to the loss of a BlackBerry Configuration Database, you change the BlackBerry Enterprise Server and any additional installations of the BlackBerry Manager to connect to a replica of the BlackBerry Configuration Database on a standby database server.

## Respond to the loss of a BlackBerry Enterprise Server

- > Perform the following actions:

Action	Procedure
Make the BlackBerry Enterprise Server add-in task unavailable on the primary computer.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the configuration settings document for the primary instance of the BlackBerry Enterprise Server.</li> <li>2. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>3. Delete <b>BES</b> from the <b>ServerTasks</b> entry.</li> <li>4. Save and close the document.</li> </ol>
Specify access to the primary and standby computers.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the server document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. Change the server document to permit users to access the computer.</li> <li>3. Save and close the document.</li> <li>4. Open the server document for the primary instance of the BlackBerry Enterprise Server.</li> <li>5. Change the server document to prevent users from accessing the computer so that replication or save conflicts in the BlackBerry state databases do not occur.</li> <li>6. Save and close the document.</li> </ol>
Use the DomBESCutover tool to update user accounts with information about the standby instance of the BlackBerry Enterprise Server.	> Use the DomBESCutover tool to update user records in the BlackBerry Configuration Database with information about the standby instance of the BlackBerry Enterprise Server.
Make the BlackBerry Enterprise Server add-in task available on the standby computer.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the configuration settings document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>3. Add <b>BES</b> to the <b>ServerTasks</b> entry.</li> <li>4. Save and close the document.</li> </ol>
Prevent the primary instance of the BlackBerry Enterprise Server from connecting to the BlackBerry Infrastructure.	<p>&gt; If possible, prevent the primary instance of the BlackBerry Enterprise Server from establishing a network connection (for example, unplug the computer from your LAN).</p> <p><b>Warning:</b> You cannot have two simultaneous connections to the wireless network using the same SRP identifier. Attempts to do so make the SRP identifier unavailable.</p>
Permit the standby instance of the BlackBerry Enterprise Server to connect to the BlackBerry Infrastructure.	<ol style="list-style-type: none"> <li>1. On the computer on which you created the standby instance of the BlackBerry Enterprise Server, in the Windows Services pane, set the startup type for all BlackBerry services to <b>Automatic</b>.</li> <li>2. Start the BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services, except the BlackBerry MDS Connection Service or the BlackBerry Collaboration Service.</li> </ul> </li> </ol>

Action	Procedure
Associate the BlackBerry services that support multiplicity to the standby BlackBerry Enterprise Server.	<ol style="list-style-type: none"> <li>1. In the BlackBerry Manager, in the left pane, click <b>BlackBerry Domain</b>.</li> <li>2. On the <b>Global</b> tab, expand <b>Service Control &amp; Customization</b>.</li> <li>3. Click <b>MDS CS to BES Mapping</b>.</li> <li>4. In the <b>BES Mappings</b> dialog box, in the left pane, click the BlackBerry MDS Connection Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>5. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>6. In the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>7. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>8. Click <b>OK</b>.</li> <li>9. Click <b>IM to BES Mapping</b>.</li> <li>10. In the <b>IM to BES Mappings</b> dialog box, in the left pane, click the BlackBerry Collaboration Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>11. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>12. In the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>13. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>14. Click <b>OK</b>.</li> </ol>
Start the BlackBerry services that support multiplicity in the BlackBerry Manager.	<ol style="list-style-type: none"> <li>1. In the BlackBerry Manager, in the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>2. In the right pane, click <b>Start Service</b>.</li> <li>3. In the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>4. In the right pane, click <b>Start Service</b>.</li> </ol> <p><b>Note:</b> The BlackBerry services with the computer name of the primary instance of the BlackBerry Enterprise Server appear in the left pane, but they are no longer active.</p>
Start the IBM Lotus Domino server on the standby computer.	<ul style="list-style-type: none"> <li>&gt; On the computer on which you created the standby instance of the BlackBerry Enterprise Server, start the IBM Lotus Domino server.</li> </ul>

## Confirm the recovery of a BlackBerry Enterprise Server

1. On the standby instance of the BlackBerry Enterprise Server, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration.
2. Perform the following actions:

Action	Procedure
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Infrastructure.	<ol style="list-style-type: none"> <li>1. On the <b>BlackBerry Server</b> tab, click <b>Validate SRP Key and ID</b>.</li> <li>2. Confirm that the test completes successfully.</li> <li>3. On the <b>BlackBerry Router</b> tab, click <b>Test Network Connection</b>.</li> <li>4. Confirm that the test completes successfully.</li> </ol>

Action	Procedure
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the <b>Database Connectivity</b> tab, click <b>Test SQL Server Connection</b>.</li> <li>2. Confirm that the test completes successfully.</li> </ol>

3. In the Windows Services pane, verify that all BlackBerry services are running.

## Respond to the loss of a BlackBerry Configuration Database

- > Perform the following actions:

Action	Procedure
If your database environment is Microsoft SQL Server 2005, delete the subscription on the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, connect to the standby database server.</li> <li>2. Browse to <i>standby database server name</i> &gt; <b>Replication</b> &gt; <b>Local Subscriptions</b>.</li> <li>3. Right-click the pull subscription to the primary instance of the BlackBerry Configuration Database.</li> <li>4. Click <b>Delete</b>.</li> </ol>
Update the numbering of the Identity values in the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the standby database server, connect to the standby instance of the BlackBerry Configuration Database.</li> <li>2. Open <b>RestoreIdentity.sql</b> located in the <b>Tools &gt; DBReplication</b> folder on the installation media.</li> <li>3. Run the query.</li> </ol>
Connect the BlackBerry Enterprise Server to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, on the taskbar, click <b>Start &gt; Programs &gt; BlackBerry Enterprise Server &gt; BlackBerry Server Configuration</b>.</li> <li>2. Click <b>Change Database</b>.</li> <li>3. Follow the instructions on the screen.</li> <li>4. Clear the <b>Backup existing database</b> option.</li> <li>5. Click <b>Start Services</b> to complete the change.</li> <li>6. Click <b>Finish</b>.</li> <li>7. Repeat steps 1 through 6 on every BlackBerry Enterprise Server that connects to the BlackBerry Configuration Database.</li> </ol>
Connect the BlackBerry Manager to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Manager, open the Registry Editor.</li> <li>2. Browse to <b>HKEY_CURRENT_USER\Software\Research In Motion\BlackBerry Enterprise Server\Management\Database</b>.</li> <li>3. Change the <b>DatabaseServerMachineName</b> and <b>DatabaseName</b> values to use the values for the standby instance of the BlackBerry Configuration Database.</li> <li>4. Open the BlackBerry Manager.</li> <li>5. Repeat steps 1 through 4 on every BlackBerry Manager that connects to the BlackBerry Configuration Database.</li> </ol>

## Confirm the recovery of a BlackBerry Configuration Database

1. On the primary instance of the BlackBerry Enterprise Server, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration.
2. Perform the following actions:

Action	Procedure
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Infrastructure.	<ol style="list-style-type: none"> <li>1. On the <b>BlackBerry Server</b> tab, click <b>Validate SRP Key and ID</b>.</li> <li>2. Confirm that the test completes successfully.</li> <li>3. On the <b>BlackBerry Router</b> tab, click <b>Test Network Connection</b>.</li> <li>4. Confirm that the test completes successfully.</li> </ol>
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the <b>Database Connectivity</b> tab, click <b>Test SQL Server Connection</b>.</li> <li>2. Confirm that the test completes successfully.</li> </ol>

3. In the Windows Services pane, verify that all BlackBerry services are running.

## Respond to the loss of both a BlackBerry Enterprise Server and a BlackBerry Configuration Database

- > Perform the following actions:

Action	Procedure
Make the BlackBerry Enterprise Server add-in task unavailable on the primary computer.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the configuration settings document for the primary instance of the BlackBerry Enterprise Server.</li> <li>2. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>3. Delete <b>BES</b> from the <b>ServerTasks</b> entry.</li> <li>4. Save and close the document.</li> </ol>
Configure access to the primary and standby computers.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the server document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. Change the server document to permit users to access the computer.</li> <li>3. Save and close the document.</li> <li>4. Open the server document for the primary instance of the BlackBerry Enterprise Server.</li> <li>5. Change the server document to prevent users from accessing the computer so that replication or save conflicts in the BlackBerry state databases do not occur.</li> <li>6. Save and close the document.</li> </ol>
Make the BlackBerry Enterprise Server add-in task available on the standby computer.	<ol style="list-style-type: none"> <li>1. In the IBM Lotus Domino Directory, open the configuration settings document for the standby instance of the BlackBerry Enterprise Server.</li> <li>2. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>3. Add <b>BES</b> to the <b>ServerTasks</b> entry.</li> <li>4. Save and close the document.</li> </ol>

Action	Procedure
If your database environment is Microsoft SQL Server 2005, delete the subscription on the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Management Studio, in the left pane, connect to the standby database server.</li> <li>2. Browse to <i>standby database server name</i> &gt; <b>Replication</b> &gt; <b>Local Subscriptions</b>.</li> <li>3. Right-click the pull subscription to the primary instance of the BlackBerry Configuration Database and click <b>Delete</b>.</li> </ol>
Update the numbering of the Identity values in the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the standby database server, connect to the standby instance of the BlackBerry Configuration Database.</li> <li>2. Open <b>RestoreIdentity.sql</b> located in the <b>Tools &gt; DBReplication</b> folder on the installation media.</li> <li>3. Run the query.</li> </ol>
Connect the standby instance of the BlackBerry Enterprise Server to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Enterprise Server, on the taskbar, click <b>Start &gt; Programs &gt; BlackBerry Enterprise Server &gt; BlackBerry Server Configuration</b>.</li> <li>2. Click <b>Change Database</b>.</li> <li>3. Follow the instructions on the screen.</li> <li>4. Clear the <b>Backup existing database</b> option.</li> <li>5. Clear <b>Start Services</b>.</li> <li>6. Click <b>Finish</b>.</li> </ol>
Use the DomBESCutover tool to update user accounts with information about the standby instance of the BlackBerry Enterprise Server.	<ul style="list-style-type: none"> <li>&gt; Use the DomBESCutover tool to update user records in the BlackBerry Configuration Database with information about the standby instance of the BlackBerry Enterprise Server.</li> </ul>
Permit the standby instance of the BlackBerry Enterprise Server to connect to the BlackBerry Infrastructure.	<ol style="list-style-type: none"> <li>1. On the computer on which you created the standby instance of the BlackBerry Enterprise Server, in the Windows Services pane, set the startup type for all BlackBerry services to <b>Automatic</b>.</li> <li>2. Start the BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services, except the BlackBerry MDS Connection Service or the BlackBerry Collaboration Service.</li> </ul> </li> </ol>
Connect the BlackBerry Manager to the standby instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the computer on which you installed the BlackBerry Manager, open the Registry Editor.</li> <li>2. Browse to <b>HKEY_CURRENT_USER\Software\Research In Motion\BlackBerry Enterprise Server\Management\Database</b>.</li> <li>3. Change the <b>DatabaseServerMachineName</b> and <b>DatabaseName</b> values to use the values for the standby instance of the BlackBerry Configuration Database.</li> <li>4. Open the BlackBerry Manager.</li> <li>5. Repeat steps 1 through 4 on every BlackBerry Manager that connects to the BlackBerry Configuration Database.</li> </ol>

Action	Procedure
Associate the BlackBerry services that support multiplicity to the standby BlackBerry Enterprise Server.	<ol style="list-style-type: none"> <li>1. In the BlackBerry Manager, in the left pane, click <b>BlackBerry Domain</b>.</li> <li>2. On the <b>Global</b> tab, expand <b>Service Control &amp; Customization</b>.</li> <li>3. Click <b>MDS CS to BES Mapping</b>.</li> <li>4. In the <b>BES Mappings</b> dialog box, in the left pane, click the BlackBerry MDS Connection Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>5. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>6. In the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>7. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>8. Click <b>OK</b>.</li> <li>9. Click <b>IM to BES Mapping</b>.</li> <li>10. In the <b>IM to BES Mappings</b> dialog box, in the left pane, click the BlackBerry Collaboration Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>11. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>12. In the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>13. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>14. Click <b>OK</b>.</li> </ol>
Start the BlackBerry services that support multiplicity in the BlackBerry Manager.	<ol style="list-style-type: none"> <li>1. In the BlackBerry Manager, in the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>2. In the right pane, click <b>Start Service</b>.</li> <li>3. In the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>4. In the right pane, click <b>Start Service</b>.</li> </ol> <p><b>Note:</b> The BlackBerry services with the computer name of the primary instance of the BlackBerry Enterprise Server still appear in the left pane, but they are no longer active.</p>
Start the IBM Lotus Domino server on the standby computer.	<ul style="list-style-type: none"> <li>&gt; On the computer on which you created the standby instance of the BlackBerry Enterprise Server, start the IBM Lotus Domino server.</li> </ul>

## Confirm the recovery of both a BlackBerry Enterprise Server and a BlackBerry Configuration Database

1. On the standby instance of the BlackBerry Enterprise Server, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration.
2. Perform the following actions:

Action	Procedure
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Infrastructure.	<ol style="list-style-type: none"> <li>1. On the <b>BlackBerry Server</b> tab, click <b>Validate SRP Key and ID</b>.</li> <li>2. Confirm that the test completes successfully.</li> <li>3. On the <b>BlackBerry Router</b> tab, click <b>Test Network Connection</b>.</li> <li>4. Confirm that the test completes successfully.</li> </ol>

Action	Procedure
Test the connection between the BlackBerry Enterprise Server and the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. On the <b>Database Connectivity</b> tab, click <b>Test SQL Server Connection</b>.</li> <li>2. Confirm that the test completes successfully.</li> </ol>

3. In the Windows Services pane, verify that all BlackBerry services are running.

## Moving forward from disaster recovery

When the disaster recovery scenario concludes, you can choose between continuing to operate on the standby instances of the BlackBerry Enterprise Server and the BlackBerry Configuration Database or returning to the primary instances.

If you continue to operate on your standby instances—making them your new primary instances—you should replace your standby instances.

### Replace standby instances

- > Perform the following actions:

Action	Procedure
Make your previous primary instance of the BlackBerry Enterprise Server your new standby instance of the BlackBerry Enterprise Server.	> If your previous primary instance of the BlackBerry Enterprise Server becomes available again—for example, when a local network service interruption ends—specify it to be your new standby instance of the BlackBerry Enterprise Server.
Install a new standby instance of the BlackBerry Enterprise Server.	> If your previous primary instance of the BlackBerry Enterprise Server is not likely to be available again—for example, if you cannot recover the hardware—create a new standby instance of the BlackBerry Enterprise Server.
Replace your standby instance of the BlackBerry Configuration Database.	> Configure the standby database server as a distributor and create a publication of the BlackBerry Configuration Database to a new subscription on another database server.

## Return to primary instances

> Perform the following actions:

Action	Procedure
Return to your primary instance of the BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. Back up the standby instance of the BlackBerry Configuration Database.</li> <li>2. Prevent every BlackBerry Enterprise Server and any additional installations of the BlackBerry Manager from connecting to the standby instance of the BlackBerry Configuration Database.   <b>Warning:</b> To avoid data corruption, you must prevent a scenario where a BlackBerry Enterprise Server continues using the standby instance of the BlackBerry Configuration Database while another BlackBerry Enterprise Server starts using the primary instance of the BlackBerry Configuration Database.</li> <li>3. On the primary database server, replace the primary instance of the BlackBerry Configuration Database with the restored version of the standby instance of the BlackBerry Configuration Database.</li> <li>4. Permit every BlackBerry Enterprise Server and any additional installations of the BlackBerry Manager to connect to the new primary instance of the BlackBerry Configuration Database.</li> </ol>

Action	Procedure
Return to your primary instance of the BlackBerry Enterprise Server.	<ol style="list-style-type: none"> <li>1. On the computer on which you created the standby instance of the BlackBerry Enterprise Server, in the Windows Services pane, stop all BlackBerry services.</li> <li>2. Set the startup type for all BlackBerry services to <b>Disabled</b>.</li> <li>3. In the IBM Lotus Domino Directory, open the configuration settings document for the standby instance of the BlackBerry Enterprise Server.</li> <li>4. On the <b>Notes.ini Settings</b> tab, click <b>Set/Modify Parameters</b>.</li> <li>5. Remove <b>BES</b> from the <b>ServerTasks</b> entry.</li> <li>6. Save and close the document.</li> <li>7. Verify that the automatic start option for the IBM Lotus Domino server is turned off.</li> <li>8. In the IBM Lotus Domino Directory, open the server document for the standby instance of the BlackBerry Enterprise Server.</li> <li>9. Change the server document to prevent users from accessing the computer so that replication or save conflicts in the BlackBerry state databases do not occur.</li> <li>10. Save and close the document.</li> <li>11. On the computer on which you created the standby instance of the BlackBerry Enterprise Server, use the DomBESCutover tool to update user records in the BlackBerry Configuration Database with information about the standby instance of the BlackBerry Enterprise Server.</li> <li>12. Turn on the computer on which you created the primary instance of the BlackBerry Enterprise Server.</li> <li>13. On the computer on which you created the primary instance of the BlackBerry Enterprise Server, in the Windows Services pane, verify that the startup type for all BlackBerry services is set to <b>Automatic</b>.</li> <li>14. Start the BlackBerry services in the following order: <ul style="list-style-type: none"> <li>• BlackBerry Controller</li> <li>• BlackBerry Router</li> <li>• BlackBerry Dispatcher</li> <li>• all remaining BlackBerry services, except the BlackBerry MDS Connection Service or the BlackBerry Collaboration Service.</li> </ul> </li> </ol>

Action	Procedure
<p>Configure the BlackBerry services that support multiplicity on your primary instance of the BlackBerry Enterprise Server.</p>	<ol style="list-style-type: none"> <li>1. In the BlackBerry Manager, in the left pane, click <b>BlackBerry Domain</b>.</li> <li>2. On the <b>Global</b> tab, expand <b>Service Control &amp; Customization</b>.</li> <li>3. Click <b>MDS CS to BES Mapping</b>.</li> <li>4. In the <b>BES Mappings</b> dialog box, in the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>5. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>6. In the left pane, click the BlackBerry MDS Connection Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>7. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>8. Click <b>OK</b>.</li> <li>9. Click <b>IM to BES Mapping</b>.</li> <li>10. In the <b>IM to BES Mappings</b> dialog box, in the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>11. In the right pane, clear the primary instance of the BlackBerry Enterprise Server.</li> <li>12. In the left pane, click the BlackBerry Collaboration Service on the primary instance of the BlackBerry Enterprise Server.</li> <li>13. In the right pane, select the primary instance of the BlackBerry Enterprise Server.</li> <li>14. Click <b>OK</b>.</li> <li>15. In the BlackBerry Manager, in the left pane, click the BlackBerry MDS Connection Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>16. In the right pane, click <b>Start Service</b>.</li> <li>17. In the left pane, click the BlackBerry Collaboration Service on the standby instance of the BlackBerry Enterprise Server.</li> <li>18. In the right pane, click <b>Start Service</b>.</li> </ol> <p><b>Note:</b> The BlackBerry services with the computer name of the primary instance of the BlackBerry Enterprise Server still appear in the left pane, but they are no longer active.</p>

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