

BlackBerry Enterprise Service 10

Version: 10.2



Upgrade Guide

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About this guide

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BlackBerry Enterprise Service 10 helps you manage BlackBerry devices, Android devices, and iOS devices for your organization. This guide provides instructions on how to upgrade to the latest version of BlackBerry Enterprise Service 10.

This guide is intended for senior IT professionals who are responsible for upgrading the product. After you complete the tasks in this guide, you may need to configure your BlackBerry Enterprise Service 10 domain. You can find configuration instructions in the *BlackBerry Enterprise Service 10 Configuration Guide*.

What is BlackBerry Enterprise Service 10?

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BlackBerry Enterprise Service 10 helps you manage mobile devices for your organization. You can manage BlackBerry devices and BlackBerry PlayBook tablets, as well as iOS and Android devices, all from a unified interface. BlackBerry Enterprise Service 10 is designed to help protect business information, keep mobile workers connected with the information they need, and provide administrators with efficient tools that help keep business moving forward.

BlackBerry Enterprise Service 10 includes the following components:

Component	Description
BlackBerry Device Service	Provides advanced administration for BlackBerry 10 devices and BlackBerry PlayBook tablets
Universal Device Service	Provides advanced administration for iOS and Android devices
BlackBerry Management Studio	Provides a unified interface to administer common tasks for BlackBerry 10 devices, BlackBerry PlayBook tablets, BlackBerry 7.1 and earlier devices, iOS devices, and Android devices
BES10 Self-Service	Provides a console to users so that they can perform some self-service tasks. For example, users can create activation passwords, remotely change the password on their device, or delete data from the device.

Key features of BlackBerry Enterprise Service 10

The table below describes some of the key features for BlackBerry Enterprise Service 10.

Feature	Description
Management of most types of devices	BlackBerry Enterprise Service 10 supports all types of BlackBerry devices and tablets, as well as iOS devices and Android devices.

Feature	Description
Single, unified interface	BlackBerry Management Studio is a single, web-based interface where you can view all devices in one place and access the most common management tasks across multiple domains. These tasks include creating and managing groups, managing device controls, and activating mobile devices.
Trusted and secure experience	Device controls give you precise management of how devices connect to your network, what capabilities are enabled, and what apps are available. Whether the devices are owned by your organization or your users, you can protect your organization's information.
Balance of work and personal needs	BlackBerry Balance and Secure Work Space technology are designed to ensure that personal and work information are kept separate and secure on devices. If the device is lost or the employee leaves the organization, you can delete only work-related information or all information from the device. Additional security features are available depending on the device type.

Planning an upgrade

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When you upgrade BlackBerry Enterprise Service 10 to the latest version, you upgrade the components and the BlackBerry Enterprise Service 10 databases. After you upgrade, existing users are active and no additional administrative actions are required.

You must upgrade the core components and the databases first. Afterwards, you can upgrade any distributed or remote components (for example, the consoles). If you try to upgrade a distributed or remote component first, the upgrade does not complete successfully for that component. You must upgrade all components before you can install additional BlackBerry Enterprise Service 10 instances.

Supported upgrade environments

You can use the setup application to upgrade BlackBerry Enterprise Service 10 version 10.1.3 or later to the latest version of BlackBerry Enterprise Service 10 version 10.2.

If you have BlackBerry Enterprise Service 10 version 10.1, 10.1.1, or 10.1.2, you must first upgrade to BlackBerry Enterprise Service 10 version 10.1.3 before you can upgrade to BlackBerry Enterprise Service 10 version 10.2.

If you have one of the following products, you must first upgrade to BlackBerry Enterprise Service 10 version 10.1:

- BlackBerry Device Service 6.2 or later
- Universal Device Service 6.2.1 or later

You can also use the setup application to perform a new installation of BlackBerry Enterprise Service 10 version 10.2.

Upgrade implications for the BlackBerry Enterprise Service 10 databases

When you upgrade BlackBerry Enterprise Service 10 to the latest version, you must also upgrade the BlackBerry Enterprise Service 10 databases. The setup application upgrades the BlackBerry Enterprise Service 10 databases automatically so that the databases and BlackBerry Enterprise Service 10 components run the same version. If you do not want to use the setup application to upgrade the BlackBerry Enterprise Service 10 databases, you can run the database upgrade scripts on the database server.

Tasks to upgrade BlackBerry Enterprise Service 10

Task	Information
Verify that the necessary ports are open, specifically external ports.	Configuring ports for the external firewall
Verify the system requirements.	Requirements
Prepare BlackBerry Enterprise Service 10 for the upgrade process and check for required permissions and accounts.	Preupgrade tasks
Verify the prerequisites.	Prerequisites: Upgrading BlackBerry Enterprise Service 10
Upgrade the BlackBerry Enterprise Service 10 core components.	Upgrade BlackBerry Enterprise Service 10
Upgrade distributed BlackBerry Enterprise Service 10 components.	Upgrade BlackBerry Enterprise Service 10
Complete the postupgrade tasks.	Postupgrade tasks
Configure BlackBerry Enterprise Service 10.	BlackBerry Enterprise Service 10 Configuration Guide

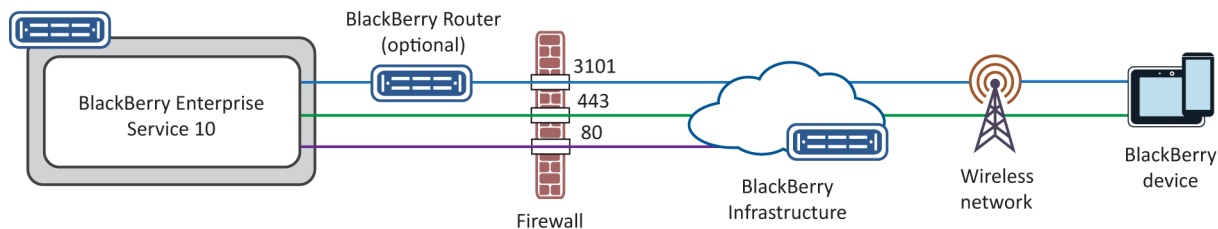
Configuring ports for the external firewall

You must configure the ports on the external firewall. For information about the internal ports that BlackBerry Enterprise Service 10 uses, see "Configuring connection types and port numbers" in the *BlackBerry Enterprise Service 10 Configuration Guide*.

Outbound ports: Managing BlackBerry devices

BlackBerry Enterprise Service 10 components use the following ports to send data to sources that are outside of your organization's firewall, such as the BlackBerry Infrastructure, and to receive data back from these sources.

Configure your organization's firewall to allow outbound and inbound connections over these ports. For more information about domains and IP addresses to use in your firewall configuration, visit www.blackberry.com/go/kbhelp to read articles KB34193 and KB03735.

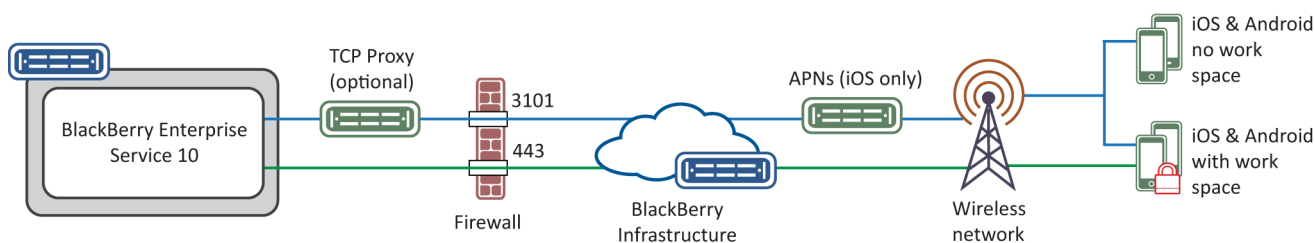


From	To	Purpose	Protocol	Port	Where you can change the port
BlackBerry Router (optional)	BlackBerry Infrastructure	To connect to the blackberry.com and blackberry.net subdomains (<region>.srp.blackberry.com) to activate and manage BlackBerry devices and to enable the use of the work space on BlackBerry devices.	TCP	3101	BES10 Configuration Tool
BlackBerry Dispatcher	BlackBerry Infrastructure	To connect to the blackberry.com and blackberry.net subdomains (<region>.srp.blackberry.com) to activate and manage BlackBerry devices and to enable the use of the work space on BlackBerry devices.	TCP	3101	BlackBerry Administration Service
BlackBerry Licensing Service	BlackBerry Infrastructure	To connect to the licensing infrastructure (license.blackberry.com) to activate licenses.	HTTPS	443	Cannot change
BlackBerry Administration Service	BlackBerry Infrastructure	To register activation information for BlackBerry devices and access device information.	HTTPS	443	Cannot change
BlackBerry Administration Service	BlackBerry Infrastructure	To specify public apps in BlackBerry World as optional work apps for BlackBerry devices.	HTTP	80	Cannot change

Outbound ports: Managing iOS and Android devices

BlackBerry Enterprise Service 10 components use the following ports to send data to sources that are outside of your organization's firewall, such as the BlackBerry Infrastructure, and to receive data back from these sources.

Configure your organization's firewall to allow outbound and inbound connections over these ports. For more information about domains and IP addresses to use in your firewall configuration, visit www.blackberry.com/go/kbhelp to read articles KB34193 and KB03735.



From	To	Purpose	Protocol	Port	Where you can change the port
BlackBerry Secure Connect Service	BlackBerry Infrastructure	To connect to the bbsecure.com subdomain (<region>.bbsecure.com) to allow work-space enabled devices to access work data, to send activation and management data between iOS and Android devices and BlackBerry Enterprise Service 10, and to allow iOS devices to connect to APNs for device notifications.	TCP	3101	Cannot change
BlackBerry Secure Connect Service through a TCP proxy server (optional)	BlackBerry Infrastructure	To route data through a TCP proxy server if you do not want a direct connection to the BlackBerry Infrastructure.	TCP	3101	Administration Console
BlackBerry Licensing Service	BlackBerry Infrastructure	To connect to the licensing infrastructure (license.blackberry.com) to activate licenses.	HTTPS	443	Cannot change

From	To	Purpose	Protocol	Port	Where you can change the port
Administration Console	BlackBerry Infrastructure	To request a signed CSR from BlackBerry so you can obtain and register an APNs certificate. The APNs certificate is required to manage iOS devices.	HTTPS	443	Cannot change
Universal Device Service core components	BlackBerry Infrastructure	To connect to the <i><region></i> .swstps.bbsecure.com subdomain to authenticate BlackBerry Enterprise Service 10 and enable the use of the Secure Work Space on iOS and Android devices.	HTTPS	443	Cannot change
Universal Device Service core components	BlackBerry Infrastructure	To connect to <i><region></i> .swsmanager.bbsecure.com subdomain to enable administrative control over the work space on iOS and Android devices.	HTTPS	443	Cannot change
BlackBerry Work Connect Notification Service	BlackBerry Infrastructure	To provide new or changed email and organizer notifications to work space-enabled iOS devices.	HTTPS	443	Cannot change
Scheduler	BlackBerry Infrastructure	To check a hosted metadata file each day at midnight for new device or OS data. Updates are downloaded to the Universal Device Service database. The hosted file is located at https://origin-www.blackberry.com/download/metadata/BES/metadata.xml.gz (IP address 208.65.77.102).	HTTPS	443	Cannot change
Core Module	Apple Root Certification Authority	To check the certificate revocation list (used if you do not set up an APNs proxy server).	HTTPS HTTP	443 80	Cannot change
Core Module	SMTP gateway	To enable SMTP for an external SMTP gateway (optional).	TCP	25	Administration Console

Outbound ports: Device data

BlackBerry Enterprise Service 10 uses the outbound-initiated port 3101 to send and receive data for BlackBerry 10 devices and work space-enabled iOS and Android devices.

For iOS and Android devices that are not work space-enabled, BlackBerry Enterprise Service 10 sends and receives only activation and management data through the outbound-initiated port 3101. All other data, such as messaging data and data from third-party applications, is not sent through port 3101. Consult the documentation or support resources for your organization's messaging software and third-party applications to determine the ports that you must open.

Outbound ports: Work space-enabled devices on a work Wi-Fi network

Work space-enabled iOS and Android devices that use your organization's Wi-Fi network use the following outbound ports to connect to the BlackBerry Infrastructure and external services. Configure your organization's firewall to allow outbound and inbound connections over these ports.

From	To	Purpose	Protocol	Port	Where you can change the port
iOS devices Android devices	BlackBerry Infrastructure	To connect to the <i><region>.bbsecure.com</i> subdomain when activating the device.	TLS	443	Cannot change
iOS devices Android devices	BlackBerry Infrastructure	To connect to the <i><region>.bbsecure.com</i> subdomain so that administration commands can be applied to the devices. Port 443 is the default. Port 80 is only used by devices that were activated before you upgraded to BlackBerry Enterprise Service 10 version 10.2, or if the user specifies port 80.	TCP	443 80	Cannot change
iOS devices	APNs	To send management data to and from iOS devices.	TCP	5223	Cannot change
Android devices	BlackBerry Infrastructure	To connect to the <i><region>.swsmanager.bbsecure.com</i> subdomain.	HTTPS	443	Cannot change

Managing the web keystores

BlackBerry Enterprise Service 10 version 10.1 and later uses a different method of managing certificates than previous releases. The setup application generates and stores an SSL certificate in two password-protected keystore files: `as.web.keystore` and `ncc.web.keystore`. The following components use the SSL certificate to authenticate with browsers:

- BlackBerry Administration Service
- BlackBerry Management Studio
- BES10 Self-Service
- Enterprise Management Web Service
- BlackBerry Web Services

In BlackBerry Device Service 6.2 and earlier, certificates were stored in a `web.keystore` file. If you upgrade to BlackBerry Enterprise Service 10 version 10.1 or later, the upgrade process replaces the `web.keystore` file with `as.web.keystore` and `ncc.web.keystore`. Any existing certificates in `web.keystore` are not migrated to the new keystores.

You can use the BES10 Configuration Tool to change the password for the web keystores, or to import a new SSL certificate. When you use the BES10 Configuration Tool to import certificates into the keystores, the certificates are written to the BlackBerry Enterprise Service 10 databases and then to the keystores (this also occurs when you restart the BlackBerry Administration Service). This process overwrites any certificates that you imported into the keystores manually. BlackBerry Enterprise Service 10 does not support importing certificates into the keystores manually.

Requirements

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System requirements: Your organization's environment

Item	Requirement
Company directory	<p>One of the following to access the list of users in your organization when you create user accounts:</p> <ul style="list-style-type: none">• Microsoft Active Directory, running at a domain functional level that is set to Windows Server 2003 or later• LDAP with anonymous authentication or simple bind authentication, with or without SSL
Exchange ActiveSync	<ul style="list-style-type: none">• Exchange ActiveSync enabled on your organization's messaging server to use the native email, calendar, and contacts apps on devices. For minimum requirements, refer to the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>.
Exchange ActiveSync gatekeeping	<p>To configure gatekeeping, the following conditions:</p> <ul style="list-style-type: none">• Microsoft Exchange Server 2010• Windows PowerShell 2.0 or later installed on the computer that hosts the BlackBerry Enterprise Service 10 core components.
Devices	<p>Any of the mobile operating systems listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i></p>

System requirements: Firewall

Item	Requirement
DNS	Support for resolving IP addresses into host names

System requirements: VPN hardware

If your organization's environment includes VPNs, you can configure a device to authenticate with the VPN so that it can access your organization's network. BlackBerry devices can use the BlackBerry Infrastructure if a VPN or work Wi-Fi connection is not available.

For information about VPN hardware for iOS, visit www.apple.com.

BlackBerry PlayBook OS 2.0 or later and BlackBerry 10 OS support the following IPsec VPN hardware:

- Any gateway from Check Point
- Cisco VPN 3000 Series Concentrator
- Cisco PIX Firewall
- Cisco IOS Easy VPN
- Any appliance in the Cisco ASA Series
- Any gateway in the Juniper SRX Series
- Any gateway in the Juniper NetScreen Series
- Any Windows Server with RRAS and IPsec configured that supports IKEv2
- Any VPN server that supports IKEv2

PlayBook OS 2.0 or later and BlackBerry 10 OS support the following SSL VPN hardware:

- Any gateway in the Juniper SA Series
- Any gateway in the Juniper MAG Series

For more information, visit www.blackberry.com/go/kbhelp to read article KB28128.

Hardware requirements

To determine the memory and disk space requirements for BlackBerry Enterprise Service 10, you must consider the number of devices that you plan to activate, the type of connection that devices use, and the level and type of user activity on devices. For more information about calculating hardware requirements for a BlackBerry Enterprise Service 10 environment, visit docs.blackberry.com/BES10 to see the *BlackBerry Enterprise Service 10 Performance Calculator*.

Log files

The size of log files for BlackBerry Enterprise Service 10 and BlackBerry Enterprise Service 10 components varies based on the number of devices in your organization's environment, the level of user activity on devices, and the logging levels that BlackBerry Enterprise Service 10 uses. It is a best practice to monitor and control the amount of disk space that the BlackBerry Enterprise Service 10 log files take up. For more information about configuring logging, visit docs.blackberry.com/BES10 to read the *BlackBerry Device Service Advanced Administration Guide* and the *Universal Device Service Advanced Administration Guide*.

Projected database growth

The size of the Microsoft SQL Server database used by BlackBerry Enterprise Service 10 will initially increase by approximately 500 KB per user per day. The size of the database will stabilize after approximately 30 days because BlackBerry Enterprise Service 10 removes historical data from the database at regular intervals. The maximum expected concurrent database connections at any one time is 120. At peak times, the database IO per second (IOPS) projection is 200 IOPS.

Hardware requirements: BlackBerry Enterprise Service 10

The following guidelines apply to a BlackBerry Enterprise Service 10 environment that supports email messages and app downloads. The environment can include BlackBerry 10 devices, BlackBerry PlayBook tablets, iOS devices, Android devices, and optionally, BlackBerry 7.1 and earlier devices.

For more information about using the Secure Work Space feature with iOS devices and Android devices, visit www.blackberry.com/go/kbhelp to read article KB34591.

Note: If you plan to activate BlackBerry 10 work space only devices, the processor, memory, and disk space requirements are higher. For more specific sizing information, visit docs.blackberry.com/BES10 to see the *BlackBerry Enterprise Service 10 Performance Calculator*.

Hardware requirements for 1 to 500 devices

If BlackBerry Enterprise Service 10 is installed on a computer that hosts BlackBerry Enterprise Server 5.0 SP4, up to 500 total devices are supported. Any combination of BlackBerry 10 devices, BlackBerry PlayBook tablets, iOS devices, Android devices, and BlackBerry 7.1 and earlier devices are supported up to a combined maximum of 500 devices.

Environment	Requirement
All BlackBerry Enterprise Service 10 components, Microsoft SQL Server Express, and BlackBerry Enterprise Server 5.0 SP4 (optional)	<ul style="list-style-type: none"> • One processor, 2.2 GHz Intel Xeon ES-2400 Series (Quad Core) • 12 GB of available memory • 40 GB of disk space

Hardware requirements for 500 to 100,000 devices

For 500 to 100,000 devices, install the BlackBerry Enterprise Service 10 core components, consoles, and databases on separate computers.

Requirements for core components

Each instance of BlackBerry Enterprise Service 10 core components can support up to 15,000 BlackBerry 10 devices and BlackBerry PlayBook tablets, and up to 7500 iOS and Android devices. Deploy as many instances of the core components as required to support the number of devices in your organization.

The number of instances of core components required depends on the combination of device types and workload, and on the performance characteristics of your network. To obtain a more accurate estimate of the required hardware, go to docs.blackberry.com/BES10 to see the *BlackBerry Enterprise Service 10 Performance Calculator*.

Number of activated devices	Number of instances of core components
500 to 5000	1
5000 to 10,000	1 to 2
10,000 to 22,500	1 to 4
22,500 to 100,000	2 to 10

Following are some examples of computer configurations that could support an instance of the BlackBerry Enterprise Service 10 core components.

Number of activated devices	Configuration example
500 to 5000	<ul style="list-style-type: none"> • One processor, 2.2 GHz Intel Xeon E5-2400 Series (Quad Core) • 12 GB of available memory

Number of activated devices	Configuration example
	<ul style="list-style-type: none"> • 40 GB of disk space
5000 to 10,000	<ul style="list-style-type: none"> • One processor, 2 GHz Intel Xeon E5-2600 Series (Six Core) • 12 GB of available memory • 80 GB of disk space
10,000 to 22,500	<ul style="list-style-type: none"> • Two processors, 2 GHz Intel Xeon E5-2600 Series (Six Core) • 12 GB of available memory • 120 GB of disk space

Requirements for consoles

The computer that the BlackBerry Enterprise Service 10 consoles reside on must meet the following requirements.

Number of activated devices	Requirement
500 to 22,500	<ul style="list-style-type: none"> • One processor, 2.2 GHz Intel Xeon E5-2400 Series (Quad Core) • 6 GB of available memory • 40 GB of disk space
22,500 to 100,000	<ul style="list-style-type: none"> • Two processors, 2.2 GHz Intel Xeon E5-2400 Series (Quad Core) • 8 GB of available memory • 80 GB of disk space

Requirements for databases

The computer that the BlackBerry Enterprise Service 10 databases reside on must meet the following requirements.

Number of activated devices	Requirement
500 to 5000	<ul style="list-style-type: none"> • One processor, 2.2 GHz Intel Xeon E5-2400 Series (Quad Core) • 4 GB of available memory • 40 GB of disk space
5000 to 22,500	<ul style="list-style-type: none"> • One processor, 2.2 GHz Intel Xeon E5-2400 Series (Quad Core) • 6 GB of available memory

Number of activated devices	Requirement
	<ul style="list-style-type: none"> 80 GB of disk space
22,500 to 100,000	<ul style="list-style-type: none"> One processor, 2 GHz Intel Xeon E5-2600 Series (Six Core) 8 GB of available memory 120 GB of disk space

Hardware requirements: BlackBerry Router

The following requirements apply to the computer that you install a standalone BlackBerry Router on. To support more devices or a large number of app downloads, install more processing cores or use a more powerful processor.

Number of activated devices	Requirement
1 to 10,000	<ul style="list-style-type: none"> One processor, 2 GHz Single Core 0.5 GB of available memory (above the requirements for the operating system) 500 KB of disk space (above the requirements for the operating system)

Hardware requirements: BlackBerry Collaboration Service

The following requirements apply to the computer that you install the BlackBerry Collaboration Service on. For more information about calculating hardware requirements, visit www.blackberry.com/go/serverdocs to see the *BlackBerry Enterprise Service 10 Performance Calculator*.

Item	Description
Hardware requirements	<ul style="list-style-type: none"> One processor, 2.4 GHz Intel Xeon 5600 Series (Quad Core) 8 GB of available memory (for 1000 users or fewer) 100 GB of disk space

Item	Description
Notes	<ul style="list-style-type: none"> • Supports up to 5000 devices that go through the BlackBerry Infrastructure if installed on the same computer as the BlackBerry Enterprise Service 10 core components • Supports up to 5000 devices per BlackBerry Collaboration Service instance, per computer • Install an additional 3 GB of memory for each 1000 users beyond the first 1000

Software requirements

Before you install BlackBerry Enterprise Service 10, your organization's environment must meet certain requirements for software.

Applications that are installed with BlackBerry Enterprise Service 10

You can use the BlackBerry Enterprise Service 10 installation process to install third-party applications.

If you want to install Microsoft SQL Server 2008 R2 Express on a computer that does not host the BlackBerry Enterprise Service 10 core components, you can copy the BlackBerry Enterprise Service 10 installation files to the computer that you want to install Microsoft SQL Server 2008 R2 Express on, navigate to the Tools folder and run the Sqlexpr.exe file (32-bit or 64-bit).

Application	Items that the application is installed with
JRE 7 Update 55	<ul style="list-style-type: none"> • BlackBerry Enterprise Service 10 core components • BlackBerry Enterprise Service 10 consoles
Microsoft .NET Framework 3.5 SP1 (if it is available for the setup application to enable through the Windows Server Manager)	<ul style="list-style-type: none"> • BlackBerry Enterprise Service 10 core components • BlackBerry Enterprise Service 10 consoles
Microsoft XML Core Services 6.0 SP2	<ul style="list-style-type: none"> • BlackBerry Enterprise Service 10 consoles

Application	Items that the application is installed with
Microsoft IIS 7.0, 7.5, or 8.0	<ul style="list-style-type: none"> BlackBerry Enterprise Service 10 core components
Microsoft Web Deploy 3.0	<ul style="list-style-type: none"> BlackBerry Enterprise Service 10 core components
Microsoft SQL Server 2008 R2 Express (if it is selected during the installation process)	<ul style="list-style-type: none"> BlackBerry Enterprise Service 10 core components

Software requirements: BlackBerry Enterprise Service 10 core components

The following requirements apply when you install all BlackBerry Enterprise Service 10 components on one computer, or when you install the BlackBerry Enterprise Service 10 core components on a separate computer.

Item	Requirement
Operating system	Any of the operating systems listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>
Software framework	<p>All of the following:</p> <ul style="list-style-type: none"> Microsoft .NET Framework 3.5 SP1 Microsoft .NET Framework 4 (Standalone Installer or Web Installer) <p>Note:</p> <ul style="list-style-type: none"> You must install the full Microsoft .NET Framework 4 instead of Microsoft .NET Framework 4 Client Profile. If you plan to install the BlackBerry Collaboration Service on the same computer as the BlackBerry Enterprise Service 10 core components, you must install Microsoft Unified Communications Managed API 2.0 Core Redistributable 64-bit before you install Microsoft .NET Framework 4. For more information, visit support.microsoft.com to read article 2224981.
Web server	<p>Any of the web servers listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i></p> <p>The BlackBerry Enterprise Service 10 setup application installs Microsoft IIS and configures it so BlackBerry Enterprise Service 10 can work. If you install IIS before you run the setup application, install the following IIS Role Services:</p>

Item	Requirement
	<ul style="list-style-type: none"> • Web Server: Static Content, Default Document, Directory Browsing, HTTP Errors • Health and Diagnostics: HTTP Logging, Request Monitor • Security: Request Filtering Performance: Static Content Compression • Management Tools: IIS Management Console, IIS Management Scripts and Tools, Management Service, IIS 6 Management Compatibility (all subcomponents)

Software requirements: Remote consoles

The following requirements apply if you are installing the BlackBerry Enterprise Service 10 consoles on a separate computer.

Item	Requirement
Operating system	Any of the operating systems listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i> at docs.blackberry.com/BES10 .
Software framework	Microsoft .NET Framework 3.5 SP1; installed by the setup application.

Software requirements: BlackBerry Router

The following requirements apply to the computer that you install a standalone BlackBerry Router on. If you do not install the BlackBerry Router, you can connect the BlackBerry Device Service to an existing standalone BlackBerry Router in your organization's environment. You can use a standalone BlackBerry Router that you installed with BlackBerry Enterprise Server 5.0 SP4 or BlackBerry Device Service 6.2.

Item	Requirement
Operating system	Any of the operating systems listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>

Software requirements: Database server

Item	Requirement
Database management system	Any of the database management systems listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>
Collation setting	<p>To configure collation settings, the following conditions:</p> <ul style="list-style-type: none">• Database server collation configured to default case-insensitive• BlackBerry Enterprise Service 10 database collation configured to default case-insensitive <p>Note: Default collations are suggested but non-default collations are supported (for more information, visit www.blackberry.com/go/kbhelp to read articles KB04785 and KB15534).</p>
Database connectivity	<ul style="list-style-type: none">• TCP/IP network protocols turned on• No count option turned off
Nested triggers	Nested triggers support turned on to allow triggers to perform actions that initiate other triggers. For more information, visit msdn.microsoft.com to read article ms178101.
Database mirroring	<p>To configure database mirroring, the following conditions:</p> <ul style="list-style-type: none">• A version of Microsoft SQL Server that supports database mirroring• High-safety mode with automatic failover• A witness server for automatic failover• A mirror database on a different computer than the principal database• The same version and edition of Microsoft SQL Server to host the mirror database and the principal database

Software requirements: Browser

The following requirements apply to the browser that you use to log in to the BlackBerry Enterprise Service 10 consoles.

Item	Requirement
Browser	<p>Any of the browsers listed in the <i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>.</p> <p>Windows Internet Explorer 8 or later provides optimal support for BlackBerry Administration Service features.</p> <p>Note: If users use a wired connection to activate or manage their BlackBerry devices, they must use Windows Internet Explorer and allow incoming TCP/IP connections to RIMProxy.exe. The default port number for RIMProxy.exe is 5666.</p> <p>To support browser access, you must configure the following settings:</p> <ul style="list-style-type: none">• Support for JavaScript• Cookies turned on• Support for TLS or SSL• The SSL certificate is installed to permit trusted connections to the consoles
Browser settings for Windows Internet Explorer	<p>To support browser access using Windows Internet Explorer, you must configure the following settings:</p> <ul style="list-style-type: none">• The latest Microsoft hotfixes installed• Language preferences that display encoded web pages• To support Microsoft ActiveX, the following settings are enabled:<ul style="list-style-type: none">• Automatic prompting for Microsoft ActiveX controls• Download signed Microsoft ActiveX controls• Run Microsoft ActiveX controls and plug-ins• Script Microsoft ActiveX controls marked safe for scripting• The console websites are assigned to the trusted websites security zone• If you configure single sign-on authentication for the consoles, Enable Integrated Windows Authentication is selected <p>Note: If Windows Internet Explorer Enhanced Security Configuration is turned on, some areas of the Universal Device Service console might not function correctly.</p>

Installation considerations

Supported features and environments

Item	Description
Virtual environment	Current in-market releases of VMware and Microsoft Hyper-V are supported with the latest BlackBerry Enterprise Service 10 version. For more information, visit www.blackberry.com/go/kbhelp to read article KB29661.
IP	The BlackBerry Enterprise Service 10 components support only IPv4 for TCP/IP connections.
Installation on a computer that hosts BlackBerry Enterprise Server 5.0	<p>BlackBerry Enterprise Service 10 can be installed on a computer that already hosts BlackBerry Enterprise Server 5.0 SP4 or BlackBerry Enterprise Server Express 5.0 SP4.</p> <p>You cannot connect BlackBerry Enterprise Service 10 and the BlackBerry Enterprise Server or BlackBerry Enterprise Server Express to the same databases. To run BlackBerry Enterprise Service 10 and the BlackBerry Enterprise Server or BlackBerry Enterprise Server Express in the same organization, you must configure the BlackBerry Enterprise Service 10 databases for the BlackBerry Enterprise Service 10 instances, and a BlackBerry Configuration Database for the BlackBerry Enterprise Server instances or BlackBerry Enterprise Server Express instances.</p>
Remote access	Administrators who use Remote Desktop Connection can access BlackBerry Enterprise Service 10 components remotely.
Certificate keystores	<p>The setup application generates and stores an SSL certificate in two password-protected keystore files: <code>as.web.keystore</code> and <code>ncc.web.keystore</code>. These keystores replace the <code>web.keystore</code> that was used in previous releases. The following components use the SSL certificate to authenticate with browsers:</p> <ul style="list-style-type: none"> • BlackBerry Administration Service • BlackBerry Management Studio • BES10 Self-Service • Enterprise Management Web Service

Item	Description
	<ul style="list-style-type: none"><li data-bbox="515 222 805 251">• BlackBerry Web Services <p data-bbox="515 279 1300 531">You can use the BES10 Configuration Tool to change the password for the web keystores or to import a new SSL certificate. When you use the tool to import certificates into the keystores, the certificates are written to the BlackBerry Enterprise Service 10 databases and then to the keystores (this also occurs when you restart the BlackBerry Administration Service). This process overwrites any certificates that you imported into the keystores manually. BlackBerry Enterprise Service 10 does not support importing certificates into the keystores manually.</p>

Unsupported environments

Item	Description
DMZ	The BlackBerry Enterprise Service 10 components, with the exception of the BlackBerry Router, do not support installation in a DMZ.

Preupgrade tasks

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You must perform some tasks to prepare your organization's environment before you upgrade to the latest version of BlackBerry Enterprise Service 10.

Back up the shared network folder

The shared network folder contains the application files and certificates that the BlackBerry Administration Service uses.

1. In the BlackBerry Administration Service, on the **Servers and components** menu, expand **BlackBerry Solution topology > BlackBerry Domain > Component view**.
2. Click **BlackBerry Administration Service**.
3. In the **Network drive** section, verify the shared network folder that the BlackBerry Administration Service uses.
4. On the computer that hosts the BlackBerry Administration Service, navigate to the location of the shared network folder.
5. Copy the shared network folder and save it to a different location (for example, another computer on your organization's network).

Backing up the BlackBerry Enterprise Service 10 databases

Back up the BlackBerry Enterprise Service 10 databases so that you can restore them if the BlackBerry Enterprise Service 10 upgrade process does not complete. If a database upgrade is required, the setup application automatically backs up the databases as part of the upgrade process.

You can also use the backup and restore tools that are a part of Microsoft SQL Server to back up and, if necessary, restore the BlackBerry Enterprise Service 10 databases. For more information, see the Microsoft documentation for Microsoft SQL Server.

DBMgmt.cfg properties

The following properties apply to the DBMgmt.cfg file, which you use when you run the CreateDB executable.

When you run the CreateDB executable to perform a test upgrade of the database, you are accessing the DBMgmt.cfg file.

The DBMgmt.cfg file contains the following properties:

Property	Description
DATABASE_NAME_BDS	This property specifies the name of the BlackBerry Configuration Database.
DATABASE_NAME_UDS	This property specifies the name of the Management Database. If the Management Database does not exist, the name must follow the format <i><BlackBerry Configuration Database name>_UDS</i> .
SERVER	This property specifies the name of the database server that hosts the database to create or upgrade. If a database instance hosts the database, follow the format <i><database_server_name>\<database_instance_name></i> . If you configure database mirroring, do not use named instances.
MSSQL_PORT	This property specifies the port number that Microsoft SQL Server uses. If you do not specify a port number, the CreateDB executable uses port number 1433 as the default.
FAILOVER_SERVER	This property specifies the name of the database server that hosts the mirror database to upgrade.
USERID	If you use database authentication, this property specifies the username for the database account that has database creator permissions.
PASSWORD	If you use database authentication, this property specifies the password for the database account.
BACKUP	This property specifies whether or not to back up the existing database. The default value is FALSE.
BACKUP_DIR	This property specifies an existing folder that you can save the database backup in. By default, this folder is the same folder that the Microsoft SQL Server database files are located in.

Performing a test upgrade of the BlackBerry Enterprise Service 10 databases

You can perform a test upgrade of the BlackBerry Enterprise Service 10 databases to help you identify and address issues that might occur during the database upgrade without affecting your production environment. You can also find out how long it takes to upgrade the BlackBerry Enterprise Service 10 databases.

When you perform a test upgrade of the BlackBerry Enterprise Service 10 databases, you back up the BlackBerry Enterprise Service 10 databases, restore the backup version of the BlackBerry Enterprise Service 10 databases to a database server that does not host the BlackBerry Enterprise Service 10 databases, and then run the CreateDB executable.

Perform a test upgrade of the BlackBerry Enterprise Service 10 databases

This task should be performed by a database administrator with the appropriate permissions to back up, restore, and upgrade the BlackBerry Enterprise Service 10 databases.

Note: If you do not want to run the CreateDB executable on the database server, you must run it on a computer that Microsoft SQL Server 2008 Native Client is installed on and the computer must be able to connect to the computer that hosts the database server that you want to perform a test upgrade of the BlackBerry Enterprise Service 10 databases on.

Before you begin: Verify that you configured the correct permissions on the database server that you want to perform a test upgrade of the BlackBerry Enterprise Service 10 databases on.

1. Log in to the computer that hosts the database server for the BlackBerry Enterprise Service 10 databases.
2. Back up the BlackBerry Enterprise Service 10 databases.
3. Log in to a computer that hosts a database server that you want to perform a test upgrade of the BlackBerry Enterprise Service 10 databases on.
4. Restore the backup version of the BlackBerry Enterprise Service 10 databases.
5. Copy the BlackBerry Enterprise Service 10 installation files to the computer.
6. Extract the contents to a folder on the computer.
7. Navigate to `<extracted_folder>\Database`.
8. Open the **DBMgmt.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 the **DBMgmt_BDS.cfg** file in a text editor.
12. Change CMD=Install to CMD=Upgrade.
13. Save and close the file.
14. Open the **DBMgmt_UDS.cfg** file in a text editor.
15. Change CMD=Install to CMD=Upgrade.
16. Save and close the file.
17. Open a command prompt window.
18. Change the directory to *<extracted_folder>\Database*.
19. Type **CreateDB.exe DBMgmt.cfg**. Press ENTER.

Verifying database permissions to upgrade the BlackBerry Enterprise Service 10 databases

BlackBerry Enterprise Service 10 connects to the BlackBerry Enterprise Service 10 databases on the database server using the login information that you specified during the installation process (Windows authentication or Microsoft SQL Server authentication). If you want to use the setup application to upgrade the BlackBerry Enterprise Service 10 databases, the service account or Microsoft SQL Server account must have permissions on the database server to upgrade the BlackBerry Enterprise Service 10 databases.

You can configure database permissions using Microsoft SQL Server roles. You must verify that the service account or Microsoft SQL Server account is a member of the dbcreator server role.

Upgrade the BlackBerry Enterprise Service 10 databases

If your organization's security policies do not allow applications to have permissions to create or upgrade databases, you can run the CreateDB executable on the database server to upgrade the BlackBerry Enterprise Service 10 databases instead of using the setup application. After you upgrade the BlackBerry Enterprise Service 10 databases using the CreateDB executable, you can run the setup application using a service account that has minimum permissions on the database server.

Note: If you do not want to run the CreateDB executable on the database server, you must run it on a computer that Microsoft SQL Server 2008 Native Client is installed on and the computer must be able to connect to the computer that hosts the database server.

Before you begin:

- Verify that you configured the correct permissions on the database server.
 - In the Windows Services, stop the BlackBerry Administration Service services. You can restart the services after the setup application upgrades the BlackBerry Administration Service.
1. Log in to the computer that hosts the database server for the BlackBerry Enterprise Service 10 databases. If you use a Windows account to upgrade the BlackBerry Enterprise Service 10 databases, you must log in to the computer using a Windows account that has database creator permissions.
 2. Copy the BlackBerry Enterprise Service 10 installation files to the computer.
 3. Extract the contents to a folder on the computer.
 4. Navigate to `<extracted_folder>\Database`.
 5. Open the **DBMgmt.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 the **DBMgmt_BDS.cfg** file in a text editor.
 9. Change `CMD=Install` to `CMD=Upgrade`.
 10. Save and close the file.
 11. Open the **DBMgmt_UDS.cfg** file in a text editor.
 12. Change `CMD=Install` to `CMD=Upgrade`.
 13. Save and close the file.
 14. Open a command prompt window.
 15. Change the directory to `<extracted_folder>\Database`.
 16. Type **CreateDB.exe DBMgmt.cfg**. Press ENTER.

Upgrading BlackBerry Enterprise Service 10

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You upgrade BlackBerry Enterprise Service 10 by replacing a supported version with the latest version and upgrading the BlackBerry Enterprise Service 10 databases.

You must upgrade the core components and the databases first. Afterwards, you can upgrade any distributed or remote components (for example, the consoles). If you try to upgrade a distributed or remote component first, the upgrade does not complete successfully for that component. You must upgrade all components before you can install additional BlackBerry Enterprise Service 10 instances.

Upgrading a high availability pair

To upgrade a high availability pair, you can perform one of the following actions:

- Turn off automatic failover for a high availability pair, then upgrade the primary instance and the standby instance (in any order).
- Upgrade the standby instance first, then upgrade the BlackBerry Administration Service. Log in to the upgraded BlackBerry Administration Service and manually fail over device service to the standby instance. Upgrade the primary instance and any remote components.

For more information about configuring BlackBerry Enterprise Service 10 for high availability, see the *BlackBerry Enterprise Service 10 Configuration Guide*.

Prerequisites: Upgrading BlackBerry Enterprise Service 10

- Verify that you opened the necessary ports on your organization's firewall.
- Verify that you installed all required third-party applications.
- Delete inactive user accounts from BlackBerry Enterprise Service 10.

- Back up the shared network folder.
- Back up the BlackBerry Enterprise Service 10 databases.
- If you configured database replication for the BlackBerry Enterprise Service 10 databases, turn off database replication during the upgrade process to avoid possible errors.
- If you perform the upgrade process on a computer that has more than one NIC, verify that the production NIC is first in the bind order in the Windows network settings.
- If you have modified the proxy server settings on the computer, reset the settings to the default. For more information, visit www.blackberry.com/go/kbhelp to read article KB35748.
- Verify that the service account that you use to upgrade BlackBerry Enterprise Service 10 is the same account that you used to install BlackBerry Enterprise Service 10.
- When you run the setup application, use only standard characters to specify values. Unicode characters are not supported.

On the computer that hosts BlackBerry Enterprise Service 10, verify that the following permissions are configured for the service account (the permissions are part of the Local Security Policy):

- Allow log on locally (if not assigned by default)
- Log on as a service
- Log on as a batch job

Upgrade BlackBerry Enterprise Service 10

If components are installed on separate computers, perform this task on the computer that hosts the core components first, and then upgrade the components on other computers (for example, standby instances of the core components or remote consoles). If you try to upgrade a distributed or remote component first, the upgrade does not complete successfully for that component.

Before you begin:

- The upgrade process deletes the "Work Data Uses Only Work Network" IT policy rule. In the BlackBerry Device Service console, verify that this rule is set to "No".
 - Verify that the BlackBerry Enterprise Service 10 service account has local administrator permissions on each computer.
1. Log in to the computer using the service account that runs the BlackBerry Enterprise Service 10 services.
 2. In the BlackBerry Enterprise Service 10 installation files, double-click **setup.exe**.
If a Windows message appears and requests permission for setup.exe to make changes to the computer, click **Yes**.
 3. Click **Next** to start the upgrade process.

4. When the upgrade process completes, click **Finish**.

After you finish:

- Repeat the steps on each computer that hosts additional instances of the core components or remote consoles.
- The active instance of the Universal Device Service is started by default. To make a different instance active, see "Change the active Administration Console instance" in the *BlackBerry Enterprise Service 10 Configuration Guide*.
- The active instance of the BlackBerry Licensing Service is started by default. To make a different instance active, see the *BlackBerry Enterprise Service 10 Licensing Guide*.

Postupgrade tasks

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After you upgrade to the latest version of BlackBerry Enterprise Service 10, you may need to perform some tasks to complete the upgrade.

Import the internally signed Microsoft Exchange certificate to the BlackBerry Work Connect Notification Service keystore

To make sure that iOS devices continue to receive notifications after you upgrade to the latest version of BlackBerry Enterprise Service 10, you must import the internally signed Microsoft Exchange certificate to the BlackBerry Work Connect Notification Service keystore.

Note: By default, the BlackBerry Work Connect Notification Service keystore is located here: C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Service 10\RIM.BUDS.BWCN\ssl\cacerts.

1. Log in to the computer that hosts BlackBerry Enterprise Service 10.
2. Open a command prompt window.
3. To change the directory, type **cd "C:\Program Files\Java\jre1.7.0_51\bin"** and press **ENTER**.
4. Type **keytool -import -alias <alias> -keystore "C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Service 10\RIM.BUDS.BWCN\ssl\cacerts" -trustcacerts -file <certificate_filename> -noprompt**, where <alias> is a short name to identify the internally signed Microsoft Exchange certificate and <certificate_filename> is the filename of the certificate. For example, at the command line, type **keytool -import -alias ExchangeCACert -keystore "C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Service 10\RIM.BUDS.BWCN\ssl\cacerts" -trustcacerts -file ExchangeCACert.cer -noprompt**.
5. Press **ENTER**.
6. Type the keystore password.
The default keystore password is **changeit**.
7. Restart the BES10 - BlackBerry Work Connect Notification Service.
8. Restart the BES10 - Scheduler service.

Test the BlackBerry Enterprise Service 10 installation

1. In the Windows Services, verify that the services for BlackBerry Enterprise Service 10 are running.
2. In the Windows Event Viewer and log files that are located in *<drive>*:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Service 10\Logs, check for error messages.
3. In Microsoft IIS, check that the websites for the Core Module and Communication Module are started.
4. Add a test user account in the BlackBerry Device Service console and the Universal Device Service console. If you can add a test user account, the connection from BlackBerry Enterprise Service 10 to the BlackBerry Enterprise Service 10 databases is open.
5. For the BlackBerry MDS Connection Service, browse to http://<server_name>:9080, where *<server_name>* is the name of the computer that hosts the BlackBerry Enterprise Service 10 core components. If the status page appears, the BlackBerry MDS Connection Service is running.

After you finish: For troubleshooting information, visit www.blackberry.com/support.

Test the connection to the BlackBerry Infrastructure

To make sure that the BlackBerry Dispatcher or BlackBerry Router can connect to the BlackBerry Infrastructure, you can test the connection using the BBSRPTest tool that is included with the BlackBerry Enterprise Service 10 installation files. The BBSRPTest tool tries to connect to the BlackBerry Infrastructure using the SRP address and SRP port number that you specified for the BlackBerry Infrastructure during the installation process.

Before you begin: Verify that the BlackBerry Enterprise Service 10 installation files are on the computer that you want to test the connection from.

1. Log in to the computer that you want to test the connection from. If you installed a standalone BlackBerry Router, test the connection from the computer that hosts the BlackBerry Router. Otherwise, test the connection from the computer that hosts the BlackBerry Enterprise Service 10 core components.
2. Open a command prompt window.
3. Change the directory to *<installation_files>*\Tools.

4. Type **bbsrptest.exe -host <srp_address> -port <port>**, where <srp_address> is the SRP address that you specified during the installation process and <port> is the SRP port number. For example, at the command line, type `bbsrptest.exe -host server1.example.com -port 3101`.
5. Press ENTER.

After you finish: If the test does not complete, use the Windows Sockets (also known as WINSOCK) error code to diagnose the problem. For more information, visit msdn.microsoft.com to read about Windows Sockets error codes.

Best practice: Running BlackBerry Enterprise Service 10

Best practice	Description
Do not change the startup type for the BlackBerry Enterprise Service 10 services.	<p>When you install or upgrade BlackBerry Enterprise Service 10, the setup application configures the startup type for the BlackBerry Enterprise Service 10 services as either automatic or manual.</p> <p>To avoid errors in BlackBerry Enterprise Service 10, do not change the startup type for the BlackBerry Enterprise Service 10 services.</p>
Do not change the account information for the BlackBerry Enterprise Service 10 services.	<p>When you install or upgrade BlackBerry Enterprise Service 10, the setup application configures the account information for the BlackBerry Enterprise Service 10 services.</p> <p>Do not change the account information for BlackBerry Enterprise Service 10 unless the BlackBerry Enterprise Service 10 documentation specifies that you can.</p>

Configuring database permissions using Microsoft SQL Server roles

The setup application requires the service account or Microsoft SQL Server account that it uses during the installation or upgrade process to have permissions on the database server to create or upgrade the BlackBerry Enterprise Service 10 databases. After the installation or upgrade process completes, you can change the database permissions for the service account or Microsoft SQL Server account to the minimum permissions that BlackBerry Enterprise Service 10 requires to run.

When you change the database permissions, you can use Microsoft SQL Server security to minimize the operations that the service account or Microsoft SQL Server account can perform on the BlackBerry Enterprise Service 10 databases. The following table describes the Microsoft SQL Server roles that are required by the setup application and BlackBerry Enterprise Service 10.

Database role	Description
db_owner	<p>The setup application or the CreateDB executable automatically adds the account that you use to create the BlackBerry Enterprise Service 10 databases to this role.</p> <p>This role contains the minimum permissions that the setup application requires to upgrade the BlackBerry Configuration Database and the Management Database.</p>
rim_db_bes_server	<p>The setup application or the CreateDB executable automatically creates this role when it creates the BlackBerry Configuration Database.</p> <p>This role contains the minimum permissions that BlackBerry Enterprise Service 10 requires to perform necessary operations on the BlackBerry Configuration Database.</p>
rim_db_uds_server	<p>The setup application or the CreateDB executable automatically creates this role when it creates the Management Database.</p> <p>This role contains the minimum permissions that BlackBerry Enterprise Service 10 requires to perform necessary operations on the Management Database.</p>

Configure minimum database permissions for the service account or Microsoft SQL Server account

You can configure minimum database permissions for the service account or Microsoft SQL Server account that BlackBerry Enterprise Service 10 uses to connect to the BlackBerry Enterprise Service 10 databases.

Before you begin: Add a different Windows account or Microsoft SQL Server account to the db_owner database role for the BlackBerry Configuration Database and the Management Database.

1. Open the Microsoft SQL Server Management Studio.
2. Expand **Microsoft SQL Server > Security > Logins**.
3. Right-click the service account or Microsoft SQL Server account and click **Properties**.
4. Click **User Mapping** and select the BlackBerry Configuration Database.
5. In the **Database role membership** section, select **rim_db_bes_server**.
6. Remove all other database role memberships except public.
7. Select the Management Database.

8. In the **Database role membership** section, select **rim_db_uds_server**.
9. Remove all other database role memberships except public.
10. Click **OK**.

Product documentation

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To read the following guides or other related materials, visit docs.blackberry.com/BES10.

Category	Resource	Description
Overview	<i>Introduction to BlackBerry Enterprise Service 10</i>	<ul style="list-style-type: none"> Quick, visual introduction to BlackBerry Enterprise Service 10 at a high level
	<i>What's New in BlackBerry Enterprise Service 10 Quick Reference</i>	<ul style="list-style-type: none"> Summary of new features, enhancements, and updates in BlackBerry Enterprise Service 10
	<i>BlackBerry Enterprise Service 10 Product Overview</i>	<ul style="list-style-type: none"> Introduction to BlackBerry Enterprise Service 10 and its features Finding your way through the documentation Architecture
	<i>Enterprise Solution Comparison Chart</i>	<ul style="list-style-type: none"> Comparison of what features are available across different BlackBerry enterprise solutions
	<i>Supported Features by Device Type</i>	<ul style="list-style-type: none"> Comparison of what features are supported for each type of device in BlackBerry Enterprise Service 10
	<i>BlackBerry Enterprise Service 10 Architecture and Data Flow Quick Reference Guide</i>	<ul style="list-style-type: none"> Descriptions of BlackBerry Enterprise Service 10 components Descriptions of activation and email data flows for different types of devices
Release notes	<i>BlackBerry Enterprise Service 10 Release Notes</i>	<ul style="list-style-type: none"> Descriptions of known issues and potential workarounds
Installation and upgrade	<i>BlackBerry Enterprise Service 10 Compatibility Matrix</i>	<ul style="list-style-type: none"> Software that is compatible with BlackBerry Enterprise Service 10

Category	Resource	Description
	<i>BlackBerry Enterprise Service 10 Performance Calculator</i>	<ul style="list-style-type: none"> • Tool to estimate the hardware required to support a given workload for BlackBerry Enterprise Service 10
	<i>BlackBerry Enterprise Service 10 Installation Guide</i>	<ul style="list-style-type: none"> • System requirements • Installation instructions
	<i>BlackBerry Enterprise Service 10 Upgrade Guide</i>	<ul style="list-style-type: none"> • System requirements • Upgrade instructions
Configuration	<i>BlackBerry Enterprise Service 10 Licensing Guide</i>	<ul style="list-style-type: none"> • Descriptions of different types of licenses • Instructions for activating and managing licenses in BlackBerry Management Studio
	<i>BlackBerry Enterprise Service 10 Configuration Guide</i>	<ul style="list-style-type: none"> • Instructions for how to configure server components before you start administering users and their devices
Administration	<i>BlackBerry Management Studio Basic Administration Guide</i>	<ul style="list-style-type: none"> • Basic administration for all supported device types, including BlackBerry 10 devices, BlackBerry PlayBook tablets, iOS devices, Android devices, and BlackBerry 7.1 and earlier devices • Instructions for creating and managing user accounts in multiple Services • Instructions for managing multiple devices for each user account
	<i>BlackBerry Device Service Advanced Administration Guide</i>	<ul style="list-style-type: none"> • Advanced administration for BlackBerry 10 devices and BlackBerry PlayBook tablets • Instructions for creating user accounts, groups, roles, and administrator accounts • Instructions for activating devices • Instructions for creating and sending IT policies and profiles • Instructions for managing apps on devices
	<i>Universal Device Service Advanced Administration Guide</i>	<ul style="list-style-type: none"> • Advanced administration for iOS and Android devices

Category	Resource	Description
Security	<i>BlackBerry Device Service Policy Reference Spreadsheet</i>	<ul style="list-style-type: none"> • Instructions for creating user accounts, groups, and administrator accounts • Instructions for activating devices • Instructions for creating and sending IT policies and profiles • Instructions for managing apps on devices • Descriptions of IT policy rules for iOS and Android devices
	<i>BlackBerry Device Service Solution Security Technical Overview</i>	<ul style="list-style-type: none"> • Descriptions of IT policy rules for BlackBerry 10 devices and BlackBerry PlayBook tablets • Description of the security maintained by the BlackBerry Device Service, BlackBerry Infrastructure, and BlackBerry 10 devices and BlackBerry PlayBook tablets to protect data and connections • Description of the BlackBerry 10 OS • Description of the BlackBerry PlayBook OS • Description of how work data is protected on BlackBerry 10 devices and BlackBerry PlayBook tablets when you use the BlackBerry Device Service
	<i>Secure Work Space for iOS and Android Security Note</i>	<ul style="list-style-type: none"> • Description of the security maintained by the Universal Device Service, BlackBerry Infrastructure, and work space-enabled devices to protect work space data at rest and in transit • Description of how work space apps are protected on work space-enabled devices when you use the Universal Device Service

Provide feedback

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Glossary

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APNs	Apple Push Notification service
BlackBerry Enterprise Service 10 databases	The BlackBerry Enterprise Service 10 databases are the BlackBerry Configuration Database (associated with the BlackBerry Device Service) and the Management Database (associated with the Universal Device Service). By default, the databases are named BDSMgmt and BDSMgmt_UDS, respectively, when you install BlackBerry Enterprise Service 10.
BlackBerry MDS	BlackBerry Mobile Data System
CSR	certificate signing request
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
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol over Secure Sockets Layer
IIS	Internet Information Services
IKE	Internet Key Exchange
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.
IPsec	Internet Protocol Security
LAN	local area network
LDAP	Lightweight Directory Access Protocol
NIC	network interface card
RRAS	Routing and Remote Access service
SMTP	Simple Mail Transfer Protocol
SRP	Server Routing Protocol
SSL	Secure Sockets Layer

TCP	Transmission Control Protocol
TLS	Transport Layer Security
VPN	virtual private network
XML	Extensible Markup Language

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