

BlackBerry Enterprise Server for Microsoft Exchange

Version: 5.0 | Service Pack: 1

Upgrade Guide

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Overview: BlackBerry Enterprise Server

1

The BlackBerry® Enterprise Server is designed to be a secure, centralized link between an organization's wireless network, communications software, applications, and BlackBerry devices. The BlackBerry Enterprise Server integrates with your organization's existing infrastructure, which can include messaging and collaboration software, calendar and contact information, wireless Internet and intranet access, and custom applications, to provide BlackBerry device users with mobile access to your organization's resources.

The BlackBerry Enterprise Server supports AES and Triple DES encryption to protect and ensure the integrity of wireless data that is transmitted between the BlackBerry Enterprise Server components and BlackBerry devices. You can select from more than 450 IT policy rules that you can configure to control the features of the BlackBerry devices that are used in your organization's environment.

The BlackBerry Enterprise Server supports several optional components and configurations to meet your organization's requirements. The BlackBerry Collaboration Service integrates with supported third-party instant messaging servers to permit users to access your organization's instant messaging system from their BlackBerry devices using the BlackBerry instant messaging client. The BlackBerry MDS Integration Service supports custom application development and distribution. You can configure the BlackBerry Enterprise Server and the BlackBerry Enterprise Server components to support high availability to enhance the consistency and reliability of your organization's environment.

You can manage the BlackBerry Enterprise Server, BlackBerry devices, and user accounts using the BlackBerry Administration Service, a web application that is accessible from any computer that can access to the computer that hosts the BlackBerry Administration Service. You can use the BlackBerry Administration Service to manage a BlackBerry Domain, which consists of one or more BlackBerry Enterprise Server instances and remote components that use a single BlackBerry Configuration Database.

Planning a BlackBerry Enterprise Server upgrade

2

If your organization's environment includes only one BlackBerry® Enterprise Server at version 4.0 SP7 or 4.1 SP3 or later, you can upgrade the BlackBerry Enterprise Server to the latest version by overwriting it or by installing the BlackBerry Enterprise Server on a different computer and moving the user data to the upgraded BlackBerry Enterprise Server.

If your organization's environment includes more than one BlackBerry Enterprise Server at version 4.1 SP3 or later, you can upgrade each BlackBerry Enterprise Server instance to the latest version in phases to reduce the risk to your organization's environment and minimize the number of users that are affected at the same time.

For information about upgrading more than one BlackBerry Enterprise Server, see the *BlackBerry Enterprise Server Upgrade Planning Guide*.

Replacing the BlackBerry Manager with the BlackBerry Administration Service

In BlackBerry® Enterprise Server versions later than version 4.1, the BlackBerry Administration Service replaces the BlackBerry Manager as the BlackBerry Enterprise Server component that you use to manage the BlackBerry Enterprise Server and BlackBerry device users.

During the BlackBerry Enterprise Server upgrade process, the setup application removes the BlackBerry Manager. If you installed a standalone BlackBerry Manager, you can remove the BlackBerry Manager after you install the BlackBerry Administration Service.

After the BlackBerry Enterprise Server upgrade process completes, you must create administrator accounts for the administrators in your organization and provide the administrators with new login information and the BlackBerry Administration Service web address. If you try to run the BlackBerry Manager, it displays the "DB version greater than maximum currently supported" message and closes.

Synchronizing data over the wireless network automatically

When you upgrade the BlackBerry® Enterprise Server, the BlackBerry Synchronization Service sends updated service books to the BlackBerry devices that can synchronize data over the wireless network. BlackBerry® Device Software versions 4.0 and later can synchronize data automatically if the BlackBerry Enterprise Server is running.

If the data does not synchronize automatically, you must use the BlackBerry Administration Service to resend the service books and synchronize the data.

Upgrade implications for the BlackBerry Configuration Database

When you upgrade the BlackBerry® Enterprise Server to the latest version, you must also upgrade the BlackBerry Configuration Database to the latest version. To upgrade the BlackBerry Configuration Database, you can use the setup application to install or upgrade BlackBerry Enterprise Server components. The installation or upgrade process upgrades the BlackBerry Configuration Database automatically so that the database and components run the same version. If you do not want to use the setup application to upgrade the BlackBerry Configuration Database, you can run the database upgrade scripts on the database server.

You cannot manage the BlackBerry Enterprise Server until you install the BlackBerry Administration Service version that is the same as the BlackBerry Configuration Database version or upgrade the BlackBerry Administration Service so that it is the same version as the BlackBerry Configuration Database.

The latest BlackBerry Enterprise Server version supports MSDE but you might want to move an MSDE database such as a BlackBerry Configuration Database from MSDE to a version of Microsoft® SQL Server® that Microsoft fully supports. To upgrade a BlackBerry Configuration Database and move it from MSDE to Microsoft SQL Server, you should create a copy of the BlackBerry Configuration Database, move the copy to Microsoft SQL Server, and then upgrade the BlackBerry Configuration Database on the Microsoft SQL Server to the latest version.

Supported BlackBerry Enterprise Server versions that you can upgrade

You can upgrade the following BlackBerry® Enterprise Server versions to the latest BlackBerry Enterprise Server version:

- BlackBerry Enterprise Server version 5.0
- BlackBerry Enterprise Server version 4.1 SP3 or later
- BlackBerry Enterprise Server version 4.0 SP7 if there is only one BlackBerry Enterprise Server instance in your organization's BlackBerry Domain. If there is more than one BlackBerry Enterprise Server instance in your organization's BlackBerry Domain, you must upgrade to BlackBerry Enterprise Server version 4.1 SP3 or later before upgrading to the latest version.

Hardware requirements: BlackBerry Enterprise Server

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The following are requirements for a BlackBerry® Enterprise Server and the BlackBerry Enterprise Server components that you install on a single computer, and excludes the BlackBerry Collaboration Service and the BlackBerry MDS Integration Service. The requirements are for a BlackBerry Enterprise Server environment that includes users that receive 100 to 200 email messages each day.

You can improve the performance and reliability of the BlackBerry Enterprise Server by installing the BlackBerry Enterprise Server components on multiple computers. If your BlackBerry Enterprise Server environment supports up to 1000 users, install the BlackBerry Configuration Database on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server. If your BlackBerry Enterprise Server environment supports up to 2000 users, install the BlackBerry Configuration Database and the BlackBerry Administration Service on computers that are separate from the computer that hosts the BlackBerry Enterprise Server.

Item	Requirement
BlackBerry Enterprise Server that supports up to 200 users	<ul style="list-style-type: none"> • Single processor, 2.0 GHz Intel® Xeon® (two processors recommended) • 2 GB of memory • 2 drives, RAID 1
BlackBerry Enterprise Server that supports up to 500 users	<ul style="list-style-type: none"> • Two processors, 2.0 GHz Intel Xeon • 2 GB of memory • 2 drives, RAID 1
BlackBerry Enterprise Server that supports up to 1000 users	<ul style="list-style-type: none"> • Two processors, 2.0 GHz Intel Xeon • 3 GB of memory • 2 drives, RAID 1
BlackBerry Enterprise Server that supports up to 2000 users	<ul style="list-style-type: none"> • Two processors, 2.8 GHz Intel Xeon or two processors, 1.86 GHz Intel Xeon 5100 Series (Dual Core) • 4 GB of memory • 2 drives, RAID 1 or 4 drives, RAID 1+0

System requirements

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For information about calculating hardware requirements, visit www.blackberry.com/go/serverdocs to see the *BlackBerry Enterprise Server Capacity Calculator* and *BlackBerry Enterprise Server Performance Benchmarking Guide*.

System requirements: BlackBerry Enterprise Server

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server 2008 SP2 (32-bit or 64-bit)
Microsoft® Exchange system tools	Any of the following system tools: <ul style="list-style-type: none"> Microsoft Exchange 2003 SP2 System Manager Microsoft Exchange Server MAPI client and CDO 1.2.1 <p>To support Microsoft Exchange 2010, you must install Microsoft Exchange Server MAPI client and CDO 1.2.1 version 6.5.8146.0 or higher.</p> <p>For more information about installing MAPI and CDO patches on your organization's BlackBerry® Enterprise Server, visit http://support.microsoft.com to read article 917481.</p>
Microsoft Exchange organization of the system tools for the messaging server	The same Microsoft Exchange organization that the messaging server uses
CDO library	To support the latest version for Microsoft Exchange in your organization's environment, the latest version of the CDO library that applies to that version
Unicode support for calendars	To support Microsoft Exchange 2003, the following Microsoft hotfixes: <ul style="list-style-type: none"> 913643 on the messaging server 923537 on the computer that hosts the BlackBerry Enterprise Server
database conditions for the BlackBerry MDS Integration Service	A database server that hosts the BlackBerry Configuration Database
static IP address for the computer	To install the BlackBerry MDS Integration Service or the BlackBerry Administration Service in a pool, a static IP address for the computer that hosts the component

Item	Requirement
browser	Windows® Internet Explorer® 6.0 to 8.0 with language preferences configured to display encoded web pages
media player	To support audio attachments, Windows Media® Player 9 or later
network proximity	A high-speed, switched connection between the BlackBerry Enterprise Server and messaging servers
monitoring	To support the BlackBerry Monitoring Service, the SNMP service must be running

System requirements: BlackBerry Administration Service and BlackBerry Web Desktop Manager

The following system requirements apply when you install the BlackBerry® Administration Service and BlackBerry® Web Desktop Manager on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit) Microsoft® hotfix 955839 installed on the computer that hosts the BlackBerry Administration Service and BlackBerry Web Desktop Manager
memory	A minimum of 1.2 GB of memory
browser	Windows® Internet Explorer® version 6.0 to 8.0 with the following settings: <ul style="list-style-type: none"> language preferences configured to display encoded web pages the BlackBerry Administration Service and BlackBerry Web Desktop Manager web sites assigned to the local intranet or trusted sites security zone

System requirements: BlackBerry Enterprise Server databases

Item	Requirement
database management system	Any of the following database management systems:

Item	Requirement
	<ul style="list-style-type: none"> • MSDE 2000 SP3 • Microsoft® SQL Server® 2005 SP3 (32-bit or 64-bit) • Microsoft SQL Server 2005 Express Edition SP3 • Microsoft SQL Server 2008 SP1 (32-bit or 64-bit) • Microsoft SQL Server 2008 Express Edition SP1 (32-bit or 64-bit) <p>For all versions of the Microsoft SQL Server earlier than Microsoft SQL Server 2005 SP3, Microsoft Security Bulletin MS09-004 (for more information, visit http://technet.microsoft.com to read article KB960082).</p>
collation setting	<p>The following conditions on the database server:</p> <ul style="list-style-type: none"> • collation set to default case-insensitive • BlackBerry® Configuration Database collation set to default case-insensitive • BlackBerry® database notification system and Microsoft SQL Server server collation must be the same • default collations are recommended though non-default collations are supported (for more information, visit http://technet.microsoft.com to read articles KB04785 and KB15534)
remote database conditions	TCP/IP network protocols turned on
database mirroring	<p>To support database mirroring for the BlackBerry Configuration Database or BlackBerry MDS Integration Service database, the following conditions:</p> <ul style="list-style-type: none"> • the database server must be Microsoft SQL Server 2005 SP3 Enterprise Edition or Standard Edition (32-bit or 64-bit), Microsoft SQL Server 2008 Enterprise Edition or Standard Edition (32-bit or 64-bit), or Microsoft SQL Server 2008 SP1 Enterprise Edition or Standard Edition (32-bit or 64-bit) • the database server that hosts the mirror database must use the same version and build as the principal database • a separate database server for the mirror database • static port with the same port number for both database servers • Microsoft SQL Server Browser running on both database servers
database transactional replication	<p>To support database transactional replication for the BlackBerry Configuration Database or BlackBerry MDS Integration Service database, the following conditions:</p> <ul style="list-style-type: none"> • the database server must be Microsoft SQL Server 2005 SP3 or later

Item	Requirement
	<ul style="list-style-type: none"> the database server that hosts the replicated database must use the same version and build as the primary database

System requirements: BlackBerry Attachment Service

The following system requirements apply when you install the BlackBerry® Attachment Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
media player	To support audio attachments, Windows Media® Player version 9 or later
browser	Windows® Internet Explorer® version 6.0 to 8.0 with language preferences configured to display encoded web pages

System requirements: BlackBerry Collaboration Service

The following system requirements apply when you install the BlackBerry® Collaboration Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
IBM® Lotus® Sametime®	IP address of the computer that hosts the BlackBerry® Collaboration Service added to the CommunityConnectivity document on the IBM Lotus Sametime server
Novell® GroupWise® Messenger	SSL authentication turned on for the Novell GroupWise Messenger agents on the Novell GroupWise Messenger server

Item	Requirement
Microsoft® Office Live Communications Server 2005 or Microsoft® Office Communications Server 2007	The latest Microsoft hotfixes installed

System requirements: BlackBerry MDS Connection Service

The following system requirements apply when you install the BlackBerry® MDS Connection Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
RSA® Authentication Agent	To support enhanced network authentication (optional), RSA® Authentication Agent version 5.0 for Windows®
memory	One of the following: <ul style="list-style-type: none"> if you install a central push server and less than 1000 user accounts, a minimum of 1024 MB if you install a central push server and more than 1000 user accounts, a minimum of 3 GB if you do not install a central push server, a minimum of 512 MB

System requirements: BlackBerry MDS Integration Service

The following system requirements apply when you install the BlackBerry® MDS Integration Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit)

Item	Requirement
	<ul style="list-style-type: none"> Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
database conditions	A database server that also hosts the BlackBerry Configuration Database
static IP address	To support the BlackBerry MDS Integration Service pool, a static IP address for the computer

System requirements: BlackBerry Monitoring Service

The following system requirements apply when you install the BlackBerry® Monitoring Service on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server.

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
SNMP	The SNMP service running on the computer that hosts the BlackBerry Enterprise Server
browser	Windows® Internet Explorer® version 6.0 to 8.0 with the following conditions: <ul style="list-style-type: none"> support for JavaScript® cookies turned on
wireless modem	To send SMS text messages to BlackBerry devices, an SMS wireless modem connected to the computer that accepts the AT command set. For more information about SMS wireless modems recommended for the BlackBerry Monitoring Service, visit www.blackberry.com/support to read article KB19504.

System requirements: BlackBerry Router

To install the BlackBerry® Router on a computer that is separate from the computer that hosts the BlackBerry® Enterprise Server, any of the following operating systems:

- Windows Server® 2003 SP2 (32-bit or 64-bit)
- Windows Server 2003 R2 SP2 (32-bit or 64-bit)
- Windows Server® 2008 SP2 (32-bit or 64-bit)

System requirements: Computers for BlackBerry Web Desktop Manager, BlackBerry Administration Service, and BlackBerry Monitoring Service users

Item	Requirement
operating system	Any of the following operating systems: <ul style="list-style-type: none"> Windows Server® 2003 SP2 (32-bit or 64-bit) Windows Server 2003 R2 SP2 (32-bit or 64-bit) Windows Server® 2008 SP2 (32-bit or 64-bit)
browser	Windows® Internet Explorer® version 6.0 to 8.0
browser settings	The following conditions must be met: <ul style="list-style-type: none"> the BlackBerry Web Desktop Manager, BlackBerry Administration Service, and BlackBerry Monitoring Service web sites assigned to the local intranet or trusted sites security zone Microsoft® hotfix 955839 installed on the users' computers to make sure the correct time zones are displayed the following settings turned on to support Microsoft® ActiveX®: <ul style="list-style-type: none"> Automatic prompting for ActiveX controls Download signed Microsoft ActiveX controls Run ActiveX controls and plug-ins Script ActiveX controls marked safe for scripting support for JavaScript® support for TLS or SSL the SSL certificate installed to permit trusted connections with the BlackBerry Administration Service if using Windows Vista, the BlackBerry Administration Service web address added as a trusted site and Enable protected mode cleared

System requirements: Messaging server

Any of the following messaging servers located in close proximity to where you want to install the primary BlackBerry® Enterprise Server:

- Microsoft® Exchange 2010 and Microsoft Exchange 2010 Update Rollup1 (also requires that you install BlackBerry Enterprise Server 5.0 SP1 MR1)
- Microsoft Exchange 2007 SP2
- Microsoft Exchange 2003 SP2
- Microsoft Exchange mixed environment (Microsoft Exchange 2003 and 2007)

System requirements: Firewall

To install the BlackBerry® Enterprise Server, configure a firewall or proxy firewall with the following conditions:

- exclusive use of port 3101 to open and maintain an outbound, bidirectional TCP/IP connection to an external server
- support for resolving Internet addresses that use DNS
- for proxy firewalls, transparency of the proxy server

System requirements: Instant messaging server

To install the BlackBerry® Enterprise Server, any of the following instant messaging servers:

- IBM® Lotus® Sametime® version 6.5.1 Community Server
- IBM Lotus Sametime version 7.0 Community Server
- IBM Lotus Sametime version 7.5 Community Server
- IBM Lotus Sametime version 8.0 Community Server
- Microsoft® Office Live Communications Server 2005 SP1 Standard or Enterprise
- Microsoft® Office Communications Server 2007 Standard or Enterprise
- Novell® GroupWise® Messenger version 2.0 or later

Supported features and environments

Item	Description
virtual environment	The BlackBerry® Enterprise Server and BlackBerry Enterprise Server components support VMware® Infrastructure version 3.5.
enhanced network authentication	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support RSA® Authentication Agent version 5.0 for Windows®.
SNMP monitoring	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support the SNMP service.
remote access	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components support remote access by administrators who use Remote Desktop Connection.

Unsupported environments

Item	Description
DMZ	The BlackBerry® Enterprise Server and BlackBerry Enterprise Server components, with the exception of the BlackBerry Router, do not support installation in a DMZ.
messaging server	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components do not support installation on the same computer as the messaging server.
email application	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components do not support the installation of email applications on the same computer.
instant messaging server	The BlackBerry Enterprise Server and BlackBerry Enterprise Server components do not support more than one type of instant messaging server in the BlackBerry Domain. For example, you cannot install the BlackBerry Collaboration Service for use with Microsoft® Office Communications Server 2007 and the BlackBerry Collaboration Service for IBM® Lotus® Sametime® in the same BlackBerry Domain.
BlackBerry database notification system	The BlackBerry database notification system does not support installation on a computer that hosts Microsoft® SQL Server® and runs Windows Server® 2008.
BlackBerry Attachment Service	If the BlackBerry Attachment Service is hosted on a computer that uses Windows Server® 2008, the BlackBerry Attachment Service does not support .mp3 audio files on BlackBerry devices, and the BlackBerry Attachment Service does not support any audio file formats on BlackBerry® 7100 Series devices that support CDMA networks. You must host the BlackBerry Attachment Service on a computer that uses Windows Server 2003 if you want the BlackBerry Attachment Service to support .mp3 audio files on BlackBerry devices and all audio formats on BlackBerry 7100 Series devices that support CDMA networks.

Preupgrade tasks

5

Configuring a Microsoft Exchange 2010 messaging environment

Create a Windows account that has a Microsoft Exchange 2010 mailbox

You must create a Windows® account with a Microsoft® Exchange 2010 mailbox so that the Windows account can authenticate with the Microsoft® Exchange Server.

Before you begin: If you want free/busy lookups to work in Microsoft® Outlook® 2003 and earlier, you must configure Microsoft Exchange 2010 to support Microsoft Outlook 2003 and earlier by creating a public folder database. For more information about supporting Microsoft Outlook 2003 and earlier, visit <http://support.microsoft.com> to read article 555851 and visit <http://technet.microsoft.com> to read articles 123694, 124270, 397221, and 691120.

1. On the computer that hosts Microsoft Exchange, log in using an administrator account that has the permission to create accounts.
2. Open the Microsoft Exchange Management Console.
3. Create an account and mailbox that you name **BESAdmin**.
4. To permit the BlackBerry® Enterprise Server to check if a BlackBerry device user has permission to access a public folder, assign the Owner permission for all public folders to the administrator account.

After you finish:

- To verify that you created the Windows account, log in to a computer using the Windows account.
- Verify that the Windows account is not a member of the Domain Administrators group in Microsoft® Active Directory®.
- Verify that BlackBerry device users have Read permissions and Visible permissions to public folders.
- To permit BlackBerry device users to check the availability of meeting participants using BlackBerry® Device Software 4.5 or later, configure the Schedule+ Free/Busy information for the system public folder. For more information, visit <http://technet.microsoft.com> to read articles 629523 and 691129.

Configure Microsoft Exchange 2010 permissions for the Windows account

1. On a computer that hosts the Microsoft® Exchange Management Shell, open the Microsoft Exchange Management Shell.
2. Type **Get-MailboxDatabase | Add-ADPermission -User "BESAdmin" -AccessRights ExtendedRight -ExtendedRights Receive-As, ms-Exch-Store-Admin**.
3. Type **Add-RoleGroupMember "View-Only Organization Management" -Member "BESAdmin"**.

4. Type **Add-ADPermission -InheritedObjectType User -InheritanceType Descendants -ExtendedRights Send-As -User "BESAdmin" -Identity "CN=Users,DC=<domain_1>,DC=<domain_2>,DC=<domain_3>"** where <domain_1>, <domain_2>, and <domain_3> form the name of the domain.
For example, if the domain name is www.example.com, type **www** for <domain_1>, **example** for <domain_2>, and **com** for <domain_3>.

After you finish: If you create a new mailbox database for Microsoft Exchange, repeat step 2.

Turn off client throttling in Microsoft Exchange 2010

By default, Microsoft® Exchange 2010 uses client throttling policies to track the bandwidth that each Microsoft Exchange user consumes and enforce bandwidth limits, as necessary. The policies affect the performance of the BlackBerry® Enterprise Server negatively, so you should turn off client throttling.

Note: If you want to turn off client throttling for only the Windows® account that has a Microsoft Exchange mailbox, you can configure a throttling policy for the Windows account and turn off client throttling for the policy.

1. On a computer that hosts the Microsoft Exchange Management Shell, open the Microsoft Exchange Management Shell.
2. Type **Get-ThrottlingPolicy | where {_.IsDefault -eq \$true} | Set-ThrottlingPolicy -RCAMaxConcurrency \$null**.

Increase the maximum number of connections to the Address Book service in Microsoft Exchange 2010

By default, Microsoft® Exchange 2010 limits the maximum number of connections from the BlackBerry® Enterprise Server to the Address Book service to 50. To permit the BlackBerry Enterprise Server to run, you must increase the number of permitted connections to a large value (for example, 100,000).

1. On the computer that hosts the Microsoft Exchange CAS server, in <drive>:\Program Files\Microsoft\Exchange Server\V14\Bin, in a text editor, open the **microsoft.exchange.addressbook.service.exe.config** file.
2. Change the value of the MaxSessionsPerUser key to **100000**.
3. Save and close the file.
4. Restart the Address Book service.

Configure a management role for Microsoft Exchange Web Services

If you want the BlackBerry® Enterprise Server to use Microsoft® Exchange Web Services to manage calendars on BlackBerry devices, you must configure a management role for Microsoft Exchange Web Services in Microsoft Exchange 2010.

For more information about configuring the BlackBerry Enterprise Server to use Microsoft Exchange Web Services, see the *BlackBerry Enterprise Server Administration Guide*.

1. On a computer that hosts the Microsoft Exchange Management Shell, open the Microsoft Exchange Management Shell.

2. Type **New-ManagementRoleAssignment -Name "BES Admin EWS" -Role ApplicationImpersonation -User "BESAdmin"**.

Configure the BlackBerry Enterprise Server to run without public folders

If you did not install any public folders in Microsoft® Exchange, you must configure the BlackBerry® Enterprise Server to run without public folders by changing a registry key.

1. On each computer that hosts the BlackBerry Enterprise Server, click **Start > Run**.
2. In the **Open** field, type **regedit**.
3. Click **OK**.
4. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows Messaging Subsystem\CDO.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Microsoft\Windows Messaging Subsystem.
5. If the **CDO** registry key does not exist, create a registry key that you name **CDO**.
6. In the **CDO** registry key, if the DWORD value does not exist, create a DWORD value that you name **Ignore No PF**.
7. Change the DWORD value to **1**.
8. Click **OK**.

Configuring a Microsoft Exchange 2007 messaging environment

Create a Windows account that has a Microsoft Exchange 2007 mailbox

You must create a Windows® account that has a Microsoft® Exchange 2007 mailbox so that the Windows account can authenticate with the Microsoft® Exchange Server.

Before you begin: You must configure Microsoft Exchange 2007 to support versions of Microsoft® Outlook® that are earlier than 2007 by creating a public folder database. For more information about supporting versions of Microsoft Outlook that are earlier than 2007, visit <http://support.microsoft.com> to read article 555851 and visit <http://technet.microsoft.com> to read articles 123694, 124270, 397221, and 691120.

1. On the computer that hosts Microsoft Exchange, log in using an administrator account that has the correct permission to create accounts.
2. Open the Microsoft Exchange Management Console.
3. Create an account and mailbox that you name **BESAdmin**.
4. To permit the BlackBerry Enterprise Server to check if a user has permissions for a public folder, assign the Owner permission for all public folders to the administrator account.

After you finish:

- To verify that you created the Windows account, log in to a computer using the Windows account.
- Verify that the Windows account is not a member of the Domain Administrators group in Microsoft® Active Directory®.
- Verify that BlackBerry device users have Read and Visible permissions to public folders.
- To permit BlackBerry device users to check the availability of meeting participants in BlackBerry® Device Software 4.5 or later, configure the Schedule+ Free/Busy information for the system public folder. For more information, visit <http://technet.microsoft.com> to read articles 629523 and 691129.

Configure Microsoft Exchange 2007 permissions for the Windows account

1. On a computer that hosts the Microsoft® Exchange Management Shell, open the Microsoft Exchange Management Shell.
2. Perform one of the following actions:
 - If you logged in to a Microsoft® Exchange Server 2007, type **add-exchangeadministrator "BESAdmin" -role ViewOnlyAdmin**.
 - If you logged in to another computer, type **get-mailboxserver "<messaging_server_name>" | add-exchangeadministrator "BESAdmin" -role ViewOnlyAdmin**.
3. For each Microsoft Exchange Server 2007 that hosts BlackBerry® device users, type the following command: **get-mailboxserver "<messaging_server_name>" | add-adpermission -user "BESAdmin" -accessrights ExtendedRight -extendedrights Receive-As, ms-Exch-Store-Admin**.

Permit BlackBerry device users to send email messages in a Microsoft Exchange environment

To permit BlackBerry® device users to send email messages, you must configure Send As permissions for the Microsoft® Active Directory® user object that contains BlackBerry device users. This task describes how to configure the Send As permissions for the entire Windows® domain but you can also configure the permissions at the user object level or on a container of user objects.

For more information about Send As permissions and the BlackBerry® Enterprise Server, visit www.blackberry.com/support to read KB04707. For more information about assigning Send As permissions to multiple user accounts, visit www.support.microsoft.com to read article 912918.

1. Log in to a computer in the Windows® domain as an administrator that has permissions to modify user objects in Microsoft Active Directory.
2. On the taskbar, click **Start > Administrative Tools > Active Directory Users and Computers**.
3. On the **View** menu, click **Advanced Features**.
4. Right-click the domain root. Click **Properties**.
5. On the **Security** tab, click **Advanced**.
6. Click **Add**.
7. Type the name of the Windows account that you created (for example, BESAdmin).
8. Click **Check Names**.

9. Click **OK**.
10. In the **Apply** drop-down list, click **User Objects**.
11. In the **Allow** column, select the **Send As** check box.
12. Click **Apply**.
13. Click **OK**.

Configuring a Microsoft Exchange 2003 messaging environment

Create a Windows account that has a Microsoft Exchange 2003 mailbox

You must create a Windows® account that has a Microsoft® Exchange 2003 mailbox so that the Windows account can authenticate with the Microsoft Exchange messaging server.

1. On any computer in the Windows domain, on the taskbar, click **Start > Programs > Microsoft Exchange > Active Directory Users and Computers**.
2. Create an account that has the following attributes:
 - **Name:** BESAdmin
 - **Group membership:** Domain User
3. Create a Microsoft Exchange mailbox for the account.
4. To activate the new mailbox, send a test email message.

After you finish:

If you cannot see the Windows account in the Microsoft Active Directory to verify that you created it, log in to a computer using the Windows account.

For more information about the Send As permission and the BlackBerry® Enterprise Server, visit www.blackberry.com to read KB04707.

For more information about assigning the Send As permission to multiple user accounts, visit www.support.microsoft.com to read article 912918.

Configure Microsoft Exchange 2003 permissions for the Windows account

On each computer that you want to install the BlackBerry® Enterprise Server or BlackBerry Administration Service on, you must configure the Microsoft® Exchange permissions of the Windows® account that you want to use to complete the installation process.

Without the correct permissions, the BlackBerry Enterprise Server cannot run after you complete the installation process.

1. Using Microsoft Exchange 2003 System Manager, configure the Exchange View Only Administrator permission with the minimum access level of Administrative Groups.

2. At the server level, configure the following permissions:
 - Send As
 - Receive As
 - Administer Information Store
3. To permit the BlackBerry Enterprise Server to check if users have permissions to access a public folder, assign the Owner permission on all public folders to the account.

After you finish: Verify that the users have Read and Visible permissions to public folders.

Permit BlackBerry device users to send email messages in a Microsoft Exchange environment

To permit BlackBerry® device users to send email messages, you must configure Send As permissions for the Microsoft® Active Directory® user object that contains BlackBerry device users. This task describes how to configure the Send As permissions for the entire Windows® domain but you can also configure the permissions at the user object level or on a container of user objects.

For more information about Send As permissions and the BlackBerry® Enterprise Server, visit www.blackberry.com/support to read KB04707. For more information about assigning Send As permissions to multiple user accounts, visit www.support.microsoft.com to read article 912918.

1. Log in to a computer in the Windows® domain as an administrator that has permissions to modify user objects in Microsoft Active Directory.
2. On the taskbar, click **Start > Administrative Tools > Active Directory Users and Computers**.
3. On the **View** menu, click **Advanced Features**.
4. Right-click the domain root. Click **Properties**.
5. On the **Security** tab, click **Advanced**.
6. Click **Add**.
7. Type the name of the Windows account that you created (for example, BESAdmin).
8. Click **Check Names**.
9. Click **OK**.
10. In the **Apply** drop-down list, click **User Objects**.
11. In the **Allow** column, select the **Send As** check box.
12. Click **Apply**.
13. Click **OK**.

Configure permissions for the Windows account

On each computer that you want to install the BlackBerry® Enterprise Server components on, you must configure permissions for the Windows® account that you want to use to install the BlackBerry Enterprise Server components and run the services for the BlackBerry Enterprise Server.

Without the correct permissions, the BlackBerry Enterprise Server cannot run.

1. Right-click **My Computer**. Click **Manage**.
2. In the left pane, expand **Local Users and Groups**.
3. Navigate to the **Groups** folder.
4. In the right pane, double-click **Administrators**.
5. Click **Add**.
6. In the **Enter the object names to select** field, type the Windows account name that you want the services for the BlackBerry Enterprise Server to use (for example, BESAdmin).
7. Click **OK**.
8. Click **Apply**.
9. Click **OK**.
10. On the taskbar, click **Start > Programs > Administrative Tools > Local Security Policy**.
11. Configure the following permissions for the Windows account:
 - log on locally with local permissions (if not assigned by default)
 - log on as a service
12. On the taskbar, click **Start > Programs > Administrative Tools > Computer Management**.
13. Add the Windows account to the local administrators group.

Prevent the Microsoft Exchange known issues for wireless calendar synchronization

Some known issues for Microsoft® Exchange impact how the BlackBerry® Enterprise Server synchronizes calendars over the wireless network. To prevent the known issues from occurring, you can read about the known issues for Microsoft Exchange that might impact your organization's messaging environment and install the hotfixes for them. If your organization's messaging environment includes multiple messaging servers, you can resolve the known issues that apply to the latest Microsoft Exchange software version in your organization's environment.

If you do not install the correct hotfixes, the BlackBerry Enterprise Server cannot run.

1. Visit <http://support.microsoft.com> to read articles 823343 and 894470.
2. Verify that your organization's environment meets the requirements that are described in the applicable known issues.

3. Download the hotfixes for the known issues on the computers that you want to install the BlackBerry Enterprise Server or BlackBerry Administration Service on.
4. Install the hotfixes.

Verify if the Windows account can access a user account in Microsoft Exchange

The BlackBerry® Enterprise Server requires permission to access each BlackBerry device user's mailbox to process email messages. The IEMSText.exe tool runs a test to verify whether the Windows® account has the Send As permission in Microsoft® Exchange so that the BlackBerry Enterprise Server can access user accounts. The IEMSText.exe tool does not verify whether the BlackBerry Enterprise Server can send email messages on behalf of a BlackBerry device user.

1. Copy the BlackBerry® Enterprise Server installation files to the computer that you want to install the BlackBerry Enterprise Server on.
2. Extract the contents to a folder on the computer.
3. Navigate to `<extracted_folder>\Tools`.
4. Double-click **IEMSTest.exe**.
5. In the **Profile Name** drop-down list, select the profile names for the user accounts.
6. Click **OK**.
7. In the left pane, select the user accounts that you want to check.
8. Click **Select**.
9. Click **OK**.

Configuring connections for the BlackBerry Enterprise Server databases

The BlackBerry® Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service store data in their own databases. The database for the BlackBerry Enterprise Server is the BlackBerry Configuration Database.

You create the BlackBerry Configuration Database when you install a BlackBerry Enterprise Server or BlackBerry Administration Service or when you run the CreateDB executable. You can create the BlackBerry MDS Integration Service database or BlackBerry Monitoring Service database during the installation processes for the BlackBerry MDS Integration Service or BlackBerry Monitoring Service, respectively.

The BlackBerry Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service can connect to their databases on the Microsoft® SQL Server® using Windows® authentication or database authentication. By default, the BlackBerry Enterprise Server, BlackBerry Monitoring Service, and BlackBerry MDS Integration Service log in to their databases using the Windows account that you use to complete the installation process or the database credentials you provided during the installation process.

To support database mirroring for the BlackBerry Configuration Database or BlackBerry MDS Integration Service database with Microsoft SQL Server 2005 or Microsoft SQL Server 2008, you must use Windows authentication. The BlackBerry Monitoring Service does not support database mirroring.

Specifying permissions when you connect to the BlackBerry Enterprise Server databases using Windows authentication or Microsoft SQL Server authentication

If you connect the BlackBerry® Enterprise Server, BlackBerry MDS Integration Service, and BlackBerry Monitoring Service to the BlackBerry Enterprise Server databases using Windows® authentication or Microsoft® SQL Server® authentication during the BlackBerry Enterprise Server installation process, the Windows account or Microsoft SQL Server account that you specify must have database permissions on the database server. The type of permissions that you specify is determined by the setup option that you select and whether you create the BlackBerry Enterprise Server databases on the computer that hosts the BlackBerry Enterprise Server components or on another database server.

Specifying permissions for the Windows account or Microsoft SQL Server account

If you install Microsoft® SQL Server® 2005 Express during the BlackBerry® Enterprise Server installation process, you might need to specify permissions for the Windows® account or Microsoft SQL Server account, depending on the type of authentication you select.

When you select Windows authentication during the BlackBerry Enterprise Server installation process, the setup application automatically assigns the required permissions to the Windows account that you use to complete the installation process.

When you select Microsoft SQL Server authentication during the BlackBerry Enterprise Server installation process, you must assign the required database permissions to the Microsoft SQL Server account that you use to complete the installation process.

Assign permissions to the Windows account or Microsoft SQL Server account

Perform one of the following actions:

- If you create the BlackBerry® Enterprise Server databases on the computer that hosts the BlackBerry Enterprise Server and you require the setup application to install Microsoft® SQL Server® Express during the installation process and you choose Windows® authentication, you are not required to assign Microsoft SQL Server permissions to the Windows account. If you want the setup application to install the BlackBerry database notification system, you must assign the Microsoft SQL Server permission for the database system administrator (also called the sysadmin server role in Microsoft SQL Server Management Studio) to the Windows account.
- If you create the BlackBerry Enterprise Server databases on the computer that hosts the BlackBerry Enterprise Server and you require the setup application to install Microsoft SQL Server Express during the installation process and you choose Microsoft SQL Server authentication, you must assign the database creator (dbcreator server role) Microsoft SQL Server permission to the Microsoft SQL Server account. If you want the setup application to install the BlackBerry database notification system, you must assign the Microsoft SQL Server permission for the database system administrator (also called the sysadmin server role in Microsoft SQL Server Management Studio) to the Microsoft SQL Server account.

- If you create the BlackBerry Enterprise Server databases on the computer that hosts the BlackBerry Enterprise Server and the computer already hosts a Microsoft SQL Server, you must assign the database creator (dbcreator server role) Microsoft SQL Server permission to the Windows account or Microsoft SQL Server account that you use to complete the BlackBerry Enterprise Server installation process. If you want the setup application to install the BlackBerry database notification system, you must assign the Microsoft SQL Server permission for the database system administrator (also called the sysadmin server role in Microsoft SQL Server Management Studio) to the Windows account or Microsoft SQL Server account.
- If you create the BlackBerry Enterprise Server databases on a computer that does not host the BlackBerry Enterprise Server, you must assign the database creator (dbcreator server role) Microsoft SQL Server permission to the Windows or Microsoft SQL Server account that you use to complete the BlackBerry Enterprise Server installation process. If you want the setup application to install the BlackBerry database notification system, you must assign the Microsoft SQL Server permission for the database system administrator (also called the sysadmin server role in Microsoft SQL Server Management Studio) to the Windows account or Microsoft SQL Server account.

Configuring authentication to the BlackBerry MDS Integration Service database

When the setup application creates the BlackBerry® MDS Integration Service database during the installation process, you must use the same authentication method and account that you specified for the BlackBerry Configuration Database. The BlackBerry MDS Integration Service requires the same permissions to access the BlackBerry MDS Integration Service database that the BlackBerry® Enterprise Server requires to access the BlackBerry Configuration Database.

Resolving IT policy and application control policy conflicts in a mixed version environment

In BlackBerry® Enterprise Server versions earlier than version 5.0, the BlackBerry Policy Service queues delivery requests for IT policies and application control policies and sends them to BlackBerry devices. In BlackBerry Enterprise Server version 5.0, the BlackBerry Administration Service queues the IT policies and application control policies, and the BlackBerry Policy Service sends them to BlackBerry devices.

To avoid conflicts between the BlackBerry Policy Service and BlackBerry Administration Service in a mixed version environment, the setup application tries to turn off application polling by the BlackBerry Policy Service for each BlackBerry Enterprise Server instance in the BlackBerry Domain before it starts the upgrade process. When the setup application turns off application polling, it prevents earlier versions of the BlackBerry Policy Service from queuing delivery requests for IT policies and application control policies.

If the setup application cannot turn off application polling for all BlackBerry Enterprise Server instances (for example, a computer that hosts one of the BlackBerry Enterprise Server instances is not running), you must run the BB50UpgradePrep tool manually before you can upgrade the BlackBerry Enterprise Server.

Resolve IT policy and application control policy conflicts in a mixed version environment

1. Copy the BlackBerry® Enterprise Server installation media to the computer that hosts a BlackBerry Enterprise Server.
2. Extract the contents to a folder on the computer.
3. In the *<extracted_folder>*tools folder, double-click **BB50UpgradePrep.exe**.
4. Complete the instructions on the screen.

Backing up the BlackBerry Configuration Database

You must back up the BlackBerry® Configuration Database so that you can restore it if the BlackBerry® Enterprise Server upgrade process does not complete.

If your organization's environment includes Microsoft® SQL Server®, use the backup and restore tools that Microsoft provides to back up the BlackBerry Configuration Database.

If your organization's environment includes an MSDE 2000 or Microsoft SQL Server Express, you can use the BlackBerry Configuration Database Backup Tool that is included with the BlackBerry Enterprise Server installation media to back up the BlackBerry Configuration Database to a file. By default, the backup file is named *<database_name><YYYYMMDDHHMMSS>.bak*.

Back up the BlackBerry Configuration Database

1. Copy the BlackBerry® Enterprise Server installation media to the database server that hosts the BlackBerry Configuration Database.
2. Extract the contents of the installation media to a folder on the computer.
3. At the command prompt, navigate to the **Tools** folder in the BlackBerry Enterprise Server installation media.
4. Run **BlackBerryDbBackup.exe**.

Example

To back up a BlackBerry Configuration Database that is named BESMgmt to a folder that is named DB_backup_folder, when you use the database credentials sqlusername and sqlpassword, type

```
BlackBerryDBBackup.exe -d BESMgmt -f C:\DB_backup_folder -U sqlusername -P sqlpassword.
```

BlackBerry Configuration Database Backup Tool parameters

The parameters listed in brackets are optional.

Parameter	Description
-d <database_name>	This parameter specifies the name of the BlackBerry® Configuration Database (for example, BESMgmt).
[-f] <folder>	This parameter specifies the folder that you want to save the backup file in. If you specify a folder, it must already exist. The default folder is the current folder location.
[-S] <database_server>	This parameter specifies the name of the database server that hosts the BlackBerry Configuration Database.
[-E]	This parameter specifies that you want to use Windows® authentication instead of database authentication to connect to the database server. Your login account must have the database owner permission. The default value is false (Windows authentication).
[-U] <user_name>	This parameter specifies the user name that you use for database authentication. To use a login account that is different from the default login account, the account must have database owner permission. The default user name is sa.
[-P] <password>	This parameter specifies the password that you use for for database authentication.
[-p] <percentage>	This parameter specifies the interval, as a percentage, that you want the BlackBerry Configuration Database Backup Tool to report progress at. The default percentage is 10.
[-?]	This parameter specifies information about the BlackBerry Configuration Database Backup Tool. You do not require any other parameters when you use this parameter.

Migrating BlackBerry MDS Runtime Applications

Previous versions of the BlackBerry® MDS Integration Service used a BlackBerry MDS Integration Service database (mdss), and a BlackBerry MDS Integration Service discovery database (mdss_dis) to store BlackBerry® MDS Runtime Applications and application data. The latest BlackBerry MDS Integration Service version does not use a BlackBerry MDS Integration Service discovery database. During the upgrade process, the setup application merges all tables of the BlackBerry MDS Integration Service discovery database into the BlackBerry MDS Integration Service database. As a result, the upgrade process does not migrate all published BlackBerry MDS Integration Service applications such as BlackBerry MDS Runtime Applications.

To migrate BlackBerry MDS Runtime Applications, you must republish the BlackBerry MDS Runtime Applications to the BlackBerry MDS Application Repository after the upgrade process completes, or you must migrate the BlackBerry MDS Integration Service discovery database to the BlackBerry MDS Integration Service version 4.1 database before you start the upgrade process. If you migrate the BlackBerry MDS Integration Service discovery database and install new BlackBerry MDS Integration Service instances instead of upgrading the existing BlackBerry MDS Integration Service instances, you must reconfigure any backend notification subscriptions. If you migrate the BlackBerry MDS Integration Service discovery database, BlackBerry devices that are running BlackBerry® MDS Runtime versions earlier than version 4.5 remove the applications that are installed.

Migrate data from the BlackBerry MDS Integration Service discovery database to the BlackBerry MDS Integration Service database

1. Open the Microsoft® SQL Server® console.
2. Generate scripts for the following tables in the BlackBerry® MDS Integration Service discovery database:
 - REGISTRY_APP
 - REGISTRY_APP_LOCALE
 - REGISTRY_APP_KEYWORD
 - REGISTRY_APP_DEPEND
3. To create the tables in the BlackBerry MDS Integration Service database, execute the generated scripts against the BlackBerry MDS Integration Service database.
4. Export data from the tables that are listed in step 2.
5. Import the data into the BlackBerry MDS Integration Service database.

After you finish: To migrate user accounts to the BlackBerry MDS Integration Service pool after you complete the upgrade process, use the BlackBerry Administration Service to update the BlackBerry® Enterprise Server to use the new BlackBerry MDS Integration Service pool.

Install the SNMP service for monitoring by the BlackBerry Monitoring Service

If you want to install the BlackBerry® Monitoring Service on a computer in the BlackBerry Domain, you must install the SNMP service on each computer that you want to install the BlackBerry® Enterprise Server on so that the BlackBerry Monitoring Service can monitor the BlackBerry Enterprise Server activity.

Before you begin: Verify that each computer can access the Windows® installation media.

1. On the taskbar, click **Start > Settings > Control Panel > Add/Remove Programs > Add/Remove Windows Components**.
2. Double-click **Management and Monitoring Tools**.
3. Select the **Simple Network Management Protocol** check box.
4. Click **OK**.
5. When Windows Setup prompts you, install the files from the Windows installation media.

6. Complete the installation wizard.
7. In the Windows Services, verify that the SNMP service is running.

After you finish: To complete the SNMP service installation process, after you install the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, configure the SNMP service to monitor the activity of the BlackBerry Enterprise Server or BlackBerry Enterprise Server components.

Creating a BlackBerry Administration Service pool using DNS round robin that includes the BlackBerry Web Desktop Manager

When you install the BlackBerry® Administration Service, BlackBerry® Web Desktop Manager, or both, the setup application installs the BlackBerry Administration Service services automatically. The BlackBerry Administration Service and BlackBerry Web Desktop Manager require the BlackBerry Administration Service services to run.

If you create a BlackBerry Administration Service pool using DNS round robin, you can install the BlackBerry Administration Service and BlackBerry Web Desktop Manager on each computer in the pool or you can install the BlackBerry Administration Service or BlackBerry Web Desktop Manager on some of the computers in the pool. If you install the BlackBerry Administration Service and BlackBerry Web Desktop Manager on each computer in the pool, you can use the pool name that you specified during the installation process in the URLs for the BlackBerry Administration Service and BlackBerry Web Desktop Manager (for example, https://<pool_name>/webconsole/login or https://<pool_name>/webdesktop/login).

If you do not install both components on each computer in the pool and you try to access one of the URLs using the pool name, the web browser might display an HTTP 404 error message. The HTTP 404 error message occurs when the web browser tries to connect to a computer in the pool that you did not install the component on that you are trying to access. For example, you can install the BlackBerry Administration Service on two of the computers in the pool and the BlackBerry Web Desktop Manager on two other computers in the pool.

To make sure that the web browser does not display HTTP 404 error messages, you can choose one of the following options:

- You can create separate pools within the BlackBerry Administration Service pool for the BlackBerry Administration Service and the BlackBerry Web Desktop Manager. You can provide your organization's administrators and BlackBerry device users with URLs that include the specific pool names.
- You can provide administrators and users in your organization's environment with URLs that include the FQDNs of the computers that you installed the BlackBerry Administration Service or BlackBerry Web Desktop Manager on (for example, https://<FQDN_of_computer>/webconsole/login or https://<FQDN_of_computer>/webdesktop/login).

Creating a BlackBerry MDS Integration Service pool

You can create a BlackBerry® MDS Integration Service pool using the setup application during the installation processes for the BlackBerry MDS Integration Service instances that you want to include in the pool. During the installation process for the first BlackBerry MDS Integration Service instance, you must type a unique FQDN or DNS name that identifies the pool. During the

installation processes for the subsequent BlackBerry MDS Integration Service instances, you must select the existing pool name from the list so that you can add the instances to the pool. After you complete the installation processes, BlackBerry MDS Integration Service clients can access the BlackBerry MDS Integration Service instances in the pool using the unique DNS name.

Create the DNS record for a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance

To configure multiple BlackBerry® Administration Service instances or BlackBerry MDS Integration Service instances for high availability using DNS round robin, you must create a DNS record. The DNS record permits the clients of the BlackBerry Administration Service pool or BlackBerry MDS Integration Service pool to access the instances using a single DNS name. You must create the DNS record in the same domain as the computers that host the BlackBerry Administration Service instances or BlackBerry MDS Integration Service instances.

Before you begin:

- You must configure a static IP address for each computer that you want to install a BlackBerry MDS Integration Service instance or BlackBerry Administration Service instance on.
 - You must have permission to manage the DNS.
 - If you configure DNS round robin, you must configure clients to resolve the DNS name into a list of IP addresses and distribute traffic equally across the BlackBerry Administration Service or BlackBerry MDS Integration Service instances in the pool.
1. Log in to the DNS server.
 2. In the DNS management console, access the forward lookup zone that you want to add the BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance to.
 3. To create a new host, type the following information:
 - In the **Name** field, type the name of the BlackBerry Administration Service pool or BlackBerry MDS Integration Service pool that you want to use.
 - In the **IP Address** field, type the IP address of the computer that you want to host a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance on.
 - Select the **Create associated pointer (PTR) record** check box.
 4. Repeat step 3 for each BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance that you want to install. When you add entries to the same pool, you must use the same pool name for all BlackBerry Administration Service instances or BlackBerry MDS Integration Service instances.

After you finish: To remove a BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance from a pool, delete the entry for the IP address of the BlackBerry Administration Service instance or BlackBerry MDS Integration Service instance from the DNS server.

Applications that are installed with the BlackBerry Enterprise Server components

The BlackBerry® Enterprise Server installation process can include the installation of third-party applications.

Application	BlackBerry Enterprise Server components that the application is installed with
JDK with JRE™ version 1.6.15	<ul style="list-style-type: none"> BlackBerry Administration Service BlackBerry Monitoring Service
JDK version 1.6.15	<ul style="list-style-type: none"> BlackBerry Administration Service BlackBerry Collaboration Service BlackBerry MDS Connection Service BlackBerry MDS Integration Service
Microsoft® XML Parser version 6.0 SP2	all components except the BlackBerry Router
Microsoft® SQL Server® 2005 Express Edition SP3 (if selected)	<ul style="list-style-type: none"> BlackBerry Administration Service any other components
Microsoft® .NET Framework version 2.0 (if you are installing Microsoft SQL Server Express)	<ul style="list-style-type: none"> All components

Prerequisites: Upgrading the BlackBerry Enterprise Server software

- Verify that the Windows® account that you use to install the BlackBerry® Enterprise Server software is assigned the local administrator permission on the computer that you perform the installation process on.
- Verify that the Windows account that you want to use to install the BlackBerry Enterprise Server software is not a member of the Domain Admins group in Microsoft® Active Directory®.
- Delete inactive user accounts from the BlackBerry Enterprise Server.
- Remove the BlackBerry Administration API from all of the computers that host the BlackBerry Administration Service in the BlackBerry Domain. You can use the Windows control panel to remove the BlackBerry Administration API. In BlackBerry Enterprise Server version 5.0 SP1, the setup application installs the BlackBerry Administration API automatically when the setup application installs the BlackBerry Administration Service.
- Close all BlackBerry Manager instances in the BlackBerry Domain and do not reopen them. If you run the BlackBerry Manager with BlackBerry Enterprise Server version 5.0 and later, you might experience issues with the BlackBerry Configuration Database.

- Retrieve the following information:
 - BlackBerry® Client Access License key
 - SRP host (in BlackBerry Enterprise Server version 5.0 and later, the format of the SRP host is different from earlier versions)
 - SRP identifier
 - SRP key
 - computer name and port number of the instant messaging server (use the virtual server name and port number where the AJAX Service is installed, if applicable)
 - computer name and port number of the proxy server (optional)
- If you upgrade from the BlackBerry Enterprise Server Small Business Edition or BlackBerry® Professional Software to a BlackBerry Enterprise Server, retrieve a new BlackBerry CAL key. For more information, visit www.blackberry.com/support to read article KB03535.
- Upgrade all BlackBerry Enterprise Server instances to version 4.0 SP7 (if your organization includes only one BlackBerry Enterprise Server instance in the BlackBerry Domain), 4.1 SP3, or later.
- Install or upgrade the BlackBerry Administration Service on the computer that you perform the upgrade process on in the BlackBerry Domain first.
- Back up the BlackBerry Enterprise Server databases.
- If you configured the BlackBerry Administration Service instances in the pool to communicate across network subnets with TCP, back up the TCP communication files for the BlackBerry Administration Service. For more information, visit www.blackberry.com/support to read article KB19654.
- If you configured database replication for the BlackBerry Configuration Database, turn database replication off.
- If you installed the BlackBerry database notification system on a remote Microsoft® SQL Server®, upgrade the BlackBerry database notification system manually.
- If you upgrade from a beta version of BlackBerry Enterprise Server 5.0 or 5.0 SP1 and you installed the BlackBerry Administration Service on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server, in the Windows® Services, stop the BlackBerry Administration Service Application Servers and the BlackBerry Administration Service Native Code Containers services.
- If you want to install Microsoft® SQL Server® 2005 Express Edition SP3 on a computer that does not host any BlackBerry Enterprise Server components, you can navigate to the Tools folder in the BlackBerry Enterprise Server installation files and run Sqlexpr.exe.
- If you install the BlackBerry Administration Service, verify that the computers that host the BlackBerry Administration Service and the BlackBerry Configuration Database are not separated by a WAN bridge.
- If you perform the upgrade on a computer that has more than one NIC, verify that the production NIC is first in the bind order in Windows network settings.

Performing a test upgrade of the BlackBerry Configuration Database

If you want to make sure that you can upgrade the BlackBerry® Configuration Database in your organization's environment without any issues or if you want to find out how long it takes to upgrade the BlackBerry Configuration Database, you can perform a test upgrade of the BlackBerry Configuration Database.

When you perform a test upgrade of the BlackBerry Configuration Database, you back up the BlackBerry Configuration Database, restore the backup version of the BlackBerry Configuration Database to a database server that does not host the BlackBerry Configuration Database, and then run the CreateDB executable.

Perform a test upgrade of the BlackBerry Configuration Database

Before you begin: Verify that you configured the appropriate permissions on the database server that you want to perform a test upgrade of the BlackBerry® Configuration Database on.

1. Log in to the computer that hosts the BlackBerry Configuration Database using a local administrator account or a Windows account that has SQL administrator permissions.
2. Back up the BlackBerry Configuration Database.
3. Log in to a computer that hosts a database server that you want to perform a test upgrade of the BlackBerry Configuration Database on using a local administrator account or a Windows account that has SQL administrator permissions.
4. Restore the backup version of the BlackBerry Configuration Database.
5. Copy the BlackBerry® Enterprise Server installation files to the database server.
6. Extract the contents to a folder on the computer.
7. Navigate to `<extracted_folder>\Database`.
8. Open the **BESMgmt.cfg** file in a text editor.
9. Change the file to include information that is specific to your organization's environment.
10. Save and close the file.
11. Open a command prompt window.
12. Change to `<extracted_folder>\Database`.
13. Type **CreateDB.exe BESMgmt.cfg**.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
CMD	This property specifies the type of action that the CreateDB executable must complete (for example, whether to install or upgrade the BlackBerry Configuration Database).
USERID	If you use database authentication, this property specifies the user name of the database account that has server administrator permission and database creator permission.

Property	Description
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
DBMS	This property specifies the database management system that your organization uses.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
BACKUP_DIR	This property specifies an existing folder where you want to save the database backup in. By default, this folder is located in the same root folder that the CreateDB.exe file is located in.

Upgrading the BlackBerry Enterprise Server software by using the in-place upgrade process

6

Using the in-place upgrade process, you can upgrade the BlackBerry® Enterprise Server software by replacing the existing version and upgrading the BlackBerry Configuration Database.

You can use the in-place upgrade process if your organization's environment includes a standalone BlackBerry Enterprise Server instance.

When you use the in-place upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and data synchronization occurs over the wireless network.

Advantages of this upgrade process include:

- You do not require an extra computer to perform this upgrade.
- When the upgrade process completes, user accounts are active and no additional administrative action is required.

Disadvantages of this upgrade process include:

- After you upgrade the BlackBerry Enterprise Server, you cannot return to an earlier version of the software automatically.
- You must turn off the BlackBerry Enterprise Server during the upgrade process. The interruption to services for BlackBerry devices lasts for as long as it takes the upgrade process to complete.

Upgrade the BlackBerry Enterprise Server software by overwriting the existing version and use the existing BlackBerry Configuration Database

The in-place upgrade process requires that you restart the computer.

During the BlackBerry® Enterprise Server installation process, you must restart the computer.

Before you begin:

- Instruct your organization's administrators to stop managing the BlackBerry Enterprise Server using the BlackBerry Manager or administration clients that use the BlackBerry® Enterprise Server Resource Kit.
 - If a remote Microsoft® SQL Server® hosts the BlackBerry Configuration Database, upgrade the BlackBerry database notification system.
1. Log in to the computer using the Windows® account that the BlackBerry Enterprise Server services run on.
 2. In the BlackBerry Enterprise Server installation files, double-click **setup.exe**.
 3. In the **Setup type** dialog box, select **Use an existing BlackBerry Configuration Database**.
 4. In the **Database information** dialog box, perform the following actions:

- Verify the names of the database server and BlackBerry Configuration Database that the BlackBerry Enterprise Server uses.
 - If you configured the database server to use static ports, select the **Static** option. If the static port number is not 1433, in the **Port** field, type the port number.
5. In the **Database mirroring options** dialog box, if you want to configure database mirroring, select the **Add support for database mirroring** check box and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft SQL Server; it adds a registry key to the computer that includes the name of the mirror Microsoft SQL Server.
 6. In the **Microsoft Exchange Server** dialog box, perform the following actions:
 - a. In the **Microsoft Exchange server** field, type the name of the Microsoft® Exchange server.
 - b. In the **Mailbox** field, type the name of the administrator that has the appropriate permissions.
 - c. Click **Check Name**.
 - d. Click **Apply**.
 - e. Click **OK**.
 7. In the **Setup options** dialog box, for the first upgrade in the BlackBerry Domain, to install the BlackBerry Administration Service, under **Additional Components**, select **BlackBerry Administration Service**. If you do not want to install the BlackBerry Administration Service, you must perform the first upgrade in the BlackBerry Domain from a computer that the BlackBerry Administration Service is already installed on.
 8. When prompted to restart the computer, click **Yes**.
 9. Log in to the computer using the same account that you used in step 1.
 10. In the **Application extensibility settings** dialog box, consider the following information:
 - You can type an FQDN to create a new BlackBerry MDS Integration Service pool.
 - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type an FQDN that corresponds to a DNS record in the DNS server that maps the FQDN to the IP address of the virtual server that you configured on the hardware load-balancer.
 - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the same database server as the BlackBerry Configuration Database.
 11. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging settings** dialog box, type the Microsoft® Office Live Communications Server 2005 address.
 12. In the **Administration settings** dialog box, perform the following actions:
 - In the **Pool name** field, type an FQDN that the setup application can use to create the BlackBerry Administration Service web address. If you install only one BlackBerry Administration Service instance in the BlackBerry Domain, you can accept the default pool name. If you install more than one BlackBerry Administration Service instance in the BlackBerry Domain, you must create a DNS entry for the pool name that is not the name of a computer and is mapped to the IP address of each BlackBerry Administration Service instance.

- In the **New password** and **Confirm password** fields, type the password for the SSL certificate that the BlackBerry Administration Service uses to authenticate with browsers. You must use the same password for every BlackBerry Administration Service instance in the BlackBerry Domain.
13. In the **Microsoft® Active Directory® settings** dialog box, in the **User password** field, type the password for the Microsoft Active Directory account (for example, BESAdmin) that the BlackBerry Enterprise Server uses to authenticate to Microsoft Active Directory. If you want to specify a different user name and user domain, you must make sure that the user domain belongs to the same Microsoft Active Directory forest as the Microsoft Exchange organization.
If the setup application cannot locate any of the global catalog servers that are associated with the Microsoft Active Directory account after you click the **Next** button, you must choose the global catalog servers that you want to add to the list manually. To add a global catalog server to the list, click the **Add** button and select the appropriate server. Each global catalog server that you add to the list must belong to the same domain as the Microsoft Active Directory user account.
 14. Start the services for the BlackBerry Enterprise Server. If you installed the BlackBerry Administration Service, the setup application waits until the BlackBerry Administration Service services are running before the setup application continues.
 15. In the **Console addresses** dialog box, copy the web addresses for the BlackBerry Enterprise Server components and paste them into a document for future reference. You can use the web addresses to log in to the BlackBerry Enterprise Server components that you installed.

After you finish:

- If you configured the BlackBerry Administration Service instances in the pool to communicate across network subnets with TCP before you upgraded BlackBerry Enterprise Server components, you must restore the configuration files. For more information, visit www.blackberry.com/support to read article KB19654.
- As required, add the name of the BlackBerry MDS Integration Service pool to the DNS server and change the name of the computer.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Upgrade the BlackBerry Enterprise Server instances that you configured for disaster recovery

If you configured the BlackBerry® Enterprise Server instances in your organization's environment for disaster recovery, you configured two BlackBerry Enterprise Server instances that use the same SRP address. You can upgrade the BlackBerry Enterprise Server instances to the latest BlackBerry Enterprise Server version and configure high availability so that the BlackBerry Enterprise Server instances can fail over automatically.

1. Upgrade the standby BlackBerry Enterprise Server using the in-place upgrade process. During the upgrade process, do not verify the SRP credentials or start the BlackBerry Enterprise Server services so that you do not deactivate the SRP credentials.
2. Stop BlackBerry Enterprise Server version 4.1 so that you can start a manual failover process.
3. Start the latest BlackBerry Enterprise Server version so that it becomes the primary instance.
4. Verify that users can send and receive messages on their BlackBerry devices.
5. Upgrade the earlier BlackBerry Enterprise Server version using the in-place upgrade process. During the upgrade process, specify that this BlackBerry Enterprise Server instance is a standby BlackBerry Enterprise Server, and associate it with the BlackBerry Enterprise Server instance that you upgraded in step 1.
6. Using the BlackBerry Administration Service, fail over to the BlackBerry Enterprise Server manually that you want to use as the primary instance.
7. Configure the automatic failover feature.

After you finish: For more information, see the *BlackBerry Enterprise Server Installation Guide* and the *BlackBerry Enterprise Server Administration Guide*.

Upgrading the BlackBerry Enterprise Server using the cutover upgrade process and upgrade the existing BlackBerry Configuration Database

Using the cutover upgrade process, you can install a BlackBerry® Enterprise Server on a new computer and move user accounts and server information from a previous BlackBerry Enterprise Server to the new one.

When you use the cutover upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and data synchronization occurs over the wireless network.

If you upgrade the existing BlackBerry Configuration Database, you can move user accounts from the previous BlackBerry Enterprise Server to the new one using the BlackBerry Administration Service.

Advantages of this upgrade process include:

- You can move user accounts back to the previous BlackBerry Enterprise Server if you experience issues with the new one.
- You can upgrade server hardware.
- Users experience minimal service interruptions because user accounts remain active on the previous BlackBerry Enterprise Server until you start the new one.

Disadvantages of this upgrade process include:

- You require an extra computer.
- The BlackBerry Enterprise Server sends new service books to all of the BlackBerry devices that are capable of synchronizing data over the wireless network.

Upgrade a BlackBerry Configuration Database

If you are not a database administrator and you do not have permissions to modify the BlackBerry® Configuration Database, you can request that a database administrator with the appropriate permissions upgrades the BlackBerry Configuration Database before you run the setup application and upgrade the BlackBerry® Enterprise Server.

Before you begin: Verify that you configured the proper permissions on the database server.

1. Log in to the computer that hosts the database server as a local administrator or using a Windows® account that has SQL administrator permissions.
2. Copy the BlackBerry Enterprise Server installation media to the database server that hosts the BlackBerry Configuration Database.
3. Extract the contents to a folder on the computer.
4. Navigate to `<extracted_folder>\Database`.

5. Open the BesMgmt.cfg file in a text editor.
6. Change the file to include information that is specific to your organization's environment.
7. Save and close the file.
8. Open a command prompt window.
9. Navigate to `<extracted_folder>\Database`.
10. Type **CreateDB.exe BESMgmt.cfg**.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
CMD	This property specifies the type of action that the CreateDB executable must complete (for example, whether to install or upgrade the BlackBerry Configuration Database).
USERID	If you use database authentication, this property specifies the user name of the database account that has server administrator permission and database creator permission.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
DBMS	This property specifies the database management system that your organization uses.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
BACKUP_DIR	This property specifies an existing folder where you want to save the database backup in.

Property	Description
	By default, this folder is located in the same root folder that the CreateDB.exe file is located in.

Install the BlackBerry Enterprise Server on a new computer and upgrade the existing BlackBerry Configuration Database

To administer the BlackBerry® Enterprise Server, you must install the BlackBerry Administration Service. You can install the BlackBerry Administration Service on the computer that hosts the BlackBerry Enterprise Server or on a separate computer. You must either install or upgrade the BlackBerry Administration Service on the computer that you perform the installation process on in the BlackBerry Domain first.

During the BlackBerry Enterprise Server installation process, you must restart the computer.

1. Log in to the computer using the Windows® account that you want the BlackBerry Enterprise Server services to run on.
2. In the BlackBerry Enterprise Server installation files, double-click **setup.exe**.
3. In the **Setup type** dialog box, select **Use an existing BlackBerry Configuration Database**.
4. In the **Database information** dialog box, perform the following actions:
 - Verify the names of the database server and BlackBerry Configuration Database that the BlackBerry Enterprise Server uses.
 - If you configured the database server to use static ports, select the **Static** option. If the static port number is not 1433, in the **Port** field, type the port number.
5. In the **Database mirroring options** dialog box, if you want to configure database mirroring, select the **Add support for database mirroring** check box and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft® SQL Server®; it adds a registry key to the computer that includes the name of the mirror Microsoft SQL Server.
6. In the **Microsoft Exchange Server** dialog box, perform the following actions:
 - a. In the **Microsoft Exchange server** field, type the name of the Microsoft® Exchange server.
 - b. In the **Mailbox** field, type the name of the administrator that has the appropriate permissions.
 - c. Click **Check Name**.
 - d. Click **Apply**.
 - e. Click **OK**.
7. In the **Setup options** dialog box, consider the following information:
 - For the first upgrade in a BlackBerry Domain, to install the BlackBerry Administration Service, select **BlackBerry Administration Service** under **Additional Components**.

- To install the BlackBerry Administration Service by itself, select **Remote component** and **BlackBerry Administration Service**.
8. When the setup application prompts you to restart the computer, click **Yes**.
 9. Log in to the computer using the same account that you used in step 1.
 10. In the **CAL and SRP Information** dialog box, type the SRP credentials that the BlackBerry Enterprise Server that you are replacing uses.
 11. In the **Application extensibility settings** dialog box, consider the following information:
 - You can type a FQDN to create a new BlackBerry MDS Integration Service pool.
 - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type a FQDN that corresponds to a DNS record in the DNS server that maps the FQDN to the IP address of the virtual server that you configured on the hardware load-balancer.
 - You can create a new BlackBerry MDS Integration Service database or upgrade the existing BlackBerry MDS Integration Service database.
 - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the database server that the BlackBerry Configuration Database is located on.
 12. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging settings** dialog box, type the Microsoft® Office Live Communications Server 2005 address.
 13. In the **Administration settings** dialog box, perform the following actions:
 - In the **Pool name** field, type an FQDN that the setup application can use to create the BlackBerry Administration Service web address. If you install only one BlackBerry Administration Service instance in the BlackBerry Domain, you can accept the default pool name. If you install more than one BlackBerry Administration Service instance in the BlackBerry Domain, you must create a DNS entry for the pool name that is not the name of a computer and is mapped to the IP address of each BlackBerry Administration Service instance.
 - In the **New password** and **Confirm password** fields, type the password for the SSL certificate that the BlackBerry Administration Service uses to authenticate with browsers. You must use the same password for every BlackBerry Administration Service instance in the BlackBerry Domain.
 14. In the **Microsoft® Active Directory® settings** dialog box, in the **User password** field, type the password for the Microsoft Active Directory account (for example, BESAdmin) that the BlackBerry Enterprise Server uses to authenticate to Microsoft Active Directory. If you want to specify a different user name and user domain, you must make sure that the user domain belongs to the same Microsoft Active Directory forest as the Microsoft Exchange organization.

If the setup application cannot locate any of the global catalog servers that are associated with the Microsoft Active Directory account after you click the **Next** button, you must choose the global catalog servers that you want to add to the list manually. To add a global catalog server to the list, click the **Add** button and select the appropriate server. Each global catalog server that you add to the list must belong to the same domain as the Microsoft Active Directory user account.
 15. If you use the SRP credentials of an existing BlackBerry Enterprise Server in the BlackBerry Domain, do not start the BlackBerry Enterprise Server services.

16. In the **Console addresses** dialog box, copy the web addresses for the BlackBerry Enterprise Server components and paste them into a document for future reference. You can use the web addresses to log in to the BlackBerry Enterprise Server components that you installed.

After you finish:

- If you configured the BlackBerry Administration Service instances in the pool to communicate across network subnets with TCP before you upgraded BlackBerry Enterprise Server components, you must restore the configuration files. For more information, visit www.blackberry.com/support to read article KB19654.
- As required, add the name of the BlackBerry MDS Integration Service pool to the DNS server and change the name of the computer.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Move user accounts to a new BlackBerry Enterprise Server using the BlackBerry Administration Service

To complete the cutover upgrade process, you must move user accounts to the new BlackBerry® Enterprise Server. After you move the user accounts to the current BlackBerry Enterprise Server, the BlackBerry Enterprise Server sends new service books to the BlackBerry devices automatically.

1. In the BlackBerry Administration Service, on the **BlackBerry Solution management** menu, expand **User**.
2. Click **Manage Users**.

3. Click **Advanced**.
4. In the **BlackBerry Enterprise Server criteria** section, click the BlackBerry Enterprise Server that you want to move user accounts from.
5. Click **Search**.
6. Click **Manage multiple users**.
7. Select the user accounts that you want to move to the new BlackBerry Enterprise Server at the same time
8. Click **Switch BlackBerry user to different BlackBerry Enterprise Server**.
9. Select the new BlackBerry Enterprise Server from the list.
10. Click **Save All**.

After you finish: Reassign the IT policies to the user accounts.

Prevent the previous BlackBerry Enterprise Server from connecting to the BlackBerry Infrastructure

If you try to connect two BlackBerry® Enterprise Server instances to the BlackBerry® Infrastructure using identical SRP credentials, the BlackBerry Infrastructure deactivates the credentials, and wireless traffic stops.

1. In the Windows® Services, stop all BlackBerry Enterprise Server services.
2. Change the startup type for all BlackBerry Enterprise Server services to **Disabled**.

Start the new BlackBerry Enterprise Server

In the Windows® Services, start the BlackBerry® Enterprise Server services in the following order:

- BlackBerry Controller
- BlackBerry Router
- BlackBerry Dispatcher
- all remaining services

After you finish: After you complete the upgrade process, users must reactivate their BlackBerry devices. Instruct users to connect their BlackBerry devices to the BlackBerry® Desktop Manager or BlackBerry® Web Desktop Manager to receive new SRP routing and service name information.

Upgrading the BlackBerry Enterprise Server using the cutover upgrade process and create a BlackBerry Configuration Database

Using the cutover upgrade process, you can install the BlackBerry® Enterprise Server on a new computer and move user accounts and server information from the previous BlackBerry Enterprise Server to the new one.

You can use the cutover upgrade process to create a new BlackBerry Configuration Database and BlackBerry Domain. If you create a new BlackBerry Configuration Database, you require SRP credentials for the new BlackBerry Enterprise Server. You can move user accounts from the previous BlackBerry Configuration Database to the new BlackBerry Configuration Database using the BlackBerry Enterprise Transporter.

When you use the cutover upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.1 or later receive new service books and wireless data synchronization occurs.

Advantages of this upgrade process include:

- You can move user accounts back to the previous BlackBerry Enterprise Server if you experience any issues with the new one.
- You can upgrade server hardware.
- Users experience minimal service interruptions because user accounts remain active on the previous BlackBerry Enterprise Server until you start the new one.

Disadvantages of this upgrade process include:

- You require an extra computer.
- The BlackBerry Enterprise Server sends new service books to all of the BlackBerry devices that are capable of synchronizing data over the wireless network.

Create a BlackBerry Configuration Database

If the security required by your organization does not allow applications to have permissions to create or upgrade databases, you can run the CreateDB executable on the database server to create the BlackBerry® Configuration Database instead of using the setup application. After you create or upgrade the BlackBerry Configuration Database using the CreateDB executable, you can run the setup application using a Windows® account with minimum requirements to the database server.

Before you begin: Verify that the appropriate permissions are configured on the database server.

1. Log in to the computer that hosts the database server using a local administrator account or a Windows account that has SQL administrator permissions.
2. Copy the BlackBerry® Enterprise Server installation media to the database server that you want to configure as the host server for the BlackBerry Configuration Database.
3. Extract the contents to a folder on the computer.

4. Navigate to `<extracted_folder>\Database`.
5. Open the **BESMgmt.cfg** file in a text editor.
6. Change the file to include information that is specific to your organization's environment.
7. Save and close the file.
8. Open a command prompt window.
9. Change to `<extracted_folder>\Database`.
10. Type **CreateDB.exe BESMgmt.cfg**.

BESMgmt.cfg properties

Property	Description
DATABASE_NAME	This property specifies the name of the BlackBerry® Configuration Database.
CMD	This property specifies the type of action that the CreateDB executable must complete (for example, whether to install or upgrade the BlackBerry Configuration Database).
USERID	If you use database authentication, this property specifies the user name of the database account that has server administrator permission and database creator permission.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
SCRIPT_ROOT	This property specifies the path to the DBInstallScripts folder. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
LOG_DIR	This property specifies the path to the folder that you want to create log files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.
DBMS	This property specifies the database management system that your organization uses.
DB_FILE_DIR	This property specifies an existing folder that you want to save the database files in. By default, this folder is in the same root folder that the CreateDB.exe file is located in.

Property	Description
BACKUP_DIR	<p>This property specifies an existing folder where you want to save the database backup in.</p> <p>By default, this folder is located in the same root folder that the CreateDB.exe file is located in.</p>

Install the BlackBerry Enterprise Server on a new computer and create a new BlackBerry Configuration Database

During the BlackBerry® Enterprise Server installation process, you must restart the computer.

Note: To administer the BlackBerry Enterprise Server, you must install the BlackBerry Administration Service. You can install the BlackBerry Administration Service on the computer that hosts the BlackBerry Enterprise Server or on a separate computer. The first BlackBerry Administration Service or BlackBerry Enterprise Server that you install creates and populates the BlackBerry Configuration Database if you did not create the BlackBerry Configuration Database previously using the SQL scripts. You must install the BlackBerry Administration Service if you create a BlackBerry Configuration Database and you must also either install or upgrade the BlackBerry Administration Service on the computer that you perform the BlackBerry Enterprise Server installation process on in the BlackBerry Domain first.

1. Log in to the computer using the Windows® account that you want the BlackBerry Enterprise Server services to run on.
2. In the BlackBerry Enterprise Server installation files, double-click **setup.exe**.
3. In the **Setup type** dialog box, select **Create a BlackBerry Configuration Database**.
4. In the **Setup options** dialog box, consider the following information:
 - You can select or remove BlackBerry Enterprise Server components from the **Additional Components** list.
 - To install the BlackBerry Administration Service only during the first installation, click **Remote component**. In the **Additional components** list, expand **BlackBerry administration**. Click **BlackBerry Administration Service**.
5. When the setup application prompts you to restart the computer, click **Yes**.
6. Log in to the computer using the same account that you used in step 1.
7. In the **Database information** dialog box, perform the following actions:
 - Specify the names of the database server and BlackBerry Configuration Database that the BlackBerry Enterprise Server uses.
 - If you configured the database server to use static ports, select the **Static** option. If the static port number is not 1433, in the **Port** field, type the port number.

8. In the **Database mirroring options** dialog box, if you want to configure database mirroring, select the **Add support for database mirroring** check box and type the name of the database server that hosts the mirror database in the **Name of the mirror database server** field. The setup application does not create the BlackBerry Configuration Database on the mirror Microsoft® SQL Server®; it adds a registry key to the computer that includes the name of the mirror Microsoft SQL Server.
9. In the **CAL and SRP information** dialog box, type the new SRP credentials.
10. In the **Microsoft Exchange Server** dialog box, perform the following actions:
 - a. In the **Microsoft Exchange server** field, type the name of the Microsoft® Exchange server.
 - b. In the **Mailbox** field, type the name of the administrator that has the appropriate permissions.
 - c. Click **Check Name**.
 - d. Click **Apply**.
 - e. Click **OK**.
11. In the **Application extensibility settings** dialog box, consider the following information:
 - You can type an FQDN to create a new BlackBerry MDS Integration Service pool.
 - To configure a hardware load-balancer for the BlackBerry MDS Integration Service pool, you can type an FQDN that corresponds to a DNS record in the DNS server that maps the FQDN into the IP address of the virtual server that you configured on the hardware load-balancer.
 - You can create a new BlackBerry MDS Integration Service database or upgrade the existing BlackBerry MDS Integration Service database.
 - If you choose to create a new BlackBerry MDS Integration Service database, the setup application creates the BlackBerry MDS Integration Service database on the same database server as the BlackBerry Configuration Database.
12. If you upgrade from the BlackBerry Collaboration Service for use with Windows® Messenger, in the **Instant messaging Settings** dialog box, specify the Microsoft® Office Live Communications Server 2005 address.
13. In the **Administration settings** dialog box, perform the following actions:
 - In the **Pool name** field, type an FQDN that the setup application can use to create the BlackBerry Administration Service web address. If you install only one BlackBerry Administration Service instance in the BlackBerry Domain, you can accept the default pool name. If you install more than one BlackBerry Administration Service instance in the BlackBerry Domain, you must create a DNS entry for the pool name that is not the name of a computer and is mapped to the IP address of each BlackBerry Administration Service instance.
 - In the **New password** and **Confirm password** fields, type the password for the SSL certificate that the BlackBerry Administration Service uses to authenticate with browsers. You must use the same password for every BlackBerry Administration Service instance in the BlackBerry Domain.
14. In the **Microsoft® Active Directory® settings** dialog box, in the **User password** field, type the password for the Microsoft Active Directory account (for example, BESAdmin) that the BlackBerry Enterprise Server uses to authenticate to Microsoft Active Directory. If you want to specify a different user name and user domain, you must make sure that the user domain belongs to the same Microsoft Active Directory forest as the Microsoft Exchange organization.

If the setup application cannot locate any of the global catalog servers that are associated with the Microsoft Active Directory account after you click the **Next** button, you must choose the global catalog servers that you want to add to the list manually. To add a global catalog server to the list, click the **Add** button and select the appropriate server. Each global catalog server that you add to the list must belong to the same domain as the Microsoft Active Directory user account.

15. In the **Start services** dialog box, do not start the BlackBerry Enterprise Server services.
16. Click **Finish**.

After you finish:

- If you configured the BlackBerry Administration Service instances in the pool to communicate across network subnets with TCP before you upgraded BlackBerry Enterprise Server components, you must restore the configuration files. For more information, visit www.blackberry.com/support to read article KB19654.
- Move user accounts to the BlackBerry Enterprise Server using the BlackBerry Enterprise Transporter. For more information about moving user accounts, see the *BlackBerry Enterprise Transporter Installation and Administration Guide*.

Specifying a name for the BlackBerry Administration Service pool during the installation process

During the installation process, the setup application prompts you to specify the name of the BlackBerry® Administration Service pool.

The BlackBerry Administration Service instances use the pool name for interprocess communication and when you configure BlackBerry Administration Service high availability using DNS round robin. You must specify a valid DNS host name during the installation process, even if you do not configure BlackBerry Administration Service high availability using DNS round robin.

The setup application uses the FQDN of the computer that you install the first BlackBerry Administration Service instance on as the default value for the pool name. If you keep the default value and configure BlackBerry Administration Service high availability using DNS round robin at a later time, you must use the BlackBerry Configuration Panel to change the pool name to the host name for the pool.

The name for the BlackBerry Administration Service pool does not impact BlackBerry Administration Service high availability that uses a hardware load balancer.

For more information about BlackBerry Administration Service high availability, see the *BlackBerry Enterprise Server Planning Guide*.

Upgrading the BlackBerry Enterprise Server software in phases

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Using the phased upgrade process, you can maintain previous versions of the BlackBerry® Enterprise Server software, install additional BlackBerry Enterprise Server instances over time, and move user accounts to the latest BlackBerry Enterprise Server versions.

When you use the in-place upgrade process, all BlackBerry devices receive new IT policies. BlackBerry devices that are running BlackBerry® Device Software version 4.0 or later receive new service books and wireless data synchronization occurs.

Advantages of this upgrade process include:

- You can move user accounts to the new BlackBerry Enterprise Server instances gradually to limit the number of service books and IT policies that the BlackBerry Policy Service sends to BlackBerry devices at the same time.
- You can monitor system performance as you add user accounts.
- You can change your organization's environment during the upgrade process by changing which user accounts you associate with each BlackBerry Enterprise Server instance.

Disadvantages of this upgrade process include:

- You require extra computers.
- You require additional SRP credentials.
- If you move user accounts from one BlackBerry Configuration Database to another, you lose the BlackBerry device options that you backed up in the BlackBerry Configuration Database.
- You cannot use some new features (for example, one-to-many relationships between a BlackBerry MDS Connection Service or BlackBerry Collaboration Service and multiple BlackBerry Enterprise Server instances) in the BlackBerry Enterprise Server until all BlackBerry Enterprise Server components are the same version.

Upgrade multiple BlackBerry Enterprise Server instances in phases

You can upgrade the BlackBerry® Enterprise Server instances in your organization's environment in phases to minimize the impact on users.

Before you begin: If you want to create a new BlackBerry Configuration Database, instruct users to back up their BlackBerry devices. Any BlackBerry device options that are stored in the existing BlackBerry Configuration Database are deleted when you add user accounts to the new BlackBerry Configuration Database.

1. Install the latest BlackBerry Enterprise Server version with the BlackBerry Administration Service on a separate computer.
2. If you create a new BlackBerry Configuration Database, create roles, administrator accounts, groups, IT policies, and software configurations for your organization's environment.
3. If you upgrade an existing BlackBerry Configuration Database, remove BlackBerry Manager instances from your organization's environment.

4. Move user accounts to the upgraded BlackBerry Enterprise Server by performing one of the following actions:
 - To upgrade an existing BlackBerry Configuration Database, move user accounts using the BlackBerry Administration Service.
 - To create a new BlackBerry Configuration Database, move user accounts using the BlackBerry Enterprise Transporter.
5. Upgrade instances of the central push server for the BlackBerry MDS Connection Service.
6. Upgrade the earlier BlackBerry Enterprise Server version using an in-place upgrade process. You can use the upgraded BlackBerry Enterprise Server instance as the destination for user accounts that you move from earlier BlackBerry Enterprise Server versions.
7. Move user accounts to the upgraded BlackBerry Enterprise Server instances, and upgrade the old BlackBerry Enterprise Server instances until all BlackBerry Enterprise Server instances are running the latest software version.

After you finish: To enable BlackBerry device users to access the features that are part of the latest version, upgrade the BlackBerry® Device Software. For more information, see the *BlackBerry Device Software Update Guide*.

Upgrade a standalone BlackBerry Router

Note: You cannot manage the BlackBerry® Controller that monitors a standalone BlackBerry Router in the BlackBerry Administration Service. You must manage the BlackBerry Controller in the BlackBerry Configuration Panel on the computer that hosts the standalone BlackBerry Router.

1. Log in to the computer using the Windows® account that you want to use to run the BlackBerry Router.
2. In the BlackBerry® Enterprise Server installation files, double-click **Setup.exe**.
3. In the **Setup type** dialog box, select **Upgrade the BlackBerry Router and BlackBerry Controller on this computer but do not install other BlackBerry Enterprise Server components**.
4. Start the services for the BlackBerry Router.

Postupgrade tasks

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Restore the BlackBerry MDS Connection Service configuration files

You can use the BlackBerry® MDS Connection Service configuration files, `MdsLogin.conf` and `krb5.conf`, to configure how the BlackBerry MDS Connection Service authenticates BlackBerry devices with content servers that use NTLM or Kerberos™. The BlackBerry MDS Connection Service configuration files are located in `<drive>\Program Files\Research In Motion\BlackBerry Enterprise Server\MDS\Servers\Instance\config`.

When you upgrade a BlackBerry® Enterprise Server, the setup application creates new `MdsLogin.conf` or `krb5.conf` files and creates backup versions of the old BlackBerry MDS Connection Service configuration files in the same location. If you changed the `MdsLogin.conf` or `krb5.conf` files before you perform the upgrade, you should restore the backup versions of the files so that the BlackBerry MDS Connection Service can authenticate BlackBerry devices with the content servers that use NTLM or Kerberos.

Upgrade the BlackBerry database notification system

The BlackBerry® database notification system is designed to reduce the number of database queries that a BlackBerry® Enterprise Server makes to the BlackBerry Configuration Database.

If you upgrade the BlackBerry Configuration Database on the computer that hosts the BlackBerry Enterprise Server, the BlackBerry database notification system upgrades automatically.

If you upgrade the BlackBerry Configuration Database on a database server that you installed on a computer that is not the computer that hosts the BlackBerry Enterprise Server, you can upgrade the BlackBerry database notification system manually after you complete the BlackBerry Enterprise Server installation process.

Before you begin:

- You must have the system administrator permission for the database.
 - The database server must run on Windows Server® 2003.
1. On the database server, open the BlackBerry Enterprise Server installation files.
 2. Perform one of the following actions:
 - If a 32-bit Microsoft® SQL Server® 2005 is running in your organization's environment, in the **Tools\DBNS\x86** folder, copy the **RimEsp.dll** file to `C:\Program Files\Microsoft SQL Server\MSSQL\Binn`.
 - If a 64-bit Microsoft SQL Server 2005 is running in your organization's environment, in the **Tools\DBNS\x64** folder, copy the **RimEsp.dll** file to `C:\Program Files\Microsoft SQL Server\MSSQL\Binn`.
 3. Open the Microsoft SQL Server Management Studio.
 4. Using the Microsoft SQL Server Management Studio, navigate to `Database\DBInstallScripts\SQLServer\5.0` in the BlackBerry Enterprise Server installation files.
 5. Open the **NotifyMasterInstall.sql** file.

6. Run the script.
7. Open the **NotifyInstall.sql** file.
8. Change <_DATABASENAME_> to the name of the BlackBerry Configuration Database (for example, BesMgmt).
9. Run the script.
10. Confirm that the Microsoft SQL Server Management Studio displays the "Function dbo.xp_RIMxxxx registered" message.
11. To add additional BlackBerry Configuration Database instances in your organization's environment, repeat steps 7 to 10.
12. Restart the database server and the computer that hosts the BlackBerry Enterprise Server.

Best practice: Running the BlackBerry Enterprise Server

Best practice	Description
Do not change the startup type for the BlackBerry® Enterprise Server services.	<p>When you install or upgrade the BlackBerry Enterprise Server, the setup application configures the startup type for the BlackBerry Enterprise Server services to automatic or manual. For example, the setup application configures the startup type for the BlackBerry Mail Store Service, BlackBerry Policy Service, and BlackBerry Synchronization Service to manual.</p> <p>To avoid errors in the BlackBerry Enterprise Server, do not change the startup type for the BlackBerry Enterprise Server services.</p>
Do not change the account information for BlackBerry Enterprise Server services.	<p>When you install or upgrade the BlackBerry Enterprise Server, the setup application configures the account information for the BlackBerry Enterprise Server services.</p> <p>Do not change the account information for the BlackBerry Enterprise Server unless the BlackBerry Enterprise Server documentation specifies that you can.</p>
Run the BlackBerry Configuration Panel as an administrator.	<p>Consider the following guidelines if you are running the BlackBerry Configuration Panel on Windows Server® 2008:</p> <ul style="list-style-type: none"> • Log in to the computer with a user account that is in the Administrator group on the Windows Server. • Right-click the BlackBerry Configuration Panel icon and click Run as administrator.

Configure support for Unicode languages

You can make sure that the messaging application can display the Unicode messages that the BlackBerry® device sends by configuring the BlackBerry® Enterprise Server to support Unicode languages (for example, Japanese, Korean, or Simplified Chinese).

1. On the computer that hosts the BlackBerry Enterprise Server, on the taskbar, click **Start > Run**.
2. Type **regedit**.
3. Click **OK**.
4. Perform one of the following actions:
 - If you are running a 32-bit version of Windows, go to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Agents.
 - If you are running a 64-bit version of Windows, go to HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents.
5. If the **MAPIEncoding** registry key exists, perform one of the following actions:
 - Delete the key.
 - Change the value of the key to **1**.
6. Perform one of the following actions:
 - If you are running a 32-bit version of Windows, go to HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Setup.
 - If you are running a 64-bit version of Windows, go to HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Setup.
7. Verify that the **ConfigKeystoreCountry** registry key is set to one of the following values, depending on your organization's environment:
 - CN for Simplified Chinese
 - JP for Japanese
 - KR for Korean
8. In the Windows® Services, restart the BlackBerry Dispatcher.

Configure support for Unicode text in calendars on BlackBerry devices in a Microsoft Exchange 2003 environment

Before you begin: You must install the hotfixes for wireless calendar synchronization for Microsoft® Exchange 2003.

1. On the BlackBerry® Enterprise Server, on the **Start** menu, click **Run**.
2. Type **regedit**.
3. Click **OK**.

4. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents.
5. Create a DWORD value that is named **SetLocaleIDs**.
6. Set the value to **1**.
7. In the Windows® Services, restart the BlackBerry Messaging Agent.

Configure the BlackBerry Administration Service instances in the pool to communicate across network subnets

The instances in the BlackBerry® Administration Service pool use multicast UDP to communicate with each other. If the BlackBerry Administration Service instances are in different network subnets and your organization's network configuration does not permit multicast UDP across the network subnets, you must configure the BlackBerry Administration Service instances to use TCP to communicate with each other. For example, if your organization uses a UDP peer-to-peer firewall filter, you must configure the BlackBerry Administration Service instances to communicate across network subnets.

For more information, visit www.blackberry.com/support to read article KB19654.

1. On the computer that hosts a BlackBerry Administration Service instance, navigate to `<drive>\Program Files\Research In Motion\BlackBerry Enterprise Server\BAS\jboss\ejb\server\default\deploy`.
2. In a text editor, open **cluster-service.xml** and **ejb3-entity-cache-service.xml**.
3. Follow the instructions in the files to configure TCP.
4. Save and close the files.
5. Navigate to `<drive>\Program Files\Research In Motion\BlackBerry Enterprise Server\BAS\server\default\deploy`.
6. In a text editor, open **bas-object-versioning-cache-service.xml** and **bas-clustered-cache-service.xml**.
7. Follow the instructions in the files to configure TCP.
8. Save and close the files.
9. In the Windows® Services, restart the BlackBerry Administration Service services.

Log in to the BlackBerry Administration Service for the first time

To open the BlackBerry® Administration Service, you can use a browser on any computer that has access to the computer that hosts the BlackBerry Administration Service.

Before you begin: To manage a BlackBerry device using the BlackBerry Administration Service while the BlackBerry device is connected to the computer, the browser must permit Microsoft® ActiveX® controls.

1. In the browser, type **https://<server_name>/webconsole/app**, where <server_name> is the name of the computer that hosts the BlackBerry Administration Service.
2. In the **User name** field, type **admin**.
3. In the **Password** field, type the password that you created during the installation process.
4. In the **Log in using** drop-down list, click **BlackBerry Administration Service**.
5. Click **Log in**.

There is a problem with this website's security certificate

Description

The browser displays this error message when you try to navigate to the BlackBerry® Administration Service or BlackBerry Monitoring Service using Windows® Internet Explorer® version 7 or later.

Possible solution

Add the web address for the BlackBerry Administration Service or BlackBerry Monitoring Service to the list of trusted web sites in Windows Internet Explorer, and install the certificate for the BlackBerry Administration Service or BlackBerry Monitoring Service in the certificate store of your computer.

1. In Windows Internet Explorer, navigate to the BlackBerry Administration Service console or BlackBerry Monitoring Service console.
2. Click **Continue to this website (not recommended)**.
3. On the **Tools** menu, click **Internet Options**.
4. On the **Security** tab, click **Trusted Sites**.
5. Click **Sites**.
6. Click **Add** to add the console to the list of trusted web sites.
7. Click **Close**.
8. Click **OK**.
9. In the browser window, on the toolbar, click **Certificate Error**.
10. Click **View certificates**.
11. Click **Install certificate**. The Certificate Import Wizard opens.
12. Complete the instructions in the Certificate Import Wizard. If you are trying to log in to the BlackBerry Administration Service or BlackBerry Monitoring Service using a computer that runs Windows Vista™, perform the following actions in the Certificate Import Wizard.
 - a. In the Certificate Store dialog box, click **Place all certificates in the following store**.
 - b. Click **Browse**.
 - c. Click **Trusted Root Certification Authorities**.
 - d. Click **OK**.

13. Close and reopen the browser.

Configuring BlackBerry MDS Integration Service high availability during the upgrade process

The setup application creates a separate pool for each BlackBerry® MDS Integration Service instance that you upgrade. You cannot add the upgraded BlackBerry MDS Integration Service instances to a pool so that you can configure high availability. You can configure high availability only for new BlackBerry MDS Integration Service instances that you install.

You can consider upgrading a BlackBerry MDS Integration Service instance to the latest version if one of the following conditions apply:

- Your organization uses the BlackBerry MDS Integration Service as a standalone service and does not have plans to configure BlackBerry MDS Integration Service high availability.
- Your organization plans to configure BlackBerry MDS Integration Service high availability and the existing BlackBerry MDS Integration Service version 4.1 instance is installed on a computer that does not have other software (for example, a database server or third-party applications) installed on it.

If your organization plans to configure BlackBerry MDS Integration Service high availability, you must upgrade the BlackBerry MDS Integration Service version 4.1 instance as the first instance in the BlackBerry MDS Integration Service pool. You must use the FQDN of the computer that hosts the BlackBerry MDS Integration Service instance as the virtual name of the BlackBerry MDS Integration Service pool.

If one of the above conditions do not apply, you can consider installing the latest BlackBerry MDS Integration Service version on new computers. When you do so, after installing the BlackBerry MDS Integration Service instances, you must republish the BlackBerry® MDS Runtime Applications.

Install a BlackBerry MDS Integration Service pool in an upgraded environment

When you install new BlackBerry® MDS Integration Service instances in an upgraded environment instead of upgrading existing BlackBerry MDS Integration Service instances, you lose backend notification subscriptions. BlackBerry devices that run BlackBerry® MDS Runtime Application versions earlier than version 4.5 remove the applications.

1. Install all BlackBerry MDS Integration Service instances in the pool.
2. Publish all existing BlackBerry MDS Runtime Applications.
3. Install all BlackBerry MDS Runtime Applications on a test BlackBerry device.
4. To migrate users from BlackBerry MDS Integration Service version 4.1 to the new BlackBerry MDS Integration Service pool, in the BlackBerry Administration Service, update the BlackBerry Enterprise Server to associate with the new BlackBerry MDS Integration Service pool.

After you finish:

- Configure backend notification subscriptions.

- Resend applications to BlackBerry devices that run BlackBerry MDS Runtime Application versions earlier than version 4.5.
- For more information, see the *BlackBerry Enterprise Server Installation Guide*.

Change applications to support BlackBerry MDS Connection Service failover

In earlier versions of the BlackBerry® Enterprise Server, an organization's push applications connected to only one instance of the BlackBerry MDS Connection Service central push server. You must make sure that your organization's applications can access all central push servers.

1. Change the applications to access central push servers only, and not BlackBerry MDS Connection Service instances that administrators have not configured to also act as central push servers.
2. To change your organization's applications to support central push server failover, perform one of the following actions:
 - Configure an HTTP or HTTPS proxy server that applications send requests through. Use this option if the applications are located on the Internet. Optionally, you can place the proxy server in the DMZ.
 - Configure the application servers to use a list of IP addresses to find an available central push server. If a central push server does not respond to a request, the application can try to connect to another central push server.
 - Configure a hardware load balancer. The load balancer accepts all requests from the application servers, and distributes the traffic to the various central push servers. If a central push server does not respond, the load balancer redistributes the requests to the remaining central push servers.
 - Configure the application to use the new HTTP response header x-rim-push-gateways.

Configuring support for new attachments

Configure an upgraded BlackBerry Enterprise Server to support new attachment extensions

When you upgrade a BlackBerry® Enterprise Server instance, the upgrade process does not automatically add the new attachment extensions that the latest BlackBerry Enterprise Server version supports. You must add the new attachment extensions after the upgrade process completes so that the BlackBerry Enterprise Server can recognize the new attachment extensions and send them to a BlackBerry Attachment Service instance for processing. The following list of supported file formats were added to versions later than BlackBerry Enterprise Server version 4.1 SP3: .amr*, .wma, .pptx, .docx, .xlsx, .odp, .ods, .odt, .ott, .odp, and .ods files.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > Attachment > Connector**.
2. Click the BlackBerry Attachment Connector instance for the BlackBerry Enterprise Server.
3. Click **Edit instance**.
4. Click **Supported Attachment Server instances**.
5. For the BlackBerry Attachment Service instance that you want the BlackBerry Enterprise Server to send new attachments to, click the **Edit** icon.
6. Add the new attachment extensions to the attachment extensions list.

7. Click **Save all**.

Configure an upgraded BlackBerry Attachment Service to support new attachment distillers

During the upgrade process for a BlackBerry® Attachment Service instance, the setup application does not turn on the new attachment distillers automatically. If you want the BlackBerry Attachment Service to process new attachments, you must turn on the attachment distillers for these file formats. The following supported file formats were added to versions later than BlackBerry Enterprise Server version 4.1 SP3: .amr*, .wma, .pptx, .docx, .xlsx, .odp, .ods, .odt, .ott, .ods, and .odp files.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view > Attachment > Server**.
2. Click the instance that you upgraded.
3. Click **Edit instance**.
4. In the **Distiller** section, in the **Allowed** column, turn on the attachment distillers that you want the BlackBerry Attachment Service to support.
5. If required, in the **Distiller** section, in the **Attachment size (KB)** column, change the attachment size, in KB, for the new attachments.
6. Click **Save**.

Assigning an IT policy to a group

After you complete the upgrade process, you can assign an IT policy to a group. When you assign an IT policy to a group, the BlackBerry® Enterprise Server can assign the IT policy to each user account in the group. However, if an IT policy is already assigned to a user account in a group, the BlackBerry Enterprise Server sends the IT policy that is assigned to the user account to the BlackBerry device. To use the IT policy that is assigned to the group, you must remove the IT policy that is assigned to the user account.

Remove an IT policy from a user account

Before you begin: Assign an IT policy to a group that includes the user account.

1. In the BlackBerry® Administration Service, on the **BlackBerry solution management** menu, expand **User**.
2. Click **Manage users**.
3. Search for the user account.
4. Click the user account.
5. On the **Policies** tab, click **Edit user**.
6. In the drop-down list, click the blank option (the first entry in the drop-down list) to remove the IT policy.
7. Click **Save all**.

After you finish: Resend the IT policy to the user account.

Restrict database permissions for the BlackBerry Attachment Service

The BlackBerry® Attachment Service accesses the BlackBerry Configuration Database to read attachment data using a Windows® account or a SQL authentication account. To limit the access that the BlackBerry Attachment Service account has to the tables in the BlackBerry Configuration Database, you can configure a BlackBerry Attachment Service account that has limited database permissions. This account is not the same as the account that the BlackBerry® Enterprise Server uses to access the BlackBerry Configuration Database.

Before you begin:

- Create a Windows® account for the BlackBerry Attachment Service.
 - To use database authentication, create a SQL authentication account for the BlackBerry Attachment Service.
1. In the Microsoft® SQL Server® management console, create a SQL login for the Windows account or SQL authentication account.
 2. Assign the account to the rim_db_AttachmentServer role in the BlackBerry Configuration Database.
 3. If you want the BlackBerry Attachment Service to use a SQL authentication account to access the BlackBerry Configuration Database, perform the following actions:
 - a. On the computer that you installed the BlackBerry Attachment Service on, log in using the Windows account that the BlackBerry Attachment Service is running on.
 - b. Click **Start > Run**.
 - c. Type **regedit**. Click **OK**.
 - d. If you are running a 32-bit version of Windows, navigate to HKEY_CURRENT_USER\SOFTWARE\Research In Motion.
 - e. If you are running a 64-bit version of Windows, navigate to HKEY_CURRENT_USER\SOFTWARE\WOW6432Node\Research In Motion.
 - f. Create the BBAttachServer\Database keys.
 - g. In the Database key, create the **Login** and **Password** string values for the SQL authentication account.

After you finish: After you complete the BlackBerry Attachment Service installation process, in the Windows Services, verify that the service for the BlackBerry Attachment Service is using the Windows account that you configured. If you need to change the account information, restart the BlackBerry Attachment Service.

Configuring minimum Microsoft SQL Server permissions for the Windows account

The BlackBerry® Enterprise Server setup application requires the Windows® account that it uses during the installation process or upgrade process to have Microsoft® SQL Server® permissions to create or upgrade the BlackBerry Configuration Database. The setup application requires the Windows account to have more Microsoft SQL Server permissions to install the BlackBerry Enterprise Server than the BlackBerry Enterprise Server requires to run.

After the installation or upgrade process completes, you can change the Microsoft SQL Server permissions of the Windows account to the Microsoft SQL Server permissions that the BlackBerry Enterprise Server requires to run. When you change the Microsoft SQL Server permissions of the Windows account, you can use Microsoft SQL Server security to minimize the operations that the Windows account can perform on the BlackBerry Configuration Database.

The following table describes the Microsoft SQL Server permissions for the setup application and the Windows account that the BlackBerry Enterprise Server uses to run.

Server and database roles	Description
db_owner	<p>The setup application requires this role to install and upgrade the BlackBerry Configuration Database, BlackBerry MDS Integration Service database, and BlackBerry Monitoring Service database.</p> <p>You can remove this role from the Windows account that the BlackBerry Enterprise Server uses to run after the setup application creates or upgrades the BlackBerry Configuration Database.</p>
rim_db_bes_server	<p>The BlackBerry Enterprise Server requires this role to run the BlackBerry Enterprise Server services. The setup application or the createDB executable creates the role automatically when it creates the BlackBerry Configuration Database.</p> <p>This role is the minimum Microsoft SQL Server permission for running the BlackBerry Enterprise Server.</p>

Configure minimum Microsoft SQL Server permissions for the Windows account

You can configure the minimum Microsoft® SQL Server® permissions for the Windows® account that the BlackBerry® Enterprise Server uses to run.

1. Open the Microsoft SQL Server console.
2. Expand **Microsoft SQL Server > Security > Logins**.

3. Right-click the Windows account that the BlackBerry Enterprise Server uses to run. Click **Properties**.
4. Map the Windows account to the BlackBerry Configuration Database.
5. Change the **Database role membership** to **rim_db_bes_server**.
6. Remove all other database role memberships.
7. Apply your changes.

Configuring a computer for monitoring

Configure the SNMP service for monitoring

You can configure the SNMP service on the computer that hosts the BlackBerry® Enterprise Server so that the BlackBerry Monitoring Service can monitor BlackBerry Enterprise Server activity.

Before you begin: Verify that the SNMP service is installed and running.

1. On a computer that hosts the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, in the Windows® Services, right-click **SNMP Service**. Click **Properties**.
2. On the **General** tab, change the startup type to **Automatic**.
3. On the **Traps** tab, in the **Community name** field, type the community name for the SNMP service. The field is case-sensitive.
4. In the **Trap Destinations** section, add the IP address of the computer that hosts the BlackBerry Monitoring Service.
5. On the **Security** tab, in the **Accepted community names** section, add the community name that you typed in step 3. The SNMP community name is read-only.
6. Select the **Accept SNMP packets from any host** or **Accept SNMP packets from these hosts** option, depending on your organization's environment.
7. If you selected **Accept SNMP packets from these hosts**, type the IP address of the computer that hosts the BlackBerry Monitoring Service.
8. Click **Apply**.
9. In the **Services** list, right-click **SNMP Service**. Click **Restart**.

Configure the BlackBerry Monitoring Service to monitor a BlackBerry Enterprise Server

Before you begin: Verify that the computer that hosts the BlackBerry® Enterprise Server has access to the computer that hosts the BlackBerry Monitoring Service.

1. In a browser, type **https://<server_name>:8443/webconsole/app**, where <server_name> is the FQDN of the computer that hosts the BlackBerry Monitoring Service.
2. Log in as an administrator that has permissions to access the BlackBerry Monitoring Service.
3. On the **Configuration** menu, expand **Servers**.

4. Click **Manage Servers**.
5. Click the **Edit** icon for the BlackBerry Enterprise Server that you want the BlackBerry Monitoring Service to monitor.
6. In the **SNMP Configuration** section, type the SNMP port number that the SNMP service on the BlackBerry Enterprise Server computer uses.
7. In the **SNMP Configuration** section, type the SNMP community name that the SNMP service on the BlackBerry Enterprise Server computer uses.
8. In the **SNMP Configuration** section, select the **Monitoring status** check box.
9. Click **Save**.

Troubleshooting the BlackBerry Enterprise Server upgrade process

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Failed to write License Key to the Database

This error message appears when you try to add the BlackBerry® Client Access License key during the installation process.

Possible solution

After you restart the computer during the BlackBerry® Enterprise Server installation process, you must log in using the same Windows® account that you used to start the installation process.

1. Close the setup application.
2. Log out of the computer.
3. Log in to the computer.
4. Restart the setup application.

Previous version detected but no database available

This error message appears when you cannot start the setup application or the setup application stops responding.

Possible solution

Verify that the registry keys that identify the BlackBerry® Configuration Database exist in the Windows® registry.

1. On the computer that you want to install or upgrade the BlackBerry® Enterprise Server on, on the **Start** menu, click **Run**.
2. Type **regedit**.
3. Click **OK**.
4. In the left pane, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server \Database.
5. If necessary, create case-sensitive strings that you name **DatabaseName** and **DatabaseServerMachineName**.
6. Specify the name of the BlackBerry Configuration Database as the value for **DatabaseName**.
7. Specify the FQDN name of the database server as the value for **DatabaseServerMachineName**.
8. Restart the setup application.

You encounter errors when you try to upgrade the BlackBerry Configuration Database

Possible solution

1. Navigate to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Installer or to the location of the log files that you specified in the setup application.
2. Open **DB_InstallV<YYMMDDHHMMSS>.log**, where <YYMMDDHHMMSS> specifies the date and time, in 24 hour clock format, that you upgraded the BlackBerry® Configuration Database.
3. Check the log file for error messages.

You cannot resolve errors that occur when you move users

Possible solution

1. Delete the user accounts from the BlackBerry® Enterprise Server before you start the upgrade process.
2. Add the user accounts to the BlackBerry Enterprise Server when the upgrade process completes.
3. Activate users' BlackBerry devices over the wireless network.

A third-party tool did not install and the BlackBerry Enterprise Server setup application closed

Possible solution

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the setup application file for the tool that you want to install.
3. Complete the instructions on the screen.
4. Restart the BlackBerry Enterprise Server setup application.

The BlackBerry Collaboration Service does not connect to Microsoft Office Live Communications Server 2005

Possible solution

If the instant messaging in your organization's environment supports Windows® Messenger with TLS, you must configure authentication.

1. Download the trial edition of Microsoft® Office Communicator 2005 from www.microsoft.com/downloads.
2. Install Microsoft Office Communicator 2005 on the computer that hosts the BlackBerry® Collaboration Service.
3. Connect to Microsoft® Office Live Communications Server 2005 using Microsoft Office Communicator 2005.
4. If a connection does not open, verify that you installed or imported the certificates that are required for authentication.

The setup application did not prompt you to change or confirm the MAPI profile

Possible solution

Create and change the MAPI profile manually.

1. On the BlackBerry® Enterprise Server installation media, open the **Tools** folder.
2. Double-click the **Fixmapisvc.exe** file.
3. Verify that **mapisvc.inf** is installed in C:\winnt\system32\ or C:\windows\system32\.
4. On the taskbar, click **Start > BlackBerry Enterprise Server > Edit MAPI Profile**.
5. Type the Microsoft® Exchange server name.
6. Click the Windows® account that is associated with the MAPI profile.
7. Click **OK**.

The BlackBerry Monitoring Service cannot monitor events

Possible cause

The SNMP service was not installed before the BlackBerry® Enterprise Server software was installed.

Possible solution

To permit the BlackBerry Monitoring Service to monitor a BlackBerry Enterprise Server activity, you can install the SNMP service on the computer after you install a BlackBerry Enterprise Server.

1. Verify that the computer has access to the Windows® installation media.
2. On the computer that hosts the BlackBerry Enterprise Server or BlackBerry Enterprise Server components, on the taskbar, click **Start > Settings > Control Panel > Add/Remove Programs > Add/Remove Windows Components**.
3. Double-click **Management and Monitoring Tools**.
4. Select the **Simple Network Management Protocol** check box.
5. Click **OK**.
6. When the installation wizard prompts you, install the files from the Windows installation media.
7. Complete the installation wizard.

To complete the installation process, configure the SNMP service to monitor the BlackBerry Enterprise Server activity.

Restore a BlackBerry Configuration Database

If you created a copy of the BlackBerry® Configuration Database using the CreateDB tool, you can restore the copy if you determine that the upgrade process did not complete successfully.

1. In the Windows® Services, stop the BlackBerry® Enterprise Server services.
2. On the server that hosts the BlackBerry Configuration Database, open a command prompt window.
3. Change to *<extractedfolder>\Tools*.
4. Type **BlackBerryDBRestore.exe**.
5. Type the same parameters that you used when you backed up the BlackBerry Configuration Database.
6. Press ENTER.

Users experience unexpected behavior with message lists and calendars on BlackBerry devices

Possible cause

If the MAPI and CDO client version 6.5.8022 was installed without uninstalling previous versions of the MAPI and CDO client (including the associated .DLL files), users might experience unexpected behavior with message lists and calendars on BlackBerry® devices.

Possible solution

For more information about Microsoft® Exchange Server MAPI Client and CDO version 1.2.1, visit www.microsoft.com.

1. In the Windows® Services, stop the services for the BlackBerry® Enterprise Server and any processes that use the MAPI and CDO client.
2. Remove the MAPI and CDO client version 6.5.8022.
3. Verify that the following files are not present in C:\Windows\System32 or any other directory in the environment path:
 - CDO.DLL
 - EMSABP32.DLL
 - EMSMDB32.DLL
 - EMSUI32.DLL
 - EMSUIX32.DLL
 - GAPI32.DLL
 - MAPISP32.EXE
 - MSPST32.DLL
 - WMSUI32.DLL

4. In C:\Windows\System32, run the FixMapi.exe application.
5. Install the MAPI and CDO client version 6.5.8022.
6. Restart the services for the BlackBerry Enterprise Server and any processes that use the MAPI and CDO client.

If you run the BlackBerry Enterprise Server setup application after you complete the possible solution, when the setup application displays the preinstallation checklist, an error message indicates that the setup application could not detect the MAPI and CDO client. The setup application displays this error message because you installed the MAPI and CDO client version 6.5.8022 in a different directory than the directory that you installed it in for previous versions. The error message does not prevent the BlackBerry Enterprise Server setup application from completing the installation process successfully.

Various BlackBerry Enterprise Server components do not start

Possible cause	Possible solution
The BlackBerry® Administration Service, BlackBerry MDS Connection Service, BlackBerry MDS Integration Service, or BlackBerry Collaboration Service is configured to use a dynamic port when it connects to the BlackBerry Configuration Database, but the database server uses a static port.	<p>Configure a static port for the BlackBerry Configuration Database.</p> <ol style="list-style-type: none"> 1. On the computer that hosts the BlackBerry® Enterprise Server component, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration. 2. On the Database Connectivity tab, clear the Use dynamic ports or specify SQL port check box. 3. Type the port number in the Use dynamic ports or specify SQL port field. 4. Click OK. 5. In the Windows® Services, restart the services for the BlackBerry Enterprise Server component.
The BlackBerry Administration Service, BlackBerry MDS Connection Service, BlackBerry MDS Integration Service, or BlackBerry Collaboration Service is configured to use an incorrect static port number when it connects to the BlackBerry Configuration Database.	<p>Configure the component to use the correct port number.</p> <ol style="list-style-type: none"> 1. On the computer that hosts the BlackBerry Enterprise Server component, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration. 2. Type the correct port number in the Use dynamic ports or specify SQL port field. 3. Click OK. 4. In the Windows Services, restart the services for the BlackBerry Enterprise Server component.

You cannot access the BlackBerry Administration Service

Possible cause

The computer that hosts the BlackBerry® Administration Service has more than one NIC and the production NIC is not first in the bind order in Windows® network settings as it must be for you to access the BlackBerry Administration Service.

Possible solution

On the computer that hosts the BlackBerry Administration Service, in the Windows network settings, verify that the production NIC is first in the bind order. For more information, visit www.blackberry.com/support to read article KB18190.

You cannot create a user account in the BlackBerry Administration Service

Possible cause	Possible solution
The BlackBerry® Administration Service is configured to use static ports when it connects to the BlackBerry Configuration Database server, but the BlackBerry Configuration Database server uses a dynamic port.	<p>Configure the BlackBerry Administration Service to use a dynamic port for the BlackBerry Configuration Database.</p> <ol style="list-style-type: none"> 1. On the computer that hosts the BlackBerry® Enterprise Server or BlackBerry Enterprise Server components, on the taskbar, click Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration. 2. On the Database Connectivity tab, select the Use dynamic ports or specify SQL port check box. 3. Click OK. 4. In the Windows® Services, restart the services for the BlackBerry Administration Service.

The BlackBerry Administration Service pool name is the same as the FQDN of the host computer

Possible cause

A DNS record was not created before a BlackBerry® Administration Service instance was installed.

Possible solution

1. Create the DNS record for the BlackBerry Administration Service instance.

2. On the computer that hosts the BlackBerry Administration Service instance, on the taskbar, click **Start > Programs > BlackBerry Enterprise Server > BlackBerry Server Configuration**.
3. On the **Administration Service - High Availability** tab, in the **Pool name** field, type the name of the BlackBerry Administration Service pool.
4. In the Windows® Services, restart the services for the BlackBerry Administration Service.

Glossary

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AES

Advanced Encryption Standard

AJAX

Asynchronous JavaScript® and XML

BlackBerry CAL

A BlackBerry® Client Access License (BlackBerry CAL) limits how many users you can add to a BlackBerry® Enterprise Server.

BlackBerry Domain

A BlackBerry Domain consists of the BlackBerry Configuration Database with its users and any BlackBerry® Enterprise Server instances that connect to it.

BlackBerry Enterprise Server databases

The BlackBerry® Enterprise Server databases are the BlackBerry Configuration Database, the BlackBerry MDS Integration Service database, and the BlackBerry Monitoring Service database.

BlackBerry MDS

BlackBerry® Mobile Data System

CAS

Client Access Server

CDO

Collaboration Data Object

CDMA

Code Division Multiple Access

DMZ

A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.

DNS

Domain Name System

FQDN

fully qualified domain name

HTTP

Hypertext Transfer Protocol

HTTPS

Hypertext Transfer Protocol over Secure Sockets Layer

IIS

Internet Information Services

IP

Internet Protocol

IP address

An Internet Protocol (IP) address is an identification number that each computer or mobile device uses when it sends or receives information over a network, such as the Internet. This identification number identifies the specific computer or mobile device on the network.

JDK

Java® Development Kit

JRE

Java® Runtime Environment

LAN

local area network

LDAP

Lightweight Directory Access Protocol

MAPI

Messaging Application Programming Interface

messaging server

A messaging server sends and processes messages and provides collaboration services, such as updating and communicating calendar and address book information.

MSDE

Microsoft® SQL Server® Desktop Engine

NIC

network interface card

RAID

redundant array of independent (or inexpensive) disks

SMS

Short Message Service

SNMP

Simple Network Management Protocol

SQL

Structured Query Language

SRP

Server Routing Protocol

SSL

Secure Sockets Layer

TCP

Transmission Control Protocol

TCP/IP

Transmission Control Protocol/Internet Protocol (TCP/IP) is a set of communication protocols that is used to transmit data over networks, such as the Internet.

TLS

Transport Layer Security

Triple DES

Triple Data Encryption Standard

XML

Extensible Markup Language

WAN

wide area network

Provide feedback

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To provide feedback on this deliverable, visit www.blackberry.com/docsfeedback.

Legal notice

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Research In Motion Limited
295 Phillip Street
Waterloo, ON N2L 3W8
Canada

Research In Motion UK Limited
Centrum House
36 Station Road
Egham, Surrey TW20 9LF
United Kingdom

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