BlackBerry Enterprise Server

Version: 5.0 | Service Pack: 3

Upgrade Planning Guide

::: BlackBerry®

Contents

Overview: BlackBerry Enterprise Server

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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 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 devices. You can select from more than 450 IT policy rules that you can configure to control the features of the 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 devices using the BlackBerry instant messaging client. You can use the BlackBerry Monitoring Service to monitor and troubleshoot issues with BlackBerry Enterprise Server instances and monitor the activity of device users. 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, devices, and user accounts using the BlackBerry Administration Service, a web application that is accessible from any computer that can access 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.

Upgrading a BlackBerry Enterprise Server environment

The latest BlackBerry® Enterprise Server version contains new features and components (for example, high availability and a new administrative client named the BlackBerry Administration Service) that impact how you can upgrade an existing BlackBerry Enterprise Server environment. To upgrade your organization's environment to the latest BlackBerry Enterprise Server verson, you must determine how you can implement the new components and features in the current BlackBerry Enterprise Server environment, what changes to the hardware and BlackBerry Enterprise Server architecture are required, and which upgrade process is most appropriate for your organization's environment.

You can consider the following information to help you determine which upgrade process you can use in your organization's environment:

- whether you want to upgrade the BlackBerry Enterprise Server environment without modifying the hardware or BlackBerry Enterprise Server architecture
- whether the current BlackBerry Enterprise Server environment supports the new BlackBerry Enterprise Server components and features
- which changes you might want to implement in the BlackBerry Enterprise Server environment during the upgrade process

For system requirements or supported upgrade versions, see the *BlackBerry Enterprise Server Upgrade Guide*.

Supported BlackBerry Enterprise Server versions that you can upgrade

You can upgrade the following BlackBerry® Enterprise Server versions to the latest version:
- BlackBerry Enterprise Server 5.0 or later
- BlackBerry Enterprise Server 4.1 SP7

If your organization has a BlackBerry Enterprise Server version that is not listed, you must first upgrade to one of the BlackBerry Enterprise Server versions in the list above before you can upgrade to the latest version.

Deployment implications of upgrading a BlackBerry Enterprise Server environment

How you deploy a BlackBerry® Enterprise Server environment determines how you can configure the functionality that is available for each BlackBerry Enterprise Server instance and BlackBerry device user. The BlackBerry Enterprise Server architecture must include at least one BlackBerry Enterprise Server instance and one BlackBerry Configuration Database. If you install additional BlackBerry Enterprise Server instances that use the same BlackBerry Configuration Database, you deploy a BlackBerry Domain.

If you deploy more than one BlackBerry Domain in your organization's environment, the BlackBerry Enterprise Server instances in one BlackBerry Domain cannot communicate with BlackBerry Enterprise Server instances in another BlackBerry Domain. Each BlackBerry Domain must use its own administrative client.

The following table explains the upgrade implications of each deployment type.

Deployment type	Description
standalone BlackBerry Enterprise Server	If you deploy a standalone BlackBerry Enterprise Server, only one BlackBerry Enterprise Server connects to the BlackBerry Configuration Database. If you plan to upgrade a standalone BlackBerry Enterprise Server, you must consider future growth of your organization or consolidations with other organizations.
	If you expect future growth of your organization, you should plan whether you want to locate the BlackBerry Configuration Database on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server.
	If you expect disaster recovery or high availability of the BlackBerry Enterprise Server to become more important, you should consider whether to install the BlackBerry Configuration Database on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server and whether to acquire additional hardware or virtual machine resources to host a standby BlackBerry Enterprise Server instance.
BlackBerry Domain	If you deploy a BlackBerry Domain, two or more BlackBerry Enterprise Server instances connect to a shared BlackBerry Configuration Database.
	Before you upgrade the BlackBerry Domain, consider the following information:
	• upgrade options for the BlackBerry Configuration Database and whether you require new software or hardware
	• performance of the BlackBerry Enterprise Server instances and BlackBerry Administration Service in relation to their network proximity to the BlackBerry Configuration Database
	• in an environment with more than one BlackBerry Domain, limits for sharing BlackBerry Enterprise Server services and administrative flexibility
	• scope and size of the BlackBerry Domain
	• upgrade process that you want to use (for example, a phased approach, or a one-time, in-place upgrade)

Upgrading a BlackBerry Enterprise Server and a BlackBerry Configuration Database that are configured for replication

If you configured previous BlackBerry® Enterprise Server versions for disaster recovery as documented in *BlackBerry Enterprise Server Disaster Recovery Guide*, you installed a BlackBerry Enterprise Server and a replicated BlackBerry Enterprise Server. When you upgrade the BlackBerry Enterprise Server instances that are configured for disaster

recovery, you can upgrade the BlackBerry Enterprise Server instances and configure high availability instead. When you configure high availability, you can also configure automatic failover, which permits a standby BlackBerry Enterprise Server to take over from a primary BlackBerry Enterprise Server without intervention from an administrator.

If you configured database replication for the BlackBerry Configuration Database, you can continue to use database replication after the upgrade process completes. However, during the upgrade process, you must turn off database replication. After the upgrade process completes, you must reconfigure the replicated BlackBerry Configuration Database manually.

As an alternative to database replication, you can configure database mirroring after the upgrade process completes. If you configure database mirroring and if you configure the BlackBerry Enterprise Server instances to support database mirroring, when the principal BlackBerry Configuration Database stops responding, the BlackBerry Enterprise Server can automatically switch to the mirror BlackBerry Configuration Database without intervention from an administrator.

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

Upgrading a BlackBerry Enterprise Server in a segmented network

If you distributed the BlackBerry® Enterprise Server components on multiple computers and configured a segmented network using firewalls as documented in *Placing the BlackBerry Enterprise Solution in a segmented network*, you must verify that the components can communicate with each other. You must open the new ports on the firewalls that the components in the latest BlackBerry Enterprise Server version require. For example, when you upgrade to BlackBerry Enterprise Server version 5.0, you must open the database port for the BlackBerry Attachment Service so that it can communicate with the BlackBerry Configuration Database.

In the latest BlackBerry Enterprise Server version, you must expand the segmented network architecture to include the BlackBerry Administration Service and BlackBerry Monitoring Service. To improve performance of the BlackBerry Administration Service, you can consider placing the BlackBerry Administration Service in close network proximity to the BlackBerry Configuration Database.

Upgrading the BlackBerry Enterprise Server in a Wi-Fi environment

If you upgrade the BlackBerry® Enterprise Server in a Wi-Fi® environment, the upgrade process maintains the WLAN SRP information and WLAN activation settings that you previously configured. The setup application for the latest BlackBerry Enterprise Server version does not display the same Wi-Fi dialog boxes as previous setup applications did. Instead, you can view and change the Wi-Fi settings for the BlackBerry Enterprise Server using the BlackBerry Configuration Panel.

Managing a mixed-version environment

If your organization installed multiple BlackBerry® Enterprise Server instances in a BlackBerry Domain, you can choose to upgrade each BlackBerry Enterprise Server instance over time. If you installed the BlackBerry MDS Integration Service on any BlackBerry Enterprise Server instances in a BlackBerry Domain, you must remove the BlackBerry MDS Integration Service component from all BlackBerry Enterprise Server instances before you upgrade to the latest BlackBerry Enterprise Server version.

After you upgrade the BlackBerry Configuration Database, you must manage all BlackBerry Enterprise Server instances using the BlackBerry Administration Service version that is the same as the BlackBerry Configuration Database version. When you manage BlackBerry Enterprise Server 4.1 SP7 or later using the BlackBerry Administration Service, consider the following information:

- You cannot install previous versions of the BlackBerry Enterprise Server.
- You can create user accounts only after you install the latest BlackBerry Enterprise Server version and a BlackBerry Administration Service. To create user accounts, the BlackBerry Administration Service requires the BlackBerry Mail Store Service. The setup application installs the BlackBerry Mail Store Service automatically with the latest BlackBerry Enterprise Server version.

Best practice: Preparing to upgrade the BlackBerry Enterprise Server

Best practice	Description
Document the BlackBerry® Enterprise Server environment.	Consider documenting the following items: • topology • user accounts, administrator accounts, groups, and roles • IT policies and application control policies • software configurations and applications • addresses for proxy servers, content servers, and application servers • email message filters • email message classifications, signatures, and disclaimers • settings for organizer data synchronization • attachment file formats specific to your organization • settings for instant messaging • access restrictions to your organization's applications and web servers
Configure a test environment.	Consider building a test environment to test the latest BlackBerry Enterprise Server version and upgrade process that applies to your organization's environment.
Analyze your organization's environment to determine an upgrade strategy. Each	Consider the following questions:

Best practice	Description
organization's upgrade process might differ depending on expected future growth, existing resources, and features that an organization might want to implement.	- What was the growth of the BlackBerry Enterprise Server environment in your organization's environment over the past year, including the number of users and the types of actions that users perform on their BlackBerry devices? - Does your organization plan to upgrade the messaging servers, database servers, or operating systems within the next 6 months or year? - What features of the BlackBerry Enterprise Server does your organization use (for example, messaging, calendar, browsing, applications)? - If your organization is experiencing BlackBerry Enterprise Server issues, are the issues resolved in the latest BlackBerry Enterprise Server version? - If your organization uses role-based administration, do the existing BlackBerry Enterprise Server roles meet the needs of your organization? - How much volume for calls can your organization's help desk handle? - What is your organization's support strategy during the upgrade process? - Are user accounts distributed across the BlackBerry Enterprise Server instances by user name or role? - What is an acceptable amount of downtime for the users in your organization? - If you have any BlackBerry applications, what is your organization's plan for upgrading them? - Which new features is your organization interested in applying to your organization's environment? How do the new features fit with other IT initiatives (for example, security, high availability, and central management)? - Can you run user acceptance testing programs throughout your organization's environment, including different geographical regions, messaging servers, and BlackBerry device models? - Do you plan on replacing older BlackBerry device models? - What is your organization's schedule for upgrading the BlackBerry Enterprise Server instances? - Do you have any BlackBerry Enterprise Server components that are installed on separate computers from the BlackBerry Enterprise Server (for example, the BlackBerry Router or BlackBerry MDS Connection Service)? - How do you plan to test applications on BlackBerry devices?

Best practice	Description
	• How do you plan to test how to add new user accounts to the BlackBerry Enterprise Server? • How do you plan to train the help desk employees in your organization? • How do you plan to communicate the upgrade impact to your organization's BlackBerry device users? • How much time do you have to complete the upgrade process? • Do you require BlackBerry Technical Support services to help you complete the upgrade process? • How do you plan to measure the performance impact of the BlackBerry Enterprise Server on the messaging servers, database servers, and instant messaging servers in your organization's environment? • Who completes the upgrade process in your organization? Which groups do you need to involve? • What resources do you need to complete the upgrade process (for example, people or budget)? • What amount of savings does your organization expect to experience after the upgrade process is complete?

Upgrading BlackBerry Enterprise Server components

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.

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. You can use the setup application to install or upgrade BlackBerry Enterprise Server components such as the BlackBerry Configuration Database. 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.

You must 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 must 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.

Upgrade implications for the BlackBerry Attachment Service

You can run BlackBerry® Attachment Service 4.1 SP7 or later with the latest BlackBerry® Enterprise Server version. Consider the following information:

- You can use the BlackBerry Administration Service to view BlackBerry Attachment Service version 4.1 settings for the BlackBerry Messaging Agent, BlackBerry MDS Connection Service, and BlackBerry Collaboration Service, but you cannot change the settings.
- You can continue to configure BlackBerry Attachment Service version 4.1 using the BlackBerry Configuration Panel.

During the BlackBerry Attachment Service upgrade process, the BlackBerry Attachment Service settings that are stored in the Windows® registry move to the BlackBerry Configuration Database.

Before you can upgrade the BlackBerry Attachment Service, you must upgrade the BlackBerry Configuration Database and a BlackBerry Enterprise Server instance. You must also install the BlackBerry Administration Service.

Upgrade implications for the BlackBerry Collaboration Service

Before you upgrade to the latest version of the BlackBerry® Collaboration Service or BlackBerry® Enterprise Server, consider the following information:

- You can run the latest BlackBerry Collaboration Service version with BlackBerry Enterprise Server 5.0 or later.
- You can run BlackBerry Collaboration Service 4.1 SP7 or later with the latest BlackBerry Enterprise Server version.

If you installed the BlackBerry Collaboration Service for use with Windows® Messenger, you must upgrade Windows Messenger to Microsoft® Office Live Communications Server 2005 or later. The latest BlackBerry Collaboration Service version does not support Windows Messenger.

Before you can upgrade the BlackBerry Collaboration Service, you must upgrade the BlackBerry Configuration Database and a BlackBerry Enterprise Server instance. You must also install the BlackBerry Administration Service.

Upgrade implications for the BlackBerry MDS Connection Service

You can run BlackBerry® MDS Connection Service 4.1 SP7 or later with the latest BlackBerry® Enterprise Server version. Consider the following information:

- The latest BlackBerry Enterprise Server version does not support versions of the BlackBerry MDS Connection Service central push servers that are earlier than version 5.0. You must upgrade all BlackBerry MDS Connection Service central push servers that the latest BlackBerry Enterprise Server version uses to version 5.0 or later.
- If you assigned the software configuration for a push application to a group, when you upgrade the BlackBerry Configuration Database to the latest version, the upgrade process does not migrate the group information. If a BlackBerry MDS Connection Service version 4.1 instance requests a push to a group that no longer exists, the push fails and an error message is written to the log file, indicating that the group does not exist.
- The BlackBerry Administration Service permits you to view the BlackBerry MDS Connection Service version 4.1 settings, but it does not permit you to change the settings.

- The latest BlackBerry MDS Connection Service version might require more memory than previous versions because you can configure it to connect to multiple BlackBerry Enterprise Server instances. The latest version of the BlackBerry MDS Connection Service central push server caches all user data from all BlackBerry Enterprise Server instances.

Before you can upgrade the BlackBerry MDS Connection Service, you must upgrade a BlackBerry Configuration Database and a BlackBerry Enterprise Server instance. You must also install a BlackBerry Administration Service.

The upgrade process removes the SNMP monitoring of the server-level events associated with the BlackBerry MDS Connection Service. To monitor the server-level events after the upgrade process completes, you can use the BlackBerry® Monitoring Service.

After you upgrade the BlackBerry MDS Connection Service, you must update your organization's push applications to use the new x-rim-push-gateways header. In earlier versions, when the BlackBerry MDS Connection Service received the UserAgent:MDSRuntime header from a push application, the BlackBerry MDS Connection Service sent the host:port of the central push server in the http_via header. The latest BlackBerry MDS Connection Service version does not send the http_via header.

Upgrade implications for a BlackBerry Enterprise Server connection to a remote BlackBerry MDS Connection Service or BlackBerry Collaboration Service

When you upgrade a BlackBerry® Enterprise Server, the upgrade process maintains the existing connections to the BlackBerry MDS Connection Service instances or BlackBerry Collaboration Service instances. If the BlackBerry Enterprise Server connects to BlackBerry MDS Connection Service instances or BlackBerry Collaboration Service instances that you installed on remote computers, and during the upgrade process you install a BlackBerry MDS Connection Service instance or BlackBerry Collaboration Service instance with the BlackBerry Enterprise Server, the setup application does not connect the BlackBerry Enterprise Server to the BlackBerry MDS Connection Service instance or BlackBerry Collaboration Service instance that you install on the same computer.

You can use the BlackBerry Administration Service to configure the BlackBerry Enterprise Server to connect to the local BlackBerry MDS Connection Service or BlackBerry Collaboration Service instance after the upgrade process completes.

Upgrade implications for the BlackBerry Monitoring Service

To monitor the latest BlackBerry® Enterprise Server version, you must install the latest BlackBerry® Monitoring Service version.

BlackBerry Monitoring Service 5.0 and later does not support monitoring BlackBerry Enterprise Server 4.1 instances. If your organization's environment includes instances of BlackBerry Enterprise Server 4.1 SP7, you can use BlackBerry Monitoring Service 4.1 SP7 to monitor BlackBerry Enterprise Server 4.1 instances. You must install the latest BlackBerry Monitoring Service version on a computer that does not host BlackBerry Monitoring Service 4.1 SP7 and create a new BlackBerry Monitoring Service database to monitor the latest BlackBerry Enterprise Server version.

Upgrade implications for the BlackBerry Router

You can run a BlackBerry® Router that is version 4.1 SP7 or later with the latest BlackBerry® Enterprise Server version.

You cannot use the BlackBerry Administration Service to manage the BlackBerry Router instances because the BlackBerry Router instances do not connect to the BlackBerry Configuration Database. You can continue to configure the BlackBerry Router instances using the BlackBerry Configuration Panel.

Upgrade implications for the BlackBerry Web Desktop Manager

If BlackBerry® Web Desktop Manager version 1.0 or later is installed, you must upgrade the BlackBerry Web Desktop Manager to the latest version. You cannot use earlier versions of the BlackBerry Web Desktop Manager with BlackBerry® Enterprise Server version 5.0 or later.

To upgrade the BlackBerry Web Desktop Manager, you must install the BlackBerry Administration Service. The BlackBerry Administration Service installation process also installs the BlackBerry Web Desktop Manager.

When you upgrade the BlackBerry Web Desktop Manager, the upgrade process does not maintain the BlackBerry Web Desktop Manager settings that you configured in the bas-config.properties file or using the basConfig.bat tool. The upgrade process creates a new SSL certificate for the BlackBerry Web Desktop Manager. After the upgrade process completes, you can reconfigure the BlackBerry Web Desktop Manager using the BlackBerry Administration Service.

Upgrading a standalone BlackBerry Enterprise Server 4

If your organization includes fewer than 500 BlackBerry® device users and you manage the BlackBerry® Enterprise Server from a central location, it is possible that you installed a standalone BlackBerry Enterprise Server with its own BlackBerry Configuration Database.

Before you upgrade a standalone BlackBerry Enterprise Server, consider the following questions:
- Do you expect the number of BlackBerry device users to increase beyond 500?
- Do you plan to add BlackBerry Enterprise Server instances to the BlackBerry Enterprise Server environment?
- Do you plan to consolidate the standalone BlackBerry Enterprise Server with another BlackBerry Domain in your organization's environment?

To consolidate multiple BlackBerry Domain instances in your organization's environment (for example, to make management of the BlackBerry Enterprise Server easier or permit multiple BlackBerry Enterprise Server instances to use distributed BlackBerry Enterprise Server components), you can use the BlackBerry Enterprise Transporter to move user accounts from one BlackBerry Configuration Database to another.

You can consider the following infrastructure variations as you plan the upgrade process for your organization's environment.

Variation	Description
MSDE or Microsoft® SQL Server® used to host the BlackBerry Configuration Database	If your organization's environment includes MSDE, you must upgrade to a later version of Microsoft SQL Server.
	You can upgrade to Microsoft SQL Server Express if your organization's environment does not include many BlackBerry device users and you do not plan to add any more.
	You can upgrade to Microsoft SQL Server if you expect the number of BlackBerry device users to increase to more than 500.
	You can upgrade the database server that hosts the BlackBerry Configuration Database before you upgrade the BlackBerry Enterprise Server.
BlackBerry Configuration Database installed locally or on a separate computer	If you expect the number of BlackBerry device users to increase, you might want to install the BlackBerry Configuration Database on its own computer. When you install the BlackBerry Configuration Database on its own computer, you increase the system resources that are available to the BlackBerry Configuration Database and BlackBerry Enterprise Server, and make it easier to configure features such as high availability.

For information about maintaining the existing infrastructure and upgrading a standalone BlackBerry Enterprise Server, see the *BlackBerry Enterprise Server Upgrade Guide*.

Upgrading a BlackBerry Domain

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If you upgrade a BlackBerry® Enterprise Server environment that includes more than one BlackBerry Enterprise Server instance, you can choose from a variety of upgrade processes, depending on the existing architecture of the BlackBerry Domain and how you expect the architecture to change as you add BlackBerry device users, install additional BlackBerry Enterprise Server components and instances, and configure new features.

You can consider the following infrastructure variations as you plan the upgrade process for your organization's environment.

Variation	Description
MSDE or Microsoft® SQL Server® used to host the BlackBerry Configuration Database	If your organization's environment includes MSDE, you must upgrade to a later version of Microsoft SQL Server.
	You can upgrade to Microsoft SQL Server Express if your organization's environment does not include many BlackBerry device users and you do not plan to add any more.
	You can upgrade to Microsoft SQL Server if you expect the number of BlackBerry device users to increase to more than 500.
	You can upgrade the database server that hosts the BlackBerry Configuration Database before you upgrade the BlackBerry Enterprise Server.
BlackBerry Configuration Database installed locally or on a separate computer	If you expect the number of BlackBerry device users to increase, you might want to install the BlackBerry Configuration Database on its own computer. When you install the BlackBerry Configuration Database on its own computer, you increase the system resources that are available to the BlackBerry Configuration Database and BlackBerry Enterprise Server, and make it easier to configure features such as high availability.
network proximity of the BlackBerry Enterprise Server, BlackBerry Configuration Database, messaging servers, and other third-party systems	If you configure the BlackBerry Enterprise Server, BlackBerry Configuration Database, messaging servers, and other third-party systems on separate LANs connected by a WAN, the upgrade process takes longer to complete.

Planning to upgrade the BlackBerry Domain when your organization's infrastructure is in one location

If you previously installed the BlackBerry® Enterprise Server instances, BlackBerry Configuration Database, and messaging servers on a single LAN and want to limit the infrastructure changes during the upgrade process, you can use an in-place upgrade process.

During the in-place upgrade process, you upgrade one of the BlackBerry Enterprise Server instances, install a BlackBerry Administration Service, and upgrade the BlackBerry Configuration Database. After you upgrade the BlackBerry Enterprise Server instance and the BlackBerry Configuration Database, you can upgrade the remaining BlackBerry Enterprise Server instances one at a time.

For example, ABC Company, a consulting firm, has a head office in Toronto, Canada. The company has 500 consultants that work from home and access their email messages and other resources over a VPN connection, and approximately 300 employees that work from the head office. The organization's IT systems, which include the BlackBerry Enterprise Server instances, Microsoft® SQL Server® that hosts the BlackBerry Configuration Database, and Microsoft® Exchange servers, are located in the data center at the head office. The organization's infrastructure includes the following configurations:

- The BlackBerry Configuration Database uses the BlackBerry Enterprise Server 4.1 SP7 schema.
- The Microsoft SQL Server that hosts the BlackBerry Configuration Database is on a computer that is separate from the computers that host the BlackBerry Enterprise Server instances.
- The help desk employees use BlackBerry Manager version 4.1 SP7 to manage the BlackBerry Enterprise Server.
- The BlackBerry Enterprise Server instances, Microsoft SQL Server, and Microsoft Exchange servers are located on the same high-speed LAN.

If your organization's environment is similar to ABC Company, you can consider using an in-place upgrade process to upgrade your organization's BlackBerry Enterprise Server environment.

Tasks for upgrading the BlackBerry Domain when your organization's infrastructure is in one location

Task	Resource
Verify that your organization's environment meets the system requirements for the latest BlackBerry® Enterprise Server version.	"System requirements" in the *BlackBerry Enterprise Server Upgrade Guide*
Prepare the BlackBerry Domain for the upgrade process.	"Preupgrade tasks" in the *BlackBerry Enterprise Server Upgrade Guide*
Stop all administration of the BlackBerry Domain.	—
Upgrade a BlackBerry Enterprise Server using an in-place upgrade process. During the upgrade process, select the existing BlackBerry Configuration Database and install the BlackBerry Administration Service.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*
Create administrative roles and administrator accounts.	"Creating administrator accounts" in the *BlackBerry Enterprise Server Administration Guide*
Resume administration of the BlackBerry Domain using the BlackBerry Administration Service.	—
Remove all BlackBerry Manager instances from the BlackBerry Domain.	"Removing BlackBerry Enterprise Server software" in the *BlackBerry Enterprise Server Installation Guide*

Task	Resource
Upgrade the remaining BlackBerry Enterprise Server instances using the in-place upgrade process.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*

Planning to upgrade the BlackBerry Domain in phases when your organization's infrastructure is in one location

If you previously installed the BlackBerry® Enterprise Server instances, BlackBerry Configuration Database, and messaging servers on a single LAN, and one or more of the following conditions applies to your organization environment, you can use the phased upgrade process:

- You want to upgrade the existing BlackBerry Configuration Database and BlackBerry Enterprise Server instances.
- You are not a database administrator and you do not have permissions to upgrade the BlackBerry Configuration Database using the BlackBerry Enterprise Server setup application.
- You installed the BlackBerry Enterprise Server components on separate computers.
- Your analysis indicates that you must install the BlackBerry Administration Service on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server.

Tasks for upgrading the BlackBerry Domain in phases when your organization's infrastructure is in one location

Task	Resource
Verify that your organization's environment meets the system requirements for the latest BlackBerry® Enterprise Server version.	"System requirements" in the *BlackBerry Enterprise Server Upgrade Guide*
Prepare the BlackBerry Domain for the upgrade process.	"Preupgrade tasks" in the *BlackBerry Enterprise Server Upgrade Guide*
Stop all administration of the BlackBerry Domain.	—
Upgrade the BlackBerry Configuration Database using the database upgrade scripts.	"Upgrade the BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*
On a computer that is separate from the computer that hosts the BlackBerry Enterprise Server, install the BlackBerry Administration Service and, if required, the BlackBerry® Web Desktop Manager.	"Installing the BlackBerry Enterprise Server Software" in the *BlackBerry Enterprise Server Installation Guide*
Create administratives roles and administrator accounts.	"Creating administrator accounts" in the *BlackBerry Enterprise Server Administration Guide*
Resume administration of the BlackBerry Domain using the BlackBerry Administration Service.	—

Task	Resource
Upgrade the BlackBerry Enterprise Server instances one at a time using the in-place upgrade process.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*
Upgrade distributed BlackBerry Enterprise Server components using the in-place upgrade process.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*

Planning to upgrade the BlackBerry Domain and test the latest version during the upgrade process

If your organization has a distributed BlackBerry® Enterprise Server environment, you can test the latest BlackBerry Enterprise Server version during the upgrade process before you upgrade the existing BlackBerry Enterprise Server instances that have user accounts assigned to them.

You can consider using the phased upgrade process to test the latest BlackBerry Enterprise Server version if one or more of the following conditions applies to your organization's environment:

- You want to upgrade the existing BlackBerry Enterprise Server instances and the BlackBerry Configuration Database.
- You want to test the latest BlackBerry Enterprise Server version before you upgrade the BlackBerry Enterprise Server instances that have user accounts assigned to them.
- You are not a database administrator and you do not have permissions to upgrade the BlackBerry Configuration Database using the BlackBerry Enterprise Server setup application.
- Your analysis indicates that you must install the BlackBerry Administration Service on a computer that is separate from the computers that host the BlackBerry Enterprise Server instances.
- Test user accounts and extra computers are available for testing the latest BlackBerry Enterprise Server version.

During the phased upgrade process that includes testing the latest BlackBerry Enterprise Server version, you install a temporary BlackBerry Enterprise Server instance with test user accounts. A database administrator backs up and upgrades the BlackBerry Configuration Database using the database upgrade scripts. You install the BlackBerry Administration Service, upgrade the temporary BlackBerry Enterprise Server, test the user accounts on the temporary BlackBerry Enterprise Server, and upgrade the BlackBerry Enterprise Server instances and BlackBerry Enterprise Server components one at a time.

Tasks for upgrading the BlackBerry Domain and testing the latest version

Task	Resource
Install a temporary instance of BlackBerry® Enterprise Server 4.1 SP7 or later.	"Installing the BlackBerry Enterprise Server software" in the *BlackBerry Enterprise Server 4.1 Installation Guide*
Move test user accounts to the temporary instance of the BlackBerry Enterprise Server.	"Move a user account from one BlackBerry Enterprise Server to another" in the *BlackBerry Enterprise Server 4.1 Administration Guide*

Task	Resource
Verify that your organization's environment meets the system requirements for the latest BlackBerry Enterprise Server version.	"System requirements" in the *BlackBerry Enterprise Server Upgrade Guide*
Prepare the BlackBerry Domain for the upgrade process.	"Preupgrade tasks" in the *BlackBerry Enterprise Server Upgrade Guide*
Stop all administration of the BlackBerry Domain.	—
Back up the BlackBerry Configuration Database.	"Backing up the BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*.
Upgrade the BlackBerry Configuration Database using the CreateDB script.	"Upgrade the BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*
On a computer that is separate from the computers that host the BlackBerry Enterprise Server instances, install the BlackBerry Administration Service and, if required, the BlackBerry® Web Desktop Manager.	"Installing the BlackBerry Enterprise Server Software" in the *BlackBerry Enterprise Server Installation Guide*
Create administrative roles and administrator accounts.	"Creating administrator accounts" in the *BlackBerry Enterprise Server Administration Guide*
Resume administration of the BlackBerry Domain using the BlackBerry Administration Service.	—
Upgrade the temporary BlackBerry Enterprise Server to the latest version.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*
Using the test user accounts, run the tests that your organization requires to verify the software and features.	—
Upgrade the BlackBerry Enterprise Server instances one at a time using the in-place upgrade process.	"Upgrading the BlackBerry Enterprise Server software by overwriting the existing version" in the *BlackBerry Enterprise Server Upgrade Guide*

Planning to upgrade the BlackBerry Domain when moving to new hardware

If your organization has a distributed BlackBerry® Enterprise Server environment, you can move to new hardware for the BlackBerry Enterprise Server instances during the upgrade process.

You can consider this upgrade option if one or more of the following conditions applies to your organization's environment:

- You want to upgrade the existing BlackBerry Configuration Database.
- You want to move the BlackBerry Enterprise Server instances to new hardware.
- You are not a database administrator and you do not have permissions to upgrade the BlackBerry Configuration Database using the BlackBerry Enterprise Server setup application.

- Your analysis indicates that you must install the BlackBerry Administration Service on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server.

Tasks for upgrading the BlackBerry Domain when moving to new hardware

Task	Resource
Verify that your organization's environment meets the system requirements for the latest BlackBerry® Enterprise Server version.	"System requirements" in the *BlackBerry Enterprise Server Upgrade Guide*
Prepare the BlackBerry Domain for the upgrade process.	"Preupgrade tasks" in the *BlackBerry Enterprise Server Upgrade Guide*
Stop all administration of the BlackBerry Domain.	—
Upgrade the BlackBerry Configuration Database using the CreateDB script.	"Upgrade the BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*
On a computer that is separate from the computers that host the BlackBerry Enterprise Server instances, install the BlackBerry Administration Service and, if required, the BlackBerry® Web Desktop Manager.	"Installing the BlackBerry Enterprise Server Software" in the *BlackBerry Enterprise Server Installation Guide*
Create administrative roles and administrator accounts.	"Creating administrator accounts" in the *BlackBerry Enterprise Server Administration Guide*
Resume administration of the BlackBerry Domain using the BlackBerry Administration Service.	—
On new hardware, install the latest BlackBerry Enterprise Server version.	"Installing the BlackBerry Enterprise Server Software" in the *BlackBerry Enterprise Server Installation Guide*.
Using the BlackBerry Administration Service, move user accounts from an existing BlackBerry Enterprise Server instance to the BlackBerry Enterprise Server instance that you installed.	"Move a user account from one BlackBerry Enterprise Server to another" in the *BlackBerry Enterprise Server Administration Guide*.
Install BlackBerry Enterprise Server instances on new hardware and move user accounts until all BlackBerry Enterprise Server instances are running the latest software version.	—

Planning to upgrade an existing BlackBerry Domain to a new BlackBerry Domain

If your organization's environment includes more than one BlackBerry® Domain that you want to consolidate, or if you want to create a BlackBerry Domain for the latest BlackBerry® Enterprise Server version during the upgrade process, you can use the BlackBerry Enterprise Transporter to move user accounts from one BlackBerry Domain to another BlackBerry Domain.

You can consider this upgrade process if one or more of the following conditions applies to your organization's environment:

- You want to consolidate multiple BlackBerry Domain instances or create a BlackBerry Domain.
- You need to move the BlackBerry Enterprise Server instances and BlackBerry Configuration Database to new hardware.
- You are not a database administrator and you do not have permissions to upgrade the BlackBerry Configuration Database using the BlackBerry Enterprise Server setup application.
- Your analysis indicates that you must install the BlackBerry Administration Service on a computer that is separate from the computer that hosts the BlackBerry Enterprise Server.

Tasks for upgrading the existing BlackBerry Domain to a new BlackBerry Domain

Task	Resource
Verify that your organization's environment meets the system requirements for the latest BlackBerry® Enterprise Server version.	"System requirements" in the *BlackBerry Enterprise Server Upgrade Guide*
Create a BlackBerry Configuration Database using the database upgrade scripts.	"Create a BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*
On a computer that is separate from the computers that host the BlackBerry Enterprise Server instances, install the BlackBerry Administration Service, and if required, the BlackBerry® Web Desktop Manager.	"Installing the BlackBerry Enterprise Server software" in the *BlackBerry Enterprise Server Installation Guide*
On new computers, install the BlackBerry Enterprise Server instances. During the installation process, select the BlackBerry Configuration Database that you created using the database upgrade scripts.	"Installing the BlackBerry Enterprise Server software" in the *BlackBerry Enterprise Server Installation Guide*
Prepare the new BlackBerry Domain for the migration process.	"Preparing the target BlackBerry Domain for the migration process" in the *BlackBerry Enterprise Transporter Administration Guide*
Prepare the existing BlackBerry Domain for the migration process.	"Preparing the target BlackBerry Domain for the migration process" in the *BlackBerry Enterprise Transporter Administration Guide*
Install the BlackBerry Enterprise Transporter.	"Preparing the target BlackBerry Domain for the migration process" in the *BlackBerry Enterprise Transporter Administration Guide*
Configure the BlackBerry Enterprise Transporter to move user accounts.	"Preparing the target BlackBerry Domain for the migration process" in the *BlackBerry Enterprise Transporter Administration Guide*
Stop all administration of the BlackBerry Domain.	—

Task	Resource
Back up the BlackBerry Configuration Database.	"Backing up the BlackBerry Configuration Database" in the *BlackBerry Enterprise Server Upgrade Guide*
Using the BlackBerry Enterprise Transporter, move the user accounts to the new BlackBerry Domain.	"Preparing the target BlackBerry Domain for the migration process" in the *BlackBerry Enterprise Transporter Administration Guide*
Start administration of the BlackBerry Domain using the BlackBerry Administration Service.	—

Glossary

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AES

Advanced Encryption Standard

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 MDS

BlackBerry® Mobile Data System

LAN

local area network

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

SNMP

Simple Network Management Protocol

SRP

Server Routing Protocol

SSL

Secure Sockets Layer

Triple DES

Triple Data Encryption Standard

VPN

virtual private network

WAN

wide area network

WLAN

wireless local area network

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7

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