



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

**Version 4.1.4**

**Installation Guide**

BlackBerry Enterprise Server Version 4.1.4 for IBM Lotus Domino Installation Guide

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# Planning your BlackBerry environment

Choosing a BlackBerry Enterprise Server setup type  
Upgrading the BlackBerry Enterprise Server

## Choosing a BlackBerry Enterprise Server setup type

The BlackBerry® Enterprise Server consists of services and components. The BlackBerry services are designed to provide productivity tools—such as email, instant messaging, and organizer functionality—and data from enterprise applications to mobile users. The BlackBerry components are designed to monitor BlackBerry services; process, route, compress, and encrypt data; and communicate with the wireless network.

You can install all BlackBerry components on one computer, or you can install particular components on separate computers. Consider any impacts on system resources when deciding where to install a component.

You can choose only one setup type for each computer in your environment.



**Warning:** After you choose a setup type, you cannot modify it. You must remove one setup type before you can install another.

Setup type	Description	Considerations
BlackBerry Enterprise Server	This setup type installs all BlackBerry components, except the BlackBerry MDS Services.	—
BlackBerry MDS Services	This setup type installs the BlackBerry Controller and the following BlackBerry MDS Services on a remote computer: <ul style="list-style-type: none"> <li>BlackBerry MDS Application Integration Service</li> <li>BlackBerry MDS Data Optimization Service</li> <li>BlackBerry MDS Provisioning Service</li> <li>BlackBerry MDS Administrative and Management Service</li> <li>BlackBerry® MDS Studio Application Repository</li> </ul>	<p>A remote instance of the BlackBerry MDS Services can support multiple BlackBerry Enterprise Servers and one BlackBerry MDS Studio Application Repository.</p> <p>The BlackBerry MDS Services might use increased system resources when it processes content requests. Install an instance of the BlackBerry MDS Services on a remote computer to minimize the impact on message delivery.</p> <p>You must install the BlackBerry MDS Studio Application Repository on the same database server as the BlackBerry Configuration Database.</p>
BlackBerry Enterprise Server with BlackBerry MDS Services	This setup type installs all BlackBerry components, including the BlackBerry MDS Services.	—
BlackBerry Attachment Service	This setup type installs the BlackBerry Attachment Service and the BlackBerry Controller on a remote computer.	<p>A remote BlackBerry Attachment Service can support multiple BlackBerry Enterprise Servers.</p> <p>The BlackBerry Attachment Service might use increased system resources when it processes concurrent conversion requests. Install the BlackBerry Attachment Service on a remote computer to increase the number of concurrent conversions without impacting message delivery.</p>

Setup type	Description	Considerations
BlackBerry Manager	This setup type installs the BlackBerry Manager on a remote computer.	A remote BlackBerry Manager enables you to manage multiple BlackBerry Domains from your computer.
BlackBerry Router	This setup type installs the BlackBerry Router and the BlackBerry Controller on a remote computer.	<p>A remote BlackBerry Router can support multiple BlackBerry Enterprise Servers and is designed to provide wireless network bypass to BlackBerry devices.</p> <p>The BlackBerry Router does not use many system resources, but it is a critical connection point for the BlackBerry® Enterprise Solution. You can install several standby BlackBerry Routers as failover locations in case your primary BlackBerry Router is unavailable.</p>
BlackBerry MDS Connection Service	This setup type installs the BlackBerry MDS Connection Service and the BlackBerry Controller on a remote computer.	<p>A remote BlackBerry MDS Connection Service can support multiple BlackBerry Enterprise Servers.</p> <p>The BlackBerry MDS Connection Service might use increased system resources when it processes content requests. Install the BlackBerry MDS Connection Service on a remote computer to minimize the impact on message delivery.</p>



Setup type	Description	Considerations
BlackBerry Collaboration Service	This setup type installs the BlackBerry Collaboration Service, the BlackBerry Instant Messaging Connector, and the BlackBerry Controller on a remote computer.	<p>A remote BlackBerry Collaboration Service can support multiple BlackBerry Enterprise Servers.</p> <p>Your instant messaging environment can be IBM® Lotus® Sametime®, Microsoft® Live Communications Server 2005™, or Novell® GroupWise® Messenger. Your choice is not limited by your messaging server.</p> <p>You can install only one type of the BlackBerry Collaboration Service, and users can use only one type of enterprise instant messaging application on the BlackBerry device.</p> <p>The BlackBerry Collaboration Service requires the following persistent connections, based on your instant messaging environment:</p> <ul style="list-style-type: none"> <li>• If your instant messaging server is Microsoft Live Communications Server 2005 and you are using Transport Layer Security (TLS) as the communication protocol, you require one persistent socket connection for each instant messaging session.</li> <li>• If your instant messaging server is Microsoft Live Communications Server 2005 and you are using Transmission Control Protocol (TCP) as the communication protocol, you require three persistent socket connections for each instant messaging session.</li> <li>• If your instant messaging server is Microsoft Live Communications Server 2005 and you are using Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS) as the communication protocol, you require three persistent socket connections to create one TCP connection, and all instant messaging sessions use that connection.</li> <li>• If your instant messaging server is Sametime, you require three persistent socket connections to create one TCP connection, and all instant messaging sessions use that connection.</li> <li>• If your instant messaging server is GroupWise Messenger, you require one persistent socket connection for each instant messaging session.</li> </ul> <p>Install the BlackBerry Collaboration Service on a remote computer to maximize the number of available sockets.</p>

## Upgrading the BlackBerry Enterprise Server

See the *BlackBerry Enterprise Server Version 4.1.4 Upgrade Guide* for more information.



# System requirements

## Hardware requirements

System requirements for the BlackBerry Enterprise Server

System requirements for your corporate environment

System requirements for remote components

## Hardware requirements

Visit [www.blackberry.com/knowledgecenterpublic](http://www.blackberry.com/knowledgecenterpublic) to read the *BlackBerry Enterprise Server Version 4.1 for IBM Lotus Domino Server Capacity Calculator* and the *BlackBerry Enterprise Server Version 4.1 for IBM Lotus Domino Performance Benchmarking* for more information about calculating hardware requirements based on the expected use of the BlackBerry Enterprise Server in your environment.

## System requirements for the BlackBerry Enterprise Server

You must confirm that the computer on which you plan to install the BlackBerry Enterprise Server meets the system requirements.

Checklists	Description	Reference
Checklist: Operating system requirements	This checklist describes the operating system software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server.	See page 12.
Checklist: Messaging and collaboration server software requirements	This checklist describes the messaging server software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server.	See page 13.
Checklist: Security support requirements	This checklist describes the security software that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to support specific security features.	See page 13.
Checklist: Multidomain support requirements	This checklist describes the configuration that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you have a multidomain messaging environment.	See page 14.
Checklist: Multilanguage support requirements	This checklist describes the configuration that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to support localized message content.	See page 14.
Checklist: Virtual computer support requirements	This checklist describes the configuration that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you have a virtual computer environment.	See page 14.

Checklists	Description	Reference
Checklist: Additional software requirements	This checklist describes the additional software that is required on the computer on which you plan to install the BlackBerry Enterprise Server, if you want to read the documentation and help file, or if you want to implement multiple BlackBerry devices from a single computer.	See page 14.

## Checklist: Operating system requirements



**Note:** You must install the most current service pack for each Microsoft product.

Considerations	
Install one of the following operating systems on the computer on which you plan to install the BlackBerry Enterprise Server:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Microsoft® Windows® 2000 Service Pack (SP) 4 (Server or Advanced Server editions)</li> <li>Microsoft® Windows Server® 2003 (SP1 is required for Microsoft Windows Messenger support)</li> </ul>	
Install Microsoft Messaging Queue (MSMQ) Version 3.0 (required for Microsoft Windows Messenger support).	<input type="checkbox"/>
<b>Note:</b> If you install MSMQ separately from Windows Server 2003, clear the default <b>Active Directory Integration and Triggers</b> subcomponents and select only the <b>Common</b> subcomponent.	
Install Microsoft® .NET Framework Version 1.1 (SP1 is required for Microsoft Windows Messenger support). You can install this program during the BlackBerry Enterprise Server installation.	<input type="checkbox"/>
If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1.	<input type="checkbox"/>
If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language.	<input type="checkbox"/>
Visit <a href="http://www.microsoft.com/netframework/downloads/">www.microsoft.com/netframework/downloads/</a> for more information.	
Install one of the following Microsoft Data Access Component (MDAC) versions on the computer on which you plan to install the BlackBerry Enterprise Server:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00)</li> <li>MDAC Version 2.8 SP2 (Version 2000.86.1830.00)</li> </ul>	
<b>Note:</b> MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.	
Install Java® 2 Platform, Standard Edition (J2SE™) Runtime Environment Version 5.0 update 9. You can install this program during the BlackBerry Enterprise Server installation.	<input type="checkbox"/>
If you are using IBM® DB2® Universal Database (DB2 UDB), install the IBM DB2 Universal Database Runtime Client Lite. You can install this program during the BlackBerry Enterprise Server installation.	<input type="checkbox"/>

## Checklist: Messaging and collaboration server software requirements



**Warning:** Do not install IBM® Lotus® Notes® client software on the same computer as the BlackBerry Enterprise Server.

### Considerations

Install one of the following messaging and collaboration servers on the computer on which you plan to install the BlackBerry Enterprise Server:

- IBM® Lotus® Domino® server Version 5.0.3 or later (Version 5.0.12 recommended)
- IBM Lotus Domino server Version 6.0.1 Critical Fixpack 2 or later (Primary Domino Directory required)
- IBM Lotus Domino server Version 6.5 or later (Primary Domino Directory required; Version 6.5.1 required to support organizer data synchronization for roaming users)
- IBM Lotus Domino server Version 7.0 (required to support encrypted message display)

**Note:** Do not install the BlackBerry Enterprise Server on a partitioned IBM Lotus Domino server.

Verify that the Notes.ini file has read/write permission.

Verify that the Notes.ini file does not include the full path information for the SERVERKEYFILENAME value. You require only the name of the server.id.

Verify that the IBM Lotus Domino server is a member of the LocalDomainServers group.

Verify that the IBM Lotus Domino server has permission to run agents.

Verify that the IBM Lotus Domino server has manager-level access to the mail files for BlackBerry users (required to display read or unread message status on the BlackBerry device).

If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Enterprise Server:

- If your instant messaging server is Microsoft Live Communications Server 2005, you must install or import a Mutual TLS (MTLS) certificate.
- If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account.

Visit [www.office.microsoft.com/en-us/FX011526591033.aspx](http://www.office.microsoft.com/en-us/FX011526591033.aspx) for more information about configuring certificates on Microsoft Live Communications Server 2005.

If your instant messaging server is , you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server.

If your instant messaging server is Messenger, you must turn on support for Secure Sockets Layer (SSL) authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit [www.novell.com/documentation](http://www.novell.com/documentation) to read the *Messenger 1.0 Administration Guide* for more information.

## Checklist: Security support requirements

### Considerations

If you are using RSA® SecurID® authentication, you must install the Security Dynamics Technologies Ace/Agent® for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service.

## Checklist: Multidomain support requirements

### Considerations

- Verify that the IBM Lotus Domino server contains connection documents from the IBM Lotus Domino servers in the domains from which it replicates.
- Verify that the IBM Lotus Domino server is a member of the LocalDomainServers group in all the domains in your environment.
- Establish cross-certification (at a server or organization level) between the messaging and directory servers in other domains.

## Checklist: Multilanguage support requirements

### Considerations

- Set your language preferences in Microsoft® Internet Explorer® to display encoded web pages correctly.

## Checklist: Virtual machine support requirements

### Considerations

- Install VMware® ESX Server Version 2.5.2 on the computer on which you plan to install the BlackBerry Enterprise Server.

## Checklist: Additional software requirements

### Considerations

- If you run a Universal Serial Bus (USB) hub to implement BlackBerry devices while connected to the BlackBerry Manager, verify that the USB driver supports USB1.1-compliant hubs.
- Install Adobe® Acrobat® Reader® Version 3.0 or later so that you can view the product guides.
- Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript® enabled as your default browser so that you can view the online help.
- Install Microsoft® XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.
- If you are using SNMP monitoring, you must install the SNMP service before you install the BlackBerry Enterprise Server. Visit [www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.mspx](http://www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.mspx) for more information about installing and configuring the SNMP service.
- Install Microsoft® Windows Media® Player Version 9 or later to support audio attachments.

## System requirements for your corporate environment

You must confirm that settings in your network, messaging and collaboration, instant messaging, and database environments are configured to support the BlackBerry Enterprise Server.

Checklists	Description	Reference
Checklist: Network environment settings	This checklist describes how your BlackBerry Enterprise Server must connect to your firewall.	See page 15.
Checklist: Messaging and collaboration environment settings	This checklist describes the software and settings that are required on your messaging server and your desktop email program.	See page 15.

Checklists	Description	Reference
Checklist: Instant messaging environment settings	This checklist describes the software and settings that are required on your instant messaging server.	See page 16.
Checklist: Terminal service settings	This checklist describes the supported software and settings for installing the BlackBerry Enterprise Server using a terminal or remote desktop session.	See page 16.
Checklist: Database environment settings	This checklist describes the software and settings that are required on your database server.	See page 17.

## Checklist: Network environment settings

### Considerations

- Verify that the BlackBerry Enterprise Server is physically close to the messaging servers. Use a high-speed switched connection between the BlackBerry Enterprise Server and the messaging servers. Network latency impacts the performance of the BlackBerry Enterprise Server.
- Verify that the BlackBerry Enterprise Server is not installed in a perimeter network (demilitarized zone). Visit [www.blackberry.com/knowledgecenterpublic](http://www.blackberry.com/knowledgecenterpublic) to read article TAE-00038 for more information.
- Verify that you have configured the corporate firewall or proxy to permit the BlackBerry Enterprise Server to initiate and maintain an outbound connection to the BlackBerry® Infrastructure on TCP port 3101.
- Verify that the corporate firewall can resolve Internet addresses using the Domain Name System (DNS).
- Verify that the proxy server is transparent, if you are using a proxying firewall.

## Checklist: Messaging and collaboration environment settings

### Considerations

- Your messaging environment must be one of the following: 
  - IBM Lotus Domino server Version 5.0.3 or later (Version 5.0.12 recommended)
  - IBM Lotus Domino server Version 6.0 or later (required to support encrypted message display; Version 6.0.4 and higher or Version 6.5.4 and higher are required to display read or unread message status on the BlackBerry device)
  - IBM Lotus Domino server Version 6.5 or later
  - IBM Lotus Domino server Version 7.0
- Your client software must be one of the following: 
  - IBM Lotus Notes Version 5.0.3 or later (Version 5.0.12 recommended)
  - IBM Lotus Notes Version 6.0 or later
  - IBM Lotus Notes Version 6.5 or later
  - IBM Lotus Notes Version 7.0 (required to support encrypted message display when the user.id file is stored in the BlackBerry Desktop Manager Version 4.1)

## Checklist: Instant messaging environment settings

### Considerations

Your instant messaging server must be one of the following:

- Sametime Version 3.0 Community Server
- Sametime Version 3.1 Community Server
- Sametime Version 6.5.1 Community Server (Version 6.5.1 or later is required to support dormant mode.)
- Sametime Version 7.0 Community Server
- Sametime Version 7.5 Community Server
- Microsoft Live Communications Server 2005 (SP1 is required to support Microsoft Office Communicator and dormant mode.)
- Novell GroupWise Messenger Server Version 1.0.2 or later
- Novell GroupWise Messenger Server Version 2.0

If your instant messaging environment supports Microsoft Office Communicator, your environment must also include a Microsoft Office Communicator Web Access Server.

Verify that your Communicator Web Access Server meets the following criteria:

- includes the MTLS and HTTPS certificates required for communication with your Microsoft Live Communications Server

Visit [office.microsoft.com/en-us/assistance/HA100240791033.aspx](http://office.microsoft.com/en-us/assistance/HA100240791033.aspx) for more information.

If your instant messaging environment supports Microsoft Office Communicator, you must download and install the following hotfixes to support the AJAX Service:

- visit [www.support.microsoft.com/kb/911996](http://www.support.microsoft.com/kb/911996) to install the hotfix on your Microsoft Live Communications Server
- visit [www.support.microsoft.com/kb/915066](http://www.support.microsoft.com/kb/915066) to install the hotfix on your Communicator Web Access server

If your instant messaging environment supports Microsoft Office Communicator, you must install or configure an additional virtual server to support the AJAX Service on your Communicator Web Access server that meets the following criteria:

- uses all unassigned IP addresses
- uses forms-based authentication only (RIM does not recommend using integrated authentication when supporting HTTPS connections)
- supports HTTPS browser connections
- contains an Internet Server API (ISAPI) filter for both the cwaauth.dll file and the ajax.dll file

Visit [office.microsoft.com/en-us/assistance/HA100240791033.aspx](http://office.microsoft.com/en-us/assistance/HA100240791033.aspx) to read the *Microsoft Office Communicator Web Access Planning and Deployment Guide* for more information about enabling the AJAX Service for Communicator Web Access.

## Checklist: Terminal service settings

### Considerations

If your operating system is Microsoft Windows Server 2000, you can install and access the BlackBerry Enterprise Server using the Terminal Services program.

You must install the Terminal Services program using Remote Administration mode. Visit [www.support.microsoft.com/kb/306624](http://www.support.microsoft.com/kb/306624) for more information.

**Note:** RIM does not recommend using Application Server mode. If you install the Terminal Services program using Application Server mode and then install the BlackBerry Enterprise Server, unpredictable results might occur.

If your operating system is Microsoft Windows Server 2003, you can install and access the BlackBerry Enterprise Server using the Microsoft Remote Desktop Connection program that is included with Microsoft Windows Server 2003.

**Note:** Do not install the Terminal Services program. If you install the Terminal Services program on Microsoft Windows Server 2003, the Terminal Services program installs in Application Server mode automatically, which RIM does not recommend.



## Checklist: Database environment settings

Considerations	
Install one of the following database programs on the computer on which you plan to install the BlackBerry Configuration Database:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Microsoft SQL Server 2000 Desktop Engine (MSDE 2000)</li> <li>• Microsoft SQL Server 2000 SP3a</li> <li>• Microsoft SQL Server 2005 (Standard, Enterprise, or Express)</li> <li>• DB2 UDB Version 8.2 (Express or Enterprise)</li> </ul>	
<b>Notes:</b> If you are installing BlackBerry MDS Services, you cannot use Microsoft SQL Server 2005 Express as your database program.	
You can install MSDE 2000 during the BlackBerry Enterprise Server installation.	
Install one of the following MDAC versions on the computer on which you plan to install the BlackBerry Configuration Database:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00)</li> <li>• MDAC Version 2.8 SP2 (Version 2000.86.1830.00)</li> </ul>	
MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.	
You must manage the BlackBerry Configuration Database using a BlackBerry Manager that is configured to support the database management system (DBMS) type. You select the DBMS type of the BlackBerry Manager during the BlackBerry Enterprise Server installation.	<input type="checkbox"/>
The version of MSDE 2000 (MSDE 2000 Release A) provided with the BlackBerry Enterprise Server does not support upgrading from a previous version of MSDE. Visit <a href="http://www.support.microsoft.com/kb/829925">www.support.microsoft.com/kb/829925</a> for more information.	<input type="checkbox"/>
If you are using Microsoft SQL Server, install the program using the default case-insensitive collation setting. The collation setting for the BlackBerry Configuration Database must be the same as the collation setting for the database server.	<input type="checkbox"/>
If you are using Microsoft SQL Server, you can install the BlackBerry Configuration Database on a nondefault instance. During the installation process, you can specify <i>servername\instancename</i> .	<input type="checkbox"/>
If you are using Microsoft SQL Server and if you are using Windows authentication between the BlackBerry Enterprise Server and the BlackBerry Configuration Database, you must set the Microsoft SQL Server to run under the Local System account.	<input type="checkbox"/>
If you are using DB2 UDB, do not install the database program on a mainframe computer.	<input type="checkbox"/>
If you are using DB2 UDB and you want to create the BlackBerry Configuration Database using an account name that is longer than the database schema name (by default, BESADMIN), you must first apply DB2 UDB Version 8.2 FixPak 5 to your database server. Visit <a href="http://www-1.ibm.com/support/docview.wss?uid=swg1L170002">www-1.ibm.com/support/docview.wss?uid=swg1L170002</a> for more information.	<input type="checkbox"/>
If the BlackBerry Configuration Database is on a remote computer or you want to use a remote BlackBerry Manager, you must enable named pipes and TCP/IP network protocols.	<input type="checkbox"/>
If you are installing the BlackBerry MDS Services, you must install the BlackBerry MDS Services databases on the same DBMS and on the same database server as the BlackBerry Configuration Database.	<input type="checkbox"/>
If you are installing the BlackBerry MDS Services and if you are using Microsoft SQL Server, the Microsoft SQL Server must support mixed-mode authentication. If you install the BlackBerry Configuration Database on MSDE 2000, you receive a prompt to accept this change in authentication.	<input type="checkbox"/>
If you are installing the BlackBerry MDS Services and if you are using DB2 UDB, you must create the database user account before you create the BlackBerry MDS Services databases.	<input type="checkbox"/>

**Considerations**

If you are installing the BlackBerry MDS Services, you must use SQL authentication to create the BlackBerry MDS Services databases.

If you are using SQL authentication to create the BlackBerry Configuration Database, you must use a different SQL account to create the BlackBerry MDS Services databases.

**Note:** The BlackBerry MDS Services store their BlackBerry MDS Services database access credentials in plain text form in `<installation directory>\MDSS\jakarta-tomcat-5.5.9\conf\server.xml`. To protect the access credentials in that storage location, you must limit read and write control to that location.

## System requirements for remote components

If you plan to install BlackBerry components on remote computers, you must confirm that those computers meet the system requirements.

Checklists	Description	Reference
Checklist: BlackBerry MDS Services system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry MDS Services.	See page 19.
Checklist: BlackBerry Enterprise Server with the BlackBerry MDS Services system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services.	See page 19.
Checklist: BlackBerry Attachment Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Attachment Service.	See page 21.
Checklist: BlackBerry Manager system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Manager.	See page 22.
Checklist: BlackBerry Router system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Router.	See page 23.
Checklist: BlackBerry MDS Connection Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry MDS Connection Service.	See page 23.
Checklist: BlackBerry Collaboration Service system requirements	This checklist describes the software and settings that are required on the computer on which you plan to install the BlackBerry Collaboration Service.	See page 24.

## Checklist: BlackBerry MDS Services system requirements

System requirement	Considerations
operating system	<p>Install one of the following operating systems on the computer on which you plan to install the BlackBerry MDS Services: <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003 (Standard, Enterprise or Small Business Server)</li> <li>• Microsoft Windows XP</li> </ul> <p>Verify that the operating system is installed in one of English, French, German, Italian, or Spanish.</p> <p>If you are using DB2 UDB, install the IBM DB2 Universal Database Runtime Client Lite. You can install this program during the BlackBerry Enterprise Server installation.</p>
additional software	<p>Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides. <input type="checkbox"/></p>

## Checklist: BlackBerry Enterprise Server with the BlackBerry MDS Services system requirements

System requirement	Considerations
operating system	<p>Install one of the following operating systems on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services: <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 SP4 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003 (Standard, Enterprise or Small Business Server)</li> </ul> <p>Install MSMQ Version 3.0 (required for Microsoft Windows Messenger support).</p> <p><b>Note:</b> If you install MSMQ separately from Windows Server 2003, clear the default <b>Active Directory Integration</b> and <b>Triggers</b> subcomponents and select only the <b>Common</b> subcomponent.</p> <p>Install Microsoft .NET Framework Version 1.1 SP1. You can install this program during the BlackBerry Enterprise Server installation.</p> <p>If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1.</p> <p>If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit <a href="http://www.microsoft.com/netframework/downloads/">www.microsoft.com/netframework/downloads/</a> for more information.</p> <p>Install one of the following MDAC versions:</p> <ul style="list-style-type: none"> <li>• MDAC Version 2.8 with Security Patch MS04-003 (Version 2000.85.1025.00)</li> <li>• MDAC Version 2.8 SP2 (Version 2000.86.1830.00)</li> </ul> <p><b>Note:</b> MDAC Version 2.8 SP2 is shipped only with Microsoft Windows Server 2003 SP1.</p> <p>Install J2SE Runtime Environment Version 5.0 update 9. You can install this program during the BlackBerry Enterprise Server installation.</p> <p>If you are using DB2 UDB, install the IBM DB2 Universal Database Runtime Client Lite. You can install this program during the BlackBerry Enterprise Server installation.</p>

System requirement	Considerations
messaging and collaboration server software	<p>Install one of the following messaging servers on the computer on which you plan to install the BlackBerry Enterprise Server with BlackBerry MDS Services: <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• IBM Lotus Domino server Version 5.0.3 or later (Version 5.0.12 recommended)</li> <li>• IBM Lotus Domino server Version 6.0.1 Critical Fixpack 2 or later (Primary Domino Directory required)</li> <li>• IBM Lotus Domino server Version 6.5 or later (Primary Domino Directory required; Version 6.5.1 required to support organizer synchronization for roaming users)</li> <li>• IBM Lotus Domino server Version 7.0 (required to support encrypted message display)</li> </ul> <p><b>Note:</b> Do not install the BlackBerry Enterprise Server on a partitioned IBM Lotus Domino server.</p> <p>Verify that the Notes.ini file has read/write permission.</p> <p>Verify that the Notes.ini file does not include the full path information for the SERVERKEYFILENAME value. You require only the name of the server.id.</p> <p>Verify that the IBM Lotus Domino server is a member of the LocalDomainServers group.</p> <p>Verify that the IBM Lotus Domino server has permission to run agents.</p> <ul style="list-style-type: none"> <li>• Verify that the IBM Lotus Domino server has manager-level access to the mail files for BlackBerry device user accounts (required to display read or unread message status on the BlackBerry device).</li> </ul>
	<p>If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Collaboration Service: <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• If your instant messaging server is Microsoft Live Communications Server 2005, you must install or import an MTLS certificate.</li> <li>• If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account.</li> </ul> <p>Visit <a href="http://www.office.microsoft.com/en-us/FX011526591033.aspx">www.office.microsoft.com/en-us/FX011526591033.aspx</a> for more information about configuring certificates on Microsoft Live Communications Server 2005.</p> <p>If your instant messaging server is Sametime, you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server.</p> <p>If your instant messaging server is Novell GroupWise Messenger, you must turn on support for SSL authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit <a href="http://www.novell.com/documentation">www.novell.com/documentation</a> to read the <i>Messenger 1.0 Administration Guide</i> for more information.</p>
multilanguage support	<p>Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly. <input type="checkbox"/></p>
security support	<p>If you are using RSA SecurID authentication, you must install the Security Dynamics Technologies Ace/Agent for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service. <input type="checkbox"/></p>

System requirement	Considerations
additional software	<p>If you run a USB hub to implement BlackBerry devices that are connected to the BlackBerry Manager, verify that the USB driver supports USB1.1-compliant hubs. <input type="checkbox"/></p> <p>Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.</p> <p>Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help.</p> <p>Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.</p> <p>If you are using SNMP monitoring, you must install the SNMP service before you install the BlackBerry Enterprise Server. Visit <a href="http://www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.msp">www.microsoft.com/technet/itsolutions/network/deploy/confeat/snmp.msp</a> for more information about installing and configuring the SNMP service.</p> <p>Install Microsoft Windows Media Player Version 7.1 or later so that you can support audio attachments.</p>

## Checklist: BlackBerry Attachment Service system requirements

System requirement	Considerations
operating system	<p>Install one of the following operating systems on the computer on which you plan to install the BlackBerry Attachment Service: <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 SP4 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003</li> <li>• Microsoft Windows XP</li> </ul>
multilanguage support	<p>Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly. <input type="checkbox"/></p>
additional software	<p>Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides. <input type="checkbox"/></p> <p>Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help.</p> <p>Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.</p> <p>Install Microsoft Windows Media Player Version 7.1 or later so that you can support audio attachments.</p>

## Checklist: BlackBerry Manager system requirements

System requirement	Considerations	
operating system	<p>Install one of the following operating systems on the computer on which you plan to install the BlackBerry Manager:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 (Professional, Server, or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003</li> <li>• Microsoft Windows XP Professional</li> </ul> <p>Install Microsoft .NET Framework Version 1.1 SP1. You can install this program during the BlackBerry Enterprise Server installation.</p> <p>If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1.</p> <p>If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit <a href="http://www.microsoft.com/netframework/downloads/">www.microsoft.com/netframework/downloads/</a> for more information.</p> <p>In the operating system, turn on printer and file sharing to implement BlackBerry devices.</p> <p>If you are using IBM DB2 UDB, install the IBM DB2 Universal Database Runtime Client Lite. You can install this program during the BlackBerry Enterprise Server installation.</p>	<input type="checkbox"/>
messaging and collaboration server software	<p>Install one of the following on the computer on which you plan to install the BlackBerry Manager:</p> <ul style="list-style-type: none"> <li>• IBM Lotus Domino server Version 5.0.3 or later (Version 5.0.12 recommended)</li> <li>• IBM Lotus Domino server Version 6.0.1 Critical Fixpack 2 or later (Primary Domino Directory required)</li> <li>• IBM Lotus Domino server Version 6.5 or later (Primary Domino Directory required; Version 6.5.1 required to support organizer synchronization for roaming users)</li> <li>• IBM Lotus Domino server Version 7.0 (required to support encrypted message display)</li> <li>• IBM Lotus Notes Version 5.0.3 or later (Version 5.0.12 recommended)</li> <li>• IBM Lotus Notes Version 6.0 or later</li> <li>• IBM Lotus Notes Version 6.5 or later</li> <li>• IBM Lotus Notes Version 7.0</li> </ul>	<input type="checkbox"/>
multilanguage support	Set your language preferences in Microsoft Internet Explorer to display encoded web pages correctly.	<input type="checkbox"/>
additional software	<p>Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.</p> <p>Set Microsoft Internet Explorer Version 4.0 or later with Java or JavaScript enabled as your default browser so that you can view the online help.</p> <p>Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.</p>	<input type="checkbox"/>

## Checklist: BlackBerry Router system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry Router: <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003</li> <li>• Microsoft Windows XP</li> </ul>	<input type="checkbox"/>
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides. Install Microsoft XML Parser Version 4.0 SP2 or later. You can install this program during the BlackBerry Enterprise Server installation.	<input type="checkbox"/>
network environment settings	You can install the BlackBerry Router in a perimeter network (demilitarized zone). Verify that the firewall settings permit the BlackBerry Router computer to initiate a two-way TCP/IP connection to an external server on port 3101. Verify that the corporate firewall can resolve Internet addresses using the DNS. Verify that the proxy is transparent, if you are using a proxying firewall.	<input type="checkbox"/>

## Checklist: BlackBerry MDS Connection Service system requirements

System requirement	Considerations	
operating system	Install one of the following operating systems on the computer on which you plan to install the BlackBerry MDS Connection Service: <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003</li> <li>• Microsoft Windows XP</li> </ul>	<input type="checkbox"/>
security support	If you are using RSA SecurID authentication, you must install the Security Dynamics Technologies Ace/Agent for Microsoft Windows Version 5.0 on the computer on which you plan to install the BlackBerry MDS Connection Service.	<input type="checkbox"/>
additional software	Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.	<input type="checkbox"/>

## Checklist: BlackBerry Collaboration Service system requirements

System requirement	Considerations	
operating system	<p>Install one of the following operating systems on the computer on which you plan to install the BlackBerry Collaboration Service:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 (Server or Advanced Server editions)</li> <li>• Microsoft Windows Server 2003 SP1 (required for Microsoft Windows Messenger support)</li> <li>• Microsoft Windows XP</li> </ul> <p>Install Microsoft .NET Framework Version 1.1 SP1 (required for Microsoft Windows Messenger support). You can install this program during the BlackBerry Enterprise Server installation.</p> <p>If Microsoft .NET Framework Version 2.0 is installed, the setup program still installs Version 1.1 or Version 1.1 SP1</p> <p>If Microsoft .NET Framework Version 1.1 is installed in a language other than English, you must download and install SP1 in the appropriate language. Visit <a href="http://www.microsoft.com/netframework/downloads/">www.microsoft.com/netframework/downloads/</a> for more information.</p> <p>Install MSMQ Version 3.0 (required for Microsoft Windows Messenger support).</p> <p><b>Note:</b> If you install MSMQ separately from Windows Server 2003, clear the default <b>Active Directory Integration</b> and <b>Triggers</b> subcomponents and select only the <b>Common</b> subcomponent.</p>	<input type="checkbox"/>
messaging and collaboration server software	<p>If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, you must install or import one of the following certificates on the computer on which you plan to install the BlackBerry Collaboration Service:</p> <ul style="list-style-type: none"> <li>• If your instant messaging server is Microsoft Live Communications Server 2005, you must install or import a MTLS certificate.</li> <li>• If your instant messaging server is Microsoft Live Communications Server 2005 SP1, you must install or import a server authentication certificate under the computer account.</li> </ul> <p>Visit <a href="http://www.office.microsoft.com/en-us/FX011526591033.aspx">www.office.microsoft.com/en-us/FX011526591033.aspx</a> for more information about configuring certificates on Microsoft Live Communications Server 2005.</p> <p>If your instant messaging server is Sametime, you must add the IP address of each computer on which you plan to install the BlackBerry Collaboration Service to the CommunityConnectivity document on the Sametime server.</p> <p>If your instant messaging server is Novell GroupWise Messenger, you must turn on support for SSL authentication of the Novell GroupWise Messenger agents on the computer on which you plan to install the BlackBerry Collaboration Service. Visit <a href="http://www.novell.com/documentation">www.novell.com/documentation</a> to read the <i>Messenger 1.0 Administration Guide</i> for more information.</p>	<input type="checkbox"/>
additional software requirement	<p>Install Adobe Acrobat Reader Version 3.0 or later so that you can view the product guides.</p>	<input type="checkbox"/>



# Configuring your environment

Enabling the messaging environment to communicate with the BlackBerry Enterprise Server  
Setting database permissions  
Configure remote authentication for the local system account  
Create Windows groups to support administrative roles

## Enabling the messaging environment to communicate with the BlackBerry Enterprise Server

You must configure the IBM Lotus Domino messaging environment to permit access to BlackBerry-specific databases from both the BlackBerry Enterprise Server and from BlackBerry Manager remote installations.

Verify that the LocalDomainServers group includes the server on which you plan to install the BlackBerry Enterprise Server.

### Create the BlackBerryAdmins group

1. In the IBM Lotus Domino administration server directory, create an IBM Lotus Domino group with the following attributes:
  - **Name:** BlackBerryAdmins
  - **Group type:** Access Control List only
  - **Description:** users who can add, remove, and modify BlackBerry user settings
  - **Members:** LocalDomainServers, any groups or users who might administer the BlackBerry Enterprise Server
2. On the server on which you plan to install the BlackBerry Enterprise Server, replicate the group in the Domino Directory.

### Modify the server document to permit moving users within a BlackBerry Domain

1. Open the server document for the IBM Lotus Domino server on which you plan to install the BlackBerry Enterprise Server.

## 2. Perform one of the following actions:

Action	Procedure
Set permissions in an IBM Lotus Domino server Version 6.	> In the <b>Run unrestricted methods and operations</b> field, add the <b>LocalDomainServers</b> group.
Set permissions in an IBM Lotus Domino server Version 5.	> In the <b>Run unrestricted Java/Javascript/COM</b> field, add the <b>LocalDomainServers</b> group.

## Setting database permissions

When you run the setup program, the account that you use must have permissions on the database server. The type of permission depends on the setup type that you choose and whether you are creating the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server or on a remote database server.

If you create the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server, you also install a custom event-based notification system that is designed to reduce the number of database queries that the BlackBerry Enterprise Server makes to the BlackBerry Configuration Database. You require a higher level of permission for this installation because you must register this database notification system.

If you create the BlackBerry Configuration Database on a remote database server, you do not install the database notification system automatically, so you require a lower level of permission. You can install the database notification system manually after you complete the setup program. See "Install the database notification system" on page 32 for more information.

If you install the BlackBerry MDS Services, you must use a database login instead of a Microsoft Windows account to create and access the BlackBerry MDS Services databases. If you are using a database login to create the BlackBerry Configuration Database, you must use a different login for the BlackBerry MDS Services databases.

The BlackBerry MDS Services store their BlackBerry MDS Service database access credentials in plain text form in `<installation directory>\MDSS\jakarta-tomcat-5.5.9\conf\server.xml`. To protect the access credentials in that storage location, you must limit read and write control to that location.

If you install MSDE 2000 during the BlackBerry Enterprise Server installation, you do not need to set additional permissions. When you select Windows (trusted) authentication during the BlackBerry Enterprise Server installation, the required permissions are given to the account that you used to run the setup program.

Visit [http://msdn2.microsoft.com/en-us/library/aa905156\(SQL.80\).aspx](http://msdn2.microsoft.com/en-us/library/aa905156(SQL.80).aspx) for more information about Microsoft SQL Server security.

## Set Microsoft SQL Server permissions

- > Perform one of the following actions:

Action	Procedure
Create the BlackBerry Configuration Database on the same computer as the BlackBerry Enterprise Server and register the database notification system.	> Assign System Administrator permissions.
Create the BlackBerry Configuration Database on a remote database server during the BlackBerry Enterprise Server installation.	> Assign Server Administrator and Database Creator permissions. If you are using Microsoft SQL Server 2005, also assign the System Administrator permission or the following roles: SQLAgentUserRole, SQLAgentReaderRole, and SQLAgentOperatorRole.
Create the BlackBerry MDS Services databases during the BlackBerry MDS Services or BlackBerry Enterprise Server with BlackBerry MDS Services installations.	> Assign System Administrator permissions.

## Set DB2 UDB permissions

1. On the database server, create a local system account with a password that does not expire.
2. Assign Database Administrator (DB2ADMN) permission to that account.

## Configure remote authentication for the local system account

If you install and use the IBM Lotus Domino server—and by extension the BlackBerry Enterprise Server—using the local system account and you want to use a remote server for the BlackBerry Configuration Database, you must provide the local system account with credentials for authentication.

- > Perform one of the following actions:

Action	Procedure
Configure the local system account for Windows (trusted) authentication.	<ol style="list-style-type: none"> <li>1. In the Microsoft SQL Server Enterprise Manager, browse to the database server where you plan to install the BlackBerry Configuration Database.</li> <li>2. Right-click <b>Logins</b>.</li> <li>3. Click <b>New Login</b>.</li> <li>4. Type the name of the computer to host the BlackBerry Enterprise Server. Use the format <code>&lt;Domain&gt;\&lt;computer_name&gt;\$</code>.</li> <li>5. Click <b>Windows Authentication</b>.</li> <li>6. On the <b>Server Roles</b> tab, set the required database permissions.</li> <li>7. Click <b>OK</b>.</li> </ol>

Action	Procedure
Configure the local system account for database authentication.	<ol style="list-style-type: none"> <li>1. On the computer where you plan to install the BlackBerry Enterprise Server, open the Registry Editor.</li> <li>2. In the left pane, browse to HKEY_USERS\DEFAULT.</li> <li>3. Create the following nested keys (if they do not exist already): <ul style="list-style-type: none"> <li>• Software</li> <li>• Research In Motion</li> <li>• BlackBerry Enterprise Server</li> <li>• Database</li> </ul> </li> <li>4. Right-click <b>Database</b>.</li> <li>5. Create the following string values: <ul style="list-style-type: none"> <li>• <b>Login</b>: Type a database account that has the required database permissions.</li> <li>• <b>Password</b>: Type the password for the database account.</li> </ul> </li> </ol>

## Create Windows groups to support administrative roles

If you are using DB2 UDB, you cannot manage administrative roles using the BlackBerry Manager. You must create Windows groups on the database server for each administrative role and then assign Windows users or groups to those administrative role Windows groups.



**Warning:** Do not assign users or groups to more than one administrative role's Windows group. If you do, the permissions of the highest role are applied.

1. On your database server, open the Microsoft Windows Computer Management console.
2. Create the following Windows groups:
  - rim\_db\_admin\_audit\_enterprise
  - rim\_db\_admin\_audit\_handheld
  - rim\_db\_admin\_audit\_jr\_helpdesk
  - rim\_db\_admin\_audit\_sr\_helpdesk
  - rim\_db\_admin\_enterprise
  - rim\_db\_admin\_handheld
  - rim\_db\_admin\_jr\_helpdesk
  - rim\_db\_admin\_sr\_helpdesk
3. Assign Windows users or groups to each administrative role Windows group.

## Enable authentication for administrative roles on remote BlackBerry Managers

- > Use the DB2 UDB Control Center to configure the following settings:
  - control authentication at the client
  - trust the client authenticating at the server

- search locally for the administrative role Windows groups you created



# Installing the BlackBerry Enterprise Server software

[Checklist: Confirm BlackBerry Enterprise Server installation requirements](#)  
[Install the BlackBerry Enterprise Server](#)  
[Install a BlackBerry component on a remote computer](#)  
[Install the database notification system](#)  
[Installing the Hosted BlackBerry for IBM Lotus Domino](#)  
[Troubleshooting the BlackBerry Enterprise Server installation process](#)  
[Postinstallation tasks](#)

## Checklist: Confirm BlackBerry Enterprise Server installation requirements

Use the following checklist to confirm that you are ready to start the installation:

Step	
Select a setup type. See "Choosing a BlackBerry Enterprise Server setup type" on page 7 for more information.	<input type="checkbox"/>
Verify that you have met all the system requirements. See "System requirements for the BlackBerry Enterprise Server" on page 11 for more information.	<input type="checkbox"/>
Create the required accounts for the messaging server to access the BlackBerry Enterprise Server. See "Enabling the messaging environment to communicate with the BlackBerry Enterprise Server" on page 25 for more information.	<input type="checkbox"/>
Log in to the computer using an administrative account with the appropriate database permissions. See "Setting database permissions" on page 26 for more information.	<input type="checkbox"/>
<b>Note:</b> The setup program adds the administrative account automatically to the Security administrator role in the BlackBerry Configuration Database.	
Verify that the local system account can access the BlackBerry Configuration Database. See "Configure remote authentication for the local system account" on page 27 for more information.	<input type="checkbox"/>
If the IBM Lotus Domino server is newly installed, you must start it and stop it before you install the BlackBerry Enterprise Server.	<input type="checkbox"/>
Turn off the IBM Lotus Domino server automatic start before you install and configure the BlackBerry Enterprise Server.	<input type="checkbox"/>
Turn off the IBM Lotus Domino server.	<input type="checkbox"/>
Confirm that you have the following required credentials from the BlackBerry Enterprise Server installation media:	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• client access license key</li> <li>• SRP identifier</li> <li>• SRP key</li> <li>• SRP host</li> </ul>	

Step

Confirm that you have the following required installation credentials from your environment:

- computer name and port number of the instant messaging server (use the virtual server name and port number where the AJAX service is installed, if applicable in your environment)
- computer name and port of the proxy server

**Note:** If you are using a .pac file to configure the connection, you can specify that file after you complete the installation process.

## Install the BlackBerry Enterprise Server

You add BlackBerry Enterprise Servers to a BlackBerry Domain by specifying a shared BlackBerry Configuration Database during the installation process.

1. Log in to the computer using an administrative account with the appropriate database permissions.
2. Double-click **setup.exe**.
3. Complete the instructions on the screen.
4. When prompted to restart the computer, click **Yes**.
5. Log in using the same account that you used for the setup program.
6. Complete the instructions on the screen.
7. If you are using Microsoft Exchange 2003 and use calendars with unicode text, complete the following actions:
  - a) On the BlackBerry Enterprise Server, open the Registry Editor.
  - b) In the left pane, navigate to \\HKEY\_LOCAL\_MACHINE\\software\\Research In Motion\\BlackBerry Enterprise Server\\Agents.
  - c) Create a DWORD value named **SetLocaleIDs**.
  - d) Set the value to **1**.
  - e) In the Microsoft Windows Services, restart the BlackBerry Messaging Agent.

## Install a BlackBerry component on a remote computer

1. Log in to the computer using an administrative account with the appropriate database permissions.
2. Double-click **setup.exe**.
3. Complete the instructions on the screen.
4. When prompted to restart the computer, click **Yes**.
5. Log in using the same account that you used for the setup program.
6. Complete the instructions on the screen.

## Install the database notification system



1. Connect to the Microsoft SQL Server instance using an account with System Administration permission.
2. Copy RimEsp.dll to C:\Program Files\Microsoft SQL Server\MSSQL\Binn.
3. In the SQL Query Analyzer, browse to the <drive>\Database\DBInstallScripts\SQLServer\4.1 folder on the installation media.
4. Open NotifyInstall.sql and replace <\_DATABASENAME\_> with the name of your BlackBerry Configuration Database.
5. Run the script.
6. Confirm that the SQL Query Analyzer displays the message "Function dbo.xp\_RIM\_xxxx registered."
7. Repeat steps 1 through 6 for additional BlackBerry Configuration Databases in your environment.

## Installing the Hosted BlackBerry for IBM Lotus Domino

If you are installing the Hosted BlackBerry® for IBM Lotus Domino, the installation recommendations, requirements, and procedures are identical to those for the BlackBerry Enterprise Server. The Hosted BlackBerry for IBM Lotus Domino is a version of the BlackBerry Enterprise Server that you can provide to an organization. It includes all of the services and components of the BlackBerry Enterprise Server, but uses a different licensing model.

Depending on how you set up your hosted environment, additional configurations might be required after installation. See the *BlackBerry Enterprise Server Version 4.1.4 System Administration Guide* for more information about configuring a hosted environment.

## Troubleshooting the BlackBerry Enterprise Server installation process

### Resolving issues during the installation process

Symptom	Possible solution
When you start the setup program, the message "Could not open ID file" appears and the setup program ends.	<ol style="list-style-type: none"> <li>1. If you recently installed the IBM Lotus Domino server and you have not started it yet, start it and stop it.</li> <li>2. Restart the setup program.</li> </ol>
One of the third-party tools installed by the setup program does not install successfully and the setup program ends.	<ol style="list-style-type: none"> <li>1. In the BlackBerry Enterprise Server installation media, open the <b>Tools</b> folder and locate the program that you want to install.</li> <li>2. Install the third-party tool manually.</li> <li>3. Restart the setup program.</li> </ol>

Symptom	Possible solution
When you start the setup program, the message "Previous version detected but no database available" appears and the setup program ends.	<p>Verify that the registry keys identifying your BlackBerry Configuration Database are present.</p> <ol style="list-style-type: none"> <li>1. On the computer on which you plan to install the BlackBerry Enterprise Server, start the Registry Editor.</li> <li>2. In the left pane, browse to HKEY_LOCAL_MACHINE\Research In Motion\BlackBerry Enterprise Server\Database.</li> <li>3. Create the following string values (if they do not exist): <ul style="list-style-type: none"> <li>• <b>DatabaseName:</b> Type the name of the BlackBerry Configuration Database.</li> <li>• <b>DatabaseServerMachineName:</b> Type the computer name of the database server.</li> </ul> <p><b>Note:</b> These values are case sensitive.</p> </li> <li>4. Restart the setup program.</li> </ol>
After you attempt to add the client access license key, the "Failed to write License Key to the Database" message appears.	<p>Verify that you logged in to the computer using the same account after restarting the computer.</p> <ol style="list-style-type: none"> <li>1. Cancel the setup program.</li> <li>2. Log off the computer.</li> <li>3. Log in to the computer using the same account that you used to start the installation process.</li> <li>4. Restart the setup program.</li> </ol>
When you install SP1 to a previously installed version of Microsoft .NET Framework Version 1.1, the setup program prompts you for access to the original installation media for Microsoft .NET Framework Version 1.1.	<ol style="list-style-type: none"> <li>1. When the setup program prompts you for the location of <b>netfx.msi</b>, browse to the <b>Tools</b> folder in the BlackBerry Enterprise Server installation media.</li> <li>2. Click the file.</li> </ol>

## Resolving issues after the installation process completes

Symptom	Possible solution
The BlackBerry Collaboration Service is not connecting to Microsoft Live Communications Server 2005.	<p>If your instant messaging environment supports Microsoft Windows Messenger and you are using TLS as the communication protocol, verify that authentication is configured.</p> <ol style="list-style-type: none"> <li>1. Visit <a href="http://www.microsoft.com/downloads">www.microsoft.com/downloads</a> to download Microsoft Office Communicator 2005 Trial Edition.</li> <li>2. Install the Microsoft Office Communicator 2005 client on the computer where the BlackBerry Collaboration Service is located.</li> <li>3. Use Microsoft Office Communicator 2005 to connect to Microsoft Live Communications Server 2005.</li> <li>4. If a connection cannot be made, confirm that you have installed or imported the required authentication certificates.</li> </ol>

## Postinstallation tasks

Action	Resource
Add administrators to roles.	<i>BlackBerry Enterprise Server Version 4.1.4 System Administration Guide</i>
Add users to the BlackBerry Enterprise Server.	<i>BlackBerry Enterprise Server Version 4.1.4 System Administration Guide</i>
Implement BlackBerry devices.	<i>BlackBerry Enterprise Server Version 4.1.4 System Administration Guide</i>
Configure a connection between the BlackBerry Enterprise Server and the BlackBerry MDS Services.	<i>BlackBerry Enterprise Server Version 4.1.4 System Administration Guide</i>

### Configure the connection between the BlackBerry MDS Connection Service and a remote BlackBerry Attachment Service

1. On the computer on which the BlackBerry MDS Connection Service is running, browse to C:\Program Files\Research In Motion\BlackBerry Enterprise Server\MDS\Servers\Instance\config.
2. Open **rimpublic.property** in a text editor.
3. Add the following lines:  

```
Attachment.Server.host=<attachment_server_hostname>
Attachment.Server.port.asp=1900
Attachment.Server.port.rqp=2000
```
4. Save and close the file.
5. In the Microsoft Windows Services window, restart the **BlackBerry MDS Connection Service** service.
6. Complete steps 1 through 5 for every BlackBerry MDS Connection Service that is connecting to a remote BlackBerry Attachment Service.
7. On the computer on which the remote BlackBerry Attachment Service is running, open the Registry Editor.
8. In the HKEY\_LOCAL\_MACHINE\SOFTWARE\Research In Motion\BBAttachServer\BBAttachBESExtension key, change the **AllowRemoteServices** value to 1.
9. In the Microsoft Windows Services window, restart the **BlackBerry Attachment Service** service.



# Removing the BlackBerry Enterprise Server software

Remove the BlackBerry Enterprise Server software  
Remove registry entries from your computer  
Remove the database notification system

## Remove the BlackBerry Enterprise Server software

The Java Runtime Environment and Java Web Start software is not removed when you remove the BlackBerry Enterprise Server from your computer. You must remove these applications manually.

1. Shut down the IBM Lotus Domino server.
2. On the taskbar, click **Start > Settings > Control Panel > Add/Remove Programs**.
3. Click **BlackBerry Enterprise Server**.
4. Click **Remove**.
5. Click **Yes**.
6. Perform one of the following actions:

Action	Procedure
Save all logs that are stored in the root log file path.	> Click <b>No</b> .
Delete all logs that are stored in the root log file path.	> Click <b>Yes</b> .

7. Perform one of the following actions:

Action	Procedure
Save user information for a future installation of the BlackBerry Enterprise Server.	> Click <b>No</b> .
Delete all user information.	> Click <b>Yes</b> .

## Remove registry entries from your computer

1. On the computer from which you removed the BlackBerry Enterprise Server software, start the Registry Editor.
2. Delete any of the following registry entries:

Entry	Location
Research In Motion	HKEY_LOCAL_MACHINE\Software\

Entry	Location
BBAAttachServer and any keys starting with "BES" or "BlackBerry"	HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\ HKEY_LOCAL_MACHINE\System\ControlSet001\Services\ HKEY_LOCAL_MACHINE\System\ControlSet002\Services\
Research In Motion	HKEY_CURRENT_USER\Software\
any keys named BlackBerryServer, BlackBerry Server Management, or listed as the name of your BlackBerry Enterprise Server	HKEY_CURRENT_USER\Software\Microsoft\Windows NT\CurrentVersion\Windows Messaging SubSystem\Profiles\ Research In Motion
Research In Motion	HKEY_USERS\DEFAULT\Software\
any key in which the ProductName is BlackBerry Enterprise Server	HKEY_CLASSES_ROOT\Installer\Products\

## Remove the database notification system

You might have to restart the Microsoft SQL Server to complete the removal of the database notification system. If you do not want to restart the server, rename the **RimEsp.dll** file (for example, to **RimEspXXX.tmp**).

1. In the SQL Query Analyzer, browse to the <drive>\Database\DBInstallScripts\SQLServer\4.1 folder on the installation media.
2. Open **NotifyUninstall.sql**.
3. Perform one of the following actions:

Action	Procedure
Remove the database notification system from one BlackBerry Configuration Database.	<ol style="list-style-type: none"> <li>1. Remove all commands after -- <b>delete notification stored procedures</b> and -- <b>delete notification tables</b>.</li> <li>2. Run the script.</li> </ol>
Remove the database notification system from all BlackBerry Configuration Databases.	<ol style="list-style-type: none"> <li>1. Run the script.</li> <li>2. At C:\Program Files\Microsoft SQL Server\MSSQL\Binn, remove <b>RimEsp.dll</b>.</li> </ol>





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