

BlackBerry Performance Engineering Resource Kit

Version: 2.1

Administration Guide

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Overview: BlackBerry Performance Engineering Resource Kit

1

You can use the BlackBerry® Performance Engineering Resource Kit to test the behavior of a BlackBerry® Enterprise Server and the BlackBerry Enterprise Server components under operating conditions that are typical for your organization. You can test a new version of the BlackBerry Enterprise Server or changes that you made to an existing BlackBerry Enterprise Server before you implement the changes. You can change options in the BlackBerry Performance Engineering Resource Kit to change the operating conditions of the test environment, including the amount of work or workload and the active signals that the BlackBerry Enterprise Server receives.

You can use the BlackBerry Performance Engineering Resource Kit if your test environment includes a copy of the BlackBerry Enterprise Server and the BlackBerry Configuration Database that you want to test.

The BlackBerry Performance Engineering Resource Kit includes the following components:

- The BlackBerry Load Test Configuration Tool converts existing user accounts into a format that the BlackBerry Infrastructure and Smartphone Simulator can use. You must use the BlackBerry Load Test Configuration Tool to convert BlackBerry Enterprise Server user accounts before you run tests with the BlackBerry Enterprise Server.
- The BlackBerry Infrastructure and Smartphone Simulator simulates the actions of the BlackBerry® Infrastructure and the BlackBerry devices. The BlackBerry Infrastructure and Smartphone Simulator sends all messages, including email messages, records, and acknowledgements, to and from simulated BlackBerry devices through a simulated BlackBerry Infrastructure. You do not require a BlackBerry Smartphone Simulator to use the BlackBerry Infrastructure and Smartphone Simulator in a test environment.

You can use the BlackBerry Performance Engineering Resource Kit with the following versions of the BlackBerry Enterprise Server:

- BlackBerry® Enterprise Server 4.1.6 or later for Microsoft® Exchange
- BlackBerry® Enterprise Server 4.1.6 or later for IBM® Lotus® Domino®
- BlackBerry® Enterprise Server 4.1.6 or later for Novell® GroupWise®
- BlackBerry® Enterprise Server 4.1.6 or later for MDS Applications

The BlackBerry Performance Engineering Resource Kit is available to BlackBerry® Technical Support Services customers that have a Tx4, Tx5, Premium Support, or Elite Support subscription.

Requirements

2

System requirements: BlackBerry Performance Engineering Resource Kit

Item	Requirement
hardware	<p>on the computer hosting the BlackBerry Infrastructure and Smartphone Simulator:</p> <ul style="list-style-type: none"> • Intel® Pentium® III 2.5 GHz (or higher) processor or its equivalent • 1 GB RAM or more • hard disk space for a 6 MB installation, 15 MB for each day of logs stored, and additional space that is sufficient for any files that will be transferred using network access
license	an unused BlackBerry® Client Access License
operating system	<p>any of the following operating systems:</p> <ul style="list-style-type: none"> • Windows Server® 2000 SP4 • Windows Server 2003 SP2 • Windows Server 2008
redistributable packages	<p>on each machine hosting a component of the BlackBerry® Performance Engineering Resource Kit:</p> <ul style="list-style-type: none"> • Microsoft® Visual C++® 2005 C++ SP1 redistributable package (x86) • Microsoft® .NET Framework 2.0
virtual environment	<p>if you are using a virtual environment, one of the following:</p> <ul style="list-style-type: none"> • VMware® ESX® Server 3.0 • VMware ESX Server 3.5

Related topics

[System requirements: Test environment for the BlackBerry Performance Engineering Resource Kit, 8](#)

System requirements: Test environment for the BlackBerry Performance Engineering Resource Kit

To analyze the performance of the BlackBerry® Enterprise Server using the BlackBerry® Performance Engineering Resource Kit, you require four computers in the test environment. Some BlackBerry Enterprise Server configurations that you can install require additional computers (for example, a BlackBerry Enterprise Server with BlackBerry® MDS Services). If you install a BlackBerry Enterprise Server with BlackBerry MDS Services, you must have enough computers to run the BlackBerry Enterprise Server in the test environment.

Computer	Requirements
computer that hosts the messaging server	<ul style="list-style-type: none"> • messaging server • performance monitor
computer that hosts the BlackBerry Enterprise Server	<ul style="list-style-type: none"> • BlackBerry Enterprise Server • BlackBerry Load Test Configuration Tool • Microsoft® Visual C++® 2005 C++ SP1 redistributable package (x86) • Microsoft® .NET Framework 2.0 • performance monitor
computer that hosts the BlackBerry Configuration Database	<ul style="list-style-type: none"> • Microsoft® SQL Server® • BlackBerry Configuration Database
computer that hosts the load simulation tools	<ul style="list-style-type: none"> • BlackBerry Infrastructure and Smartphone Simulator • Microsoft® Visual C++® 2005 C++ SP1 redistributable package (x86) • Microsoft .NET Framework 2.0 • for full functionality, a load generator

Related topics

[System requirements: BlackBerry Performance Engineering Resource Kit, 7](#)

Pre-installation tasks

3

Configuring a messaging server

A test environment for the BlackBerry® Enterprise Server requires a messaging server unless you are testing the BlackBerry® Enterprise Server for MDS Applications. The BlackBerry® Enterprise Server for Microsoft® Exchange, the BlackBerry® Enterprise Server for IBM® Lotus® Domino®, and the BlackBerry® Enterprise Server for Novell® GroupWise® require a messaging server to send email messages and other messages.

The messaging server in a test environment is typically not connected to the Internet, so you must configure the messaging server to send messages within the test environment only.

You should make sure that you configure a load generator for use with the messaging server. The load generator creates the messages that the BlackBerry Enterprise Server sends.

You can configure the messaging server in your test environment using the same method that you would use to configure a messaging server of the same version that is associated with a BlackBerry Enterprise Server in your organization.

Backing up and restoring BlackBerry Enterprise Server information

Back up Microsoft Exchange mailboxes

To use the information in the BlackBerry® Enterprise Server, including the BlackBerry Configuration Database, with the BlackBerry® Performance Engineering Resource Kit, you must back up both the BlackBerry Configuration Database and the user mailboxes. You use the backups in your test environment to create a duplicate of your organization's environment.

Before you begin: Verify that the user accounts and the user mailboxes exist.

1. Stop the Microsoft® Exchange Information Store service.
2. Browse to C:\Program Files\Exchsrv.
3. Create a backup folder.
4. Copy the **MDBData** file into the backup folder that you created.
5. Start the Microsoft Exchange Information Store service again.

Restore the BlackBerry Enterprise Server and user mailboxes from backups

Before you begin:

- Verify that backups of the BlackBerry® Enterprise Server and the user mailboxes exist.
- Verify that both backups were made at the same time.

1. In your test environment, stop the BlackBerry Enterprise Server.
2. On the computer that hosts the Microsoft® SQL Server® and the BlackBerry Configuration Database, restore the backup of the BlackBerry Configuration Database.
3. On the computer that hosts the messaging server, restore the backup of the user mailboxes from the appropriate backup folder. For more information about restoring backups, see the documentation for the messaging server.
4. Start the BlackBerry Enterprise Server.

Configure settings for BlackBerry Enterprise Server 4.1

You must configure settings for the BlackBerry® Enterprise Server 4.1 using the BlackBerry Configuration Panel.

1. On the **BlackBerry Server** tab, in the **Router Host** field, type **localhost**.
2. In the **Attachment Host** field, type **localhost**.
3. In the **SRP Authentication key** field, type one of the SRP Authentication Keys that are a part of the BlackBerry® Performance Engineering Resource Kit. The keys are located in the `<install_directory>\Documentation\SRP Keys.txt` file on the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.
4. On the **Database Connectivity** tab, in the **SQL Server** field, type the name of the Microsoft® SQL Server® that you use in your organization's test environment.
5. In the **SQL Server** field and **BlackBerry Configuration Database** field, type the name of the BlackBerry Configuration Database that you use in your organization's test environment.
6. On the **BlackBerry Router** tab, in the **SRP Address** field, type the name of the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.
7. Click **OK**.

Configure settings for BlackBerry Enterprise Server 5.0 or later

You should choose an SRP authentication key for the BlackBerry® Enterprise Server. SRP authentication keys for the BlackBerry® Infrastructure and Smartphone Simulator are stored on the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator, in the `<install_directory>\Documentation\SRP Keys.txt` file.

1. In the BlackBerry Administration Service, open **Servers and components > BlackBerry Solution topology > Server view**.
2. Click the name of the BlackBerry Enterprise Server that you want to configure.
3. In the right pane, click **Server Configuration**.
4. In the right pane, click **Edit fields**.
5. In the right pane, in the **Authentication key** field, type the SRP key.
6. Click **OK**.
7. On the computer that hosts the BlackBerry Enterprise Server, on the **Start** menu, click **Run**.
8. In the **Open** field, type **regedit**.

9. Click **OK**.
10. In the left pane of the Registry Editor, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Database.
11. If the Registry Editor does not contain the DatabaseName key and DatabaseServerMachineName key, create these keys.
12. In the Registry Editor, in the **DatabaseName** field, type the name of the BlackBerry Configuration Database.
13. In the Registry Editor, in the **DatabaseServerMachineName** field, specify the fully qualified domain name of the database server.
14. Click **OK**.
15. Restart the BlackBerry Enterprise Server and the BlackBerry Administration Service.

BlackBerry Enterprise Server permissions

The BlackBerry® Enterprise Server requires specific permissions for the Microsoft® SQL Server® that hosts the BlackBerry Configuration Database and for the messaging server in the test environment.

Item	Permission
Microsoft SQL Server	<p>The BlackBerry Enterprise Server must have an account with the following credentials:</p> <ul style="list-style-type: none"> • login • password
Microsoft® Exchange 2007	<p>The BlackBerry Enterprise Server must have an account that is named BESAdmin with the following permissions:</p> <ul style="list-style-type: none"> • Owner for all public folders • ExtendedRight • Receive As • ms-Exch-Store-Admin • Log on Locally with Local Permissions • Log On As A Service <p>Each BlackBerry device user must have the following permissions:</p> <ul style="list-style-type: none"> • Send As • Read for all public folders • Visible for all public folders • Schedule+free and busy for the system public folder

Item	Permission
Microsoft Exchange 2003	<p>The BlackBerry Enterprise Server must have an account that is named BESAdmin. The account must be a member of the Domain User group and have the following permissions:</p> <ul style="list-style-type: none">• Exchange View Only Administrator with a minimum access level of Administrative Groups• Send As• Receive As• Administer Information Store• Owner permission on all public folders
IBM® Lotus® Domino®	<p>In the Server document for the computer that hosts the IBM® Lotus® Domino® server, the Run unrestricted methods and operation field must include the LocalDomainServers group.</p>
Novell® GroupWise®	—

Installing the BlackBerry Performance Engineering Resource Kit

4

Prerequisites: Installing the BlackBerry Performance Engineering Resource Kit

- Verify that you know the computer name, administrator name, password, and database name for the Microsoft® SQL Server®.
- Verify that you know the name of the BlackBerry® Enterprise Server and the name of the database.
- Verify that you installed the Microsoft® Visual C++® 2005 SP1 redistributable package (x86) on each computer that hosts the BlackBerry Load Test Configuration Tool and the computer that hosts the BlackBerry® Infrastructure and Smartphone Simulator.
- Verify that you installed the redistributable package for Microsoft® .NET Framework 2.0 on both the computer that hosts the BlackBerry Enterprise Server and the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.
- Verify that you have an SRP key from the <install_directory>\Documentation\SRP Keys.txt file ready to use so that the BlackBerry Enterprise Server can send messages to the BlackBerry Infrastructure and Smartphone Simulator and receive messages from it.

Configuring the BlackBerry Infrastructure and Smartphone Simulator

Install the BlackBerry Infrastructure and Smartphone Simulator

You must install the BlackBerry® Infrastructure and Smartphone Simulator on a computer that does not host the BlackBerry® Enterprise Server. When you are prompted for an SRP Authentication key, use an SRP Authentication key that is located in the <install_directory>\Documentation\SRP Keys.txt file on the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.

1. Log in to the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.
2. In the folder where the BlackBerry® Performance Engineering Resource Kit installer is located, run the **BBISim\setup.exe** file.
3. Follow the prompts.

Configure a location for the BlackBerry Configuration Database

When you start the BlackBerry Infrastructure and Smartphone Simulator for the first time, it performs the first two steps automatically.

1. In the BlackBerry Infrastructure and Smartphone Simulator, open the **Options** dialog box.
2. In the left pane, click **Server Configuration**.

3. In the **Server** field, type the name of the Microsoft® SQL Server®.
4. In the **Database** field, type the name of the BlackBerry Configuration Database.
5. In the **Authentication** drop-down list, select the type of authentication for the Microsoft SQL Server.
6. If the BlackBerry Configuration Database uses Microsoft SQL Server authentication, in the **User** field, type the user name for the administrator account that accesses the BlackBerry Configuration Database.
7. If the BlackBerry Configuration Database uses Microsoft SQL Server authentication, in the **Password** field, type the password for the administrator account that accesses the BlackBerry Configuration Database.
8. To test the information that you entered on this dialog box, click **Connect To Database**.
9. If the information is correct, click **Save**.

Example: Configure a test environment using Microsoft Exchange 2007

To perform this task, your test environment must include Microsoft® Exchange 2007, a load generator tool (either Microsoft Exchange Load Generator or Microsoft Exchange Server 2003 Load Simulator), Microsoft® SQL Server®, and the BlackBerry® Performance Engineering Resource Kit. The BlackBerry Load Test Configuration Tool is on the computer that hosts the BlackBerry® Enterprise Server. The BlackBerry Infrastructure and Smartphone Simulator is on a separate computer.

1. In the test environment, using Microsoft® Active Directory®, delete the user accounts that the load generator tool created from Microsoft Exchange 2007.
2. Stop Microsoft Exchange 2007.
3. In Microsoft Exchange 2007, delete the contents of the First Storage group and Second Storage group.
4. Start Microsoft Exchange 2007 again.
5. In the Microsoft Exchange Management Console, mount the public folders and the database for the messaging server on Microsoft Exchange 2007.
6. If you are prompted to have the load generator re-create the user accounts, click **Yes**.
7. Using Microsoft Active Directory, create a user account that is named BESAdmin.
8. In Microsoft Exchange 2007, create an administrative user account that is named BESAdmin. Perform the following actions:
 - a. If the mailbox for the administrative user account exists, delete it.
 - b. Create the administrative user account that is named BESAdmin.
 - c. Create the mailbox for the administrative user account.
9. Back up the mailboxes of all user accounts.
10. Perform one of the following tasks:

Task	Steps
Configure the test settings using the Microsoft Exchange Load Generator.	a. Configure the test settings.

- b. Update the Microsoft Exchange Load Generator configuration file so that the number of populated email messages is zero. Perform the following actions in the <UserGroups><UserGroup> section.
 1. In <ActionProfileName="ProfileName">, change <ProfileName> to **Custom**.
 2. In <MailboxStoreProfileName="MailboxName">, change <MailboxName> to **Custom**.
 3. In the <UserGroups><UserGroup> section, change the values for the tags that end in Count to **0**, except for NewFolderCount.
- c. Initialize the test configuration.

Configure settings using the Microsoft Exchange Server 2003 Load Simulator.

- a. Configure the populated email messages to zero.
- b. Configure the test settings.
- c. Initialize the user accounts.

11. Back up the mailboxes of all BlackBerry Enterprise Server user accounts.
12. On a separate computer from the other computers, install the BlackBerry Enterprise Server.
13. On the same computer, install the BlackBerry Load Test Configuration Tool.
14. In Microsoft Exchange 2007, create a file that contains the list of user accounts for the BlackBerry Load Test Configuration Tool.
15. On the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator, start the BlackBerry Infrastructure and Smartphone Simulator.
16. Start the BlackBerry Enterprise Server.
17. Using the BlackBerry Load Test Configuration Tool, convert the user accounts into a format that the BlackBerry Infrastructure and Smartphone Simulator can use.
18. Verify that the correct number of user accounts exists in the BlackBerry Enterprise Server.

Configuring the BlackBerry Load Test Configuration Tool

Install the BlackBerry Load Test Configuration Tool

You must install the BlackBerry® Enterprise Server before you install the BlackBerry® Load Test Configuration Tool because the BlackBerry Load Test Configuration Tool is installed on the same computer and uses information stored by the BlackBerry Enterprise Server. The BlackBerry Load Test Configuration Tool requires a list of fully qualified user accounts for BlackBerry® device users.

1. From its download location, copy the BlackBerry Load Test Configuration Tool setup application to the computer that hosts the BlackBerry Enterprise Server that you want to test.

2. On the computer, log in to the BlackBerry Enterprise Server as an administrator.
3. In the folder where you copied the setup application, run the **BBLTConfig\setup.exe** file.
4. Follow the prompts.

Post-installation tasks

5

Converting user accounts using the BlackBerry Load Test Configuration Tool

Prerequisites: Importing user accounts using the BlackBerry Load Test Configuration Tool

- Verify that the BlackBerry® Enterprise Server is running.
- Verify that the messaging server is running.
- Verify that you configured the administrator profile for the BlackBerry Enterprise Server correctly.
- Verify that you configured the permissions for the BlackBerry Enterprise Server correctly.
- If you plan on testing BlackBerry Enterprise Server 4.1, verify that you can start the BlackBerry Manager successfully.
- If you plan on testing BlackBerry Enterprise Server 5.0 or later, verify that you installed the BlackBerry® Administration API.

Generating a list of user accounts

You must provide the BlackBerry® Infrastructure and Smartphone Simulator with the text file that contains the user account list. Each user account must be identified by a unique email address.

You must generate the user account list the first time you run the BlackBerry Load Test Configuration Tool and each time you change the number of user accounts that are associated with the BlackBerry® Enterprise Server unless you are testing the wireless activation process.

Each line of the user account list contains one email address. To create the user account list, use the method that is provided with your messaging server or edit the list of statistics that the BlackBerry Enterprise Server exports.

Optionally, the list can also contain one PIN for each email address that is separated from the email address by a tab character. You might use this if you have multiple BlackBerry Enterprise Server instances and you must run the BlackBerry Load Test Configuration Tool again on one. The PIN is the PIN that the BlackBerry Infrastructure and Smartphone Simulator uses, not the original PIN. If you include a PIN, each email address must have a PIN. Each PIN should be hexadecimal and should appear in the list in sequential order, starting with F1000000.

Example: The format of user account list

```
# The BlackBerry Load Test Configuration Tool
# ignores lines that begin with # marks and ignores blank lines.
# [] indicates optional information.

<fully_qualified_email_address>[<tab><PIN>]
```

Convert user accounts using the BlackBerry Load Test Configuration Tool

You must use the BlackBerry® Load Test Configuration Tool to convert PIN values that are in BlackBerry device user accounts so that the BlackBerry® Infrastructure and Smartphone Simulator can use them. You must use the BlackBerry Load Test Configuration Tool before you use the BlackBerry Infrastructure and Smartphone Simulator for the first time or after you change the sequence of user accounts on the BlackBerry® Enterprise Server.

1. On the computer that hosts the BlackBerry Enterprise Server, log in to the BlackBerry Enterprise Server as an administrator.
2. On the computer that hosts the BlackBerry Enterprise Server, start the BlackBerry Load Test Configuration Tool.
3. In the BlackBerry Load Test Configuration Tool, if multiple email profiles are available, click the profile that you want to use. Click **OK**.
4. If your organization is testing BlackBerry Enterprise Server 5.0 or later, in the appropriate fields, type the administrator login information for the BlackBerry Administration Service.
5. Click **Import the user list**.
6. Navigate to the list of user accounts.
7. Click **Import users**.
8. Click **Close**.

Using the BlackBerry Infrastructure and Smartphone Simulator

6

Start the BlackBerry Infrastructure and Smartphone Simulator

1. On the computer that hosts the BlackBerry® Infrastructure and Smartphone Simulator, on the taskbar, click **Start > Programs > Research In Motion > Performance Engineering Resource Kit > BlackBerry Infrastructure and Smartphone Simulator**.
2. On the computer that hosts the BlackBerry Enterprise Server that you use in your test environment, start the BlackBerry Enterprise Server.

Related topics

[Pausing and resuming the BlackBerry Infrastructure and Smartphone Simulator, 19](#)

Pausing and resuming the BlackBerry Infrastructure and Smartphone Simulator

The BlackBerry® Infrastructure and Smartphone Simulator begins simulating the BlackBerry® Infrastructure and BlackBerry devices as soon as it starts. The BlackBerry Infrastructure and Smartphone Simulator updates the counters and generates messages based on the timer settings in a workload profile.

You can pause the simulation. When you pause the BlackBerry Infrastructure and Smartphone Simulator, the simulator stops sending messages from simulated BlackBerry devices. The BlackBerry Infrastructure and Smartphone Simulator still receives messages from the BlackBerry® Enterprise Server. You can pause the BlackBerry Infrastructure and Smartphone Simulator in order to adjust a setting on the messaging server, the load generator, or the BlackBerry Enterprise Server. When you resume the simulation, the BlackBerry Infrastructure and Smartphone Simulator resumes sending messages from simulated BlackBerry devices.

If you have configured your BlackBerry Infrastructure and Smartphone Simulator to send many messages, the simulator stores messages in a queue. When you pause the BlackBerry Infrastructure and Smartphone Simulator, it sends the messages in the queue but creates no new ones.

When you save a workload profile, even while the BlackBerry Infrastructure and Smartphone Simulator is paused, the simulator automatically starts sending messages again. The BlackBerry Infrastructure and Smartphone Simulator exits the paused state.

Related topics

[Start the BlackBerry Infrastructure and Smartphone Simulator, 19](#)

Pause the BlackBerry Infrastructure and Smartphone Simulator

In the BlackBerry Infrastructure and Smartphone Simulator, click **Simulation > Pause**.

Resume the timers for the BlackBerry Infrastructure and Smartphone Simulator

In the BlackBerry Infrastructure and Smartphone Simulator, click **Simulation > Start**.

Viewing the name of the BlackBerry Enterprise Server instance that is displayed in the BlackBerry Infrastructure and Smartphone Simulator

In the BlackBerry® Infrastructure and Smartphone Simulator you can see the names of the BlackBerry® Enterprise Server instances that the simulator can connect to. The BlackBerry Infrastructure and Smartphone Simulator displays the details of only one instance of the BlackBerry Enterprise Server at a time.

You can view the status of each BlackBerry Enterprise Server in the test environment. A BlackBerry Enterprise Server can have a status of Authenticated, Connected, or Disconnected. A test using the BlackBerry Infrastructure and Smartphone Simulator can be run only with authenticated instances of the BlackBerry Enterprise Server.

Associate new user accounts with the BlackBerry Enterprise Server of the test environment

In test environments using a messaging server other than IBM® Lotus® Domino®, the BlackBerry® Load Test Configuration Tool adds new user accounts to the BlackBerry® Enterprise Server automatically when you run the BlackBerry Load Test Configuration Tool if their email addresses are in the list of user accounts.

Before you begin: Verify that the new user accounts exist on the messaging server.

1. If your test environment uses a Lotus Domino messaging server, delete all user accounts from the BlackBerry Enterprise Server associated with the Lotus Domino messaging server.
2. On the computer that hosts the BlackBerry Enterprise Server, add the email addresses of the new user accounts to the file that contains the list of user accounts. Enter only one email address on each line of the file.
3. Run the BlackBerry Load Test Configuration Tool.

Change user accounts that are associated with an instance of the BlackBerry Enterprise Server of the test environment

1. Delete the user accounts from the BlackBerry® Enterprise Server using the appropriate BlackBerry Enterprise Server tool.
 - If the BlackBerry Enterprise Server is earlier than BlackBerry Enterprise Server 5.0, use the BlackBerry Manager.
 - If the BlackBerry Enterprise Server is BlackBerry Enterprise Server 5.0 or later, use the BlackBerry Administration Service.

2. On the computer that hosts the BlackBerry Enterprise Server, delete the appropriate mail addresses from the file that contains the list of user accounts.
3. Convert the user accounts using the BlackBerry Load Test Configuration Tool.

After you finish:

Verify that the number of user accounts that are available to the BlackBerry Infrastructure and Smartphone Simulator is the same as the number of user accounts that are associated with the BlackBerry Enterprise Server.

Change a workload profile

A workload profile is a collection of settings that determines what protocols the BlackBerry® Infrastructure and Smartphone Simulator sends, what messages the simulator sends, and how often. Any test that uses the BlackBerry Infrastructure and Smartphone Simulator uses a workload profile.

Note: When you save a workload profile, the current test starts running. If the BlackBerry Infrastructure and Smartphone Simulator is paused, the simulator resumes.

1. In the BlackBerry Infrastructure and Smartphone Simulator, open the workload profile that you want to change, or create a new workload profile.
2. Change the appropriate settings
3. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Related topics

[Change an existing workload profile, 21](#)

[Add a new payload to a workload profile, 37](#)

[Delete a payload, 37](#)

[Add a calendar event payload to a workload profile, 43](#)

Change an existing workload profile

You must update the workload profile for a workload to change the settings in the BlackBerry® Infrastructure and Smartphone Simulator, such as the number of messages of each type that are sent.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the workload profile that you want to change.
3. In the left pane, click the part of the workload profile that you want to change.
4. Change the appropriate values.
5. Click **Save** until the main screen of the simulator appears.

Related topics

[Change a workload profile, 21](#)

Payloads and weights

A payload is the information that a message contains. The message can be anything that the BlackBerry® Infrastructure and Smartphone Simulator sends, such as an email message, a calendar entry, a synchronization request, or an HTTP request. Each message type has different properties. The BlackBerry Infrastructure and Smartphone Simulator determines the properties of the payload randomly, such as its size, within the limits that you set. You can configure the limits of the payload for each type of message in a workload profile. For example, you can define a small email message as one that has a body between 20 bytes and 200 bytes long.

If you define two or more types of payloads for a type of message, the weight is the percentage of messages that contain a given payload. If you define only one payload, the payload has a weight of 100%. If you define two or more payloads, you can adjust the percentage of time that each is sent. For example, you can define a small payload and a large payload for email messages, and then specify the weights so that the BlackBerry Infrastructure and Smartphone Simulator sends the small payload 80% of the time and the large payload 20% of the time. The total of the weights must be 100%.

The BlackBerry® Enterprise Server sends only messages that the messaging server sends. To specify the sizes of the messages that the BlackBerry Enterprise Server sends, you must see the documentation for your load generator. The BlackBerry Enterprise Server sends the changes that are made on the messaging server.

Changing the workload in a workload profile

You can use timers to configure the number of messages for each user account that the BlackBerry® Infrastructure and Smartphone Simulator sends to the BlackBerry® Enterprise Server in an 8-hour period. You can change the amount of work that the BlackBerry Enterprise Server does during a test by changing the number of messages that the BlackBerry Infrastructure and Smartphone Simulator sends, or by changing the number of user accounts on the BlackBerry Enterprise Server.

The BlackBerry Enterprise Server sends service books and IT policies to BlackBerry devices. To configure the number of service books or IT policies that the BlackBerry Infrastructure and Smartphone Simulator receives, change the appropriate settings for the BlackBerry Enterprise Server.

Default workload profile settings

You can use the RIM® passive workload profile when you test the installation of the BlackBerry® Enterprise Server, messaging server, load generator, and performance monitor. With the passive workload profile, the BlackBerry Infrastructure and Smartphone Simulator receives messages from the BlackBerry Enterprise Server, but does not send messages from the BlackBerry devices.

The messages that are indicated in the workload profiles are messages that are sent to the BlackBerry Enterprise Server for each user in an 8-hour period. In the default workload profiles, the BlackBerry Infrastructure and Smartphone Simulator does not send HTTP requests.

Configuration	Low workload profile	Medium workload profile	High workload profile	RIM passive workload profile
calendar event payloads available	simple event <ul style="list-style-type: none"> location between 10-20 bytes notes between 100-200 bytes subject between 20-40 bytes reminder time 15 minutes 0 other recipients 	simple event <ul style="list-style-type: none"> location between 10-20 bytes notes between 100-200 bytes subject between 20-40 bytes reminder time 15 minutes 0 other recipients 	simple event <ul style="list-style-type: none"> location between 10-20 bytes notes between 100-200 bytes subject between 20-40 bytes reminder time 15 minutes 0 other recipients 	-
configuration of contact lookup requests	<ul style="list-style-type: none"> 1 search 20–100 matches 	<ul style="list-style-type: none"> 1 search 20–100 matches 	<ul style="list-style-type: none"> 1 search 20–100 matches 	-
configuration of email message payloads, with all default payloads having the following: <ul style="list-style-type: none"> 0 BCC users 0 CC users subject 20 bytes default character encoding default sensitivity 	simple email message <ul style="list-style-type: none"> 1 To user body 100 bytes normal importance 	simple email message <ul style="list-style-type: none"> 1 To user body 100 bytes normal importance 	small email message <ul style="list-style-type: none"> 1 To user body 100 bytes normal importance large email message <ul style="list-style-type: none"> 2 To users 	-

Configuration	Low workload profile	Medium workload profile	High workload profile	RIM passive workload profile
			<ul style="list-style-type: none"> body between 300-1000 bytes high importance 	
number of calendar events	2	3	5	-
number of contact lookup requests	1	2	2	-
number of contact lookup requests that search the messaging server	0	0	0	-
number of email messages	5	7	10	-
number of requests for free or busy status	0	0	0	-
number of requests regarding access to network documents	0	0	0	-
number of synchronization messages for organizer data	3	4	6	-
percentage of BlackBerry device messages that the BlackBerry Infrastructure and Smartphone Simulator adds attachments to, requesting 1 block from the BlackBerry Attachment Service 4.1 SP2	4%	8%	12%	0%
percentage of email messages that cause reconciliation requests	<ul style="list-style-type: none"> 5% reply requests 3% forward requests 1% delete requests 	<ul style="list-style-type: none"> 5% reply requests 3% forward requests 1% delete requests 	<ul style="list-style-type: none"> 5% reply requests 3% forward requests 1% delete requests 	-
weights of calendar event payloads	<ul style="list-style-type: none"> 20% create appointment 	<ul style="list-style-type: none"> 20% create appointment 	<ul style="list-style-type: none"> 20% create appointment 	-

Configuration	Low workload profile	Medium workload profile	High workload profile	RIM passive workload profile
	<ul style="list-style-type: none"> • 25% update appointment • 5% delete appointment • 20% request meeting • 25% update meeting • 5% delete meeting 	<ul style="list-style-type: none"> • 25% update appointment • 5% delete appointment • 20% request meeting • 25% update meeting • 5% delete meeting 	<ul style="list-style-type: none"> • 25% update appointment • 5% delete appointment • 20% request meeting • 25% update meeting • 5% delete meeting 	
weights of responses to meeting requests	<ul style="list-style-type: none"> • 10% accept • 5% decline • 70% ignore • 5% tentative • 10% forward 	<ul style="list-style-type: none"> • 10% accept • 5% decline • 70% ignore • 5% tentative • 10% forward <p>100%:</p> <ul style="list-style-type: none"> • 0 recurrences • small text fields 	<ul style="list-style-type: none"> • 10% accept • 5% decline • 70% ignore • 5% tentative • 10% forward 	value entered in GUI but not used by simulator
weights of email message payloads	<ul style="list-style-type: none"> • 100% simple email messages 	<ul style="list-style-type: none"> • 100% simple email messages 	<ul style="list-style-type: none"> • 50% small email messages • 50% large email messages 	-
weights of synchronization messages for organizer data	<ul style="list-style-type: none"> • 30% memos • 30% task list • 30% contacts • 5% email settings 	<ul style="list-style-type: none"> • 30% memos • 30% contacts • 30% task list • 5% email settings 	<ul style="list-style-type: none"> • 30% memos • 30% contacts • 30% task list • 5% email settings 	0

Configuration	Low workload profile	Medium workload profile	High workload profile	RIM passive workload profile
	<ul style="list-style-type: none"> 5% email filters 	<ul style="list-style-type: none"> 5% email filters 	<ul style="list-style-type: none"> 5% email filters 	

Copy the organization's BlackBerry Enterprise Server settings

You can copy the mailboxes and the settings from the BlackBerry® Enterprise Server for the organization to the test environment instead of creating a new configuration for the BlackBerry Configuration Database. You must back up the mailboxes and the BlackBerry Configuration Database at the same time.

1. If your organization uses Microsoft® Exchange, back up the user mailboxes for the user accounts associated with BlackBerry devices.
2. Back up the BlackBerry Configuration Database that is associated with the user accounts.
3. If your organization uses Microsoft Exchange, on the computer that hosts the test environment's Microsoft Exchange, restore the mailboxes using the backup copy that you created in step 1.
4. On the computer that hosts the test environment's Microsoft® SQL Server®, restore the BlackBerry Configuration Database from the backup copy that you created in step 2.

Change the workload in a workload profile

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the workload profile that you want to change.
3. Click **Edit**.
4. Click **Timers**.
5. Type a number for the timer that you want to change.
6. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Choose the BlackBerry Enterprise Server instances to test

You can use one instance of the BlackBerry® Infrastructure and Smartphone Simulator to test multiple instances of the BlackBerry Enterprise Server. The BlackBerry Enterprise Server instances that you test must use the same BlackBerry Configuration Database.

Before you begin:

Verify that all BlackBerry® Enterprise Server instances use the same BlackBerry Configuration Database.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.

2. In the left pane, click **Profile Configuration**.
3. In the **Profile Assignment** section, perform the following actions for each BlackBerry Enterprise Server instance in the test environment:
 - To include the instance in the next test that the BlackBerry Infrastructure and Smartphone Simulator runs, select the workload profile from the drop-down list beside the instance name. Make sure the check box in the **Active** column is selected.
 - To exclude the instance from the next test that the BlackBerry Infrastructure and Smartphone Simulator runs, make sure the check box in the **Active** column is clear.
4. Click **OK**.
5. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.
6. Restart the BlackBerry Infrastructure and Smartphone Simulator.

Testing the wireless activation process

The wireless activation process activates BlackBerry® devices that are associated with a BlackBerry® Enterprise Server over the wireless network. Neither you nor the BlackBerry device users are required to connect the BlackBerry devices to a computer in your organization's network to complete the activation process.

The BlackBerry® Infrastructure and Smartphone Simulator uses the wireless activation process to activate any user account that you add to an active BlackBerry Enterprise Server after you run the BlackBerry Load Test Configuration Tool.

To test the activation process, add one or more user accounts to the active BlackBerry Enterprise Server instance that has the highest ServerConfigID value. The BlackBerry Enterprise Server must be configured to use the wireless activation process.

The BlackBerry Infrastructure and Smartphone Simulator requires a contiguous string of PIN values. The simulator attempts to fill any gaps created by the removal of user accounts and then adds new PIN values to the active BlackBerry Enterprise Server with the highest ServerConfigID. If the BlackBerry Infrastructure and Smartphone Simulator cannot fill in the gaps, it displays a request that you use the BlackBerry Load Test Configuration Tool to add the users.

Test the wireless activation process

Before you begin: Verify that the new user account exists on the messaging server.

1. With the appropriate tool, add the user accounts to the active BlackBerry® Enterprise Server that has the highest ServerConfigID in the test environment.
 - If the BlackBerry Enterprise Server is earlier than BlackBerry Enterprise Server 5.0, use the BlackBerry Manager.
 - If the BlackBerry Enterprise Server is BlackBerry Enterprise Server 5.0 or later, use the BlackBerry Administration Service.
2. Start (or restart) the BlackBerry Infrastructure and Smartphone Simulator.
3. In the dialog box, enter the SMTP address of the messaging server.

4. Enter the number of user accounts you want to activate every second. The maximum value is 10.
5. Click **OK**.

Changing debug settings and log settings

7

Overview: log console

The BlackBerry® Infrastructure and Smartphone Simulator writes debug information and log information to log files, the test report, and to the log console. You can configure the log console to display less or more information than the files capture. For example, you can configure the BlackBerry Infrastructure and Smartphone Simulator to capture all information (debug level 5 and log level 5), but you can configure the log console to display only level 1 information.

The log console does not wrap text from one line to the next. To examine a long line in the console, you can highlight the text or pause the simulation.

If you highlight text in the log console, the BlackBerry Infrastructure and Smartphone Simulator stops updating the log console. The BlackBerry Infrastructure and Smartphone Simulator resumes updating the log console when you cancel the selection.

If new log messages are available in the log console but the log console is not displayed, an asterisk (*) appears beside the log tab name in the BlackBerry Infrastructure and Smartphone Simulator. The asterisk disappears after you display the log console. To clear the log console, click Clear.

The BlackBerry Infrastructure and Smartphone Simulator records log information using the same format as the BlackBerry® Enterprise Server log files.

Set the level of detail that the log console displays

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. In the **GUI Console Log Level** drop-down list, click the setting that you want the BlackBerry Infrastructure and Smartphone Simulator to display in the log console. The descriptions of each level are provided in the drop-down list.

Set the level of detail of the debug log file

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. In the **Debug Log File Level** drop-down list, click the level of information that you want recorded in the debug log file.
3. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Changing the number of messages that the BlackBerry Infrastructure and Smartphone Simulator sends to the BlackBerry Enterprise Server

Timers and counters

You can use the BlackBerry® Infrastructure and Smartphone Simulator to configure both timers and counters. Timers control the workload that the BlackBerry Infrastructure and Smartphone Simulator is testing, and counters display the number of messages that the BlackBerry Infrastructure and Smartphone Simulator sends to BlackBerry® Enterprise Server or receives from the BlackBerry Enterprise Server.

Timers regulate the number of messages that the BlackBerry Infrastructure and Smartphone Simulator sends for each user account in an 8-hour period (a typical business day). You can configure the number of messages that the BlackBerry Infrastructure and Smartphone Simulator sends by configuring the timers in a workload profile.

Counters calculate the data packets and messages that the BlackBerry Infrastructure and Smartphone Simulator sends and receives during a simulation. You can view the counters on the Statistics tab of the BlackBerry Infrastructure and Smartphone Simulator. To reset the counters to 0, click the Reset Counters button.

Each BlackBerry Enterprise Server with a separate UID has its own set of counters. You can reset the counters to 0 by clicking the Reset Counters button.

You can also use the BlackBerry Infrastructure and Smartphone Simulator to view counters for messages that only the BlackBerry Enterprise Server sends, such as IT policies and service books. The BlackBerry Infrastructure and Smartphone Simulator receives that information and sends acknowledgments to the BlackBerry Enterprise Server.

Statistics and reports

You can see the statistics and reports for the BlackBerry® Enterprise Server that is displayed in the BlackBerry Infrastructure and Smartphone Simulator or for all instances of the BlackBerry Enterprise Server that are part of the test. The statistics and reports record the number of times or the percentage of time that specific events have happened in the test.

You can view statistics to see the number of times that events happen to the BlackBerry Enterprise Server instance that is currently displayed.

You can view reports to see the same statistics for all of the active BlackBerry Enterprise Server instances.

Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates

You can see statistics of the current test on the Statistics tab in the BlackBerry® Infrastructure and Smartphone Simulator. The Statistics tab displays the items that you can view statistics for, such as Email, Calendar, and Web Browsing.

The Statistics tab displays the number of events that occur from the time that the BlackBerry® Enterprise Server connects to the BlackBerry Infrastructure and Smartphone Simulator or from the time that the counters are restarted. You can reset the counters to zero for a new test.

You can hide or display statistics.

Statistics are relative to the BlackBerry Infrastructure and Smartphone Simulator. A statistic that uses the term "sent" counts a particular message or signal that the BlackBerry Infrastructure and Smartphone Simulator sends. A statistic that uses the term "received" counts a particular message or signal that the BlackBerry Infrastructure and Smartphone Simulator receives. This might not be the same number of messages or signals that the BlackBerry Enterprise Server sends.

Related topics

[List of counters in the BlackBerry Infrastructure and Smartphone Simulator, 31](#)

[List of timers in the BlackBerry Infrastructure and Smartphone Simulator, 34](#)

[View the configuration values for timers, 31](#)

[List of timers in the BlackBerry Infrastructure and Smartphone Simulator, 34](#)

[List of counters in the BlackBerry Infrastructure and Smartphone Simulator, 31](#)

View the configuration values for timers

Each workload profile has its own settings for timers.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Click a workload profile.
3. Click **Edit**.
4. Click **Timers**.

Related topics

[Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates, 31](#)

[List of timers in the BlackBerry Infrastructure and Smartphone Simulator, 34](#)

[List of counters in the BlackBerry Infrastructure and Smartphone Simulator, 31](#)

List of counters in the BlackBerry Infrastructure and Smartphone Simulator

This list does not include counters that are self-explanatory, such as Compressed Bytes Sent.

Counter	Description
Mail	
Email Moved	This counter displays the number of email messages that the BlackBerry® Infrastructure and Smartphone Simulator moves between folders on BlackBerry devices.
OTAFM MTHs Received	This counter displays the number of reconciliation messages that the BlackBerry® Enterprise Server sends to the BlackBerry Infrastructure and Smartphone Simulator. Reconciliation messages include status updates (whether an email message is read, filed, or deleted) and folder synchronization (whether the messaging server created, deleted, moved, or renamed a synchronized folder).
OTAFM MFHs Sent	This counter displays the number of reconciliation messages that the BlackBerry Infrastructure and Smartphone Simulator sends to the BlackBerry Enterprise Server.
Total Attachments Completed	This counter displays the number of attachments that the BlackBerry Infrastructure and Smartphone Simulator acknowledges as fully transmitted. This number should match or be lower than the number of attachment responses that the BlackBerry Infrastructure and Smartphone Simulator receives.
Calendar	
Meeting Requests Received	This counter displays the number of meeting request messages that the BlackBerry Infrastructure and Smartphone Simulator receives. The messaging server must send the meeting requests. The BlackBerry Infrastructure and Smartphone Simulator counts the meeting requests in the Meeting Requests Received counter and in the Email Messages Received counter, because a meeting request is sent as an email message.
Meeting Requests Sent	This counter displays the number of meeting request messages that the BlackBerry Infrastructure and Smartphone Simulator sends. The BlackBerry Infrastructure and Smartphone Simulator counts the meeting requests in the Meeting Requests Received counter and in the Email Messages Received counter, because a meeting request is sent as an email message.
Meeting Updates Sent	This counter displays the number of appointments deleted messages that the BlackBerry Infrastructure and Smartphone Simulator receives. The simulator and the messaging server both can create these messages.
Web browsing	
IPPP Disconnect Received	This counter displays the number of sessions that close while the BlackBerry Infrastructure and Smartphone Simulator is exchanging HTTP information or DFTP information.

Counter	Description
Remote Desktop Received	This counter displays the number of DFTP responses that the BlackBerry Infrastructure and Smartphone Simulator receives. The BlackBerry Infrastructure and Smartphone Simulator receives DFTP responses after it downloads a file or requests folder contents or the properties of a folder or file. The number of DFTP responses does not equal the number of DFTP packets received – a single file can take one or more packets to deliver but causes only one response.
Contact lookup	
Search Matches	This counter displays the number of results for contact lookup requests that match the criteria that the BlackBerry Infrastructure and Smartphone Simulator sends.
Sync	
Device Sessions Opened	This counter displays the number of times that the simulated BlackBerry devices opens a synchronization session. A BlackBerry device might have several synchronization sessions in an eight-hour period or it might have none. The BlackBerry device might not open a session for synchronization because the BlackBerry Synchronization Service opens one first.
Server Sessions Opened	This counter displays the number of times the BlackBerry Synchronization Service has opened a session for synchronization.
SRP	
Total MTHs Received	This counter displays the number of data packets that the BlackBerry Infrastructure and Smartphone Simulator receives for BlackBerry devices. The BlackBerry Infrastructure and Smartphone Simulator receives more data packets than this number .
Total MFHs Sent	This counter displays the data packets that the BlackBerry Infrastructure and Smartphone Simulator sends to the BlackBerry Enterprise Server as if from BlackBerry devices.
Total MTH Status Sent	This counter displays the number of times that the BlackBerry Infrastructure and Smartphone Simulator receives status requests for a BlackBerry device from the BlackBerry Enterprise Server.
Total MFHs Status Received	This counter displays the acknowledgments that the BlackBerry Infrastructure and Smartphone Simulator receives from the BlackBerry Enterprise Server about the status of a specific BlackBerry device.
GME Errors Received	This counter displays the number of data packets that contain errors at the higher protocol level. The order of protocols is the SRP protocol, and within that the GME protocol, and within that, protocols for specific tasks such as email messages, calendar events, or service books. A high number of GME errors typically indicates a configuration error in the test environment.
Pings Received	This counter displays the number of pings that the BlackBerry Infrastructure and Smartphone Simulator receives. A ping is a signal that is designed to verify that the connection with the BlackBerry Enterprise Server is still open.

Counter	Description
Ping Responses Sent	This counter displays the number of responses to pings that the BlackBerry Infrastructure and Smartphone Simulator sends.
Successful Authentications	This counter displays the number of times that the BlackBerry Infrastructure and Smartphone Simulator successfully authenticates a BlackBerry Enterprise Server.
Failed Authentications	This counter displays the number of times that the BlackBerry Infrastructure and Smartphone Simulator fails to successfully authenticate a BlackBerry Enterprise Server.
Disconnects	This counter displays the number of times that the BlackBerry Infrastructure and Smartphone Simulator sends the message that a BlackBerry device disconnects or is out of range.
IT policy	
IT Policies Received	This counter displays the number of IT policies that the BlackBerry Infrastructure and Smartphone Simulator receives from the BlackBerry Enterprise Server. An IT policy is specific to the configuration of the BlackBerry Enterprise Server and applies to one or more user accounts.
Service books	
Service Books Received	This counter displays the number of service books that the BlackBerry Infrastructure and Smartphone Simulator receives. BlackBerry devices never send service books.

Related topics

[List of timers in the BlackBerry Infrastructure and Smartphone Simulator, 34](#)

[Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates, 31](#)

[Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates, 31](#)

[View the configuration values for timers, 31](#)

List of timers in the BlackBerry Infrastructure and Smartphone Simulator

A timer determines the number of messages of a certain type that the BlackBerry® Infrastructure and Smartphone Simulator sends to the BlackBerry® Enterprise Server for each user account in an 8-hour period. Each workload profile in the BlackBerry Infrastructure and Smartphone Simulator can have different timer values..

Timer	Description
Email	This timer controls the number of email messages that the BlackBerry Infrastructure and Smartphone Simulator sends to a BlackBerry® Enterprise Server. You can configure the size of the subject and the amount of body text and the number of recipients as email properties in the workload profile.

Timer	Description
Calendar Appointment	This timer controls the number of calendar appointments that the BlackBerry Infrastructure and Smartphone Simulator sends to a BlackBerry Enterprise Server. You can configure the text fields, times, and recurrence as calendar properties in the workload profile. The BlackBerry Infrastructure and Smartphone Simulator can accept any calendar meeting requests that the BlackBerry Enterprise Server sends.
Contact Lookup	This timer controls the number of contact lookup requests that the BlackBerry Infrastructure and Smartphone Simulator sends to a BlackBerry Enterprise Server. You can configure the contents of the contact lookup requests as contact lookup properties in the workload profile.
Browsing	This controls the number of web browsing requests that the BlackBerry Infrastructure and Smartphone Simulator sends to a BlackBerry Enterprise Server. The BlackBerry Infrastructure and Smartphone Simulator uses real web sites, and the contents of the HTTP message replies depend on the web addresses sent. If a web address is not valid, the BlackBerry MDS Connection Service sends the BlackBerry Infrastructure and Smartphone Simulator a notification that the address is invalid. You can configure the web addresses as web browsing properties in the workload profile.
Sync	This controls the number of synchronization messages that the BlackBerry Infrastructure and Smartphone Simulator sends to a BlackBerry Enterprise Server. You can configure the weights of the synchronization messages as properties in the workload profile.

Related topics

[List of counters in the BlackBerry Infrastructure and Smartphone Simulator, 31](#)

[Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates, 31](#)

[Statistics that the BlackBerry Infrastructure and Smartphone Simulator generates, 31](#)

[View the configuration values for timers, 31](#)

Maximum rates

The BlackBerry® Infrastructure and Smartphone Simulator has maximum values for sending messages from simulated BlackBerry devices. These limits are for sending only; the tool can receive as many messages as the messaging server can send and the network supports.

Timer	Maximum value
Email messages	20 messages/day/user
Calendar messages	12 messages/day/user
Address lookup requests	25 messages/day/user
Browser requests (MDS protocol)	20 messages/day/user
PIM Synchronization requests	20 messages/day/user

Reset counters for a BlackBerry Enterprise Server

1. In the BlackBerry® Infrastructure and Smartphone Simulator, in the left pane, click the name of a BlackBerry® Enterprise Server.
2. On the **Statistics** tab, click **Reset Counters**.
3. Click **Yes**.

Turn on or off a counter

You can turn on or off counters for tests of a particular BlackBerry® Enterprise Server.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, in the left pane, click the name of a BlackBerry Enterprise Server.
2. On the **Statistics** tab, in the **Find Counter** field, type all or part of the name of the counter you want to turn on or off.
3. To turn on or off a counter, select the check box beside the name of the counter.

Changing an email message simulation

Add a new payload to a workload profile

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile you want to change. Click **Edit**.
3. In the list on the left side of the dialog box, click the type of message that you want to change, such as **Email**.
4. Click **Add**.
5. To change the name of the payload, click **New Payload**.
6. Type a name for the payload.
7. Click the payload. Click **Edit**.
8. Configure the properties of the new payload.
9. Click **Save**.
10. To close the **BlackBerry Infrastructure and Smartphone Simulator Settings** dialog box, click **Save**.

Related topics

[Change a workload profile, 21](#)

Delete a payload

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile you want to change and click **Edit**.
3. Select the payload that you want to delete.
4. Click **Remove**.
5. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Related topics

[Change a workload profile, 21](#)

Change the properties of the email simulation

By default, when you create a new workload profile, the BlackBerry® Infrastructure and Smartphone Simulator sends email messages as if from the simulated BlackBerry devices. You do not need to turn on email simulation.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change. Click **Edit**.
3. In the list on the left side of the dialog box, click the type of message that you want to change, such as **Email**.

4. Add, change, or remove the email message payloads that you want to use.
5. Change the properties about message views by specifying the percentage of all email messages that go to the simulated BlackBerry devices are read, deleted, replied to, and forwarded.
6. Specify the percentage of email messages that have attachments for which the BlackBerry Infrastructure and Smartphone Simulator requests the contents of the attachment.
7. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Change the properties of a payload

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change Click **Edit**.
3. In the list on the left side of the dialog box, click the type of message that you want to change, such as **Email**.
4. Click **Edit**.
5. To change the name of the payload, click the existing name and type the new name.
6. Click **Edit**.
7. Change the properties for the payload.
8. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Properties of email messages

Several properties have minimum and maximum size fields. If the entries in the minimum and maximum size fields are different, the BlackBerry Infrastructure and Smartphone Simulator generates values in those ranges and uses randomly generated text to meet them.

Property	Description
To Users	This property specifies the number of users in the To: field of the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The default is 1.
CC Users	This property specifies the number of users in the CC: field of the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload . The default is 0.
BCC Users	This property specifies the number of users in the BCC: field of the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The default is 0.

Property	Description
Signature	This specifies the type of signature in the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The possible signatures are None or Corporate Standard. The default is None. The messaging server contains the definitions of signatures.
Sensitivity	This property specifies the level of sensitivity of the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The possible levels of sensitivity are None, Personal, Private, or Confidential. The default is None.
Importance	This property specifies the level of importance of the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The possible levels of importance are Normal, High, or Low. The default is Normal.
Character Encoding	This property specifies the text encoding of the email messages that the BlackBerry Infrastructure and Smartphone Simulator uses for this payload. The possible text encodings are Latin-1 or Unicode. The default is Latin-1.
Subject	This property specifies the minimum and maximum size in bytes of the subject for the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The default is 20 bytes for each size. The maximum value that you can enter in each field is 200 bytes.
Body	This property specifies the minimum and maximum size in bytes of the body text for the email messages that the BlackBerry Infrastructure and Smartphone Simulator generates for this payload. The default is 100 bytes for each size. The maximum value that you can enter in each field is 10,000 bytes.

Change message viewing properties

Message viewing properties control whether the simulated message is marked read, deleted, replied to, forwarded, or generates an attachment request. The ratio set is the input of the system: if Messages read is set to 20%, the BlackBerry® Infrastructure and Smartphone Simulator marks two out of ten incoming messages as read.

1. In the BlackBerry Infrastructure and Smartphone Simulator, open the workload profile.
2. In the panel on the right side, set the properties.

Properties of message views

For a percentage of the email messages that the BlackBerry® Infrastructure and Smartphone Simulator receives, the simulator changes the status of the messages, depending on the values of the properties of message views. These message view statuses apply to a percentage of all email messages that the BlackBerry Infrastructure and Smartphone Simulator receives, not only the email messages carrying a specific payload. The percentage is called a *ratio* in the user interface. A message can be read, deleted, replied to, forwarded, or be unread. These properties of message views are set for each workload profile.

A change in the status of an email message is a reconciliation. When an email message is reconciled, the BlackBerry Infrastructure and Smartphone Simulator sends information about the reconciliation of that email message to the BlackBerry® Enterprise Server. These messages affect the workload of the BlackBerry Enterprise Server.

Property	Description
Read ratio	This property specifies the percentage of email messages that the BlackBerry Infrastructure and Smartphone Simulator receives and marks as read. The maximum value is 50%.
Delete ratio	This property specifies the percentage of email messages that the BlackBerry Infrastructure and Smartphone Simulator receives and marks as deleted. The maximum value is 70%.
Reply ratio	This property specifies the percentage of email messages that the BlackBerry Infrastructure and Smartphone Simulator receives and generates a reply email message for. The maximum value is 15%.
Forward ratio	This property specifies the percentage of email messages that the BlackBerry Infrastructure and Smartphone Simulator receives and forwards. The maximum value is 15%.
Attachment Request ratio	<p>This property specifies the percentage of email messages with attachments that the BlackBerry Infrastructure and Smartphone Simulator receives and generates an attachment request for. The maximum value is 15%.</p> <p>The BlackBerry Infrastructure and Smartphone Simulator generates attachment information requests based on the number of email messages that have attachments, not on the total number of email messages. If your load generator is configured so that the messaging server never sends email messages with attachments, the BlackBerry Infrastructure and Smartphone Simulator does not send attachment requests.</p>

Change the weights of email message payloads

If you define only one email message payload, the weight of that payload is 100%. If you define two or more payloads, then the total of the weights of all payloads in that workload profile must equal 100%.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.

2. Select the workload profile you want to change. Click **Edit**.
3. In the list on the left side of the dialog box, click type of message that you want to change, such as **Email**.
4. Click the weight of the payload that you want to change.
5. In the **Weight** field, type a new weight.
6. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Changing the properties of calendar simulations

10

Meetings and appointments

On a BlackBerry® Enterprise Server, calendar events can be either appointments or meetings. For the BlackBerry Infrastructure and Smartphone Simulator, a meeting is an appointment with email recipients. The BlackBerry Infrastructure and Smartphone Simulator can respond to meeting invitations with acceptances, tentative acceptances, cancellations, or forwarding, or it can ignore the request. The BlackBerry Infrastructure and Smartphone Simulator also generates meeting invitations. The responses come from the BlackBerry Infrastructure and Smartphone Simulator and the load generator.

The BlackBerry Enterprise Server sends and synchronizes calendar appointments and calendar meetings in different ways. The BlackBerry Enterprise Server sends and synchronizes calendar appointments using the calendar protocol, ICAL. It sends and synchronizes meeting invitations as email messages using the email protocol, CMIME. (These names can appear in BlackBerry Enterprise Server log files.) BlackBerry® device users send responses to calendar meeting requests as email messages. A meeting response increases the number of email messages that the BlackBerry Infrastructure and Smartphone Simulator sends, while an appointment response increases the number of calendar responses that the BlackBerry Infrastructure and Smartphone Simulator sends. The increase in the statistics for both email messages and calendar responses is visible in the statistics.

Whether the BlackBerry Enterprise Server sends appointment requests or meeting requests depends on the configuration of the load generator for the messaging server. Whether the BlackBerry Infrastructure and Smartphone Simulator sends appointment requests or meeting requests depends on the calendar event payload it uses and the weights of the payloads. Calendar event payloads are set in the workload profile.

Properties of a calendar event payload

Each calendar event payload has the following properties. You can configure the properties separately for each calendar event payload in a workload profile.

Property	Description
Busy Status	This property specifies the status of the Busy field for a calendar event. A calendar event payload can have a status of Free, Tentative, Busy, or Out of Office. The default status is Free.
Location	This property specifies the minimum size and maximum size, in bytes, of the Location field for a calendar event payload. The maximum value for each field is 200 bytes. The default value for the minimum size is 10 bytes. The default value for the maximum size is 20 bytes.

Property	Description
Notes	<p>This property specifies the minimum size and maximum size, in bytes, of the Notes field in a calendar event payload. The maximum value for each field is 10,000 bytes.</p> <p>The default setting for the minimum size is 100 bytes. The default value for the maximum size is 200 bytes.</p>
Reminder	<p>This property specifies the time, in minutes, for the event reminder. The reminder time can be configured to None, or as low as 0 minutes. The maximum value for this property is 560,640 minutes (which equals approximately a year and a month).</p> <p>The default time is 15 minutes.</p>
Number of Recipients	<p>This property specifies the number of email addresses for this calendar meeting. The property applies only to calendar meetings. The messaging server, not the BlackBerry® Infrastructure and Smartphone Simulator, determines the maximum number of recipients.</p> <p>The default number of recipients is 0, making the default calendar event an appointment.</p>
Recurrences	<p>This property specifies whether and how often this calendar event recurs.</p> <p>The maximum number of times that an event can recur is 100 times. The available time increments are Daily, Weekly, Monthly, and Yearly.</p> <p>The default number of times that an event can recur is 0. The default time increment is Daily.</p>
Subject	<p>This property specifies the minimum size and maximum size, in bytes, of the subject for this calendar event payload. The maximum value in each field is 200 bytes.</p> <p>The default value for the minimum size is 20 bytes. The default value for the maximum size is 30 bytes.</p>

Add a calendar event payload to a workload profile

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change. Click **Edit**.
3. On the left side of the **New Workload** dialog box, click **Calendar**.
4. Click **Add**.
5. To change the name of the payload or create a payload, click **New Payload**.
6. Type a name for the payload.
7. Click the payload name. Click **Edit**.
8. Change the properties of the payload.
9. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Related topics[Change a workload profile, 21](#)

Change the properties of a calendar event payload

A calendar event payload has a number of recipients, a reminder, a recurrence, and a busy status. You can also specify the size of the text sections of the calendar event payload.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change. Click **Edit**.
3. On the left side of the **New Workload** dialog box, click **Calendar**.
4. Entering the values in the appropriate fields, set the properties for this calendar event.
5. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change the weights of calendar event payloads

If you define only one calendar event payload, the weight of that payload is 100%. If you define two or more calendar event payloads, the total weight of the payloads must equal 100%.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change. Click **Edit**.
3. On the left side of the **New Workload** dialog box, click **Calendar**.
4. In the field of the payload type that you want to change, type a weight.
5. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change the weights of responses to meeting requests

Enter the responses to meeting requests on the dialog box that lists the calendar event payloads.

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change. Click **Edit**.
3. On the left side of the **New Workload** dialog box, click **Calendar**.
4. In the **Meeting Request Receipt Behavior** section, select the weight of each response.
The weights must total 100.
5. Click **Save** until the main screen of the BlackBerry Infrastructure and Smartphone Simulator appears.

Change the properties of a calendar event payload

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.

2. Click the workload profile you want to change. Click **Edit**.
3. On the left side of the **Workload profiles** dialog box, click **Calendar**.
4. Click the calendar event payload that you want to change. Click **Edit**.
5. Change the time, number of recipients, and status properties for the calendar event.
6. Change the minimum sizes and maximum sizes for the subject, location, and notes.
7. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Configure how often Free/Busy flags change

Each workload profile can specify a different number of requests for Free/Busy information for each user account in an 8-hour day. The BlackBerry® Infrastructure and Smartphone Simulator limits the number of Free/Busy requests that it sends at once to the number of user accounts or 10, whichever is fewer.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the name of the workload profile that you want to change the flags for.
3. Click **Edit**.
4. In the left pane of the dialog box, click **Timers**.
5. In the **Free/Busy Lookup** field, type the number of times that the flag is changed for each user account in an 8-hour period.
6. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Changing properties for a contact lookup simulation

11

Properties of a contact lookup simulation

When you specify a criteria for contact lookup requests in a workload profile in the BlackBerry® Infrastructure and Smartphone Simulator, you can change the following properties:

- whether the criteria for contact lookup requests are generated from email messages that the BlackBerry® Enterprise Server sends or from the information that you provide
- the text to find in the user directory
- whether the criterion is a first name, last name, or a company name
- the number of contact lookup requests that the BlackBerry Infrastructure and Smartphone Simulator sends to the BlackBerry Enterprise Server for each user account in an 8-hour period

You can use the Populate from live data feature when you want to check whether contact lookup searches work but you do not have specific criteria. The BlackBerry Infrastructure and Smartphone Simulator stores information from the email messages that it receives, and uses this information for contact lookup requests. For example, if the BlackBerry Enterprise Server sends an email message to Marc Gervais, the simulator stores the name and company, and might later send a contact lookup request using this information. The BlackBerry Infrastructure and Smartphone Simulator does not require that the email address is associated with a BlackBerry device user.

You can add specific criteria for contact lookup searches if you want to test a specific issue, such as an odd character set or some other edge condition.

You cannot specify criteria and populate from live data in one workload profile in one contact lookup request. If you specify even one text string in a workload profile for a contact lookup request, you must specify all criteria for contact lookup requests.

Adding criteria for contact lookup requests to a workload profile

Use information from email messages for contact lookup searches

Before you begin:

Because the Populate from live data feature uses information from email messages, the workload profile for the BlackBerry® Infrastructure and Smartphone Simulator must receive email messages.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.

4. In the left pane, click **Contact Lookup**.
5. Select the **Populate values from live data** check box.
6. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Specify criteria for contact lookup requests

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane, click **Contact Lookup**.
5. Verify that the **Populate values from live data** check box is clear.
6. Click **Add**.
7. In the **Field** drop-down list, click the type of criteria.
8. In the **Query String** field, type the criteria that you want used for the search of the user directory.
9. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change criteria for contact lookup requests

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane, click **Contact Lookup**.
5. In the right pane, verify that the **Populate values from live data** check box is clear.
6. In the **Field** drop-down list, click the type of criteria for the contact lookup request.
7. In the **Query String** field, type the criteria.
8. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change the number of contact lookup requests that the BlackBerry Infrastructure and Smartphone Simulator sends

You can configure the number of contact lookup requests that the BlackBerry® Infrastructure and Smartphone Simulator sends to the BlackBerry® Enterprise Server during an 8-hour period. If you exceed the maximum permitted value, the BlackBerry Infrastructure and Smartphone Simulator sets the number to the maximum value.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.

3. Click **Edit**.
4. In the left pane, click **Timers**.
5. Click **Add**.
6. On the **Contact Lookups** line, in the **Rate** field, type the number of requests that you want the BlackBerry Infrastructure and Smartphone Simulator to send to the BlackBerry Enterprise Server for each user account in an 8-hour period.
7. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Delete criteria for a contact lookup request

The BlackBerry® Infrastructure and Smartphone Simulator removes one line of criteria at a time.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane, click **Contact Lookup**.
5. Click the criteria for contact lookup requests that you want to delete.
6. Click **Remove**.
7. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Remote search for email messages

With BlackBerry® Enterprise Server 5.0 or later, a BlackBerry device user can search through the email messages that are located on the messaging server instead of the email messages that are stored on the device.

You can simulate the remote search for email messages feature using the this version of the BlackBerry Infrastructure and Smartphone Simulator. The BlackBerry Infrastructure and Smartphone Simulator requests searches for only one set of fields at a time (all address fields, the Subject field, or the Body field). The BlackBerry Infrastructure and Smartphone Simulator automatically completes address fields. You supply the search criteria for the subject and body of the message.

To permit the BlackBerry Infrastructure and Smartphone Simulator to search remote email messages, you must turn on the ability to search remote email messages on the BlackBerry Enterprise Server. Set the frequency of email message searches in the BlackBerry Infrastructure and Smartphone Simulator. In environments with IBM® Lotus® Domino® messaging servers, you must index the email messages on the Lotus Domino messaging servers.

The BlackBerry Infrastructure and Smartphone Simulator logs search requests as part of the statistics and the number of search requests appears in reports.

Specify criteria for searching remote email message data

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the name of the workload profile that you want to change. Click **Edit**.
3. In the left pane of the profile description, click **Remote Email Search**.
4. In the **Search Field Frequencies** section, enter the percentage of times that the BlackBerry Infrastructure and Smartphone Simulator searches each field. These percentages must add to 100%.
5. In the **More Percentage** field, type the percentage of remote email message searches that request searching more of the message.
6. In the **Retrieval Percentage** field, type the percentage of remote email message searches that request to download the message. The percentages in the **Request Settings** section do not need to total 100%.
7. In the Subject field or the Body field, perform any of the following actions:
 - To add a search string, type the phrase in the Search String field and click **Add**.
 - To delete a search string, click the search string in the list of search strings and click **Remove**.
8. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Changing the properties for organizer data

12

Properties of organizer data synchronization

The BlackBerry® Enterprise Server stores information about organizer data and its synchronization for each BlackBerry device user. The BlackBerry Infrastructure and Smartphone Simulator checks the configuration information for each simulated BlackBerry device. The BlackBerry Infrastructure and Smartphone Simulator sends requests and responses to synchronize organizer data. Email message filters and email message settings are not organizer data, but they are also synchronized with the BlackBerry Synchronization Service.

You cannot configure which organizer data is changed, but you can configure the weight of each type. The weights are percentages that represent the amount of synchronization messages for each type of organizer data. The available types of organizer data are contacts, notes, tasks, email message filters, and email message settings.

Change the weights of organizer data synchronization

You can change the weights of organizer data payloads for email message settings, email message filters, tasks, notes, and contacts to determine how many requests for each type of organizer data that the BlackBerry® Infrastructure and Smartphone Simulator sends. Weights are expressed as a percentage.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane of the workload profile configuration dialog box, click **Sync**.
5. Beside the type of record, in the **Weight** field, type the percentage of synchronization requests that the BlackBerry Infrastructure and Smartphone Simulator sends.
6. If necessary, change the weights for other types of records and change lists so that the weights total 100%.
7. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change the number of synchronization requests for organizer data that the BlackBerry Infrastructure and Smartphone Simulator sends

You can change the number of synchronization requests that the BlackBerry® Infrastructure and Smartphone Simulator sends for each user in an 8-hour period. If you exceed the maximum permitted value, the BlackBerry Infrastructure and Smartphone Simulator sets the number of synchronization requests to the maximum value.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the workload profile that you want to change.

3. Click **Edit**.
4. In the left pane of the workload profile dialog box, click **Timers**.
5. In the **Rate** field, type the number of synchronization requests.
6. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Changing the properties of a browser simulation

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Turn on browsing in a workload profile

The default workload profiles of the BlackBerry® Infrastructure and Smartphone Simulator do not have browsing turned on. You cannot change the default workload profiles. To turn on browsing for a workload profile, you must add a web address.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane, click **Web Browsing**.
5. Click **Add**.
6. For each web address that you want to add, in the **URL** field, type a web address.
7. For each web address, in the **Weight** field, type a weight.
8. In the left pane, click **Timers**.
9. In the **Rate** field, type the number of web browsing requests that the BlackBerry Infrastructure and Smartphone Simulator sends to the BlackBerry® Enterprise Server for each user account in an 8-hour period.
10. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Change the number of browser requests that the BlackBerry Infrastructure and Smartphone Simulator sends

You can change the number of browser requests that the BlackBerry® Infrastructure and Smartphone Simulator sends to the BlackBerry® Enterprise Server for each user account in an 8-hour period. If you exceed the maximum permitted value, the BlackBerry Infrastructure and Smartphone Simulator sets the number to the maximum value.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. In the left pane, click **Timers**.
5. In the right pane, beside **Web Browsing**, type the number of requests.
6. Click **Save**.
7. To close the **BlackBerry Infrastructure and Smartphone Simulator Options** dialog box, click **Save**.

Adding or changing web addresses in a workload profile

Add or change web addresses in a workload profile

To test browser requests, the BlackBerry® Infrastructure and Smartphone Simulator sends requests for information from web sites. The BlackBerry Infrastructure and Smartphone Simulator must be able to access the web addresses that you add, unless you want to determine how your test environment deals with missing sites.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. To add a web address, click **Add**.
5. In the **URL** field, type the new web address.
6. In the **Weight** field, type the percentage of web browsing requests that use this web address.
7. If necessary, change the weights of other web addresses so that they equal 100%.
8. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Delete a web address from a workload profile

1. In the BlackBerry® Infrastructure and Smartphone Simulator, click **Options**.
2. Select the workload profile that you want to change.
3. Click **Edit**.
4. Click **Web Browsing**.
5. Click the web address that you want to delete.
6. Click **Remove**.
7. If necessary, change the weights of the remaining web addresses so that they equal 100%.
8. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Configuring support for HTML and rich content email messages

14

In the BlackBerry® Performance Engineering Resource Kit, support for HTML and rich content email messages is turned on.

The only option is to turn inline images on or off. By default, inline images in a workload profile are turned on. Inline images that appear in the first part of an email message might be sent to the simulated BlackBerry devices when support for inline images is turned off because the BlackBerry® Enterprise Server sends the equivalent of 2KB of plain text from the beginning of each email message to a BlackBerry device intact. Most inline images are stored in the first part of the message, so the BlackBerry Enterprise Server sends those images.

All of the simulated devices in the BlackBerry Infrastructure and Smartphone Simulator support HTML and rich content email messages. If you add user accounts that do not support HTML and rich content email messages while you are testing the wireless activation process or if you have other devices attached to the BlackBerry Enterprise Server that do not support HTML and rich content email messages, the BlackBerry Enterprise Server log file contains errors.

Properties of HTML email message display

All simulated BlackBerry® devices have the HTML email format feature turned on.

Property	Description
Inline images	When the value for this property is True, it specifies that the BlackBerry Infrastructure and Smartphone Simulator requests inline images for HTML email messages and rich content email messages that have inline images.

Turn off inline images in HTML email messages

When you turn off inline images in HTML and rich content email messages, the option affects all of the simulated BlackBerry® devices that use that workload profile.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the name of the workload profile that you want to change.
3. Click **Edit**.
4. On the workload profile screen, click **Email**.
5. In the **Request Inline Images** drop-down list, click **False**.
6. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Setting access to network documents from a BlackBerry device

15

With a BlackBerry® device running BlackBerry® Device Software 5.0 or later and a BlackBerry® Enterprise Server 5.0 or later, a BlackBerry device user can exchange files with a network computer. The user can send network access commands that request a list of files, the properties of a folder or file, or the file. For this test, there must be files in the Remote Download folder and in the Local folder. Any kind of file is acceptable.

You can use the BlackBerry® Performance Engineering Resource Kit to test the exchange of files between a shared network location and the simulated BlackBerry devices. To test this exchange, you must set up a computer that acts as the network location. The computer must have the following two folders:

- a Remote Download folder that stores the files that are sent to the simulated BlackBerry devices; this folder must have host files
- a Remote Upload folder that stores the files that are sent from the simulated devices

The computer that hosts the BlackBerry Infrastructure and Smartphone Simulator must have a folder, the Local folder, that contains the files that are sent from the simulated BlackBerry devices.

After the BlackBerry Infrastructure and Smartphone Simulator sends the files from the simulated devices to the Remote Upload Folder, the network computer stores the files in the Remote Upload folder. The BlackBerry Infrastructure and Smartphone Simulator retrieves the files that are in the Remote Download folder but does not store them after it retrieves them. The files are not stored on the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator.

Properties of the access to network documents feature

In the BlackBerry® Infrastructure and Smartphone Simulator, the properties that specify access to documents on the network from the simulated BlackBerry devices are divided into the following sections:

- the Credentials and Directories section that describes the computer that simulates the network computers
- the Action Distribution section, which describes the percentage of each type of access request for a document on the network

Property	Description
Username	specifies the name of the user account that hosts the network documents
Password	specifies the password of the user account that hosts the network documents
Domain	specifies the Windows® domain that contains the network documents
Local Folder	specifies the name of the folder on the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator, and which hosts the files that are sent from the simulated BlackBerry devices

Property	Description
Remote Download Folder	specifies the name of the computer and the name of the folder for downloaded files that the BlackBerry Infrastructure and Smartphone Simulator uses as a network computer, in the form <i>//computername/path/name</i>
Remote Upload Folder	specifies the name of the computer that hosts the Remote Upload Folder and the name of the folder in the form <i>//computername/path/name</i>
Download Percentage	specifies the percentage of simulated devices that download files from the Remote Download Folder
Upload Percentage	specifies the percentage of simulated devices that upload files to the Remote Upload Folder
List Percentage	specifies the percentage of simulated devices that request a list of folders and files that are located on the network computer
Properties Percentage	specifies the percentage of simulated devices that request the properties of a folder or file that is located on the network computer

Set permissions on the shared folder for network access

The network access feature uses a folder on a separate computer to act as a network computer. The user account that is used to test network access must have both security permissions and sharing permissions for the folder so that it can create files in and copy files from the folder.

1. On the computer that hosts the folder that is used for network access, right-click the folder. Click **Properties**.
2. On the **Sharing** tab, click **Share this Folder**.
3. Click **Permissions**.
4. Beside all permissions, select the **Allow** check boxes.
5. Click **OK**.
6. On the **Security** tab, click the name of the login account or the group containing the user account that the BlackBerry® Infrastructure and Smartphone Simulator uses to test network access.
7. Beside the following permissions, select the **Allow** check boxes:
 - **Full Control**
 - **Modify**
 - **Read & Execute**
 - **List Folder Contents**
 - **Read**
 - **Write**
8. Click **OK**.

Configure access to network documents in the BlackBerry Infrastructure and Smartphone Simulator

Each workload profile in the BlackBerry® Infrastructure and Smartphone Simulator can be pointed at a different Remote Upload Folder and Remote Download Folder. Larger or smaller network documents change the workload associated with access to network documents.

Before you begin: Verify that the network computer in the test environment hosts the Remote Upload Folder and the Remote Download Folder.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Click the name of the workload profile that you want to change. Click **Edit**.
3. In the **Workload Profile Configuration** dialog box, in the left pane, click **Remote Desktop**.
4. Type the login information for the user account on the network computer
5. In the **Domain** field, type the name of the domain.
6. In the **Local Folder** field, type the name of the folder that stores the files that the simulated BlackBerry devices send to the network computer.
7. In the **Remote Download Folder** field, type the name of the folder on the network computer that hosts the documents that the simulated BlackBerry devices download.
8. In the **Remote Upload Folder** field, type the name of the folder on the network computer that hosts the documents that the simulated BlackBerry devices upload.
9. To verify that the information is correct, click **Test Remote Connection**.
10. In the **Action Distribution** section, configure the percentage of simulated devices that send each network access command.
11. Click **Save** until the BlackBerry Infrastructure and Smartphone Simulator displays the main screen.

Changing the models of BlackBerry devices that the BlackBerry Infrastructure and Smartphone Simulator simulates

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BlackBerry device models and screen resolutions

You can configure the BlackBerry® Infrastructure and Smartphone Simulator to send messages from three different models of the BlackBerry device. In the simulation that the BlackBerry Infrastructure and Smartphone Simulator creates, the models differ in screen resolution. Each simulated model of the BlackBerry device has a different screen resolution.

The BlackBerry® Enterprise Server uses the screen resolution only in some situations. The BlackBerry Infrastructure and Smartphone Simulator sends a screen resolution whenever it requests a picture that was not created for a BlackBerry device model. The BlackBerry Enterprise Server component uses the screen resolution to scale and render the image correctly.

The BlackBerry Infrastructure and Smartphone Simulator sends a screen resolution with HTTP requests and attachment requests. Those are the only requests that require the information about BlackBerry device models. You must configure the BlackBerry device model only if your test environment includes the BlackBerry Attachment Service or the BlackBerry MDS Connection Service.

The percentage of each BlackBerry device model is called its weight. By default, the BlackBerry Infrastructure and Smartphone Simulator sends 100% of all messages as if they were from BlackBerry® 8300 smartphones.

Installing a BlackBerry device to work with the BlackBerry Infrastructure and Smartphone Simulator

In a typical test environment, the BlackBerry® Infrastructure and Smartphone Simulator simulates all BlackBerry devices. However, when you test a BlackBerry® Enterprise Server, you might want to send information that the BlackBerry Infrastructure and Smartphone Simulator does not generate. You can use a physical BlackBerry device or a simulated BlackBerry device to send information.

You can associate a BlackBerry device or a simulated BlackBerry device with a BlackBerry device user account on the BlackBerry Enterprise Server that you are using for performance testing. You can install the BlackBerry device before or after you install the other BlackBerry device user accounts on the BlackBerry Enterprise Server. Because the BlackBerry device is in a cradle, the BlackBerry device sends messages directly to the BlackBerry Enterprise Server and bypasses the BlackBerry Infrastructure and Smartphone Simulator.

The BlackBerry Infrastructure and Smartphone Simulator does not record any information that you send to the BlackBerry Enterprise Server using this BlackBerry device. If you configure logging options correctly, the BlackBerry Enterprise Server can log the information that you send using the physical BlackBerry device.

Configuring device weights

To simulate the BlackBerry® device models that the BlackBerry Infrastructure and Smartphone Simulator simulates for a specific workload profile, you must change the BlackBerry device configuration in that workload profile.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. Open a workload profile.
3. Click **Edit**.
4. In the left pane, click **Devices**.
5. Beside the name of each BlackBerry device model, type a new weight. The total weight must equal 100%.
6. Click **Save** until the main screen of the simulator appears.

Creating reports about a test

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View statistics about the current test

Each test is associated with a BlackBerry® Enterprise Server and a workload profile, and determines the workload using the values in the workload profile. The BlackBerry® Infrastructure and Smartphone Simulator displays the values for the current test on the Statistics tab. In the BlackBerry Infrastructure and Smartphone Simulator, statistic names are organized in a tree-like structure.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click the **Statistics** tab.
2. Click the item that you want to see statistics for.

Generate a BlackBerry Infrastructure and Smartphone Simulator report

You can save the current statistics as an HTML file at any time so that you have a record of the progress of the test. The BlackBerry® Infrastructure and Smartphone Simulator saves the statistics as a file in the Reports folder, with the name BBISSimReport<yyyymmdd>-<hhmmss>.html, where <yyyymmdd> is the current date and <hhmmss> is the current time.

In the BlackBerry Infrastructure and Smartphone Simulator, click **Simulation > Generate HTML Report**.

View a BlackBerry Infrastructure and Smartphone Simulator report

You can view a report of the BlackBerry® Infrastructure and Smartphone Simulator statistics in a browser instead of saving the statistics as an HTML file.

In the BlackBerry Infrastructure and Smartphone Simulator, click **Simulation > View HTML Report**.

Interpreting a BlackBerry Infrastructure and Smartphone Simulator report

When reading and interpreting a report that the BlackBerry® Infrastructure and Smartphone Simulator creates, consider the following:

- The information in a report is relative to the BlackBerry Infrastructure and Smartphone Simulator. In a report, the term "sent" refers to the information that the BlackBerry Infrastructure and Smartphone Simulator sends, and the term "received" refers to the information that the BlackBerry Infrastructure and Smartphone Simulator receives.
- A report includes entries for compressed bytes and uncompressed bytes that were sent until the time that the report was generated. These entries show the number of bytes of compressed information and the number of bytes that the compressed information expands to. A comparison of these two numbers can reveal that the BlackBerry Infrastructure and Smartphone Simulator or the BlackBerry® Enterprise Server is not sending enough information, which might not be apparent from the compressed values alone.

Troubleshooting

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Best practice: Troubleshooting a BlackBerry Performance Engineering Resource Kit test environment

Consider the following guidelines:

- Verify that your test environment is in a single Windows® domain.
- Verify that your test environment is in a single BlackBerry® Domain .
- Isolate components of the test environment by installing them at different times and testing the installations.
- Add components one at a time until an issue appears.
- Before you add a component, verify that the performance monitor for the computer is turned on.
- Add components in the following order:
 - messaging server
 - load generator for the messaging server
 - basic BlackBerry® Enterprise Server configuration, including the BlackBerry Configuration Database
 - BlackBerry Load Test Configuration Tool
 - BlackBerry Infrastructure and Smartphone Simulator
 - additional BlackBerry Enterprise Server components
 - additional components that do not belong to the BlackBerry Enterprise Server
- Check all running components for issues, because the source of an issue is sometimes not in the component that reports the issue. For example, the BlackBerry Load Test Configuration Tool generates an error message if it cannot open a SOAP connection, but the issue is typically in the network or web service.

I get permission errors when I try to install BlackBerry Enterprise Server 5.0

Description

During the BlackBerry® Enterprise Server 5.0 installation process, you receive a Preinstall Checklist warning, "The setup application cannot find the Send As permission for account <Domain\User>".

For the BlackBerry® Enterprise Server for Microsoft® Exchange to work correctly, the BlackBerry service account must have the Send As permission for the user object in Microsoft® Active Directory®. The prerequisite check in the setup application verifies whether this permission is configured for all User Objects in Microsoft Active Directory.

Possible solution

You must use an administrator account to configure the correct permissions in Microsoft® Exchange.

1. Open **Start > Microsoft Exchange > Active Directory Users and Computers**.

2. On the **View** menu, verify that the **Advanced Features** option is selected.
3. Right-click the Windows® domain. Click **Properties**.
4. On the **Security** tab, click **Advanced**.
5. Add the account that requires the **Send As** permission (for example, BESAdmin).
6. Double-click the account.
7. In the **Allow** column, click **Edit**.
8. In the **Apply onto** drop-down list, click **User Objects**.
9. At the bottom of the page, in the **Allow** column, check **Send As**.

Unable to get user information from the address book for user

Possible cause

In an IBM® Lotus® Domino® environment, the BlackBerry® Enterprise Server cannot find the user account. This message appears in the BlackBerry Enterprise Server log file when the local copy of the user directory is out of date.

Possible solution

On the computer that hosts a command console for the IBM Lotus Domino server, type **pull <essaging_server_name>**.

I get GME errors in the BlackBerry Enterprise Server log files

Possible cause

The BlackBerry® Messaging Agent might not be running or might be renamed. Until the BlackBerry Messaging Agent starts again, the BlackBerry® Enterprise Server writes GME errors in the log files and does not send email messages. The BlackBerry Manager or BlackBerry Administration Service displays the status of BlackBerry device users as Initialize.

Possible solution

1. If the BlackBerry Messaging Agent is running, stop it.
2. Start the BlackBerry Messaging Agent again using the correct name.

I get a MAPI error message when the BlackBerry Enterprise Server performs a calendar lookup in Microsoft Exchange 2007

Description

When the BlackBerry® Enterprise Server looks up calendar information in Microsoft® Exchange 2007, the BlackBerry Messaging Agent (MAGT) log file contains a MAPI error message if public folders are not present.

Microsoft Exchange 2007 can be installed without public folders for environments with Microsoft® Outlook® 2007 and later as the messaging application; however, Microsoft Outlook and the BlackBerry Enterprise Server require access to public folders.

Possible solution

Create a public folder storage group and database on the Microsoft Exchange server.

Error messages: BlackBerry Load Test Configuration Tool

Calendar validation failure

This message appears when, after the BlackBerry® Load Test Configuration Tool converts the user account, the BlackBerry Configuration Database value in the Calendar enabled field is not typed correctly.

Device capabilities validation failure for PIN

This message appears when the value of the Device Capabilities field selected in the BlackBerry Load Test Configuration Tool does not match the corresponding value stored in the BlackBerry Configuration Database.

DeviceType validation failure

This message appears when the Device Type field in the BlackBerry Configuration Database is not specified correctly.

DispatcherHostInstance not found

This message appears when the BlackBerry Load Test Configuration Tool cannot find an instance of the BlackBerry Dispatcher service on the computer that the BlackBerry Load Test Configuration Tool is installed on.

Email address contains an invalid character

This message appears when an email address that is provided in the file that contains the user account list contains a character that is not valid.

Encryption key validation failure

This message appears when the encryption key that the BlackBerry Load Test Configuration Tool uses is different from the encryption key that is stored in the BlackBerry Configuration Database.

ERROR: Additional Device Capabilities field length invalid: <length>

This message appears when the length of the record field in the BlackBerry Configuration Database entry does not correspond with the length that was specified. The BlackBerry device capabilities were not specified correctly.

ERROR: Device Capabilities length invalid: <length>

This message appears when the length of the record field in the BlackBerry Load Test Configuration Tool entry does not correspond with the length that was specified, for a reason other than an incorrect definition of the capabilities that the user can specify.

ERROR: Dispatcher or ConfigServerName registry entries missing.

This message appears when the registry on the computer is missing the values that describe the BlackBerry Dispatcher and the BlackBerry® Enterprise Server.

ERROR: Failed to parse!!

This message appears when the BlackBerry Enterprise Server does not specify any capabilities for a user account.

ERROR: Not implemented

This message appears when the BlackBerry Load Test Configuration Tool tries to activate a user account, but the type of messaging server is not specified for the user account.

ERROR: PIN is not available

This message appears when the PIN that is associated with the user account that the BlackBerry Load Test Configuration Tool is trying to convert is already reserved by another user account.

ERROR: User <email_address> has pending delete status

This message appears when the user account is still pending deletion on the BlackBerry Enterprise Server when the BlackBerry Load Test Configuration Tool tries to convert or update the user account.

Error parsing <user_account_list_entry>

This message appears when the BlackBerry Load Test Configuration Tool cannot parse an entry in the user accounts list. This error message is usually preceded by a descriptive error message of the issue.

EXPECTED: email@server.com, F1xxxxxx

This message occurs when the format of the user account file is not correct. The error messages shows the correct format for entry for the user account list, and is also stored in the log.

Failed to connect to socket: <socket_name>

This message appears when the BlackBerry Load Test Configuration Tool cannot connect to a socket when the BlackBerry Load Test Configuration Tool tries to start a web service.

MailStoreName not updated <PIN>

This message appears in a test environment with BlackBerry® Enterprise Server for IBM® Lotus® Domino® when the BlackBerry Load Test Configuration Tool tries to verify user accounts, but the field MailStoreDisplayName is not current in the BlackBerry Configuration Database. The BlackBerry Load Test Configuration Tool adds user accounts to the BlackBerry Enterprise Server for IBM Lotus Domino in chunks of 200 user accounts, with a delay between each chunk. After each delay, the BlackBerry Load Test Configuration Tool updates the information in the MailStoreDisplayName field of the BlackBerry Configuration Database. If the process of adding user accounts takes longer than the delay programmed into the BlackBerry Load Test Configuration Tool, the BlackBerry Load Test Configuration Tool displays this message.

MailStoreType was not found

This message appears when the BlackBerry Configuration Database does not specify the type of messaging server.

One or more of the failed user accounts are pending for deletion or could not be reimported. Writing user accounts to email-to-pin map file

This message appears in a test environment with BlackBerry® Enterprise Server for IBM® Lotus® Domino® when you cancel the delay of the BlackBerry Load Test Configuration Tool and you are converting user accounts again. The BlackBerry Load Test Configuration Tool writes to a file a list of the user accounts that it did not convert.

OTAFM validation failure

This message appears when the OTAFM enabled field in the BlackBerry Configuration Database is not typed correctly.

Specified email address is invalid

This message appears when an email address in the file that contains the user account list has a format that is not valid.

Specified PIN is invalid

This message appears when a PIN in the user account list is not eight characters long.

The remove name could not be resolved

This message appears when the name of the BlackBerry Administration Service is different from the name that you specified.

The specified user import file not found

This message appears when the file that contains the user account list does not exist on the computer that the BlackBerry Load Test Configuration Tool is installed on.

Timeout waiting for pending user updates...

This message appears when the BlackBerry Load Test Configuration Tool waits more than 300 seconds for the BlackBerry Enterprise Server to complete pending changes.

Unable to determine BES Dispatcher instance. Try specifying `-bdn <server>` option from the command line

This message appears when the BlackBerry Load Test Configuration Tool is setting up a web service and cannot retrieve the name of the BlackBerry Dispatcher instance in the registry or the command line.

User `<user_name>` could not be deleted

This message appears when the BlackBerry Load Test Configuration Tool cannot delete a user account. When the BlackBerry Load Test Configuration Tool converts user accounts again, the user accounts are deleted from the BlackBerry Enterprise Server and then are added to the BlackBerry Enterprise Server.

User `<user_name>` could not be disabled

This message appears when the BlackBerry Administration Service could not deactivate a user account.

User `'<user_name>'` already exists. Updates are not supported in Domino. The user must be deleted in BAS/BBManager before importing...

This message appears when you left the user account named `<user_name>` on that particular BlackBerry Enterprise Server for IBM Lotus Domino. For this environment, you must delete the user accounts from the BlackBerry Enterprise Server before running the BlackBerry Load Test Configuration Tool.

User `'<user_name>'` is disabled in BAS. (BASID: `<BAS_user_ID>` UserConfigID: `<user_config_ID>`) The user must be enabled or deleted in BAS/BBManager before importing...

This message appears when a user account exists on the BlackBerry Enterprise Server for IBM Lotus Domino but is not associated with it.

User `'<user_name>'` was not found in BAS. (BASID: `<BAS_user_ID>` UserConfigID: `<user_config_ID>`)

This message appears when a user account does not exist in the BlackBerry Administration Service.

UserDeleteStatus validation failure

This message appears when the BlackBerry Enterprise Server for IBM Lotus Domino has scheduled a converted user account for deletion during the conversion validation process.

Validation Failed.. <user_name>, <PIN>

This message appears when the BlackBerry Load Test Configuration Tool cannot validate a user account that was just converted.

Error messages: relayed by BlackBerry Load Test Configuration Tool

The following error messages are reported by the BlackBerry® Load Test Configuration Tool but occur elsewhere.

Database Connection Failed <error_number>

This message appears when the connection between the BlackBerry Load Test Configuration Tool and the BlackBerry Configuration Database ends unexpectedly, where *error_number* is the number of the most recent error. The number might not indicate the source of the issue.

Error: <create_user_message>

This message appears when the user account could not be created on the BlackBerry Administration Service, where *<create_user_message>* describes the issue in more detail.

ERROR: createUserCompletedEventHandler [<add_user_error_number>]

This message appears when a program cannot work when the BlackBerry Load Test Configuration Tool tries to add a user account to the BlackBerry® Enterprise Server version 5.0 or later, where the *<add_user_error_number>* specifies the BlackBerry Enterprise Server error message that describes the issue.

Environment Detection Failed <error_number>

This message appears when information is missing when the BlackBerry Load Test Configuration Tool tries to determine the environment information, where the number specifies the error message that describes the missing information.

Error occurred: <find_services_instance_message>

This message appears when a program cannot work when the BlackBerry Load Test Configuration Tool is attempting to obtain a specified BlackBerry Dispatcher service, where *<find_services_instance_message >* describes the reason.

Error occurred: <find_services_message>

This message appears when a program failed when the BlackBerry Load Test Configuration Tool tried to retrieve the BlackBerry Dispatcher service with a specified name, where *<find_services_message>* describes the reason.

Error occurred: <get_user_attributes_message>

This message appears when a program generates an issue when the BlackBerry Load Test Configuration Tool tries to retrieve information about a specific BlackBerry Administration Service user account.

Failed to establish BAS web service connection

The BlackBerry Load Test Configuration Tool cannot establish a web service. This usually happens if the type of messaging server (one of exchange, dom i no, or groupw i se) is not specified in the registry or BlackBerry Configuration Database.

Failed to establish web service connection: <error_message>

This message appears when a program generates an error message while the BlackBerry Load Test Configuration Tool tries to establish a connection, where the <error_message> describes the reason.

Failed to open Database connection

This message appears when the BlackBerry Load Test Configuration Tool cannot connect with the specified BlackBerry Configuration Database.

Finduser accounts: Query failed: <find_mail_store_user_message>

This message appears when an issue arises when the BlackBerry Load Test Configuration Tool is querying the BlackBerry Administration Service for the name of the messaging server for the specified user account, where <find_mail_store_user_message> describes the reason.

Finduser accounts: User '<email_address>' was not found in GAL.

This message appears when the query for the name of the messaging server for this user account is successful but the user account is not in the user directory.

GetUser: '<email_address>' not found

This message appears when the email address specified for the user account does not exist on the BlackBerry Administration Service in the test environment.

Invalid device capabilities (wrong header): <PIN>

This message appears when the description of the BlackBerry device capabilities for a PIN has a header that does not begin with the correct number.

Please contact your administrator to ensure you have the proper MAPI Permissions to Add user accounts

This message appears when user account that is logged into the BlackBerry Enterprise Server for Microsoft® Exchange does not have the MAPI permissions to add user accounts to Microsoft® Exchange.

Please ensure that the BAS service is running and the BAA plug-in is installed

This message appears when the BlackBerry Administration Service is not running or the BlackBerry® Administration API plug-in is not installed. This message occurs in the log.

The BlackBerry Load Test Configuration Tool cannot convert user accounts

Possible cause

If the BlackBerry® Enterprise Server for Microsoft® Exchange has multiple MAPI profiles, the MAPI profile that was selected using the BlackBerry Load Test Configuration Tool was not the correct one.

Possible solution

Try clearing the Microsoft® Exchange cache and selecting a different MAPI profile for the BlackBerry Load Test Configuration Tool.

BlackBerry Enterprise Server does not have the correct number of user accounts

Possible cause

An entry in the user account list is not formatted correctly.

Possible solution

1. In the BlackBerry® Enterprise Server, delete the user account that is formatted incorrectly.
2. Delete all user accounts that are associated with a PIN that is higher than the PIN of the user account that you deleted in step 1.
3. Add the user accounts again. Make sure to include a fully qualified email address and that PINs are used consistently in the user account list.
4. Run the BlackBerry Load Test Configuration Tool again.

Verify the number of user accounts that you converted for the BlackBerry Infrastructure and Smartphone Simulator

You can use the BlackBerry® Infrastructure and Smartphone Simulator to verify the number of user accounts that are associated with the BlackBerry® Enterprise Server.

1. In the BlackBerry Infrastructure and Smartphone Simulator, click **Options**.
2. On the left pane of the **BlackBerry Infrastructure and Smartphone Simulator Settings** dialog box, in the tree, click **Server Configuration**.
3. In the right pane of the **BlackBerry Infrastructure and Smartphone Simulator Settings** dialog box, in the **Clients** drop-down list, click a BlackBerry Enterprise Server name.
4. In the left pane of the **BlackBerry Infrastructure and Smartphone Simulator Settings** dialog box, click **Users**. The number of users is displayed in the lower right corner of the dialog box.
5. Perform one of the following actions:
 - If the number of user accounts displayed in the lower right corner of the dialog box is the same as the number that you converted using the BlackBerry Load Test Configuration Tool, click **Close**.
 - If the number of user accounts is different from the number that you converted using the BlackBerry Load Test Configuration Tool, click **Refresh**. The correct number of user accounts should appear on the screen.
6. To close the **Options** dialog box, click **Cancel**.

Error messages: BlackBerry Infrastructure and Smartphone Simulator

Failure to initialize

This message appears when the installation of the BlackBerry® Infrastructure and Smartphone Simulator was not completed.

Application configuration problem

This message appears if you do not install the Microsoft® Visual C++® 2005 SP1 Redistribution Pack or the Microsoft® .NET Framework 2.0.

Unable to find configuration database

This message appears when the BlackBerry Infrastructure and Smartphone Simulator cannot locate the BlackBerry Configuration Database, when the BlackBerry Configuration Database is not installed in the test environment, or the computer that hosts the BlackBerry Configuration Database is unavailable.

The BlackBerry Infrastructure and Smartphone Simulator does not connect to the BlackBerry Enterprise Server

Description

The BlackBerry® Enterprise Server opens the connection to the BlackBerry Infrastructure and Smartphone Simulator. If the BlackBerry Infrastructure and Smartphone Simulator is not running, the BlackBerry Enterprise Server cannot open the connection and tries again after a period of time.

Possible solution

To force a connection manually, try performing the following actions:

1. On the computer that hosts the BlackBerry Enterprise Server, stop the BlackBerry Enterprise Server services.
2. On the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator, start the BlackBerry Infrastructure and Smartphone Simulator.
3. On the computer that hosts the BlackBerry Enterprise Server, start the BlackBerry Enterprise Server services.

BlackBerry Enterprise Server disconnects

Possible cause

If the status of the BlackBerry® Enterprise Server is showing as Disconnected, the possible cause might be that too much time passed since the BlackBerry Infrastructure and Smartphone Simulator communicated with the BlackBerry Enterprise Server. If the BlackBerry Infrastructure and Smartphone Simulator does not respond, the BlackBerry Enterprise Server waits before it tries connecting again.

If the status of the BlackBerry Enterprise Server is showing as Disconnected, the possible cause might be that too much time passed since the BBISS communicated with the BlackBerry Enterprise Server. If the BlackBerry Infrastructure and Smartphone Simulator does not respond, the BlackBerry Enterprise Server waits before it tries connecting again.

Possible solution

To force the BlackBerry Enterprise Server to reconnect to the BlackBerry Infrastructure and Smartphone Simulator, stop and restart the BlackBerry Enterprise Server components.

Changes to the BlackBerry Enterprise Server are not reflected in the BlackBerry Infrastructure and Smartphone Simulator

Possible cause

The BlackBerry® Enterprise Server was changed while the BlackBerry Infrastructure and Smartphone Simulator was running.

Possible solution

Stop the BlackBerry Infrastructure and Smartphone Simulator and the BlackBerry® Enterprise Server and restart them in that order.

Remove the BlackBerry Performance Engineering Resource Kit

1. On the computer that hosts the BlackBerry® Load Test Configuration Tool, on the taskbar, click **Settings > Control Panel > Add or Remove Programs**.
2. Click **BlackBerry Load Test Configuration Tool**.
3. Click **Remove**.
4. Click **OK**.
5. On the computer that hosts the BlackBerry Infrastructure and Smartphone Simulator, on the taskbar, click **Settings > Control Panel > Add or Remove Programs**.
6. Click **BlackBerry Infrastructure and Smartphone Simulator**.
7. Click **Remove**.
8. Click **OK**.
9. Using the administrative tools of the BlackBerry® Enterprise Server, remove the user accounts from the BlackBerry Enterprise Server.

RIM proprietary protocols

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Protocol	Description
ALP	The address lookup (ALP) protocol is a protocol that allows the transfer of contact lookup requests and the results between the BlackBerry® device and the appropriate destination device.
CICAL	The compressed Internet calendar (CICAL) protocol is a protocol that allows the transfer of calendar appointments back and forth between the appropriate destination service and the BlackBerry device. Meetings are sent using the email (CMIME) protocol.
CMIME	The compressed Multipurpose Internet Mail Extension (CMIME) protocol is a protocol that allows the transfer of email messages back and forth between the appropriate destination service and the BlackBerry device.
DFTP	The device file transfer (DFTP) protocol is a protocol that allows the BlackBerry device to exchange files with the local area network of the BlackBerry® Enterprise Server.
GME	The gateway message envelope (GME) protocol is a protocol that allows the transfer of compressed and encrypted data between the wireless network and BlackBerry devices. The protocol defines a routing layer that specifies the types of message contents allowed and the addressing information for the data. Gateways and routing components use this information to identify the type and source of the BlackBerry device data, and the appropriate destination service to route the data to.
IPPP	The IP proxy protocol (IPPP) is a protocol that allows the transfer of both TCP and HTTP packets between the appropriate destination service and the BlackBerry device.
OTAFM	The Over The Air Folder Management (OTAFM) protocol is a protocol that allows the user of a BlackBerry device to create and delete email message folders and to move messages between folders on a BlackBerry device or the appropriate destination service and have the changes performed on the other.
OTAKEYGEN	The wireless key generation (OTAKEYGEN) protocol is a protocol that allows the activation of users over the wireless network, between the appropriate destination service and the BlackBerry device.
Service Book protocol	The Service Book Protocol is a protocol that allows the transfer of service book information between the BlackBerry Enterprise Server and the BlackBerry device.
SRP	The Server Routing Protocol is responsible for communication between the BlackBerry Enterprise Server and the BlackBerry® Infrastructure .
SYNC	The synchronization (SYNC) protocol is a protocol that allows the transfer of packets containing organizer data, data changes, email message filters and email message signatures between the BlackBerry device and the BlackBerry Synchronization Service of the BlackBerry Enterprise Server.

Glossary

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BlackBerry Domain

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

BlackBerry MDS

BlackBerry® Mobile Data System

messaging server

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

MFH

message from handheld

MTH

message to handheld

PIM

personal information management

PIN

personal identification number

SOAP

Simple Object Access Protocol

UID

unique identifier

Provide feedback

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

Legal notice

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Waterloo, ON N2L 3W8
Canada

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

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