

BlackBerry Enterprise Server for Novell GroupWise

Placing the BlackBerry Enterprise Server in a
Segmented Network

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Technical Note

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Using a segmented network to prevent the spread of malware

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To help prevent the spread of malware in your organization's network, you can use firewalls to divide your organization's network or LAN into segments to create a segmented network. Each segment can manage the network traffic for a specific BlackBerry Enterprise Solution component. A segmented network is designed to improve the security and performance of the segments by filtering out data that is not sent to the correct segment.

To configure the BlackBerry Enterprise Solution in a segmented network, you must install each BlackBerry Enterprise Solution component on a computer that is separate from the computers that host other components and then place each computer in its own network segment. If you configure the BlackBerry Enterprise Solution in a segmented network, you create an architecture that is designed to prevent the spread of potential attacks from one computer that hosts a component to another computer within your organization's LAN. A segmented network architecture is designed to isolate attacks and contain them on one computer. To permit communication with other components, when you install each component in its own segment, you open only the port numbers that the components use.

The BlackBerry Enterprise Server and components, with the exception of the BlackBerry Router, do not support installation in a DMZ. For more information about configuring the BlackBerry Router in the DMZ, see *Placing the BlackBerry Router in the DMZ*.

For more information about the port numbers that the components use, see the *BlackBerry Enterprise Server Administration Guide*.

Protecting BlackBerry Enterprise Solution communications in your organization's environment

How a BlackBerry Enterprise Server and messaging server protect a connection to each other

A BlackBerry Enterprise Server is designed to connect to the following messaging servers in a highly secure manner.

Messaging server	Description
IBM Domino	<p>The BlackBerry Enterprise Server and the Domino server communicate using the Notes RPC protocol.</p> <p>A user who activates a BlackBerry device when the device is connected to a computer can encrypt data that is in transit between the Domino server and a Notes Inbox.</p> <p>For more information, see the online help for Domino.</p>
Microsoft Exchange	<p>The BlackBerry Enterprise Server and Microsoft Exchange Server can communicate using Microsoft Exchange Web Services or the Microsoft Exchange Server RPC protocol over a MAPI connection.</p> <p>When the BlackBerry Enterprise Server and Microsoft Exchange Server communicate using Microsoft Exchange Web Services they use an SSL connection.</p> <p>A user can use 128-bit encryption to encrypt RPC communication over the MAPI connection between the Microsoft Exchange server and Microsoft Outlook. For</p>

Messaging server	Description
Novell GroupWise	<p>more information about turning on encryption, see the documentation for Microsoft Exchange</p> <p>The BlackBerry Enterprise Server is designed to use a trusted application key to open a connection to the Novell GroupWise server. To generate the trusted application key, an administrator of Novell GroupWise runs the trusted application key generator, specifies the location of the primary domain of Novell GroupWise, and specifies the application name that the BlackBerry Enterprise Server can use to connect to the Novell GroupWise server. The trusted application key is a 64-byte ASCII string.</p> <p>The BlackBerry Enterprise Server connects to a user's mailbox in a highly secure manner using the trusted application key. The Novell GroupWise server verifies the trusted application key and permits the BlackBerry Enterprise Server to open a connection to the Novell GroupWise database for the user.</p>

How the BlackBerry Enterprise Server components and the BlackBerry MVS protect communication

BlackBerry Enterprise Server components and the BlackBerry Mobile Voice System use the BlackBerry inter-process protocol to help protect the data that the components send to each other. The BlackBerry inter-process protocol uses a communication password to generate a session key that encrypts the data that the components send to each other. The BlackBerry Collaboration Service, BlackBerry MDS Connection Service, BlackBerry Policy Service, BlackBerry Synchronization Service, and BlackBerry MVS share a communication password. The BlackBerry Messaging Agent and BlackBerry Dispatcher share a different communication password. The communication passwords are designed to prevent a potentially malicious user from viewing data that the BlackBerry Enterprise Server components and the BlackBerry MVS send to each other.

When a BlackBerry Enterprise Server component or the BlackBerry MVS opens a connection to the BlackBerry Dispatcher, the BlackBerry inter-process protocol is designed to use SPEKE to generate the session key. The key generation process uses the communication password of the BlackBerry Enterprise Server component or BlackBerry MVS and generates an AES-256 encryption key, which is the session key. The BlackBerry Enterprise Server components and BlackBerry MVS use the session key to encrypt the data that the BlackBerry Enterprise Server components and BlackBerry MVS sends to other BlackBerry Enterprise Server components that share the same communication password.

How the BlackBerry Collaboration Service connects to an instant messaging server and collaboration clients on devices

The BlackBerry Collaboration Service is designed to connect to an instant messaging server and the collaboration clients on BlackBerry devices. If your organization's instant messaging server is Microsoft Office Live Communications Server 2005 or Microsoft Office Communications Server 2007, the BlackBerry Collaboration Service connects to the Microsoft Office Communicator Web Access server using HTTPS or HTTP.

Architecture: BlackBerry Enterprise Server components in a segmented network

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Component	Description
BlackBerry Administration Service	The BlackBerry Administration Service connects to the BlackBerry Configuration Database. You can use the BlackBerry Administration Service to manage BlackBerry Enterprise Server components, user accounts, and features for BlackBerry devices.
BlackBerry Attachment Service	The BlackBerry Attachment Service converts supported message attachments into a format that users can view on their devices.
BlackBerry Collaboration Service	The BlackBerry Collaboration Service provides a connection between the instant messaging server and the enterprise instant messaging application on devices.
BlackBerry Configuration Database	The BlackBerry Configuration Database is a relational database that contains the configuration data that BlackBerry Enterprise Server components use.
BlackBerry Controller	The BlackBerry Controller monitors other BlackBerry Enterprise Server components and restarts them if they stop responding.
BlackBerry Dispatcher	The BlackBerry Dispatcher compresses and encrypts all data that devices send and receive. The BlackBerry Dispatcher sends the data through the BlackBerry Router, to and from the wireless network.
BlackBerry Mail Store Service	The BlackBerry Mail Store Service connects to the messaging servers in your organization's environment and retrieves the contact information that the BlackBerry Administration Service must use to search for user accounts on the messaging servers.
BlackBerry MDS Connection Service	The BlackBerry MDS Connection Service permits users to access web content on your organization's intranet or on the Internet. The BlackBerry MDS Connection Service also permits applications on devices to connect to your organization's application and content servers to retrieve application data and updates.
BlackBerry Messaging Agent	The BlackBerry Messaging Agent connects to your organization's messaging servers to provide messaging services, calendar management, contact lookups,

Component	Description
	attachment viewing, and attachment downloading. The BlackBerry Messaging Agent also generates device transport keys and acts as a gateway for the BlackBerry Synchronization Service to access organizer data on the messaging servers. The BlackBerry Messaging Agent synchronizes configuration data between the BlackBerry Configuration Database and user mailboxes.
BlackBerry Monitoring Service	The BlackBerry Monitoring Service is designed to help you monitor your organization's BlackBerry Domain. You can use the BlackBerry Monitoring Service to troubleshoot issues and monitor the health of your organization's BlackBerry Domain proactively.
BlackBerry Policy Service	The BlackBerry Policy Service sends IT policies and IT administration commands to devices and provisions service books. The BlackBerry Policy Service sends service books to devices to configure settings for features and components on the devices.
BlackBerry Router	The BlackBerry Router connects to the wireless network to send data to and from devices. The BlackBerry Router also sends data within your organization's network to devices that are connected to computers that host the BlackBerry Device Manager.
BlackBerry Synchronization Service	The BlackBerry Synchronization Service synchronizes organizer data between devices and the messaging servers over the wireless network.
devices	Devices provides users with access to BlackBerry services such as messaging and browsing.
instant messaging servers	Instant messaging servers store instant messaging accounts.
messaging servers	Messaging servers receive, send, and store all email messages.
organization's application and content servers	Your organization's application server or content server provides push applications and intranet content that the BlackBerry MDS Services use to install on devices.
SNMP agent	The SNMP agent monitors the SNMP queries and traps for the BlackBerry Enterprise Server components.
syslog	The syslog monitors events that the BlackBerry Enterprise Server components produce.
users' computers with the BlackBerry Device Manager	The users' computers with BlackBerry Device Manager permit users to connect their devices to their computers over a serial connection or USB connection. The BlackBerry Enterprise Server uses the connection to send data between it and the devices.

BlackBerry Enterprise Solution connection types and port numbers

The BlackBerry Enterprise Server components authenticate the port connections over a TCP/IP or UDP/IP connection that uses SSL or TLS.

BlackBerry Administration Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
for a Microsoft SQL Server, incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database	TCP	1433	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node

Item	Connection type	Default port number	UI where you can configure the connection
			\Research In Motion \BlackBerry Enterprise Server \Database\Port
incoming data connections from, and outgoing data connections to, browsers	HTTPS	443	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, BlackBerry Enterprise Server components	HTTP	18180	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, BlackBerry Enterprise Server components for HA JNDI	TCP	11100	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, a BlackBerry Administration Service instance for local JNDI	TCP	11099	BlackBerry Configuration Panel
internal data connection	TCP	18082, 18083	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, BlackBerry Enterprise Server components for Java RMI	TCP	13873	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, BlackBerry Enterprise Server components for Java RMI over SSL	TLS	13843	BlackBerry Configuration Panel
internal data connection	TCP	14457	BlackBerry Configuration Panel
internal data connection	TCP	28083	BlackBerry Configuration Panel
internal data connection	TLS	23843	BlackBerry Configuration Panel
internal data connection	TCP	21099	BlackBerry Configuration Panel

Item	Connection type	Default port number	UI where you can configure the connection
data connections between BlackBerry Administration Service instances	UDP	multicast IP address/port 228.1.2.1/48858 228.1.2.1/48857 228.1.2.1/48855 228.1.2.5/45588	—
data connections between BlackBerry Administration Service instances using TCP ping	TCP	first unused port number from 17000 to 17009; 17200 to 17209; 17100 to 17109; 17400 to 17409; 17600 to 17609 and 17800 to 17809	BlackBerry Administration Service

BlackBerry Attachment Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming document submissions from the BlackBerry Attachment Service	TCP	1900	BlackBerry Administration Service
outgoing conversion results to the BlackBerry Attachment Connector	TCP	1900	BlackBerry Administration Service
incoming connections and outgoing connections for BlackBerry Administration Service configuration	TCP	1999	BlackBerry Administration Service
incoming document queries from the BlackBerry Attachment Service	TCP	2000	BlackBerry Administration Service

Item	Connection type	Default port number	UI where you can configure the connection
outgoing conversion results of large attachments to the BlackBerry Attachment Connector for the BlackBerry Attachment Service	TCP	2000	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server database hosts	TCP	1433 (static connections only)	Windows registry <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port

BlackBerry Collaboration Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the Microsoft Office Live Communications Server 2005 or Microsoft Office Communications Server 2007	HTTPS	443	BlackBerry Administration Service

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the Microsoft Office Communications Server 2007 R2 or Microsoft Lync Server 2010	TLS or MTLS	5061	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, IBM Sametime	TCP/IP	1516	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, the Novell GroupWise Messenger	SSL	8300	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, the BlackBerry Dispatcher	TCP	3200	—
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433 (for static port)	<p>Windows registry</p> <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port
outgoing syslog connections to the SNMP agent	UDP	4071	<p>Windows registry</p> <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort

Item	Connection type	Default port number	UI where you can configure the connection
			<ul style="list-style-type: none"> On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort

BlackBerry Configuration Database connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
for a Microsoft SQL Server, incoming data connections from, and outgoing data connections to, any of the following BlackBerry Enterprise Server components:	TCP	1433 (for static port)	BlackBerry Configuration Panel Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion

Item	Connection type	Default port number	UI where you can configure the connection
			\BlackBerry Enterprise Server\Database\Port

BlackBerry Controller connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming syslog connections from the BlackBerry Messaging Agent	UDP	4070	Microsoft Windows registry <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Logging Info\Mailbox Agent\SysLogHost • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Logging Info\Mailbox Agent\SysLogHost
outgoing syslog connections to the BlackBerry Messaging Agent	UDP	port number that the BlackBerry Messaging	—

Item	Connection type	Default port number	UI where you can configure the connection
		Agent provides	

BlackBerry Dispatcher connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from the BlackBerry Messaging Agent	TCP	5096	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Agents\TcpPortDispatcher On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents\TcpPortDispatcher
incoming data connections from, and outgoing data connections to, one or more of the following BlackBerry Enterprise Server components: <ul style="list-style-type: none"> BlackBerry Collaboration Service BlackBerry MDS Connection Service 	TCP	3200	—

Item	Connection type	Default port number	UI where you can configure the connection
<ul style="list-style-type: none"> BlackBerry Policy Service BlackBerry Synchronization Service 			
outgoing data connection that uses SRP to the BlackBerry Router	TCP	3101	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port
incoming data connection from the BlackBerry database notification system	UDP	first unused port number from 4185 to 4499	—
outgoing syslog connection to the SNMP agent	UDP	4071	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort

Item	Connection type	Default port number	UI where you can configure the connection
			<ul style="list-style-type: none"> On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort

BlackBerry Messaging Agent connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
outgoing data connections to the BlackBerry Dispatcher	TCP	5096	<p>Windows registry</p> <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Agents\TcpPortDispatcher On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents\TcpPortDispatcher

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433	<p>Windows registry</p> <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port
incoming syslog connections from the BlackBerry Controller and CalHelper	UDP	first unused port number from 4085 to 4499	—
outgoing syslog connections to the BlackBerry Controller	UDP	4070	<p>Windows registry</p> <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Agents\SysLogHost • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise

Item	Connection type	Default port number	UI where you can configure the connection
			Server\Agents \SysLogHost
outgoing syslog connections to the SNMP agent	UDP	4071	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Agents\UDPPort On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents\UDPPort
incoming data connections from the BlackBerry database notification system	UDP	first unused port number from 4185 to 4499	—

BlackBerry MDS Connection Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
if access control for push applications is turned on, incoming connections for the HTTP listener port	HTTP	8080	BlackBerry Administration Service

Item	Connection type	Default port number	UI where you can configure the connection
if access control for push applications is turned on, incoming connections for the HTTP listener port	HTTPS	8443	BlackBerry Administration Service
incoming data connections from, and outgoing data connections to, the BlackBerry Dispatcher	TCP	3200	—
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433	<p>Windows registry</p> <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port
outgoing syslog connections to the SNMP agent	UDP	4071	<p>Windows registry</p> <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion

Item	Connection type	Default port number	UI where you can configure the connection
			\\BlackBerrySNMPAgent \\Parameters\\UDPPort
incoming data connections for reliable pushes	TCP	7874	BlackBerry Administration Service

BlackBerry Monitoring Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
for a Microsoft SQL Server, incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database and BlackBerry Monitoring Service database	TCP	1433	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, browsers	HTTP	58180	—
incoming data connections from, and outgoing data connections to, browsers	HTTPS	8443	—
incoming data connections from, and outgoing data connections to, the BlackBerry Enterprise Server and any other applications that you configured the BlackBerry Monitoring Service to send SNMP traps to	SNMP	161 and 162	BlackBerry Monitoring Service console
internal data connection to the BlackBerry Monitoring Service Application Core	TCP	55500	BlackBerry Configuration Panel
internal data connection to the BlackBerry Monitoring Service Polling Engine	TCP	55501	BlackBerry Configuration Panel
internal data connection to the BlackBerry Monitoring Service Data Collection Subsystem	TCP	55502	BlackBerry Configuration Panel

Item	Connection type	Default port number	UI where you can configure the connection
internal data connection to the BlackBerry Monitoring Service console	TCP	55503	BlackBerry Configuration Panel

BlackBerry Policy Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the BlackBerry Dispatcher	TCP	3200	—
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433 (for the static port)	Windows registry <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Database\Port
incoming data connections from the BlackBerry database notification system	UDP	first unused port number from 4185 to 4499	—

BlackBerry Router connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from the BlackBerry Dispatcher that use SRP	TCP	3101	BlackBerry Configuration Panel Windows registry <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerryRouter\ServicePort • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerryRouter\ServicePort
outgoing data connections to the BlackBerry Infrastructure that use SRP	TCP	3101	BlackBerry Configuration Panel Windows registry <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, BlackBerry devices that use the BlackBerry Device Manager to bypass the wireless network and devices that connect using Wi-Fi	TCP	4101	<p data-bbox="1063 256 1258 317">\BlackBerryRouter \TcpPort</p> <ul data-bbox="1029 348 1315 1237" style="list-style-type: none"> <li data-bbox="1029 348 1315 600">• On a 64-bit version of Windows: HKEY_LOCAL_MACHIN E\SOFTWARE \WOW6432Node \Research In Motion \BlackBerryRouter \TcpPort <li data-bbox="1029 638 1315 956">• On a 32-bit version of Windows: HKEY_LOCAL_MACHIN E\SOFTWARE\Research In Motion \BlackBerryRouter \DevicePort <li data-bbox="1029 994 1315 1237">• On a 64-bit version of Windows: HKEY_LOCAL_MACHIN E\SOFTWARE \WOW6432Node \Research In Motion \BlackBerryRouter \DevicePort <p data-bbox="1026 638 1315 713">BlackBerry Device Manager Windows registry</p>
outgoing syslog connections to the SNMP agent	UDP	4071	<p data-bbox="1026 1286 1200 1312">Windows registry</p> <ul data-bbox="1029 1338 1315 1489" style="list-style-type: none"> <li data-bbox="1029 1338 1315 1489">• On a 32-bit version of Windows: HKEY_LOCAL_MACHIN E\SOFTWARE\Research In Motion

Item	Connection type	Default port number	UI where you can configure the connection
			<p>\BlackBerrySNMPAgent \Parameters\UDPPort</p> <ul style="list-style-type: none"> On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort

BlackBerry Synchronization Service connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the BlackBerry Dispatcher	TCP	3200	—
incoming data connections from, and outgoing data connections to, the BlackBerry Configuration Database that a Microsoft SQL Server hosts	TCP	1433	<p>Windows registry</p> <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Database\Port On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from the BlackBerry database notification system	UDP	first unused port number from 4185 to 4499	\WOW6432Node \Research In Motion \BlackBerry Enterprise Server\Database\Port

IBM Sametime connection type and port number

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from and outgoing data connections to the BlackBerry Collaboration Service	TCP/IP	1533	IBM Sametime Administration Tool

BlackBerry Client for use with Microsoft Office Live Communications Server 2005 connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the Microsoft Office Live Communications Server	TLS	5061	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, the Microsoft Office Live Communications Server	TCP	5060	BlackBerry Configuration Panel

Microsoft Office Live Communications Server 2005 connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the connector for the Microsoft Office Live Communications Server	TLS	5061	Microsoft Office Live Communications Server
incoming data connections from, and outgoing data connections to, the connector for the Microsoft Office Live Communications Server	TCP	5060	Microsoft Office Live Communications Server

Novell GroupWise connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the SOAP API	TCP	7191	BlackBerry Configuration Panel
incoming data connections from, and outgoing data connections to, the SOAP API	TCP	9000	BlackBerry Configuration Panel

Novell GroupWise Messenger connection type and port number

Item	Connection type	Default port number	UI where you can configure the connection
incoming data connections from, and outgoing data connections to, the BlackBerry Collaboration Service	SSL	8300	Novell GroupWise server that hosts the Novell GroupWise Messaging Agent

SNMP agent connection types and port numbers

Item	Connection type	Default port number	UI where you can configure the connection
incoming syslog connections from the following BlackBerry Enterprise Server components: <ul style="list-style-type: none"> • BlackBerry Messaging Agent • BlackBerry Dispatcher • BlackBerry Router 	UDP	4071	Windows registry <ul style="list-style-type: none"> • On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort • On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerrySNMPAgent\Parameters\UDPPort
incoming syslog connections from SNMP queries and traps	UDP	161	Windows registry
outgoing syslog connections from SNMP queries and traps	TCP	162	Windows registry

Syslog connection type and port number

Item	Connection type	Default port number	UI where you can configure the connection
listener port for the BlackBerry Enterprise Server events	UDP	514	<p>Windows registry</p> <ul style="list-style-type: none"> On a 32-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Research In Motion\BlackBerry Enterprise Server\Logging Info\<i><component></i>(Default) On a 64-bit version of Windows: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Logging Info\<i><component></i>(Default)

Changing port numbers

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Change the port number that BlackBerry Enterprise Server components use to connect to the BlackBerry Configuration Database

You can change the static port number that BlackBerry Enterprise Server components use if you changed the port number that the BlackBerry Configuration Database uses after you install the BlackBerry Enterprise Server.

By default, the BlackBerry Configuration Database accepts TCP/IP connections to port 1433 on a Microsoft SQL Server. The BlackBerry Configuration Database accepts connections through ports 1024 to 65535.

1. On the computer that hosts the BlackBerry Enterprise Server component, open the BlackBerry Configuration Panel.
2. In the **Database Connectivity** tab, in the **Use dynamic ports or specify SQL port** field, type the port number.
3. Click **Apply**.
4. Click **OK**.
5. In the Windows Services, restart the appropriate service for the BlackBerry Enterprise Server component.
6. Repeat steps 1 to 5 on each computer that hosts a BlackBerry Enterprise Server component that connects to the BlackBerry Configuration Database.

Change the port number that the syslog tools use to monitor BlackBerry Enterprise Server events

You can change the port number that the syslog tools listen on to monitor BlackBerry Enterprise Server events. By default, the syslog tools listen to events for the BlackBerry Enterprise Server on port 514.

1. On the computer that hosts the BlackBerry Enterprise Server component, open the Windows Registry Editor.
2. Perform one of the following actions:
 - If you are running a 32-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server.
3. In the **Logging Info** registry key, click a BlackBerry Enterprise Server component.
4. If the DWORD value does not exist, create a DWORD value that you name **(Default)**.
5. Change the DWORD value to the port number that the syslog tools listen on.
6. Click **OK**.
7. In the Windows Services, restart the service for the BlackBerry Enterprise Server component.

Glossary

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AES	Advanced Encryption Standard
ASCII	American Standard Code for Information Interchange
BlackBerry inter-process protocol	The BlackBerry inter-process protocol is a BlackBerry proprietary protocol that generates the session key that BlackBerry Enterprise Solution components, such as the BlackBerry Enterprise Server and BlackBerry Mobile Voice System, can use to communicate in a highly secure manner with each other. The BlackBerry inter-process protocol generates the session key based on the communication password.
BlackBerry MDS	BlackBerry Mobile Data System
BlackBerry MVS	BlackBerry Mobile Voice System
communication password	The communication password is a password that BlackBerry Enterprise Solution components use for the BlackBerry inter-process protocol. The communication password is designed to prevent a potentially malicious user from viewing the data that the components send to each other.
DMZ	A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.
HTTP	Hypertext Transfer Protocol over Secure Sockets Layer
HTTPS	Hypertext Transfer Protocol over Secure Sockets Layer
IP address	An Internet Protocol (IP) address is an identification number that each computer or mobile device uses when it sends or receives information over a network, such as the Internet. This identification number identifies the specific computer or mobile device on the network.
IT administration command	An IT administration command is a command that you can send over the wireless network to protect sensitive information on a BlackBerry device or delete all BlackBerry device data.
IT policy	An IT policy consists of various IT policy rules that control the security features and behavior of BlackBerry smartphones, BlackBerry PlayBook tablets, the BlackBerry Desktop Software, and the BlackBerry Web Desktop Manager.
IT policy rule	An IT policy rule permits you to customize and control the actions that BlackBerry smartphones, BlackBerry PlayBook tablets, the BlackBerry Desktop Software, and the BlackBerry Web Desktop Manager can perform.
JNDI	Java Naming and Directory Interface

LAN	local area network
MAPI	Messaging Application Programming Interface
MTLS	Mutual Transport Layer Security
NetBIOS	network basic input/output system
NSPI	Name Service Provider Interface
PAP	Push Access Protocol
RMI	Remote Method Invocation
RPC	remote procedure call
SMB	Server Message Block
SNMP	Simple Network Management Protocol
SPEKE	Simple Password-authenticated Exponential Key Exchange
SQL	Structured Query Language
SRP	Server Routing Protocol
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol/Internet Protocol (TCP/IP) is a set of communication protocols that is used to transmit data over networks, such as the Internet.
TCP	Transmission Control Protocol
TLS	Transport Layer Security
UDP/IP	User Datagram Protocol/Internet Protocol
UDP	User Datagram Protocol
USB	Universal Serial Bus

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