

Managing the BlackBerry Enterprise Server Performance in a Microsoft Exchange 2010 Environment

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Technical Note



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Manage the BlackBerry Enterprise Server performance in a Microsoft Exchange 2010 environment

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Before you begin:

- Install BlackBerry® Enterprise Server 5.0 SP2 MR4.
 - Install version 6.5.8211.0 of the Microsoft® Exchange Server MAPI Client and CDO 1.2.1 on the BlackBerry Enterprise Server computer. For more information, visit www.microsoft.com/downloads to read the article named "Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1".
1. Verify that you configured Microsoft® Exchange 2010 performance as suggested by Microsoft. For more information, visit technet.microsoft.com to read "Understanding the Mailbox Database Cache" in the Microsoft Exchange 2010 SP1 help.
 2. If necessary for your organization's environment, verify that you installed the Microsoft hotfixes that are located in the following articles:
 - 2155311
 - 979149

For more information about the hotfixes, visit support.microsoft.com.

3. Configure the BlackBerry Enterprise Server to use LDAP to retrieve email addresses and organizer data.
4. Configure the BlackBerry Enterprise Server to use Microsoft Exchange Web Services to manage calendars on devices.

Related topics

[Configuring the BlackBerry Enterprise Server to use LDAP to retrieve email addresses and organizer data](#), 3

[Configuring the BlackBerry Enterprise Server to use Microsoft Exchange Web Services or MAPI and CDO libraries](#), 7

Configuring the BlackBerry Enterprise Server to use LDAP to retrieve email addresses and organizer data

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By default, when BlackBerry® device users search for recipients' email addresses or organizer data, the BlackBerry® Enterprise Server uses MAPI to connect to the Microsoft® Exchange Server and retrieve the email addresses or organizer data that is stored in Microsoft® Active Directory®. You can configure the BlackBerry Enterprise Server to use LDAP to connect to Microsoft Active Directory directly to retrieve email addresses, organizer data, or both.

When you configure the BlackBerry Enterprise Server to use LDAP to retrieve email addresses and organizer data, you help reduce the MAPI connections that the BlackBerry Enterprise Server requires which helps improve the performance of the BlackBerry Enterprise Server and Microsoft Exchange Server. In a Microsoft® Exchange 2010 environment, if you configure the BlackBerry Enterprise Server to use LDAP, you cannot migrate users to different forests.

If you configure Hosted BlackBerry® services, you must configure the BlackBerry Enterprise Server to use LDAP to retrieve email addresses.

You can configure the following options when you configure the BlackBerry Enterprise Server to use LDAP to retrieve email addresses and organizer data:

- Windows® domain that the Microsoft Active Directory uses
- whether to use LDAPS to connect to Microsoft Active Directory
- timeout value for the connection to Microsoft Active Directory
- which contacts the BlackBerry Enterprise Server cannot retrieve, if required
- whether to support a Microsoft Active Directory that you configured for multi-tenancy, if required
- custom field to use to resolve email addresses for Hosted BlackBerry services, if required
- baseDN of the Microsoft Active Directory tree, if required

Configure the BlackBerry Enterprise Server to connect to Microsoft Active Directory

1. On the computer that hosts the BlackBerry® Enterprise Server, click **Start > Run**.
2. Type **regedit**. Click **OK**.
3. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents.
4. If your organization's environment includes multiple Windows domains, perform the following actions:
 - a. Create a String value named **LDAPDomain**.

- b. Change the value to the FQDN of the global catalog server and the port number that the BlackBerry Enterprise Server can use to resolve the DNS name of Microsoft® Active Directory®, using the following format: `<FQDN_of_GC>:<port>`. If the BlackBerry Enterprise Server must connect to multiple global catalog servers for DNS name resolution, specify all of them as the value, using the following format: `<FQDN_of_GC1>:<port> <FQDN_of_GC2>:<Port> <FQDN_of_GC3>:<port>`. Separate multiple entries using spaces.

Optionally, if you do not want to configure a limited list of global catalog servers, set the value to a domain name, and the port number to the global catalog server (for example, `example.com:3268`).

5. If the BlackBerry Enterprise Server must use a specific port to connect to Microsoft Active Directory and you did not specify the port number in the LDAPDomain string, perform the following actions:
 - a. Create a DWORD value named **LDAPport**.
 - b. Change the value to the port number. To limit the number of LDAP queries that the BlackBerry Enterprise Server needs, use the port number of the global catalog server (port 3268).
6. If the BlackBerry Enterprise Server must use LDAPS to connect to the Microsoft Active Directory, perform the following actions:
 - a. Create a DWORD value named **LDAPssl**.
 - b. Change the value to **1**.
7. To change the amount of time that the BlackBerry Enterprise Server waits for a response from Microsoft Active Directory before the connection times out (by default, 10 seconds), perform the following actions:
 - a. Create a DWORD value named **LDAPTimeout**.
 - b. Change the value to the timeout period, in seconds, that your organization requires.
8. In the Windows Services, restart the BlackBerry Controller.

Configure the BlackBerry Enterprise Server to retrieve email addresses and organizer data using LDAP

1. On the computer that hosts the BlackBerry® Enterprise Server, click **Start > Run**.
2. Type **regedit**. Click **OK**.
3. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to `HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents`.
 - If you are running a 64-bit version of Windows, navigate to `HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents`.
4. Create a DWORD value named **LDAPSearch**.
5. Change the value to **1**.
6. To configure the BlackBerry Enterprise Server to resolve email addresses using LDAP, perform the following actions:
 - a. Create a DWORD value named **LDAPALPSearch**.

- b. Change the value to **1**.
7. To configure the BlackBerry Enterprise Server to resolve organizer data using LDAP, perform the following actions:
 - a. Create a DWORD value named **LDAPPIMSearch**.
 - b. Change the value to **1**.
8. In the Windows Services, restart the BlackBerry Controller.

Prevent the BlackBerry Enterprise Server from retrieving contact information for specific users

If you are required by your organization to prevent BlackBerry® device users from finding contact information for specific users, you can specify a list of users that you want to prevent BlackBerry device users from finding contact information for or you can filter users using an attribute in Microsoft® Active Directory®.

Before you begin:

- Configure the BlackBerry® Enterprise Server to resolve email addresses and organizer data information using LDAP.
 - If you want to filter users using an attribute, choose an attribute in Microsoft Active Directory such as Mail or any of the extensionAttributes (extensionAttribute1 through extensionAttribute15). You can use the Active Directory Users and Computers console to change the value for the attribute to HideFromBlackBerry for all users that you do not want BlackBerry device users to find.
1. On the computer that hosts the BlackBerry Enterprise Server, click **Start > Run**.
 2. Type **regedit**. Click **OK**.
 3. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents.
 4. Create a String value named **LDAPALPObjectCategory**.
 5. Change the value to one of the following options:
 - If your organization uses Microsoft® Exchange 2007 or Microsoft Exchange 2010, use **msExchDynamicDistributionList,Group,Person))(!(<attribute>=HideFromBlackBerry**, where <attribute> is the name of the attribute that you want to filter (for example, extensionAttribute1).
 - If your organization uses earlier versions of Microsoft Exchange, use **Group,Person))(!(<attribute>=HideFromBlackBerry**, where <attribute> is the name of the attribute that you want to filter (for example, extensionAttribute1).
- You can use an asterisk (*) as a wildcard.
6. In the Windows Services, restart the BlackBerry Controller.

Restrict the location in Microsoft Active Directory that the BlackBerry Enterprise Server can retrieve email addresses and organizer data from

You can configure a BlackBerry® Enterprise Server instance so that it searches for email addresses and organizer data only in a specified BaseDN in Microsoft® Active Directory®.

1. On the computer that hosts the BlackBerry Enterprise Server, click **Start > Run**.
2. Type **regedit**. Click **OK**.
3. Perform one of the following actions:
 - If you are running a 32-bit version of Windows®, navigate to HKEY_LOCAL_MACHINE\Software\Research In Motion\BlackBerry Enterprise Server\Agents.
 - If you are running a 64-bit version of Windows, navigate to HKEY_LOCAL_MACHINE\Software\WOW6432Node\Research In Motion\BlackBerry Enterprise Server\Agents.
4. Create a String value named **LDAPBaseDN**.
5. Change the value to the BaseDN that you want the BlackBerry Enterprise Server to use (for example, ou=Waterloo,o=example,c=CA).
6. In the Windows Services, restart the BlackBerry Controller.

Configuring the BlackBerry Enterprise Server to use Microsoft Exchange Web Services or MAPI and CDO libraries

By default, the BlackBerry® Enterprise Server uses Microsoft® Exchange Web Services to manage calendars on BlackBerry devices. The BlackBerry Enterprise Server monitors periodically whether a user account can use Microsoft Exchange Web Services. If a user account cannot use Microsoft Exchange Web Services, for example, because of a configuration error in Microsoft Exchange, the BlackBerry Enterprise Server uses MAPI and CDO libraries to manage calendars on devices. A BlackBerry Messaging Agent on the BlackBerry Enterprise Server can include a dynamic mix of user accounts that use Microsoft Exchange Web Services and user accounts that use MAPI and CDO libraries.

You can use the BlackBerry® Enterprise Trait Tool to configure the BlackBerry Enterprise Server to use only Microsoft Exchange Web Services or only MAPI and CDO libraries to manage calendars on devices. You can configure a specific BlackBerry Messaging Agent instance, a specific BlackBerry Enterprise Server, or all BlackBerry Enterprise Server instances that share one BlackBerry Configuration Database.

To use Microsoft Exchange Web Services, your organization's environment must include Microsoft® Exchange 2007 SP1 or later.

For more information about Microsoft Exchange Web Services, visit www.msdn.microsoft.com/en-us/library/bb204119.aspx.

Prerequisites: Configuring the BlackBerry Enterprise Server to use Microsoft Exchange Web Services

- Install an SSL certificate on a BlackBerry® Enterprise Server so that the BlackBerry Enterprise Server can communicate with Microsoft® Exchange Web Services. You must export the SSL certificate from the client access server for Microsoft® Exchange and import the SSL certificate to the BlackBerry Enterprise Server. The BlackBerry Enterprise Server supports a self-signed security certificate or a certificate that a certificate authority issues. For more information about installing an SSL certificate, visit support.microsoft.com to read article KB 962624.
- Configure the Microsoft® Exchange Impersonation features for a BlackBerry Enterprise Server administrator account. For more information about configuring the Microsoft Exchange Impersonation feature, visit [www.msdn.microsoft.com/en-us/library/bb204095\(EXCHG.140\).aspx](http://www.msdn.microsoft.com/en-us/library/bb204095(EXCHG.140).aspx).
- Assign IIS permissions to a BlackBerry Enterprise Server administrator account on the Microsoft® Exchange Server that hosts the client access server role. For more information about assigning IIS permissions, visit support.microsoft.com to read article KB 816117.

Configure the BlackBerry Enterprise Server to use Microsoft Exchange Web Services

You can configure the BlackBerry® Enterprise Server to use only Microsoft® Exchange Web Services to manage calendars on BlackBerry devices.

1. Copy the BlackBerry Enterprise Server installation files to the computer that hosts the primary BlackBerry Enterprise Server.
2. Extract the contents to a folder on the computer.
3. At a command prompt, navigate to `<extracted_folder>\tools`.
4. Perform one of the following actions:
 - To configure a specific BlackBerry Messaging Agent on a specific BlackBerry Enterprise Server to use Microsoft Exchange Web Services, type **traittool -server <server_name> -agent <agent_id> -trait EWSEnable -set true**, where `<server_name>` is the name of the BlackBerry Enterprise Server and `<agent_id>` is the ID for the BlackBerry Messaging Agent. If you configured high availability, configure only the primary BlackBerry Enterprise Server.
 - To configure all BlackBerry Messaging Agent instances on a specific BlackBerry Enterprise Server to use Microsoft Exchange Web Services, type **traittool -server <server_name> -trait EWSEnable -set true**, where `<server_name>` is the name of the BlackBerry Enterprise Server. If you configured high availability, configure only the primary BlackBerry Enterprise Server.
 - To configure all BlackBerry Messaging Agent instances on all BlackBerry Enterprise Server instances to use Microsoft Exchange Web Services, type **traittool -global -trait EWSEnable -set true**.
5. Restart the BlackBerry Messaging Agent instances that you made changes to.

After you finish:

In the logs folder verify that the file named `<server_name>_CALH_<agent_id>_<date>.txt` appears. In the file name, `<server_name>` is the name of the BlackBerry Enterprise Server, `<agent_id>` is the ID of the BlackBerry Messaging Agent, and `<date>` is the date that you configured the BlackBerry Enterprise Server to use Microsoft Exchange Web Services.

Configure the BlackBerry Messaging Agent instances to use a web address for a specific Microsoft Autodiscover service

You can configure the BlackBerry® Messaging Agent instances to use a specific Microsoft® Autodiscover service to search for a client access server for Microsoft® Exchange by specifying the web address for the service. You can use the web address of the service if the default Microsoft Autodiscover service does not find an appropriate client access server for Microsoft Exchange or if you want to use a different client access server for Microsoft Exchange.

1. Copy the BlackBerry® Enterprise Server installation files to the computer that hosts the primary BlackBerry Enterprise Server.
2. Extract the contents to a folder on the computer.

3. At the command prompt, navigate to `<extracted_folder>\tools`.
4. Perform one of the following actions:
 - To configure all BlackBerry Messaging Agent instances on a specific BlackBerry Enterprise Server to use a web address for a specific Microsoft Autodiscover service, type **traittool -server <server_name> -trait EWSSCPURL -set <web_address>**, where `<server_name>` is the name of the BlackBerry Enterprise Server and `<web_address>` is the web address of the Microsoft Autodiscover service. If you configured high availability, configure only the primary BlackBerry Enterprise Server.
 - To configure all BlackBerry Messaging Agent instances on all BlackBerry Enterprise Server instances to use a web address for a specific Microsoft Autodiscover service, type **traittool -global -trait EWSSCPURL -set <web_address>**, where `<web_address>` is the web address of the Microsoft Autodiscover service.
5. Press ENTER.

Example:

To specify a web address for a specific Microsoft Autodiscover service that all BlackBerry Messaging Agent instances on all BlackBerry Enterprise Server instances will use, type **traittool -global -trait EWSSCPURL -set https://server.company.com/Autodiscover/Autodiscover.xml**

Configure the BlackBerry Messaging Agent instances to use a specific web address for a client access server for Microsoft Exchange

You can configure the BlackBerry® Messaging Agent instances to use a specific client access server for Microsoft® Exchange to connect to Microsoft Exchange Web Services. You can use the specific web address for the client access server if you do not have access to the Microsoft® Autodiscover service or if you do not want to use the client access server for Microsoft Exchange that the Microsoft Autodiscover service selects. If you configure the BlackBerry Messaging Agent instances to use the web address for the client access server, the BlackBerry Messaging Agent instances do not use the Microsoft Autodiscover service to search for a client access server for Microsoft Exchange.

1. Copy the BlackBerry® Enterprise Server installation files to the computer that hosts the primary BlackBerry Enterprise Server.
2. Extract the contents to a folder on the computer.
3. At the command prompt, navigate to `<extracted_folder>\tools`.
4. Perform one of the following actions:
 - To configure a specific BlackBerry Enterprise Server to use a specific web address for a client access server for Microsoft Exchange, type **traittool -server <server_name> -trait EWSCASURL -set <web_address>**, where `<server_name>` is the name of the BlackBerry Enterprise Server and `<web_address>` is the web address for the Microsoft Exchange client access server. If you configured high availability, configure only the primary BlackBerry Enterprise Server.

- To configure all BlackBerry Messaging Agent instances on all BlackBerry Enterprise Server instances to use a specific web address for a client access server for Microsoft Exchange, type **traittool -global -trait EWSCASURL -set <web_address>**, where <web_address> is the web address for the Microsoft Exchange client access server.

5. Press ENTER.

Configuring the BlackBerry Messaging Agent instances to look up the user's status using only Microsoft Exchange Web Services

You can configure the BlackBerry® Messaging Agent instances to use only Microsoft® Exchange Web Services to determine the user's status, for example, whether a user is available, busy, or offline. By default, the BlackBerry Messaging Agent instances can determine the user's status using Microsoft Exchange Web Services unless the user is an external user or the user's email address is a distribution list. If the BlackBerry Messaging Agent instances cannot determine the user's status using Microsoft Exchange Web Services and Microsoft Exchange public folders that are in your organization's environment, the BlackBerry Messaging Agent instances can search the Microsoft Exchange public folders for the user's status. If your organization's environment is running Microsoft Exchange 2007, it does not include public folders and the BlackBerry Messaging Agent instances write error messages to the log files because they cannot find the public folders.

You can configure the BlackBerry Messaging Agent instances to look up the user's status using only Microsoft Exchange Web Services to avoid the BlackBerry Messaging Agent instances writing error messages to their log files.

Configure the BlackBerry Messaging Agent instances to look up a user's status using only Microsoft Exchange Web Services

1. Copy the BlackBerry® Enterprise Server installation files to the computer that hosts the primary BlackBerry Enterprise Server instance.
2. Extract the contents to a folder on the computer.
3. At the command prompt, navigate to <extracted_folder>\tools.
4. Perform one of the following actions:
 - To configure a BlackBerry Messaging Agent on a BlackBerry Enterprise Server to look up the user's status using only Microsoft® Exchange Web Services, type **traittool -server <server_name> -agent <agent_id> -trait EWSUserAvailabilityAccess -set EWS**, where <server_name> is the name of the BlackBerry Enterprise Server and <agent_id> is the ID for the BlackBerry Messaging Agent.
 - To configure all BlackBerry Messaging Agent instances on a specific BlackBerry Enterprise Server to look up the user's status using only Microsoft Exchange Web Services, type **traittool -server <server_name> -trait EWSUserAvailabilityAccess -set EWS**, where <server_name> is the name of the BlackBerry Enterprise Server.
 - To configure all BlackBerry Messaging Agent instances on all BlackBerry Enterprise Server instances to look up the user's status using only Microsoft Exchange Web Services, type **traittool -global -trait EWSUserAvailabilityAccess -set EWS**.

5. Press ENTER.

Provide feedback

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

Legal notice

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