

# Google Apps Connector for BlackBerry Enterprise Server

Installation and Administration Guide



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## Chapter 1

# About This Guide

## What This Guide Contains

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The *Google Apps Connector for BlackBerry Enterprise Server Administration Guide* provides information about the following topics:

- Features of Google Apps Connector for BlackBerry Enterprise Server
- The architecture of Google Apps Connector and related components
- Steps for installing the Google Apps Connector on a server
- Activating users
- Troubleshooting Google Apps Connector

This guide is intended for administrators who are already familiar with both Google Apps and BlackBerry Enterprise Server.

## Related Documentation

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For additional information about Google Apps Connector for BlackBerry Enterprise Server and about related products, refer to the following documents.

Document	Description
<a href="#"><i>Google Apps Connector for BlackBerry Enterprise Server</i></a>	Download and tools page for Google Apps Connector.
<a href="#"><i>Google Apps Help Center</i></a>	Google Apps Help Center article with information about downloading and using the Google Apps Connector.

Document	Description
<i>Release Notes</i>	Release Notes for Google Apps Connector, including new features, known issues, and resolved issue.
<i>Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server</i>	This document details common problems and troubleshooting methods for Google Apps Connector for BlackBerry Enterprise Server.
<i>Google Apps Technical Transition Guide</i>	This guide helps IT administrators and other deployment project team members manage the entire deployment process, communicating the switch to Google Apps to your organization, migrating legacy data, and training your users.
<i>User Setup Guide for Google Apps Connector for BlackBerry Enterprise Server</i>	A user guide that describes to end users how to activate and use the Google Apps Connector.

## How to Send Comments About This Guide

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Please send feedback on this guide to:

`enterprise-apps-doc-feedback@google.com`

In your message, be sure to tell us the specific section to which your comment applies.

If you have any questions or need technical support, please contact Support rather than using this address. For more information about contacting support, see “Getting Further Support” on page 74.

## Chapter 2

# Overview of Google Apps Connector

## What is Google Apps Connector?

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Google Apps Connector for BlackBerry Enterprise Server synchronizes email, calendar events, and contacts between Google Apps and BlackBerry devices using a local installation of BlackBerry Enterprise Server.

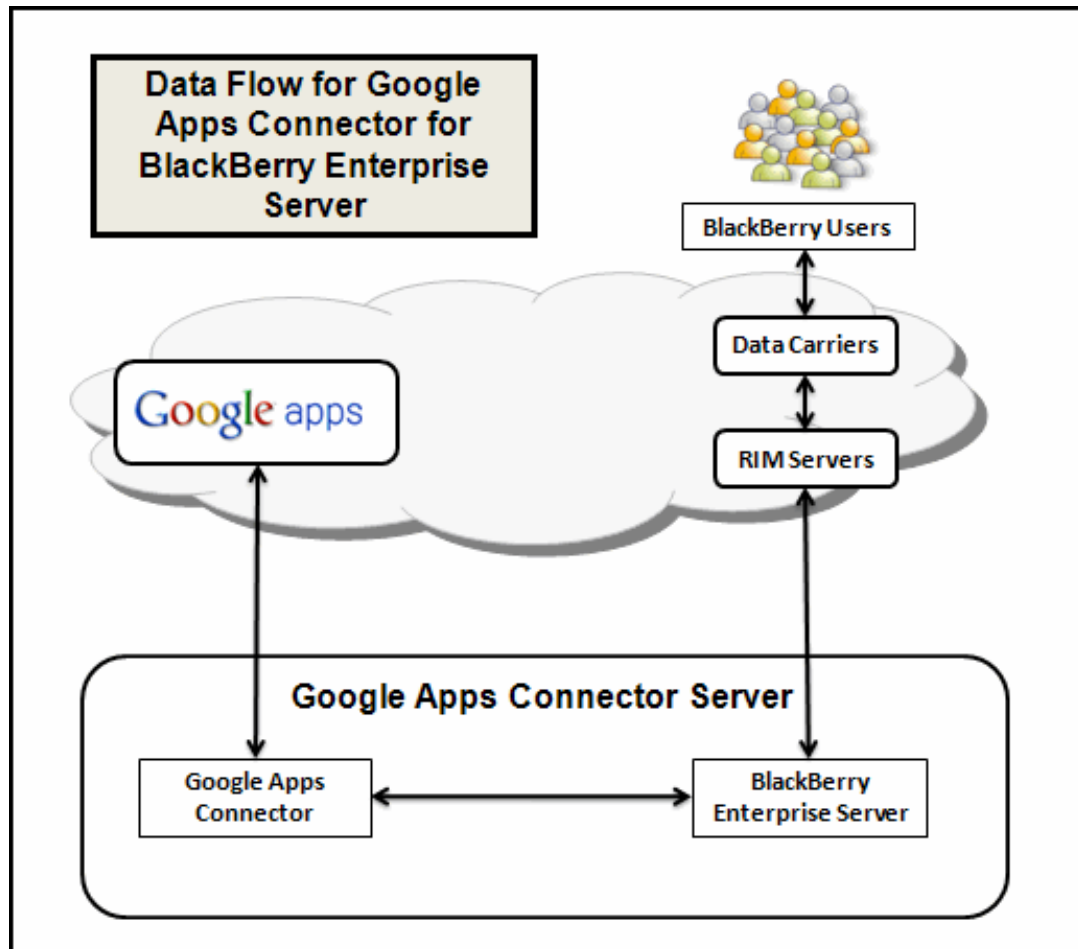
If you're using a Google Apps account for email, calendar and contacts, use the Connector to synchronize with BlackBerry devices and take advantage of the features of BlackBerry Enterprise Server. Google Apps Connector synchronizes email, calendar events, and contacts between your Google Apps account and your users' BlackBerry devices.

Google Apps Connector works with the Google Apps for Business and Google Apps for Education editions.

For a list of requirements, see "Server Requirements" on page 13 and "Network Requirements" on page 17.

# How Google Apps Connector Works

Google Apps Connector for BlackBerry Enterprise Server synchronizes data between Google Apps and a BlackBerry Enterprise Server. Mail, calendar events and contacts flow as follows:



## 1. Google Apps to the Google Apps Connector

The Google Apps Connector synchronizes mail, calendars, and contacts through the Internet to Google Apps.

## 2. Google Apps Connector to BlackBerry Enterprise Server

The BlackBerry Enterprise Server reads data from the Google Apps Connector provider for any changes that should be sent to BlackBerry users. The component also writes any changes to the Connector provider. The BlackBerry Enterprise Server is a server designed and marketed by Research In Motion (the makers of BlackBerry) to support centralized administration of BlackBerry devices for enterprise IT departments. The BlackBerry Enterprise Server pulls information from the Google Apps Connector.



### 3. BlackBerry Enterprise Server to RIM Network

BlackBerry Enterprise Server connects to the Research In Motion (RIM) BlackBerry network to send and receive messages.

### 4. RIM Network to Data Carriers

The RIM data network sends and receives messages from data carriers who support BlackBerry devices.

### 5. Carriers to BlackBerry Users

The data carriers then connect to individual BlackBerry devices to send and receive data.

## User Cache Files

When a new user is added, Google Apps Connector initially caches up to 1000 past messages in the Inbox/Sent labels, as well as all contacts and calendar events. Google Apps Connector will prune the user email cache so that only the past 30 days of email is stored in the cache. Because of this caching model, expect to use about 1GB of disk space for each cache file.

**Note:** During initial activation, the BlackBerry Enterprise Server will only sync the last 5 days of mail, or 200 messages to a BlackBerry device, even though more messages may be contained in the cache. This is a result of BlackBerry Enterprise Server behavior and cannot be changed.

Keeping a local cache of the data makes the availability of the server transparent to the BlackBerry Enterprise Server. Synchronization tasks run in the background, and if the Google Apps Connector server in your environment fails, the messages will be stored safely and will be synchronized properly once the system is back online.

## Features and Benefits

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Google Apps Connector for BlackBerry Enterprise Server offers the following features and benefits:

- **Push Email:** Push email between the BlackBerry device and Google Apps, using native BlackBerry applications.
- **Less than 60 seconds latency for email synchronization.**
- **Sent Mail Sync:** Sent Mail messages are automatically redirected to the BlackBerry device by default.
- **Label/Folder Sync:** Synchronize Gmail labels as BlackBerry mail folders.
- **Read Sync:** Any emails users read on the BlackBerry will be shown as read in Gmail and vice versa.
- **Delete Sync:** Any emails your users delete on the BlackBerry can optionally be deleted in Gmail and vice versa.
- **Archive Sync:** Messages filed into the [Archived] folder on the BlackBerry are archived in Gmail, and vice versa.
- **Starred Items Sync:** Messages filed into the [Starred] folder on a BlackBerry device are marked as starred in Gmail, and vice versa.
- **Contacts Sync:** Synchronize contacts between Google Apps and the BlackBerry device, including pictures.
- **Global Address Lookup:** Search through your domain's Global Address List (GAL) on your device.
- **Calendar Sync:** Synchronize calendar events between the default Google Apps Calendar and your BlackBerry device. Accept and reply to meeting requests on your BlackBerry device.
- **Policy and Device Management:** Supports BlackBerry Enterprise Server IT policy and device management features. Enforce your IT policy and remote wipe BlackBerry devices.
- **Hosting Support:** The Google Apps Connector supports multiple domains for a hosting solution.
- **Support for BlackBerry Enterprise Server 5.0:** Google Apps Connector supports BlackBerry Enterprise Server version 5.0.2 and 5.0.3.
- **Cache file compaction:** By default cache file compaction is enabled. You can adjust the configuration settings in the Google Apps Connector Manager.
- **Send As:** With this feature enabled, the BlackBerry device will use a user's default Send As email address and display name, which are specified in Gmail settings.
- **Free/Busy:** When scheduling a meeting on the BlackBerry device, users can view free/busy information for other meeting attendees. This feature is disabled by default. You can enable free/busy sharing in the registry. See "Enable Optional Features" on page 32.
- **Read Receipt:** When the BlackBerry device gets a message that requests a read receipt, the device will prompt whether to send a read receipt, and whether to remember this setting. This feature is disabled by default. You can enable read receipts in the registry. For more information on this feature, see "Enable Optional Features" on page 32.

## Considerations

Note that the current version of the Google Apps Connector for BlackBerry Enterprise Server has the following limitations:

- 24 Hour GAL Updates: New users can take up to 24 hours before they're visible in the Global Access List (GAL). This cannot be manually accelerated.
- Calendar Sync: Only events in your primary user calendar are synced. Multiple calendars are not supported.
- Contacts Sync: Only contacts within the "My Contacts" label within Gmail are synced.
- Contacts Sync Delay: Updates to contacts take about 5 minutes to synchronize.
- Notes/Tasks: Notes and Tasks are not wirelessly synchronized to Google Apps. They're only local to the device.
- Remote Search: Remote search only searches messages cached in the 30-day cache content, not the entire Gmail mailbox. **Note: This feature doesn't work on BES version 5.0.3 and later.**
- 30-day Cache Update Limitation: If you change the status of a mail message over 30 days old on your BlackBerry device (or a calendar event that ended at least 60 days ago), the changes don't sync to the Gmail mailbox.
- Email Filters: Local BlackBerry email filters only apply to emails that are being redirected to the BlackBerry device.
- Migration: If you have an existing BlackBerry infrastructure, you cannot migrate users from it. You must remove and recreate users.
- Data Recovery and Server Failures: Moving users between BlackBerry Enterprise Servers, which is a common method for data recovery, isn't supported. If a server fails, you must add users to a new server, and wipe and reactivate all users. However, all user data is stored in Google Apps and will not be lost during server failure.
- Not compatible with Google Sync for the BlackBerry: Don't install Google Sync on a device that's activated with Google Apps Connector. If you're using both, the user may experience duplicate contacts and calendar events.
- Manage Folder Redirection on Device Only: You cannot manage folder redirection from the BlackBerry Enterprise Server.
- No BlackBerry Desktop Manager integration: Changes to device settings in Desktop Manager will not be pushed to the device.
- No BlackBerry Resource Kit integration: You cannot run the BlackBerry Enterprise Server resource kit on the same machine that's running the Google Apps Connector.
- No per-user admin features in the BlackBerry Enterprise Server Manager: BlackBerry Enterprise Server Manager features to change settings for individual user signatures, field mapping, and other settings are not supported.
- Log messages don't exactly match BlackBerry Enterprise Server: Some log entries will appear different from standard BlackBerry Enterprise Server log entries. This may affect the functionality of third-party monitoring applications.
- Antivirus and Backup software conflicts: Antivirus and Backup software can cause corruption of data or service outages, because they can lock these files while they're in

use. Exclude cache files associated with BlackBerry Enterprise Server from all Antivirus and Backup software. These files are cache files and don't need to be backed up.

- Windows Search conflicts: Windows Search attempts to open and index data files, which causes data corruption. If Windows Search is installed on the same server as Google Apps Connector, uninstall it completely.

## Chapter 3

# Getting Started

## Overview

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For a successful implementation of Google Apps Connector for BlackBerry Enterprise Server, prepare and plan for your installation.

Some factors to consider when you prepare to install:

- Does your server meet the installation server requirements?
- Does your network meet the installation network requirements?
- Are you using the Google Apps for Business or Google Apps for Education?
- Do you need to make any preparations for security considerations?

These issues are discussed in the chapter below.

Be especially aware of hardware requirements for Google Apps Connector for BlackBerry Enterprise Server. The Google Apps Connector makes intensive use of your server's processor and disk drives, and your performance results with Google Apps Connector will be heavily affected by hardware capacity.

## Server Requirements

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**Note:** For up-to-date system and capacity requirements, you can also check the help center article [System and capacity requirements](#).

Following are the system and capacity requirements for the Google Apps Connector for BlackBerry Enterprise Server.

**Note:** BlackBerry Enterprise Server 5.0 is designed to be tightly integrated with Microsoft Active Directory. If you're installing Google Apps Connector with BlackBerry Enterprise Server 5.0.2 or 5.0.3, be sure that the server that will host BlackBerry Enterprise Server is joined to a Microsoft Windows Domain, and the local administration user that's used is a domain account.

## BlackBerry Enterprise Server: Up to 250 users per server

Following are the minimum requirements for the Google Apps Connector server. Your disk and memory needs may increase depending on your users' email load and usage patterns.

If you're piloting the Google Apps Connector, you may be able to access a trial version of BlackBerry Enterprise Server; check with your RIM sales or support representative for more information. For your production rollout, you'll need to purchase a full license for each server.

### User Capacity:

- Up to 250 users per Google Apps Connector server
- Users receive approximately 100 to 200 email messages each day

### BlackBerry Enterprise Server for Microsoft Exchange®:

- BlackBerry Enterprise Server 5.0.2 or 5.0.3.

**Note:** Google Apps Connector supports any version of 5.0.2 and 5.0.3. For example, BlackBerry Enterprise Server 5.0.3, Maintenance Release 7 and 8 are both supported.

Component	Requirements
<b>Server</b>	A dedicated server that's not used for other services.
<b>Operating System</b>	<ul style="list-style-type: none"><li>• Windows Server® 2003 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2003 R2 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 (64-bit only)</li></ul> (Only supported in U.S. English versions.)
<b>Processor</b>	Dual Intel® Pentium® IV processor (2GHz or greater)
<b>Memory</b>	4 GB RAM minimum recommended
<b>Disk Space</b>	1 GB per user minimum

## BlackBerry Enterprise Server: Over 250 users per server

The Google Apps Connector acts as both a BlackBerry Enterprise server and as a mail server that stores a 30-day cache of every user's mailbox. The mailbox usage patterns of each customer and their users affect the Connector server and its disk subsystem performance.

Organizations that have configured 250 users or fewer per server typically don't experience performance issues.

With specific disk subsystem requirements, using standard hardware, and close monitoring, you can scale the number of users above 250 per server. Connector servers that don't meet the recommended requirements or that are configured with too many users will experience poor performance, and most severely, server shutdown issues which can lead to corruption of cache files.

In order to achieve higher numbers of users per server, and to provide the optimal user experience and system stability, follow these steps:

### 1) Estimate your user capacity needs

User capacity guidelines for Google Apps Connector:

- Up to 350 - 400 users on a single Google Apps Connector server
- Supports receipt of up to 48,000 total messages per day (120-135 email messages per user per day)

**Important:** Your actual capacity can be determined only after you implement the Google Apps Connector solution in your environment.

**Note for large deployments:** If you're installing Google Apps Connector on more than 25 servers, we recommend you use a different admin user account for every 25 servers, so that a single admin account isn't sending out a large number of activation emails.

## 2) Configure your server system to meet the minimum disk requirements

Following are the minimum requirements for the Google Apps Connector server. Your disk and memory needs may increase depending on your users' email load and usage patterns.

Component	Requirements
<b>Server</b>	A dedicated server that's not used for other services.
<b>Operating System</b>	<ul style="list-style-type: none"><li>• Windows Server® 2003 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2003 R2 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 (64-bit only)</li></ul> (Only supported in U.S. English versions.)
<b>Processor</b>	Quad Core Xeon 2.83 GHz (or greater)
<b>Memory</b>	8 GB RAM minimum recommended
<b>Disk Space</b>	1 GB per user minimum
<b>Operating system drive</b>	2 disk drives: 15K RPM SAS, 148GB, mirrored
<b>Cache drive</b>	4 disk drives minimum: 15K RPM SAS, 300 GB, RAID5
<b>Disk controller</b>	Supports SAS 3 GB/s, with 256MB onboard cache memory

**Important:** The configuration of the cache drive and disk controller are the key elements to the performance of a Connector server bearing over 250 users.

## 3) Monitor the Google Apps Connector system during deployment

Through the early adopter and IT pilot phase of your deployment, closely monitor the Connector system and disk queue performance to assess performance as users are added.

The Connector server should meet these requirements at stable running state (check the Windows Task Manager and Performance Monitor):

- The average CPU load should be no more than 25%.
- The committed bytes should be no more than 60%.
- The current disk queue length should be no more than 3.

If these numbers begin to increase, consider expanding the number of Connector servers to accommodate additional users.



## BlackBerry Enterprise Server Express

The following are the minimum requirements for the Google Apps Connector server. Your disk and memory needs may increase depending on your users' email load and usage patterns.

### User Capacity:

- Up to 250 users per Google Apps Connector server
- Users receive approximately 100 to 200 email messages per day

### BlackBerry Enterprise Server Express for Microsoft Exchange®

- BlackBerry Enterprise Server Express 5.0

Component	Requirements
<b>Server</b>	A dedicated server that's not used for other services.
<b>Operating System</b>	<ul style="list-style-type: none"><li>• Windows Server® 2003 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2003 R2 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 SP2 (32-bit or 64-bit)</li><li>• Windows Server 2008 R2 (64-bit only)</li></ul> (Only supported in U.S. English versions.)
<b>Processor</b>	Dual Intel® Pentium® IV processor (2GHz or greater)
<b>Memory</b>	4 GB RAM minimum recommended
<b>Disk Space</b>	1 GB per user minimum

## Network Requirements

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Run Google Apps Connector from a server on your network. Your network will need:

- Ability for the BlackBerry Enterprise Server to initiate an outbound TCP/IP connection to BlackBerry's server on port 3101.
- Ability to make outbound Internet connections to Google on https port 443. By default, the Google Apps Connector uses the proxy settings in the Internet Options Admin console applet.
- Access to SQL Server database (if you're using a Microsoft SQL Server database).
- Internet traffic can be routed via a proxy egress point within your network.

## Domain Requirements

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BlackBerry Enterprise Server 5.0 is designed to be tightly integrated with Microsoft Active Directory. Check that your domain supports these requirements.

- The server that will host BlackBerry Enterprise Server is joined to a Microsoft Windows domain.
- The local administration user that you use for installation is an account on that domain.

## Google Apps Account Requirements

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Google Apps Connector for BlackBerry Enterprise Server is designed to work with a Google Apps for Business or Google Apps for Education account. Check that your domain has the required features. If you need to upgrade, you can do so from your Google Apps Admin console.

During installation, you'll set up the following features on your Google Apps account:

- Create a Google Apps non-admin user account which is used by both the Google Apps Connector and BlackBerry Enterprise Server. This user needs a Google Calendar enabled to validate OAuth.

**Important:** Create a separate user for this setup. Don't use an existing user or an admin account. You can use any Google Apps user as long as you don't expect to provision that user on your BlackBerry Enterprise Server. All outgoing administrator messages will come from this user.

- Enable Two-legged OAuth.
- Enable the Google Apps Sync under Settings > Email in the Admin console.
- Enable contact sharing for your domain, if it isn't already.

These steps are described in "Configure Google Apps Domain" on page 24.

## Database

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Select a database to use with your BlackBerry Enterprise Server.

If you're setting up a trial of the Connector with fewer than 100 users, you can use the MSDE or Microsoft SQL Express database that's included with BlackBerry Enterprise Server installation. The MSDE database program is a scaled-down version of Microsoft SQL Server.

If you're using a full-scale installation, or an installation with more than 100 users, use Microsoft SQL Server on a remote server. Microsoft SQL Server is a full-scale database that will require additional setup and configuration. See Microsoft SQL Server documentation for installation steps.

## Security Considerations

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Google Apps Connector requires the use of an OAuth consumer key and secret to authenticate itself to Google. As part of the installation of this product, you'll grant an OAuth key access to a large portion of the data hosted in your Google Apps domain, including the mail, calendar and contacts for your users. Keep this key and secret secure, and share them with as few people as possible. We recommend your Google Apps administrator assist your BlackBerry administrator during setup so to avoid sharing the key and secret.

Google Apps Connector stores a cache of mail, calendar, and contact data for each user on the local file system. Secure your BlackBerry Enterprise Server as necessary to protect this sensitive data. We also recommend software that encrypts specific files or folders.



## Chapter 4

# Installation for BlackBerry Enterprise Server 5.0

## Installing Google Apps Connector for BlackBerry Enterprise Server

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Install the Google Apps Connector for BlackBerry Enterprise Server on a dedicated machine in your network. For System Requirements, see “Server Requirements” on page 13 and “Network Requirements” on page 17.

These installation steps apply to BlackBerry Enterprise Server version 5.0.2 or 5.0.3. RIM no longer supports BlackBerry Enterprise Server 4.1.x. If you’re using a 4.1.x BlackBerry Enterprise Server, upgrade to 5.0 immediately. See “Upgrading BlackBerry Enterprise Server from 4.1.x to 5.0” on page 34 for instructions.

**WARNING:** Windows Search will cause data corruption and server failures if installed on the same machine as the Google Apps Connector. If Windows Search is installed on your server, stop the server and then remove Windows Search completely (don’t simply disable Windows Search).

### Installation order

Installation involves the following steps. Because these components interact with one another, be sure to go through installation steps in exactly this order.

**Important:** Always install Google Apps Connector before the BlackBerry Enterprise Server software. The Google Apps Connector installer creates a required BlackBerry Server mail profile, and specific registry keys. If these are not present when BlackBerry Enterprise Server is installed, your installation will not be successful.

The following steps are explained in detail in subsequent sections. For more information, see the sections below.

1. Choose Installation Plan
2. Download All Components
3. Configure Google Apps Domain

4. Install Google Apps Connector
5. Install BlackBerry Enterprise Server
6. Enable Optional Features
7. Add Users

## Choose Installation Plan

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Before you begin installation, decide on how you want to install Google Apps Connector for BlackBerry Enterprise Server. Note that you must install Google Apps Connector on a machine that's not used for any other purpose.

While choosing your installation plan, decide the following:

- **Extent of integration with Active Directory:** Decide whether to give visibility into Active Directory.
- **Location of BlackBerry Administration Server:** Decide whether to run the BlackBerry Administrative Server (BAS) on the same machine or a separate machine.

### Extent of Integration with Active Directory

During the BlackBerry Enterprise Server 5.0 installation, BlackBerry Enterprise Server prompts you to provide credentials for a user in Active Directory. These credentials must authenticate properly. After authentication, you can determine the visibility into Active Directory that this user has. This will impact some BlackBerry Enterprise Server features. The credentials you provide will be used by BlackBerry Enterprise Server when performing queries against this Directory.

BlackBerry Enterprise Server queries Active Directory for two purposes. It uses this data to populate the configuration database with users that can be provisioned in BlackBerry Enterprise Server. It also uses this data for Active Directory-based authentication in the BlackBerry Administration Service (BAS) web client.

You have two options for your Active Directory authentication user:

- **A user account that has visibility to browse your Active Directory.** Choosing a domain account with visibility into your Active Directory provides a simpler administration experience, but for some environments this level of access may violate company security policy. This option provides additional functionality, but requires greater Active Directory access.
- **A valid domain account without Active Directory visibility.** If your company doesn't want to give BlackBerry Enterprise Server any visibility into Active Directory, the MAPI Global Address List will be used to present the users that can be provisioned in BlackBerry Enterprise Server, and all users will be required to log into the BAS web client with BAS credentials. BAS credentials are credentials that are local to BlackBerry Enterprise Server. BAS credentials are explicitly provided on a user by user basis by the BlackBerry Enterprise Server administrator. This option doesn't provide as much functionality, but doesn't require full Active Directory access.

## Location of BlackBerry Administration Server (BAS)

BlackBerry Enterprise Server version 5.0.2 and 5.0.3 use a web-based administration interface through BlackBerry Administration Service (BAS). This interface imposes additional performance requirements, since BAS runs as a web server that's hosted by Apache, JBoss, and other web server technologies. Web server components must be installed on the same machine that's running BAS.

You have two options:

- **Install BAS on the same server.** You can install BlackBerry Administration Service on the same machine that runs BlackBerry Enterprise Server and the Google Apps Connector. This is a simpler solution, but increases performance requirements.
- **Install BAS on a separate server.** For performance purposes, you may wish to install BAS on a different server than BlackBerry Enterprise Server, but with access to the same configuration database.

The Google Apps Connector will work with BAS installed on the same server as BlackBerry Enterprise Server, or with a different server. If you're concerned with performance or capacity, you may wish to consider installing BAS on a separate server. If capacity isn't an issue, or you don't expect to use many resources (for instance, during a pilot program), you may wish to install BAS on the same server as BlackBerry Enterprise Server.

See the official BlackBerry Enterprise Server documentation provided by Research In Motion for performance implications of running BAS and BlackBerry Enterprise Server on the same server and how to install these components on different servers.

## Download All Components

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Installing Google Apps Connector requires a number of software packages, service updates, and patches. Before you begin installation, identify and download all the components that you'll need so that the rest of installation goes through more quickly.

You'll need to download and install the following:

During the installation steps described in this book, you'll install the following:

- BlackBerry Enterprise Server for Microsoft Exchange® 5.0.2 or 5.0.3. Go to the [BlackBerry Enterprise Server download site](#) and select "BlackBerry Enterprise Server v5.0.2 for Microsoft® Exchange" or "BlackBerry Enterprise Server v5.0.3 for Microsoft® Exchange".
- Microsoft SQL Express (if you're not using Microsoft SQL Server). This is included in the BlackBerry Enterprise Server installation package.
- Microsoft Outlook 2007 with SP2 (U.S. English language support). Outlook 2007 requires a CD. The Service Pack is available for download here:

<http://www.microsoft.com/download/en/details.aspx?id=5>

**Important:** Don't enable Windows Search for Outlook, as this can cause cache file corruption.

- The February 2010 Cumulative Time Zone update for Microsoft Windows operating systems, available here:

<http://support.microsoft.com/kb/979306/>

- The March 2010 Daylight Saving Time Update for BlackBerry Enterprise Server, available here:

[http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB20676&sliceId=1&docTypeID=DT\\_SUPPORTISSUE\\_1\\_1&dialogID=329434725&stateId=0%20%20329428507](http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB20676&sliceId=1&docTypeID=DT_SUPPORTISSUE_1_1&dialogID=329434725&stateId=0%20%20329428507)

- Google Apps Connector for BlackBerry Enterprise Server. You can download the latest version here:

<https://tools.google.com/dlpage/appsconnector>

## Configure Google Apps Domain

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Before you install the Google Apps Connector, prepare your Google Apps domain to work with the BlackBerry Enterprise Server. This includes:

- Confirming the Google Apps Sync setting
- Enabling contact sharing
- Enabling OAuth
- Creating a user in Google Apps for the BlackBerry Enterprise Server

Enabling contact sharing in the Google Apps Admin console is required for Google Apps Connector to access your Global Address List (GAL). Contact sharing is enabled by default.

OAuth is an open protocol to allow secure API authorization in a simple and standard method from desktop and web applications. The protocol is described at the OAuth website at <http://oauth.net>.

The user account created in your Google Apps domain is used by the Google Apps Connector and BlackBerry Enterprise Server. BlackBerry Enterprise Server will use this account to send e-mails based on the different admin functions available in the BlackBerry Manager application. This user doesn't require administrator access to your Google Apps domain.

### Step 1: Set your sharing settings

1. In a Web browser, go to your Google Apps Admin console.

<https://admin.google.com>

2. Log in as the Google Apps Administrator for your domain.
3. In the Admin console, go to **Google Apps > Gmail > Advanced settings**.



4. In the **Outlook & BlackBerry Support** section, confirm that **Enable Google Apps Sync and Google Apps Connector** is checked. If it isn't checked, check the setting and save your change.
5. Next, in the Admin console, go to **Google Apps > Contacts > Sharing settings**.
6. Confirm that **Enable contact sharing** is selected. If it isn't, select it and save your change.

## Step 2: Set your API and OAuth settings

1. In your Google Admin console, go to **Security > API reference**, and make sure **Enable API access** is checked.
2. Also under **Security**, go to **Advanced settings**. In the **Authentication** section, click **Manage OAuth Domain Key**.
3. Next to your OAuth consumer key, check **Enable this consumer key**.
4. Unless other utilities require you to give access to all APIs, leave **Allow Access to All APIs** unchecked and save your changes.
5. Back under **Security > Advanced settings > Authentication**, click **Manage third party OAuth Client access**.
6. Enter your domain name for the OAuth consumer key name, such as `example.com`.
7. Enter the URLs you want to grant access to for this OAuth Consumer:

```
https://mail.google.com/,  
https://www.google.com/calendar/feeds/,  
https://www.google.com/m8/feeds/
```

These are the URLs for Email access, Calendar access, and Contacts access. Enter the URLs as a comma-delimited list.

**Note:** If you're using an earlier version of [Google Apps Connector](#) (prior to 3.0), use these API scopes instead:

```
https://mail.google.com/,  
https://www.google.com/calendar/feeds/,  
https://www.google.com/m8/feeds/,  
https://apps-apis.google.com/a/feeds/user/#readonly,  
https://apps-apis.google.com/a/feeds/calendar/resource/#readonly
```

8. Click **Authorize**. OAuth is now available.
9. Note the OAuth consumer key and OAuth consumer secret. You'll need this information during Google Apps Connector configuration.

## Step 3: Create user

1. In your Google Apps Admin console, go to **Users**.
2. In the top-right, click **Add more users > Add a user manually** to create the BlackBerry Enterprise Server Google Apps user account. This user will send and receive mail, but doesn't need to be an admin account.

**Important:** Create a separate user for this profile. Don't use an existing user or an admin account. Don't activate this special user in Google Apps Connector.

3. Enter the First name, Last name and Username you want to define for this account. Note the name of this account. You'll need it later.

Example: BlackBerry Admin `besadmin@example.com`

4. Click **Set password**.
5. Enter a complex password, then re-enter the password to confirm it.
6. Click **Create new user**. Your BlackBerry Enterprise Server Google Apps user is now available.
7. Important final step: In the Admin console, go to **Google Apps** and in the row for **Calendar**, make sure that its **Status** is **On for everyone**. If it says **On for selected orgs**, make sure that the account you just created is in an org unit with Calendar enabled.

## Install Google Apps Connector

---

While installing the connector, use a Windows domain user with local administrative privileges to the server. Don't use the built-in Administrator account on the machine you'll be installing.

### Set up server

1. Install Windows Server 2003 or 2008 and all applicable service packs and Windows updates. See "Server Requirements" for more information on supported versions of Windows Server.  
**Note:** Be sure to use a clean installation of Windows Server that's not used for any other purpose.
2. Install Microsoft Outlook 2007 and Service Pack 2 on the machine where you'll run the Connector. If unsure, use the "Install Now" default configuration.
  - a. Install Microsoft Outlook 2007 from your standard CD or volume license.
  - b. Download Service Pack 2 here:  
<http://www.microsoft.com/download/en/details.aspx?id=5>
3. Remove Windows Search for Outlook. Windows Search can cause cache file corruption, and will prompt administrators to enable. Uninstall Windows Search from the Admin console "Add or Remove Programs."
4. Install any required updates and hotfixes.

Note specifically that Google Apps Connector for BlackBerry Enterprise Server requires the most up-to-date time zone hotfix for Microsoft Windows®.

Information about the Microsoft time zone hotfix can be found here:

<http://support.microsoft.com/kb/979306/>

If you're concerned that there may be a more recent time zone update, you can check the Microsoft Support site here:

[http://support.microsoft.com/gp/dst\\_prodlist#WS2008](http://support.microsoft.com/gp/dst_prodlist#WS2008)

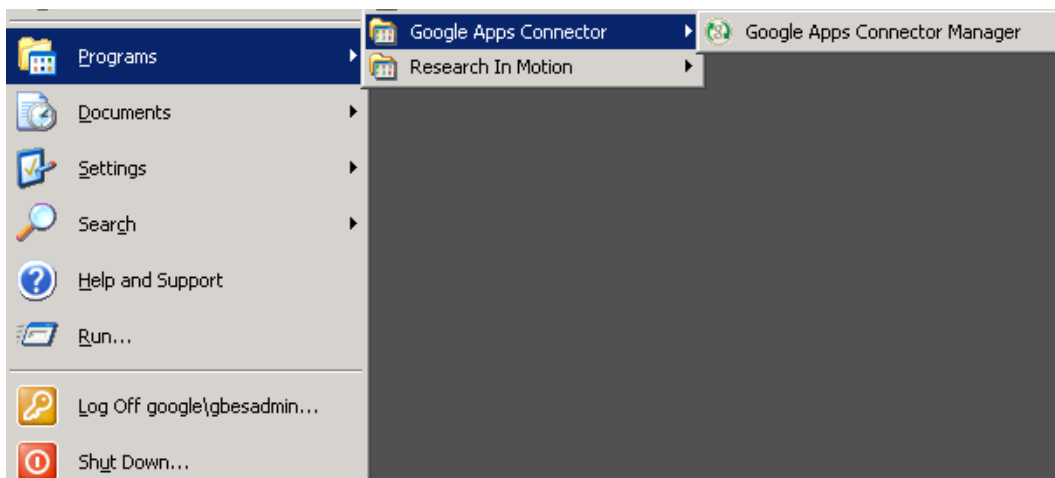
## Install Connector

You can download the Google Apps Connector for BlackBerry Enterprise Server from the following URL:

<https://tools.google.com/dlpage/appsconnector>

**Important:** Antivirus and Backup software can cause service outages or corruption of data. If you have any Antivirus or Backup software, exclude cache files associated with BlackBerry Enterprise Server. These files are cache files and don't need to be backed up. See your software documentation for details.

1. Reboot the server.
2. Log in to the server as the domain account with local administrator access.
3. Run the installer for the Connector `AppsConnector.msi` and wait for it to complete. The MSI installer will only show a basic progress bar.
4. From the Start Menu, choose **Google Apps Connector > Google Apps Connector Manager**.



You'll see the Google Apps Connector for BlackBerry Enterprises Server Console.

5. Click **File Locations** and make any changes required.
6. Click Save, then Yes and OK if needed, to return to the main screen.

7. Click **Profiles**.

**Edit Google Apps Connector Profiles**

Profile Status

Google Apps Connector compatible profiles have not been detected. The existing BlackBerry Enterprise Server profiles will be deleted and new profiles will be created in their place.

Service Email Account

besadmin@example.com

OAuth Consumer Key

example.com

OAuth Consumer Secret

\*\*\*\*\*

Create Cancel

8. Enter the Service Email Account you created in Google Apps.
9. Enter your Google Apps Domain OAuth Consumer Key.
10. Enter your Google Apps Domain OAuth Consumer Secret.
11. Click **Create Profiles**.

**Note:** If Two-legged OAuth isn't already enabled, it may take 15 minutes to 24 hours before the OAuth feature takes effect after OAuth is enabled.

**WARNING:** Never delete the BlackBerryServer or BlackBerryManager mail profiles in the Mail Admin console applet. If you do so, you'll need to completely reconfigure the Google Apps Connector, wipe all user devices, and reactivate all users.

12. Click **Yes**, then click **OK** on the Success dialog.
13. Click **Settings** and enable any relevant optional features for your domain. See "Enable Optional Features" for more information.
14. Reboot the server.

## Install BlackBerry Enterprise Server

---

After you set up an administrator account and install necessary components, you'll install the BlackBerry Enterprise Server.

The BlackBerry Enterprise Server will install services that run as the account you're using when you install the server. Make sure you're logged in as the right BlackBerry Enterprise Server administrator account when you perform these steps.

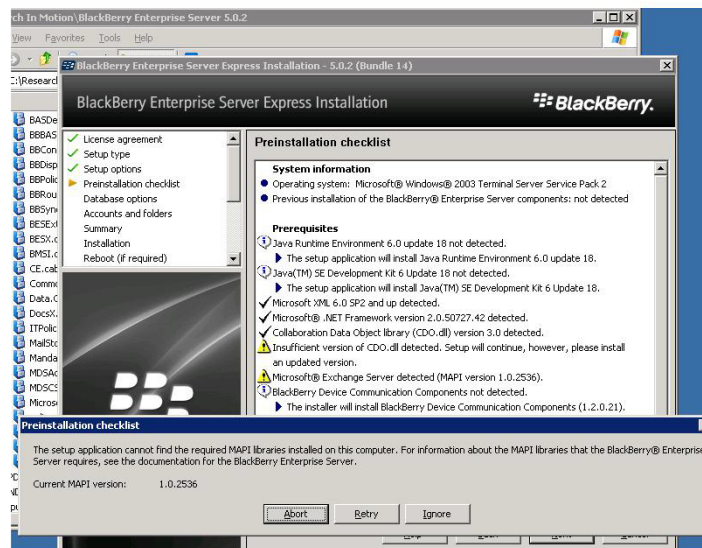
Before you install the server, decide which database to use. If you'll be installing for fewer than 100 BlackBerry users, you can use the MSDE 2000 database, which is included in the BlackBerry Enterprise Server installation. Otherwise, you should consider using Microsoft SQL Server.

If you want to use SNMP monitoring, install SNMP before installing BlackBerry Enterprise Server.

Follow instructions from RIM documentation to install BlackBerry Enterprise Server version 5.0.2 or 5.0.3.

**Important:** During installation you may see the following error:

The setup application cannot find the required MAPI libraries installed on this computer. For information about the MAPI libraries that the BlackBerry Enterprise Server requires, see the documentation for the BlackBerry Enterprise Server.



If you see this message, click Ignore and continue with installation. This will not affect your installation or performance.

## Install Time Zone Patch

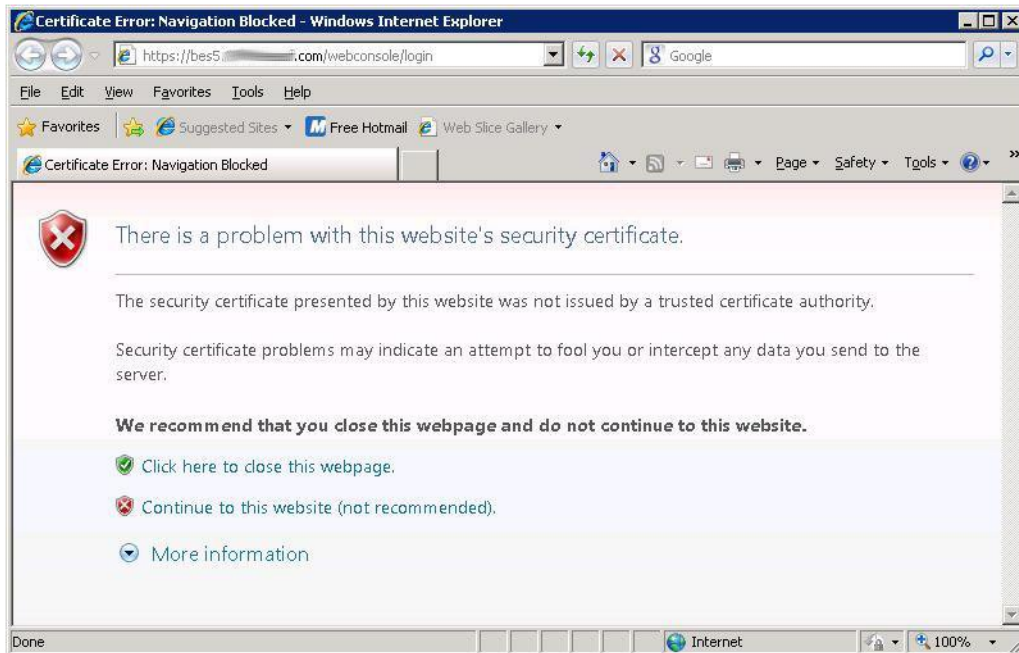
Install the following patch for BlackBerry Enterprise Server.

[http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB20676&sliceId=1&docTypeID=DT\\_SU PPORTISSUE\\_1\\_1&dialogID=329434725&statelD=0%200%20329428507](http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB20676&sliceId=1&docTypeID=DT_SU PPORTISSUE_1_1&dialogID=329434725&statelD=0%200%20329428507)

## Internet Explorer Options

Research In Motion recommends using Internet Explorer to access the various web interfaces to administer the BlackBerry Enterprise Server. If using Internet Explorer against BlackBerry Enterprise Server, remember to set the browser in Compatibility Mode.

Also, if the following screen is encountered, select “Continue to this website (not recommended).” This will bring you to the main administration interface. For more explanation regarding the various settings and errors that a user may encounter by using Internet Explorer to view BAS, please contact Research In Motion or reference the official documentation for the product.



## Active Directory Authentication Setup

BlackBerry Enterprise Server 5.0 that allows individual BlackBerry Enterprise Server users to log into BAS to perform various administrative processes on their own account. (Historically, BlackBerry Enterprise Server users would have to contact the BlackBerry Enterprise Server administrator to perform these actions.)

When a user tries to authenticate against BAS, BAS requires user credentials.

## **Option One: Active Directory Credentials**

By default, any user that's added to a BlackBerry Enterprise Server is given the right to authenticate themselves with BAS via Active Directory. To enable Active Directory authentication, there is some setup that needs to be performed.

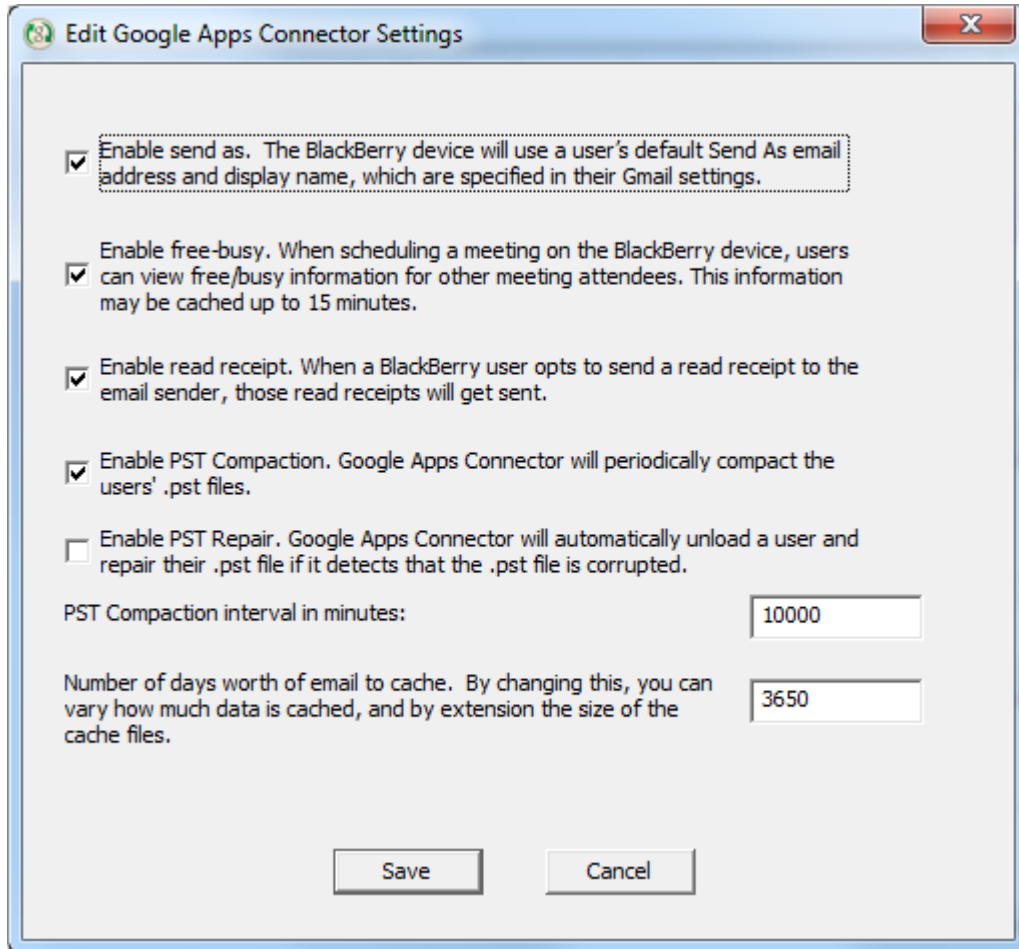
1. Make sure that the LDAP administrator user specified in BlackBerry Enterprise Server set up has enough access to be able to view and query the Active Directory container that contains the BlackBerry Enterprise Server users.
2. Make sure that each LDAP user object exposes the field "legacyExchangeDN" with a string that matches the SMTP address of that user in Google Apps. There are many ways to add properties to users in Active Directory but the easiest way is to use ADSI Edit. This application is an MMC snap-in that can be downloaded from Microsoft. For a large number of users, it may be easier to script these modifications.

## **Option Two: BAS Credentials**

If Active Directory authentication isn't something that's important or the prerequisites to support this method of authentication are not desirable, each user can be modified to allow for BAS authentication. In this scenario, each user must be modified in BAS to add the BAS authentication modules. Once that module is added to the user, a user name and password pair must be assigned to the user.

## Enable Optional Features

Some additional optional features are available after you install Google Apps Connector. To enable them, select the appropriate checkboxes in the **Configuration Settings** page of Google Apps Connector Manager.



### Send As

Google Apps Connector supports "Send As" functionality on BlackBerry devices running through Google Apps Connector. With this feature enabled, the BlackBerry device will use a user's default Send As email address and display name, which are specified in Gmail settings.

This will check the "Send As" value for each user every time that the BlackBerry Enterprise Server starts, or every 24 hours.



## Free/Busy

When scheduling a meeting on the BlackBerry device, users can view free/busy information for other meeting attendees. This information may be cached up to 15 minutes. This feature is disabled by default.

This setting will take effect the next time you restart the Dispatcher and agents.

If this feature is enabled, free/busy will be visible for all users who share their free/busy settings with the Google Apps Connector user, whether or not those users share their free/busy with an individual user. As a result, users may see free/busy schedules in BlackBerry that they would not have permission to see in the Google Apps web browser, and vice versa.

**Note:** The free/busy lookups will fail if you're using a hosted OAuth consumer key and secret to authenticate the Google Apps Connector. See "Hosted Solution" on page 51.

## Read Receipt

When the BlackBerry device gets a message that requests a read receipt, the device will prompt whether to send a read receipt, and whether to remember this setting. This feature is disabled by default.

This setting will take effect the next time you restart the Dispatcher and agents.

If a user previously had set a BlackBerry device to deliver a read receipt by default, when you enable this feature the BlackBerry device will deliver a read receipt without prompting the user.

## Change number of days to synchronize emails

By default, Google Apps Connector will cache 30 days of email. You can vary how much data is cached, and by extension the size of the cache files.

Set this value to the number of days for caching. By default, this is 30 days. For most environments, 30 days is the recommended value.

**Note:** Increasing the number of days **does not** cause existing users to pull older mail. Reducing the number of days **does** cause mail older than the new limit to be removed from the cache immediately.

## Change Cache File Compaction

Google Apps Connector will compact your cache files regularly. It's enabled to compact cache files once per week by default. This can reduce cache file size by 70% on average. Set this value to the interval time in minutes. For instance, to set this to compact cache files daily, use the value 1440 (24 hours).

## Additional note about formatting your GAL and user contact list

If your GAL or user's contact lists contain email addresses with uppercase characters, this may cause issues with meetings. Specifically, if you're the meeting owner and you update a meeting from your BlackBerry device, cancellation emails may be sent to attendees. To avoid this you need to create the following DWORD registry keys and set their value to 1:

```
Software\Google\Google Apps Sync\GAL\LowercaseEmailsEnabled  
Software\Google\Google Apps Sync\ContactsSync\LowercaseEmailsEnabled
```

This should be done before starting the Dispatcher service, so that when the GAL is downloaded and the user's contacts are downloaded, the email addresses will all be in lowercase. If you're experiencing this issue and need additional help, please contact support at <http://contact.googleapps.com>.

## Add Users

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Once you have set up Google Apps Connector, you can add users. For steps on how to add users, see "Create BlackBerry Enterprise Server Users" on page 37. For deployment suggestions, see "Deployment" on page 41

## Upgrading BlackBerry Enterprise Server from 4.1.x to 5.0

---

As of July 2011, RIM no longer supports BlackBerry Enterprise Server version 4.1.x. If you're using this server, upgrade immediately.

The following are instructions for upgrading a BlackBerry Enterprise Server 4.1.x server running with the Google Apps Connector to a BlackBerry Enterprise Server 5.0.2 or 5.0.3 server.

1. Stop the BlackBerry Dispatcher service and wait until all BlackBerryAgent.exe and CalHelper.exe processes are gone from the taskbar.
2. Uninstall previous versions of the Google Apps Connector for BlackBerry Enterprise Server.
3. Uninstall the Exchange CDO package, as this isn't used.
4. Install the Google Apps Connector by launching the newest version of AppsConnector.msi.
5. Open Google Apps Connector and enter your current OAuth consumer secret and consumer key.
6. Open Outlook on the BlackBerryManager profile to confirm that the synchronization icon in the taskbar spins and successfully syncs with no errors.

7. Install BlackBerry Enterprise Server 5.0.2 or 5.0.3. Don't start BlackBerry services or reboot the server once the install has completed.

**Note:** During this step you may see a warning message about missing components. If this warning appears, ignore it. You may also see a warning if the user account used to log into the server is a member of the Domain Administrators group. You can ignore this warning as well.

8. Restart the server. When the server restarts, all the BlackBerry services should be on by default.



## Chapter 5

# Users

## About Users

---

After you have installed Google Apps Connector and your BlackBerry Enterprise Server, you'll add users to your server. This chapter details methods and considerations for adding users.

## Create BlackBerry Enterprise Server Users

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Create users with the BlackBerry Manager application.

**Important:** Don't activate the special Google Apps user that you created during installation. This special user is used by the Connector and cannot be activated on a BlackBerry device.

For documentation for your users, see the [Google Apps Connector for BlackBerry Enterprise Server - User Setup Guide](#).

To create a BlackBerry Enterprise Server User in 5.0.2 or 5.0.3: Creating users in 5.0.x may vary depending on your environment. For full information on creating users in 5.0.x, see the [BlackBerry Enterprise User Administration Guide](#) on the RIM web site.

1. Open the BlackBerry Administration Service.
2. In the User menu, select **Create a user**.
3. Without entering anything, click **Search**. You should now see a list of the users from your Google Apps domain. (This can take up to 24 hours to synchronize after users are added in Google Apps.)
4. Select the users you want to add.
5. Click Add.
6. Click Save.

## The “First Five Users Rule”

When first run, BlackBerry Enterprise Server will run only a single agent. After you add users and restart the server, however, BlackBerry Enterprise Server will automatically begin running up to five agents, to optimize performance.

Therefore, consider the “First Five Users Rule”: **When adding users to a new server, add five users, then restart the Dispatcher server.**

If you add hundreds of users to the server for staging with only a single agent running, the server can run out of memory and fail to start users. If this happens, restart the Dispatcher service to improve performance.

## Adding Users In Bulk

RIM provides the following tools to add many users at once.

- You can import a list of users through a CSV file. For more details, see RIM’s [BlackBerry Enterprise Server Express Administrator Guide](#).
- RIM also provides a resource kit and APIs to automate adding users. For more information, see the [BlackBerry Enterprise Server Resource Kit](#).

**Note:** Each time you add a user, the Google Apps Connector builds the initial cache files for that user, which uses system resources. Adding users in bulk can seriously degrade server performance for any active users on the system. If you’re adding users to an existing server with current active users, don’t add users in bulk. Add the new users to another server, or add them a few at a time. Otherwise, mail delivery for existing users can slow down or stop entirely.

## Configure BlackBerry Devices

---

To configure a user’s BlackBerry device, remove Google Sync if it’s installed, and wipe the device for activation.

**Note:** Activate the device soon after the activation message is created. If you don’t activate within the specified time limit, your activation will expire. The default time limit is 48 hours.

### To delete Google Sync from the BlackBerry device (if needed)

1. On your BlackBerry device home screen, press the menu button to display all applications.
2. Open the **Options** application.
3. Select **Advanced Options**.
4. Select **Applications**. This will display the list of applications installed on the device.
5. If Google Sync is listed highlight it and press the menu button and select **Delete**.
6. When prompted, select **Delete** to confirm the removal of the application.

7. When prompted to restart now, select **Yes**. When the device restarts, Google Sync will be removed.

### **To wipe the BlackBerry device**

Before you proceed, use BlackBerry Desktop Manager to back up your device to protect against any data loss.

If you're migrating a BlackBerry device from an existing BlackBerry environment, you'll need to take additional steps. For more information, see "Migration" on page 42.

**Note:** Exact steps to wipe your BlackBerry device will vary by the version of your BlackBerry device OS. In some BlackBerry devices, the command will instead read "Security Wipe" and the user interface will look different. For exact steps to wipe your BlackBerry device, consult your device documentation.

1. On your BlackBerry device home screen press the menu button to display all applications.
2. Open the Options application.
3. Select **Security Options**.
4. Select **General Settings**.
5. Press the menu button
6. Select **Wipe Handheld**. You're not required to remove all third-party applications. Only the Google Sync application needs to be removed from the device.
7. Select **Continue**.
8. Enter "blackberry" in the confirmation screen to confirm the handheld wipe

### **To activate the BlackBerry device with BlackBerry Enterprise Server**

**Note:** Skip the Wizard Setup by selecting either "Remind Me Later" or "Don't Ask Me Again."

1. Press the menu button to list all applications on the device.
2. Open the Options application.
3. Select **Activation Options**.
4. Select **Enterprise Activation**.
5. Enter the primary e-mail address associated with your Google Apps account.
6. Enter the BlackBerry activation password you were provided by your BlackBerry administrator. This is a separate password from your Google Apps password.
7. Press the menu button and select **Activate**.
8. If your radio is off you'll be prompted to enable the radio, select **Turn Radio On**.

Once you have activated, your device is ready to use with Google Apps Connector for BlackBerry Enterprise Server.

## Wired Activation

RIM supports the ability to activate devices more quickly by performing a wired activation to a BlackBerry device connected by a USB cable.

Wired activation with BES 5.x requires Internet Explorer, because the wired activation process uses ActiveX. For more details please review the RIM Knowledge Base article [How to activate a BlackBerry smartphone using BlackBerry Enterprise Server Express 5.0](#).

## Moving Users Between BlackBerry Enterprise Servers

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If you have more than one BlackBerry Enterprise Server configured with Google Apps Connector, it's possible to move users between them. You *cannot* move users from a BlackBerry Enterprise Server configured with another messaging service, such as Exchange.

To move a user from one BlackBerry Enterprise Server to another, do the following:

1. On the **source server**, identify the data cache file for the user you want to move. The data file should be located under the PST file location. The actual filename has the pattern:

```
GMS-BlackberryServer-email@example.com.pst
```

2. On the **destination server**, create a pending file in the same directory as the data cache file on the source server. The two BlackBerry Enterprise Servers *must* have this same path specified as the PST file location in Google Apps Connector. The pending file should have the same name as the data cache file, but should end in **.pst.pending** instead of **.pst**.
3. Find the user in BlackBerry Administration Service, right click it, and choose **User actions > Switch BlackBerry user to different BlackBerry Enterprise Server**. Select the destination server and save your changes.
4. Copy the PST and DB files for the user from the source server to the destination server.
5. Delete the pending file on the destination server.
6. Within fifteen minutes after deleting the pending file, the user will appear as active on the destination server in BlackBerry Administration Service. If you want the user to appear immediately, you can select the user from the Manage Users section of BlackBerry Administration Service and click **Reload user**.



## Chapter 6

# Deployment

## Overview

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This chapter contains information and suggestions to help you deploy Enterprise Activation (activation with Google Apps Connector for BlackBerry Enterprise Server) to your users successfully.

This chapter includes:

- Discussion of how Google Apps Connector can fit into your overall Google Apps Deployment strategy.
- Considerations for migration.
- Tips for how to migrate individual users successfully.
- Links to user and deployment resources.

This chapter offers suggestions for the most common deployment situations. It's based on case studies from actual deployments with customers and partners. Note, however, that every deployment is different, and you may need to modify these suggested strategies to suit your business needs.

## Google Apps Connector and Deployment

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When you're deploying Google Apps, plan ahead for how you'll implement Google Apps Connector for BlackBerry Enterprise Server.

### **Core IT and Early Adopter**

If you're installing Google Apps Connector for BlackBerry Enterprise Server for the first time, consider running a pilot program with a smaller number of IT staff and early adopters. This will allow you to test the functionality of the Connector, become familiar with how it works, and determine your full IT and helpdesk policy before a large number of users have BlackBerry Enterprise Server features activated.

## Go Live

On your Go Live date, you'll roll out Enterprise Activation for the majority of your users.

You can add Google Apps users on the Google Apps Connector server before your Go Live date. This won't affect users already activated on any existing BlackBerry Enterprise Server environment.

**Important:** Don't activate your users on Google Apps Connector if they're already active on another BlackBerry Enterprise Server. Users will not activate successfully. Because activation is handled through email, multiple BlackBerry Enterprise Servers will cause most activations to fail.

If you have other BlackBerry Enterprise Servers for your domain when you're ready to Go Live, follow these steps:

1. Add your users on the Google Apps Connector server. Don't activate them yet.
2. Remove the users from any previous BlackBerry Enterprise Servers, or disable mail flow to those servers.
3. Activate your users on Google Apps Connector for BlackBerry Enterprise Servers.

If the user cache isn't staged on the new BlackBerry Enterprise Server when you add the user, the cache file must synchronize before you perform the device activation. This can take up to 24 hours.

## Migration

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If you're migrating from an existing BlackBerry server, review the following migration considerations.

### Using SQL Server while migrating from Lotus Notes

If you're using a remote SQL Server database that was previously used with a setup for BlackBerry Enterprise Server for Lotus Notes, you'll need to clear some data from your SQL Server database. For more information, see article KB15788 in the [BlackBerry Technical Solution Center](#).

### Prepare BlackBerry devices for migration

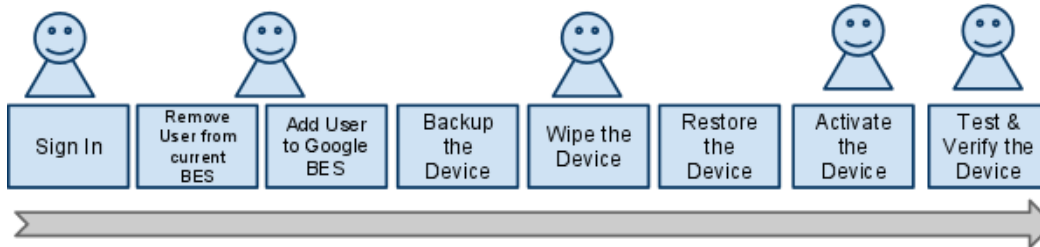
Prepare each device for migration by applying an empty IT Policy. Then wipe each device before adding it to the new BlackBerry Enterprise Server infrastructure.

For more information about removing an IT policy from a BlackBerry device, see article KB14202 in the [BlackBerry Technical Solution Center](#).

## Deployment Tips

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When you plan how to roll out Google Apps Connector for BlackBerry Enterprise Server to your users, consider the following suggested methodology.



These steps assume that you have already installed Google Apps Connector, and that you're migrating users from an existing BlackBerry Enterprise Server.

### Preparation: Set up a migration room

To make deployment easier, set up a migration room where users can turn in their device for upgrading. Make sure that this room is easy to find. Stock the room with the materials you'll need: laptops, label makers, a sign-up sheet for users, signs to explain what's happening, and so on.

Announce beforehand when the migration room will be open and how to get there. Send out a calendar invitation if possible, so that users will be reminded when the scheduled migration time arrives.

### Step 1: User turns in BlackBerry smartphone

Each user will turn in their device to you for upgrade. Consider the following suggestions:

- Have the user sign-in and note their name and the time they turned the phone in.
- Immediately after you receive the smartphone, use a label-maker to label the phone with the user's name or ID number, and, if needed, how to reach them.
- Let the user know when they can pick up their phone. Usually, migrating each phone takes about 20-40 minutes, but this may vary depending on your migration room layout, staffing, and situation.

## Step 2: Remove legacy data

After you receive each device, remove legacy data for that user, as follows:

- **Push an empty IT policy to the user.** For more information on how to do this, see the [RIM knowledge base article KB02022](#).
- **Delete the user from the previous instance of BlackBerry Enterprise Server.** Follow these steps:
  1. Open BlackBerry Manager on the administrator's PC.
  2. Right-click the BlackBerry smartphone user.
  3. Click Remove User.
  4. Click Yes to remove the BlackBerry smartphone information from the user's mailbox.
- **Remove Google Sync if the user has Google Sync installed.** Google Sync is another way to synchronize Google Apps with a BlackBerry device, without using a BlackBerry Enterprise Server. Use of Google Apps Connector for BlackBerry Enterprise Server is mutually exclusive with Google Sync. If the user's smartphone has Google Sync installed, follow these steps:
  1. On the user's BlackBerry device home screen, press the menu button to display all applications.
  2. Open the Options application.
  3. Select Advanced Options entry.
  4. Select the Applications entry. This will display the list of applications installed on the device.
  5. If Google Sync is listed highlight it and press the menu button and select Delete.
  6. When prompted select Delete to confirm the removal of the application.
  7. When prompted to restart now select Yes. When the device restarts, Google Sync will be removed.

## Step 3: Add user to the new BlackBerry Enterprise Server

Add the user to the new BlackBerry Enterprise Server. For full information on adding users, see "Deployment" on page 41.

## Step 4: Use BlackBerry Desktop Manager to back up the smartphone

Use BlackBerry Desktop Manager to back up the device to protect against any data loss. Follow these steps:

1. Connect the BlackBerry smartphone to a computer that's running BlackBerry Desktop Manager.

2. Open the BlackBerry Desktop Manager.
3. Click Backup and Restore.
4. Select Backup to perform a full backup.
5. Select a location to save the backup file, and click Save.

## Step 5: Wipe the BlackBerry device

For a cleaner activation, wipe the smartphone before adding it to the new BlackBerry Enterprise Server infrastructure. Follow these steps:

1. On the BlackBerry device home screen, press the menu button to display all applications.
2. Open the Options application, and go to Security Options -> General Settings.
3. Press the menu button and select Wipe Handheld. You don't need to remove all third-party applications.
4. Click Continue.
5. Type "blackberry" into the confirmation screen to confirm the handheld wipe.

## Step 6: Restore the device

**Note:** When you restore the device, don't restore contacts or calendars. Let this data synchronize from a backed up profile.

To restore all of the data from the backup file to a BlackBerry smartphone, complete the following steps:

1. Connect the BlackBerry smartphone to the computer that has BlackBerry Desktop Software installed.
2. Open the BlackBerry Desktop Manager.
3. Click Backup and Restore
4. Click Restore.
5. Navigate to the backup file that contains the data to be restored to the BlackBerry smartphone.
6. Double-click the backup (.ipd) file.

## Step 7: Enterprise activation

After you wipe the device and restore data, activate the device.

**Note:** Activate the device soon after the activation message is created. If you don't activate within the specified time limit, your activation will expire. The default time limit is 48 hours.

Follow these steps:

1. Press the menu button to list all applications on the device.
2. Open the Options application.
3. Select Activation Options.
4. Select Enterprise Activation.
5. Enter the primary e-mail address associated with your Google Apps account.
6. Enter the BlackBerry activation password you were provided by your BlackBerry administrator. This is a separate password from your Google Apps password.
7. Press the menu button and select Activate.
8. If your radio is off, you'll be prompted to enable the radio. Select Turn Radio On.

Once you have activated, the device is ready to use with Google Apps Connector for BlackBerry Enterprise Server.

## **Step 8: Send a test mail**

Send a test message to the user to verify that Google Apps Connector is syncing correctly for the user.

## **Step 9: Return smartphone to user**

Return the smartphone to the user. Consider the following suggestions:

- Set up a pickup area. When an activation is completed, move the device to the pickup area.
- When a user comes to pick up the device, have the user sign out to confirm that the user has received their smartphone.

## **Deployment Resources**

---

The following resources may help you with deployment.

## Deployment Resource Center

<http://deployment.googleapps.com>

The deployment resource center includes resources to help roll out Google Apps, including Google Apps Connector for BlackBerry Enterprise Server. This site includes suggestions for planning deployment, resources for users, training, and updates.

## Google Apps Learning Center: Mobile Users

<http://learn.googleapps.com/mobile-users-3/mobile-users>

The Google Apps Learning Center contains extensive training information. The mobile users section contains helpful information and training for BlackBerry users.

## Help Center User Resources

<http://www.google.com/support/a/bin/answer.py?answer=165680>

The Google Apps Help Center includes a user resources page, with links to a user setup guide, a user feature chart, and a sample email you can send to users.





## Chapter 7

# Advanced Configurations

## About Advanced Configurations

---

This chapter discusses advanced configuration options for Google Apps Connector. This chapter is intended to provide information for those with particular configuration needs. For most administrators and environments, this section isn't needed.

Topics covered include:

- Using a specific OAuth key for Google Apps Connector
- Using Google Apps Connector with multiple domains
- Using Google Apps Connector to set up a hosted server environment

A majority of the content of this chapter discusses special OAuth configurations. In a majority of cases, you can configure OAuth and set up your server using the steps detailed in "Configure Google Apps Domain" on page 24. This chapter describes special setup options that are not discussed in general OAuth topics.

## Using a specific OAuth key for Google Apps Connector

---

Follow these steps if your security policies require you to have a separate OAuth key for Google Apps Connector that's not used for other utilities or services.

1. Have an admin user in your domain follow the steps for generating OAuth 2.0 credentials for an installed application described at:

<http://developers.google.com/console/help/#generatingoauth2>

2. Note the client ID (also called the Client Name or Consumer Key) and secret that you have created. You'll use these in a later step.
3. Log in to the Google Apps Admin console for your domain.
4. Go to **Security > Advanced settings > Authentication**, and click **Manage third party OAuth Client access**.

5. Enter the Client ID in the Client Name field as provided when you created the credentials. For instance, this might have a format like `123456789012.apps.googleusercontent.com`.
6. Enter the following URLs to grant access to this OAuth consumer:

```
https://mail.google.com/,  
https://www.google.com/calendar/feeds/,  
https://www.google.com/m8/feeds/
```

These are the URLs for Email access, Calendar access, and Contacts access, respectively.

**Note:** If you're using an earlier version of [Google Apps Connector](#) (prior to 3.0), see the note on [page 25](#) about what API scopes to use.

7. To use the newly created OAuth key during installation, enter the Client ID in the "Consumer key" field and the Client secret in the "Consumer secret" field.

## Multiple Domains

---

If you're using Google Apps with multiple primary domains, you'll need some extra setup. Use these steps if you have multiple primary domains on your Google Apps account and want to use them all with Google Apps Connector.

**Note:** For information on syncing secondary domains see "[Hosted Solution](#)" on [page 51](#)

1. Choose one Google Apps domain as your primary domain for running the Google Apps Connector. Enable the OAuth consumer key for this domain, as you would for a standard installation. Use the OAuth key and secret from the primary domain.
2. For every Google Apps domain that the Connector will access, including the primary domain, take the following steps:
  - a. In the Admin console, go to **Security > Advanced settings > Authentication**, and click **Manage third party OAuth Client access**.
  - b. Enter the following URLs to grant access to this OAuth consumer:

```
https://mail.google.com/,  
https://www.google.com/calendar/feeds/,  
https://www.google.com/m8/feeds/
```

These are the URLs for Email access, Calendar access, and Contacts access, respectively.

**Note:** If you're using an earlier version of [Google Apps Connector](#) (prior to 3.0), see the note on [page 25](#) about what API scopes to use.

After these steps, you should be able to add users from any domain in the Google Apps Connector and use them all.

If you see a problem, check your OAuth access to be sure the URLs are typed correctly.

## Hosted Solution

---

Use these steps if you plan to host multiple other companies and domains on your Google Apps Connector for BlackBerry Enterprise Server.

### Enable Hosting Via Registry

To use a hosted solution, enable the appropriate registry key.

For information on setting this up, see the article [Configure how users search for email addresses in a Hosted BlackBerry services environment](#) (article 7314) on the BlackBerry web site.

### Set Mappings for GAL

Add entries for each company to the registry. On your machine with Google Apps Connector installed, set one or more registry values in the following registry location:

```
[HKEY_CURRENT_USER\Software\Google\Google Apps Sync\GAL\UserCompanyMapping]
```

Add string values under this key. For each string value:

- Set the value name to a real valid user email in the company.
- Set the value data (optional) to the specific company name that will show up from GAL lookup.

You can set as many mappings as you need.

### Configure Domain For OAuth

Create an OAuth key and configure it to give each hosted domain the correct permissions.

For more information about setting up OAuth, see the Help Center:

<http://www.google.com/support/a/bin/answer.py?&answer=162105>

#### Create the OAuth key

1. Obtain a specific OAuth consumer key for BlackBerry Enterprise Server hosting. Create a key for your hosting domain, such as `example.com`.
2. The new domain will have by default a Domain OAuth key. For each company you host, grant access to this OAuth key. See below for how to do this.

## Grant the hosting company's OAuth consumer key access to your domain

For each company you host:

1. Login to the Admin console for that company's domain at

`https://admin.google.com`

Enter the admin account email address and password for that domain.

2. In the Google Apps Admin console, go to **Security > Advanced settings > Authentication**, and click **Manage third party OAuth Client access**.
3. Enter the OAuth consumer key name for the hosting company, such as `example.com`.
4. Enter the URLs you want to grant access to for this OAuth Consumer:

`https://mail.google.com/,`  
`https://www.google.com/calendar/feeds/,`  
`https://www.google.com/m8/feeds/`

These are the URLs for Email access, Calendar access, and Contacts access, respectively.

**Note:** If you're using an earlier version of [Google Apps Connector](#) (prior to 3.0), see the note on [page 25](#) about what API scopes to use.

5. Click **Save** to save your OAuth settings.
6. When you configure the Google Apps Connector, use the OAuth key and secret for your hosting domain, such as `example.com`.

## Chapter 8

# Troubleshooting

## About Troubleshooting

---

This chapter details common problems and troubleshooting methods for Google Apps Connector for BlackBerry Enterprise Servers.

If your users are experiencing a problem with their BlackBerry connection to Google Apps, use this chapter to help with troubleshooting. In most cases, there is a solution that will resolve standard problems. For more complex issues, this chapter includes tools for troubleshooting, information to collect, and how to contact support for further help.

When troubleshooting, be sure to check the help forum for known problems:

<https://productforums.google.com/forum/?hl=en#!categories/apps/apps-connector-for-blackberry-server>

In the help forum, you can find important announcements and existing solutions for known problems.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

If you encounter problems with the Google Apps Connector which cannot be solved in the Help Center, we suggest double-checking your configuration settings and submitting the generated logs to the Google Apps Connector log analyzer, as many issues can be identified within a few moments of submission:

<https://toolbox.googleapps.com/apps/loganalyzer/?productid=gbes>

## Using MFCMAPI to Troubleshoot

---

MFCMAPI is a third-party utility, designed to assist administrators in troubleshooting Microsoft Exchange® and Outlook issues. You can use the MFCMAPI utility to investigate issues with Google Apps Connector for BlackBerry Enterprise Server without stopping the Dispatcher or Controller service.

You can find more information about the MFCMAPI utility in the Microsoft Support Knowledge Base:

<http://support.microsoft.com/kb/291794>

To install MFCMAPI on your Google Apps Connector server, download the MFCMAPI utility from CodePlex:

<http://mfcmapicodeplex.com/>

To investigate issues using the MFCMAPI utility:

1. Connect to your Google Apps Connector server with a remote desktop console session with the command line flag:

- `mstsc /console` (for Windows XP SP2)
- `mstsc /admin` (for XP SP3/Vista/Windows 7)

2. Launch MFCMAPI.
3. Open the BlackBerryServer profile.
4. Browse through user account details to troubleshoot what's happening.

The MFCMAPI utility is a third-party utility designed for troubleshooting. Information about MFCMAPI is included for your information in this book. For further information, support, issues, or questions about MFCMAPI, see the MFCMAPI product page at <http://mfcmapicodeplex.com/>.

## Stopping and Starting the Dispatcher

---

For many troubleshooting and configuration tasks, you'll need to stop and restart the BlackBerry Enterprise Server Dispatcher.

**Note:** Remember to stop the BlackBerry Enterprise Server Dispatcher, not the Controller.

### To stop the BlackBerry Enterprise Server Dispatcher

1. From the Start taskbar, run Control Panel->Administrative Tasks-> Services to open the Services control panel.
2. If the BlackBerry Dispatcher services is started, right click on the service Blackberry Dispatcher and select Stop.

### To restart the BlackBerry Enterprise Server Dispatcher

1. From the Start taskbar, run Control Panel->Administrative Tasks-> Services to open the Services control panel.
2. Right click on the service Blackberry Dispatcher and select Start.

# Installation

---

If you have just installed the Connector and you're seeing problems, try the following common troubleshooting steps.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

## **Check that software prerequisites are met.**

If software prerequisites are not met, the AppsConnector.msi installation will fail during installation. Typically, you should receive an error dialog explaining the reason for the installation failure.

If the software prerequisites have been met, check the installation log files for error messages to identify any issues. See "Log Files" on page 63 for more information.

## **Confirm that you're using a clean installation with no other programs or services running.**

The Connector uses several system libraries that often have conflicting versions, so be sure you run the Google Apps Connector for BlackBerry Enterprise Server on a separate server that's not used for other programs or services. Check to be sure you started with a clean installation and no other programs or services are running.

Two very common programs that may be running on your server are Windows Search and antivirus software.

When you install Microsoft Outlook, the installation wizard prompts you to install Windows Search. Windows Search can cause major cache file corruption issues when installed on the same server with Google Apps Connector. Don't install this program, and if it's installed, uninstall it.

If you're using antivirus software, configure your software to exclude scanning the cache files by excluding the cache files or the BlackBerry Enterprise Server cache directory. For information on how to do this, see your antivirus documentation.

## **Install Google Apps Connector before installing BlackBerry Enterprise Server.**

Google Apps Connector will fail if you uninstall and reinstall BlackBerry Enterprise Server without installing Google Apps Connector again. Always run the Google Apps Connector MSI before installing BlackBerry Enterprise Server. This will create the required profile and registry keys.

The following registry keys are removed when you uninstall BlackBerry Enterprise Server, and are required for Google Apps Connector:

```
[HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents] "MAPIProfilePerAgent"=dword:0
```

```
[HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents] "CreateCDOProfile"=reg_dword:0
```

```
[HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Dispatcher] "AgentOptimizeAlgorithm"=reg_dword:1
```

Reinstall Google Apps Connector to add these registry keys again automatically.

## Activation

---

If you have problems with activating users, check the following list of common problems.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

You can also find information on common Enterprise Activation Issues in article KB13852 in the [BlackBerry Technical Solution Center](#).

### **Make sure the user has been removed off of existing BlackBerry Enterprise Infrastructure.**

A single e-mail account can only reside on one BlackBerry Enterprise Server at a time. If a user is configured on more than one server, activation will always fail. Remove the user from all existing BlackBerry Enterprise Servers and try again.

### **For users newly added in Google Apps, wait 24 hours.**

A newly provisioned user can take up to 24 hours to become visible in the BlackBerry Enterprise Server. Before a user is visible, the following must happen:

The Google Apps GAL (Global Address List) feed for the domain must update to include the newly provisioned user. This list is re-indexed every 8 hours.

The Google Apps Connector must then download and improve the updated GAL feed into the local SQLite cache Global Address Book. This updates every 2 hours.

The BlackBerry Enterprise Server must import the changes from the local SQLite cache Global Address Book. BlackBerry Enterprise Server imports this information nightly, once every 24 hours. For instructions on how to import this information manually, see the BlackBerry support article [You cannot find a new user account in the directory using the BlackBerry Administration Service](#).

### **Verify the user is receiving Enterprise activation emails in their Gmail account.**

First, send a test message to the user to ensure they can receive any email messages. If the message isn't delivered, your domain may have misconfigured MX records. If you've configured dual or split delivery for your domain, it may be misconfigured for the user's account.

In a web browser, check the user's Gmail account to see if there is a message from RIM with subject "RIM\_bca28a80-e9c0-11d1-87fe-00600811c6a2". In particular, check the Spam folder in Gmail, and if the message is in the Spam folder (or any folder besides Inbox), move the message to Inbox.

Also, search in Gmail for current or previous activation e-mails. If old activation e-mails are found, delete each message and empty each message from the trash to be deleted forever.

Perform the following searches:



```
from:network@ in:anywhere etp
to:etp@ in:anywhere etp
```

If no email is being received, then the device likely isn't enabled in the BlackBerry Enterprise Server Data service. If the device was not previously connected to a BlackBerry Enterprise Server system before this is the most likely cause of the problem.

Contact BlackBerry to set up a BlackBerry Enterprise Server data plan assigned to the device.

**Make sure you have set an activation password for the account in BlackBerry Administration Service.**

Before you can activate a user for the first time, you must define an activation password in the BlackBerry Administration Service.

If the user doesn't have a password, or the user received a password but did not activate soon, reset the user's activation password.

**Confirm that the user has BlackBerry Enterprise Server services enabled.**

The BlackBerry device may not have BlackBerry Enterprise Server services enabled, and may have a simple data plan or set up for a different server. Call your local carrier and verify that the device has full Enterprise service for BlackBerry Enterprise Server.

**Try reactivating the user.**

If an existing contact doesn't show up on a user's BlackBerry device after activation, you may be able to add the contact by reactivating the user.

**Check for conflicting IT Policies in case of Activation errors.**

If you see an activation error on BlackBerry after verifying encryption completes, this means that email is working, both inbound and outbound.

If an activation error occurs at this point, a common cause is conflicting IT Policy settings. For instance, if the device was removed from an old BlackBerry Enterprise server without first applying an empty IT Policy, this problem might occur.

You can resolve this problem in two ways:

- Activate the device on the previous BlackBerry Enterprise Server and push the empty Default IT Policy to the BlackBerry device. Then wipe the device and try activation again on the new infrastructure. For more information on how to do this, see article KB14202 in the [BlackBerry Technical Solution Center](#).
- Use BlackBerry Desktop Manager to reset the device IT policy back to factory settings. For more information on how to do this, see article KB17215 in the [BlackBerry Technical Solution Center](#).

**Reset the device to Factory Defaults if only a limited number of services appear to initialize.**

If the BlackBerry device activates but only a limited number of services appear to initialize (for example, it only shows only Calendar databases initializing for activation), use BlackBerry Desktop Manager to reset the device to Factory Defaults. After you have reset the device, try the activation again. For more information on how to do this, see article KB17215 in the [BlackBerry Technical Solution Center](#).

**Clear any old configuration data for a problem user.**

If the user's cache file isn't being created after adding the user to BlackBerry Enterprise Server, clear any old configuration data for the problem user.

This most often occurs when a BlackBerry administrator force-purges a user from BlackBerry Enterprise Manager. When a user is purged, the Google Apps Connector doesn't get notification of these event. When the user is then re-added to the system, some Google Apps Connector still retains the old configuration for the user and doesn't create a new cache for the account.

Follow these steps:

1. Download and install the *MFC MAPI* tool from <http://mfcmapi.codeplex.com>.  
**WARNING:** Use this tool very carefully. Editing the BlackBerryServer MAPI profile incorrectly can cause your BlackBerry Enterprise Service to stop working.
2. Go to Start | Settings | Control Panel | Mail.
3. Click the Show Profiles button
4. Select the BlackBerryServer profile and select Copy  
Enter a new profile name, such as `BlackBerryServer.Backup.[currentdate]`.
5. Launch MFC MAPI.
6. From the top menu, select File->Profile and click Show Profiles.
7. Double-click BlackBerryServer.
8. Look for user account in question within the list under heading Display Name with a PR\_SERVICE\_NAME of: "GSync\_Delegate"  
**WARNING:** Never delete the primary MAPI profile entry with a PR\_SERVICE\_NAME of: "GSync"
9. Right-click the specific user entry and select Delete Service.
10. Close all MFC MAPI Windows

After you have removed the entry, add the user again as usual, using the BlackBerry Manager application.

### **Check for other issues and reset factory defaults.**

If the device will not activate and previous suggestions don't help, try the following:

- Look for common enterprise activation issues can be found in [article KB13852 in the BlackBerry Technical Solution Center](#).
- Try another device. There are many models of BlackBerry devices and different versions of the OS running on the device. If you run into an issue with a specific device or user account that you can not resolve, try activation with another device or against another user to see if the issue is specific to the device or to an individual user.
- Try resetting factory defaults, or upgrading the device OS. For more information on how to reset the device to factory defaults, see [article KB17215 in the BlackBerry Technical Solution Center](#).
- Upgrade the device OS. See [article KB03621 in the BlackBerry Technical Solution Center](#).

## Devices

---

If your users report problems with using their BlackBerry device with the Google Apps Connector, check the following list of common problems and solutions.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

### **A user is seeing duplicate contacts on their device.**

If a user gets duplicate contacts, check to see if the user has Google Sync installed on the BlackBerry device as well as Google Apps Connector. These two products are not compatible and will create duplicate contacts. Uninstall Google Sync, as it isn't needed.

### **Some contacts or calendar events are missing on a user's device after activation.**

If some contacts or calendar events from Google Apps are not successfully loaded into the BlackBerry, a problem may have occurred with device activation. Try reactivating the device.

### **How can I see messages from other labels/folders?**

By default, when you activate a device, you'll only see messages from your Inbox and Sent Items. If you want to see new messages from other folders/labels, you can redirect other folders to the BlackBerry device as well.

To redirect a folder:

1. In the BlackBerry email application, go to Options -> Email settings.
2. Click the Menu button.
3. Select Folder Redirection. You'll see a view of the folders in your mailbox.
4. Select the folders you want to redirect to the BlackBerry device.

## 5. Save changes.

Within about 15 minutes, the folders you select will be synchronized with your BlackBerry device. Note that your Inbox will contain unread messages from all folders you redirect, not just your Inbox.

### **The BlackBerry Inbox includes multiple copies of the same message.**

Google Apps allows users to tag mail using labels instead of folders. A single message can have multiple labels, which allows greater flexibility in managing and searching for messages. The Google Apps Connector implements labels by creating a folder for each label. If a message has multiple labels, the Connector creates a separate copy for each label.

The BlackBerry Inbox displays new messages in any folder, as well as messages in your Inbox folder. Because the Connector makes a copy of the message in each folder where the message has a label in Google Apps, you may see multiple copies of a message if the message has multiple labels.

If you want to avoid this, you can change the filter rules in Google Apps to put all messages you need onto the device under a single label (such as “Blackberry Sync”), then change Folder Redirection rules on your BlackBerry device to redirect only that label.

You can also enable “Hide Filed Messages” to change your Inbox display. With this setting on, messages in other folders will disappear from your Inbox after the message is read.

### **Changes in Google Apps don't appear on the BlackBerry device, or vice versa**

The Connector doesn't synchronize all data immediately. Email messages normally send within about a minute. Other types of data can take longer to synchronize. Check the BlackBerry device after an hour to see if data has synchronized.

Also, for each application (Email, Calendar and Contacts), be sure that wireless synchronization is enabled.

## Calendar

---

If you're experiencing problems with calendar applications, check for the following possible problems.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

### **Calendar events move forward one hour in the Canberra Sydney Time Zone**

The Time Zone table on the BlackBerry Enterprise Server doesn't contain the mappings for the Canberra, Melbourne, Sydney time zone.

Update your registry using the registry update file found in the BlackBerry Technical Solution Center article about this issue here:

[http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB15702&sliceId=1&docTypeID=DT\\_SUUPPORTISSUE\\_1\\_1&dialogID=271706951&stateId=0%20%20266639137](http://www.blackberry.com/btsc/microsites/search.do?cmd=displayKC&docType=kc&externalId=KB15702&sliceId=1&docTypeID=DT_SUUPPORTISSUE_1_1&dialogID=271706951&stateId=0%20%20266639137)

### **I get a red X when trying to respond to a meeting invite**

This can happen when you're trying to respond to an out of date calendar event. Find the most recent invitation for the meeting and respond via that message, or open the meeting invite from Google Calendar in a web browser.

### **Event attendees are receiving cancellation notifications after the event has been updated on the organizer's BlackBerry device.**

This issue only affects meetings in which the attendees' email addresses contain uppercase characters. To resolve this issue, make the registry key changes listed in "Additional note about formatting your GAL and user contact list" on page 34. For additional help, contact support at <http://contact.googleapps.com>.

## **Mail Flow**

---

If mail isn't flowing to the device, check for the following possible problems.

Many of these issues reference log files. For more information on log files, see "Log Files" on page 63.

For a summary of common questions and issues, you can also check the Help Center article [Troubleshooting and FAQ for Google Apps Connector for BlackBerry Enterprise Server](#).

### **Test Confirmation Email**

You can test mail flow for any device with a confirmation email.

To send a confirmation email, send the user a test message with "<confirm>" in the subject. The device will automatically reply once the device receives the message. This will allow you to test connectivity, and act as a test for how quickly the device can receive and reply to a message.

For more information, see the [BlackBerry knowledge base article KB01056](#).

### **The SRP key shows "Disconnected" in the BlackBerry Manager Application**

If the BlackBerry Manager server property pane shows that SRP is disconnected, the SRP key may be suspended.

If you're using a temporary SRP, the key may have expired. Temporary SRP keys expire after about 60-90 days. If the BlackBerry Enterprise Server recommends to the RIM server 5 times very quickly, this may trigger RIM security and suspend the SRP key.

If you see an error with SRP keys, contact RIM to renew or reactivate your SRP key.

### **The OAuth key is invalid**

If the Connector logs show HTTP error code 401 when accessing <http://mail.google.com>, this may be caused by an invalid OAuth key.

If this error occurs, troubleshoot your OAuth settings:

1. Verify the OAuth consumer key is correct in the logs.
2. Verify the OAuth Consumer secret by updating the configuration profile using the Google Apps Connector Manager.
3. Verify the server OS has the proper date and time.

### **Gmail is down**

If the Connector logs show an HTTP error code 5xx when accessing <https://mail.google.com>, this may be a sign that Gmail is down.

Try to connect to Gmail through a web browser and check Gmail system status.

### **Gmail is too slow**

If the Connector logs show error code 0x80072ee2, this is a sign that Gmail may be running slowly.

Try to connect to Gmail through a web browser and check Gmail system status.

### **The cache is corrupted**

If the Connector logs show error code 0x80040600 or 0x80040119, this may indicate a corrupt user cache file.

A support tool is available to repair files showing this error. For details, see the Support Tools page in the Google Help Center.

Alternatively, you can remove and reactivate the user.

## **Backup Profiles**

---

You can make a backup of a user profile in the Control Panel Mail applet. If you plan to make changes to a profile and want to be sure you don't lose the old profile, back the profile up in Control Panel.

### **To create a backup profile**

1. Open Start -> Settings -> Control Panel -> Mail -> Show Profiles.
2. Select your profile.
3. Copy to another profile name. For instance, you could use the same profile but with the final extension ".bak".

# Log Files

---

There are two sets of logs that are important for the Google Apps Connector: the tracing logs for the Google Apps Connector and the Research In Motion BlackBerry Enterprise Server software logs.

The `BlackBerryAgent` process contains the core trace logs for the Google Apps Connector.

If you're gathering logs to escalate a case to Google support, please provide all the Google Apps Sync logs as well as BlackBerry Server logs for the date when the problem occurred.

If you're researching installation problems, check the trace logs in the `MSIEXEC` folder.

If you're missing data such as calendar events, contacts, or email, check the trace logs in the `BlackBerryAgent` trace folder.

If you're having issues with BlackBerry device activation, check the BlackBerry Server logs for the specific assigned agent ID for the account of the user who is experiencing a problem.

## Google Apps Connector Logs

The Google Apps Connector creates a separate log directory for each date. Each date folder in turn contains a separate file for each process that generates logs.

By default, the Trace logs mostly only output details when an error occurs.

**Note:** Google Apps Connector will automatically attempt to prevent logging from filling up your disk space. Normally, the Connector keeps a 30-day history of logs. However, if your free disk space ever drops below 1GB, the Connector will reduce this history and keep only a 2-day history of logs.

By default, Google Apps Connector logs are found in subdirectories of the main log directory:

```
%APPDATA%\Google\Google Apps Sync\Logs\ (on Windows Server 2003)
%LOCALAPPDATA%\Google\Google Apps Sync\Logs\ (on Windows Server 2008)
```

The contents of the logs are detailed in the table below.

Log	Description
<code>BlackBerryAgent</code>	Trace logs for the Google Apps Connector. This is the process that contains the core trace logs for the Google Apps Connector.  If you're using multiple agents, you'll see multiple logs, one for each agent.
<code>MsiExec</code>	Installation trace logs.
<code>bbmgrw32</code>	Trace logs for the BlackBerry manager application.

Log	Description
<b>GoogleAppsConnectorManager</b>	Trace logs for the Google Apps Connector Manager configuration tool.
<b>Outlook</b>	Logs for Microsoft Outlook.
<b>MFCMapi</b>	Logs for MFC MAPI (if you're using MFC MAPI).
<b>CalHelper</b>	Logs related to calendar events and calendar email processing.

## BlackBerry Enterprise Server Logs

BlackBerry Enterprise Server logs are stored by date.

By default, BlackBerry Enterprise Server logs are found in the BlackBerry log directory for the day.

For 32-bit Windows, this is:

```
C:\Program Files\Research In Motion\BlackBerry Enterprise Server\logs\[date]
```

For 64-bit Windows, this is:

```
C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Server\logs\[date]
```

where [date] is the current date.

Each log is named with the following format:

```
[SERVERNAME]_[LOGNAME]_[AGENT]_[DATE]_[INCREMENT].txt
```

where [SERVERNAME] is the name of your BlackBerry Enterprise Server, [LOGNAME] is the name of the log (detailed below), [DATE] is the date of the log, and [NUMBER] and [INCREMENT] are incrementing numbers starting with 01 and 0001, respectively.

Log Names are detailed in the table below.

Log	Description
<b>ALRT</b>	BlackBerry Alert log
<b>CBCK</b>	BlackBerry Backup Connector log
<b>CEXC</b>	BlackBerry Exchange Connector log
<b>CMNG</b>	Management Connector log



Log	Description
<b>CTRL</b>	BlackBerry Controller log
<b>DISP</b>	BlackBerry Dispatcher log
<b>MAGT</b>	BlackBerry Agent log. If you're using multiple agents, you'll see multiple logs, each with a different value for [AGENT].  A user's mailbox is assigned to a specific agent, usually between 1 and 5. To review the logs for a specific user, first determine the user's Agent ID via the BlackBerry Manager tool. Once you know the Agent ID, find the corresponding log that contains the details regarding this user.
<b>POLC</b>	BlackBerry Policy Service log
<b>ROUT</b>	BlackBerry Router log
<b>SYNC</b>	BlackBerry Synchronization Service log

## Log File Errors

---

If you see the following errors in your log files, troubleshoot using the steps described below.

### Review logs for activation emails

The Google Apps Connector logs show when activation e-mails are downloaded, and if necessary copied from Spam to the Inbox. Reviewing logs for activation emails can be useful when trying to confirm mail flow is working when there are failed activations.

#### Steps to review logs for activation emails:

1. Locate the directory where the Google Apps Connector Agent Logs are stored. The default path is `C:\Program Files\Google\Google Apps Sync\Logs\BlackBerryAgent`
2. Open the command prompt and within the logs directory run the following command:

```
find /i "activation" *2011-07-06*.
```

Substitute the appropriate date for your user's activation.

3. The logs will look like this:

```
C:\Program Files\Google\Google Apps Sync\Logs\BlackBerryAgent>find /i
"activation" *2011-07-06*
----- TRACE-2011-07-06-1.LOG
----- TRACE-2011-07-06-2.LOG
----- TRACE-2011-07-06-3.LOG
----- TRACE-2011-07-06-4.LOG
----- TRACE-2011-07-06-5.LOG
2011-07-06T05:47:26.587-04:00 ldf4 A:Sync
gsync32!GmailSyncImpl::HandleMessage @ 3025 (user1@domain.com)> Found BES
activation email. msgid = 1234567890123456789
2011-07-06T13:08:28.628-04:00 ldfc A:Sync
gsync32!GmailSyncImpl::HandleMessage @ 3025 (user2@domain.com)> Found BES
activation email. msgid = 1234567890123456789
2011-07-06T13:08:28.628-04:00 ldfc A:Sync
gsync32!GmailSyncImpl::HandleMessage @ 3036 (user2@domain.com)> Copied BES
activation email to inbox. msgid = 1234567890123456789
```

## Review logs for users not starting

The BES server may fail to start users for a number of reasons. If a user isn't starting in BES and the connector will not sync the user, the user won't be able to activate or function until the problem is corrected.

### Steps to review logs for users not starting:

1. Locate the directory where today's BlackBerry Enterprise Server logs are stored. Default path is: C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Server\[date]\.
2. Open the command prompt and within the logs directory run the following command:

```
find /i "not started" *MAGT*
```

3. Review the BESSERVER1\_MAGT\_02\_20110706\_0001.TXT for more details as to the specific BES error message.
4. You'll see logs that look like this:

```
----- HOT-BES-01_MAGT_01_20110706_0001.TXT

----- HOT-BES-01_MAGT_02_20110706_0001.TXT
[20154] (07/06 00:06:13.857):{0x21B4} User Joe User not started
[20154] (07/06 00:19:13.918):{0x21B4} User Joe User not started
[20154] (07/06 00:32:13.979):{0x21B4} User Joe User not started
[20154] (07/06 00:45:14.041):{0x21B4} User Joe User not started
```

## Review logs for started users

You can review a server to determine if all the users on the system are started. For instance, after a reboot or services restart you may need to confirm that the server and services restarted successfully. The number of started users line won't be in the output until the agent has tried to start every user assigned to it.

### Steps to review logs for started users:

1. Locate the directory where today's BlackBerry Enterprise Server logs are stored. Default path is: C:\Program Files (x86)\Research In Motion\BlackBerry Enterprise Server\[date]\.

2. Open the command prompt and within the logs directory run the following command:

```
find /i "total number of started" *MAGT*
```

3. The logs will look like this:

```
----- BESSERVER1_MAGT_01_20110706_0001.TXT  
[30000] (07/06 02:56:23.305):{0x2198} Optimize ThreadPools, total number  
of started users 25  
----- BESSERVER1_MAGT_02_20110706_0001.TXT  
[30000] (07/06 02:55:27.305):{0x2198} Optimize ThreadPools, total number  
of started users 25  
----- BESSERVER1_MAGT_03_20110706_0001.TXT  
[30000] (07/06 02:51:27.305):{0x2198} Optimize ThreadPools, total number  
of started users 26  
----- BESSERVER1_MAGT_04_20110706_0001.TXT  
[30000] (07/06 02:57:27.305):{0x2198} Optimize ThreadPools, total number  
of started users 25  
----- BESSERVER1_MAGT_05_20110706_0001.TXT  
[30000] (07/06 02:59:27.305):{0x2198} Optimize ThreadPools, total number  
of started users 26
```

## Review cache for empty files

After you add a large number of users to a server, it can take significant time for Google Apps Connector to create cache files and begin synchronizing content. You can review the cache directory to confirm that user cache files have been created and that content is being synchronize.

### Steps to review cache for empty files:

1. Locate the directory where today's BlackBerry Enterprise Server logs are stored. Default path is: C:\Program Files\Google\Google Apps Sync\Cache.

2. Open the command prompt and within the logs directory run the following command:

```
dir *.pst |find /i "271,360"
```

### 3. You'll see log entries that look like this:

```
07/06/2011 09:04 PM          271,360  GMS-admin-BlackBerryServer-
BESSERVER-svcbes@company.com.pst
03/02/2011 07:58 PM          271,360  GMS-BlackBerryServer-
user1@company.com.pst
04/19/2011 08:32 AM          271,360  GMS-BlackBerryServer-
user2@company.com.pst
02/10/2011 02:07 PM          271,360  GMS-BlackBerryServer-
user3@company.com.pst
```

## Troubleshoot OAuth failures

This is an example of an error that indicates an OAuth failure. This error can be found in the Google Apps Connector log for the BlackBerryAgent.

```
2009-06-24T21:57:50.968-07:00 550 E:Network
gsync32!WinHttp::ExecuteHttpRequest @ 534 (dSmith@example.com) > HttpRequest
output.
POST https://mail.google.com/a/example.com/r/
?view=config&xoauth_requestor_id=dSmith%40example.com HTTP/1.1
Content-Type: application/protobuf
Authorization: OAuth oauth_consumer_key="example.com",
oauth_nonce="13373969686979656588",
oauth_signature="Sn20%2BxWQzUHoKu%2Fpxp6%2FTafkg0Q%3D",
oauth_signature_method="HMAC-SHA1", oauth_timestamp="1245905870",
oauth_version="1.0"
Accept-encoding: gzip
User-Agent: GBES/1.0.17.39 (gzip)

HTTP/1.1 401 Unauthorized
X-Google-GFE-Backend-Request-Info: eid=COnfoofRpJsCFQN7cgodoRiCKw
Content-Type: text/html; charset=UTF-8
Date: Thu, 25 Jun 2009 04:57:51 GMT
Expires: Thu, 25 Jun 2009 04:57:51 GMT
Cache-Control: private, max-age=0
X-Content-Type-Options: nosniff
Transfer-Encoding: chunked
X-Google-GFE-Request-Trace: pxd25:443,wafw4:9411,/bns/wa/borg/wa-airbus/bns/
gmail/v.caribou-server/128:9802,wafw4:9411,pxd25:443
Content-Encoding: gzip
Server: GFE/1.3
X-Google-Backends: /bns/wa/borg/wa-airbus/bns/gmail/v.caribou-server/
128:9802,wafw4:9411,/bns/wa/ccc/caribou/prod/layer2-gfe/26,pxd25:443
X-Google-Service: gmail,gmproxy
```

```
2009-06-24T21:57:50.968-07:00 550 E:Network
gsync32!OAuthLogin::TryAuthorizeRequest @ 280 (dSmith@example.com) >
Authentication error: url=https://mail.google.com/a/example.com/r/
?view=config, user=JSmith%40example.com
```

If this error occurs, troubleshoot your OAuth settings:

1. Verify the OAuth consumer key is correct in the logs.
2. Verify the OAuth Consumer secret by updating the configuration profile using the Google Apps Connector Manager.



Transparency: <http://schemas.google.com/g/2005#event.opaque>  
Visibility: <http://schemas.google.com/g/2005#event.default>

The most likely cause of this error is an unusual recurrence pattern in a meeting invitation. If this error occurs the specific calendar entry or recurrence will fail to sync to the specific user's BlackBerry device. If you see this error, contact support so the Google Apps Connector engineering team can investigate the issue.

## Missing Timezone values

Below is an example of an error that indicates an Calendar event synchronization failure. This error can be found in the Google Apps Connector log for the BlackBerryAgent.

```
2009-06-05T18:17:42:0045 d04 E:Parser gsync32!WinTZ::GetTZI @ 1349 > Failed
with 0x80070002, last successful line = 1344.
2009-06-05T18:17:42:0045 d04 W:Parser gsync32!WinTZ::LoadTables @ 1281 >
Failed to get windows timezone info for Armenian Standard Time
2009-06-05T18:17:42:0045 d04 E:Parser gsync32!WinTZ::GetTZI @ 1349 > Failed
with 0x80070002, last successful line = 1344.
2009-06-05T18:17:42:0045 d04 W:Parser gsync32!WinTZ::LoadTables @ 1281 >
Failed to get windows timezone info for Mauritius Standard Time
2009-06-05T18:17:42:0045 d04 E:Parser gsync32!WinTZ::GetTZI @ 1349 > Failed
with 0x80070002, last successful line = 1344.
2009-06-05T18:17:42:0045 d04 W:Parser gsync32!WinTZ::LoadTables @ 1281 >
Failed to get windows timezone info for Morocco Standard Time
2009-06-05T18:17:42:0060 d04 E:Parser gsync32!WinTZ::GetTZI @ 1349 > Failed
with 0x80070002, last successful line = 1344.
2009-06-05T18:17:42:0060 d04 W:Parser gsync32!WinTZ::LoadTables @ 1281 >
Failed to get windows timezone info for Pakistan Standard Time
2009-06-05T18:17:42:0060 d04 E:Parser gsync32!WinTZ::GetTZI @ 1349 > Failed
with 0x80070002, last successful line = 1344.
2009-06-05T18:17:42:0060 d04 W:Parser gsync32!WinTZ::LoadTables @ 1281 >
Failed to get windows timezone info for Venezuela Standard Time
```

If you see this error, Windows is missing the latest Timezone hot-fix update from Microsoft. Download and install the update from this URL:

<http://support.microsoft.com/kb/976098/>

## Log Events You Can Ignore

---

The following log events or errors represent normal functionality. You can ignore these errors in the log files.

## Common Application Event Logs

These common BlackBerry events from the Application log entries are safe to ignore.

### OpenProperty failed

Event Type: Error  
Event Source: BlackBerry Messaging Agent %BESSESERVER% Agent 1  
Event Category: None  
Event ID: 10007  
Date: 6/24/2009  
Time: 11:35:20 PM  
User: N/A  
Computer: %BESSESERVER%  
Description:  
CalICSSynchronizer::Initialize - OpenProperty failed: (0x80004002)

### Could not Initialize Synchronizer

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSESERVER% Agent 1  
Event Category: None  
Event ID: 20041  
Date: 6/24/2009  
Time: 11:35:20 PM  
User: N/A  
Computer: %BESSESERVER%  
Description:  
CalICSAgent::Start Could not Initialize Synchronizer for jsmith@example.com:  
(0x80004002)

### AddMessageState - EntryId is invalid

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSESERVER% Agent 1  
Event Category: None  
Event ID: 20501  
Date: 6/24/2009  
Time: 10:59:50 PM  
User: N/A  
Computer: %BESSESERVER%  
Description:  
{jsmith@example.com} MsgMemStateDb::AddMessageState - EntryId is invalid

### DoICS() failed: ERR\_FAIL

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSESERVER% Agent 1  
Event Category: None  
Event ID: 20280  
Date: 6/24/2009  
Time: 10:59:25 PM  
User: N/A  
Computer: %BESSESERVER%  
Description:  
{jsmith@example.com} DoICS() failed: ERR\_FAIL

### GetFreeBusyFolder - HrOpenExchangePublicStore

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSESERVER% Agent 1  
Event Category: None  
Event ID: 20638

Date: 6/24/2009  
Time: 10:59:23 PM  
User: N/A  
Computer: %BESSERVER%  
Description:  
GetFreeBusyFolder - HrOpenExchangePublicStore (0x800b0001)

### SubsystemInitialize - GetFreeBusyFolder

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSERVER% Agent 1  
Event Category: None  
Event ID: 20639  
Date: 6/24/2009  
Time: 10:59:23 PM  
User: N/A  
Computer: %BESSERVER%  
Description:  
MailboxManager::SubsystemInitialize - GetFreeBusyFolder (0x800b0001)

### CreateRIMEEventFromException failed

Event Type: Warning  
Event Source: BlackBerry Messaging Agent %BESSERVER% Agent 1  
Event Category: None  
Event ID: 20265  
Date: 6/24/2009  
Time: 10:44:39 PM  
User: N/A  
Computer: %BESSERVER%  
Description:  
{jsmith@example.com} MAPIMailbox::GetRIMCalendar(EntryID) -  
CreateRIMEEventFromException (0x00000000) failed

## BlackBerry Alert Log common events

The following events are error messages in the BlackBerry Alert Log. These messages are part of normal operation, and are safe to ignore.

```
[30000] (06/24 22:12:56.843):{0xBF4} EventLog::ThreadProc: Received notification, processing...  
[30000] (06/24 22:12:56.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm: <N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on BES-VM-41) | 06/24/2009 22:12:51 (AFFF509E) -> GetFreeBusyFolder - HrOpenExchangePublicStore (0x800b0001)  
[30000] (06/24 22:12:56.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm: <N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on BES-VM-41) | 06/24/2009 22:12:51 (AFFF509F) -> MailboxManager::SubsystemInitialize - GetFreeBusyFolder (0x800b0001)  
[30000] (06/24 22:12:56.843):{0xBA4} Alarm::ThreadProc: Received an alarm message  
[30000] (06/24 22:12:56.843):{0xBA4} Alarm::ThreadProc: Received an alarm message  
[30000] (06/24 22:13:01.843):{0xBF4} EventLog::ThreadProc: Received notification, processing...
```



```

[30000] (06/24 22:13:01.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:12:57 (6FFFC3AE) -> [AUDIT] jsmith@example.com -
User added to the BES
[30000] (06/24 22:13:01.843):{0xBA4} Alarm::ThreadProc: Received an alarm
message
[30000] (06/24 22:17:24.484):{0xBF4} EventLog::ThreadProc: Received
notification, processing...
[30000] (06/24 22:17:24.484):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:17:24 (AFF5013) -> {jsmith@example.com}
MsgMemStateDb::GetRefIdByEntryId(uc*,1) - EntryId is 0
[30000] (06/24 22:17:24.484):{0xBA4} Alarm::ThreadProc: Received an alarm
message
[30000] (06/24 22:18:07.203):{0xBF4} EventLog::ThreadProc: Received
notification, processing...
[30000] (06/24 22:18:07.203):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:07 (6FFFC3B6) -> [AUDIT] jsmith@example.com -
User activated on the BES
[30000] (06/24 22:18:07.203):{0xBA4} Alarm::ThreadProc: Received an alarm
message
[30000] (06/24 22:18:12.547):{0xBF4} EventLog::ThreadProc: Received
notification, processing...
[30000] (06/24 22:18:12.547):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:07 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:12.547):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:07 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:12.547):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:07 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:12.547):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:07 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:18.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:14 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:18.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:15 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid
[30000] (06/24 22:18:18.843):{0xBF4} [Alarm::ActivateAlarm] Queuing alarm:
<N/A> | BlackBerry Messaging Agent BES-VM-41 Agent 1 (Application Event Log on
BES-VM-41) | 06/24/2009 22:18:16 (AFF5015) -> {jsmith@example.com}
MsgMemStateDb::AddMessageState - EntryId is invalid

```

## Getting Further Support

---

If you need help with Google Apps Connector for BlackBerry Enterprise Server, you can use the following resources.

### Help Forum

For further support with Google Apps Connector for BlackBerry Enterprise Server, visit the Apps Connector Help forum:

<http://www.google.com/support/forum/p/Google+Apps/label?lid=6da1d94387deda10>

In the help forum, you can find important announcements and existing solutions for known problems. A FAQ document containing the most common issues and solutions is available here:

<http://www.google.com/support/a/bin/answer.py?answer=1349290>

### Log Analyzer

The log analyzer evaluates files generated by the Google Apps Connector and offers guidance on common issues visible from the logs. Consult the Log Analyzer:

<https://toolbox.googleapps.com/apps/loganalyzer/?productid=gbes>

### Support Tools

You can also download support tools from the Google Support site. To see a list of Google Apps Connector support tools and download the tools file, see the Google Apps support article [Support Tools](#).

### Documentation and Support

For documentation, support information and help center articles, see the Google Apps Connector for BlackBerry Enterprise Server page in Google Apps Admin Help:

<http://www.google.com/support/a/bin/answer.py?answer=154346>

### Expediting Support with Your Customer PIN

To contact support directly for assistance, and receive expedited support as a Premium or Education Edition customer, find your Customer PIN and Support PIN. Information on how to collect this information is available in the help center here:

<http://www.google.com/support/a/bin/answer.py?answer=60233>