Microsoft Exchange for IM and Presence Service on Cisco Unified Communications Manager, Release 9.1(1)

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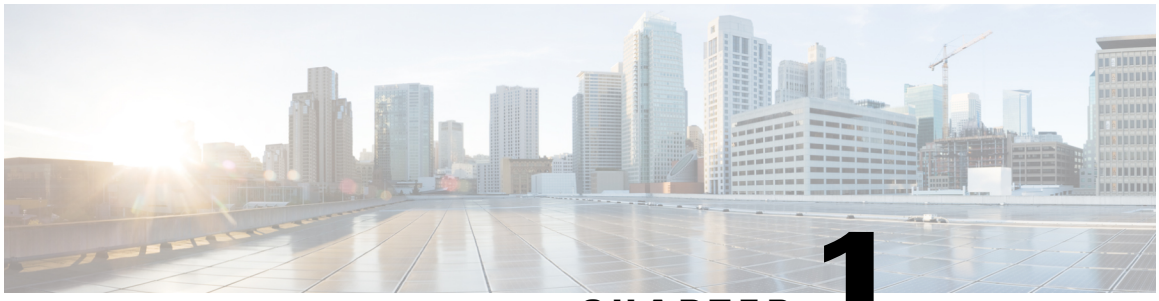

CHAPTER 1

Preface

- Introduction, page 1
- Audience, page 1
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Introduction

Microsoft Exchange integration with the IM and Presence Service allows users to incorporate their calendar and meeting status in Microsoft Outlook into their availability status on IM and Presence Service.

Audience

This publication is for experienced users who configure and maintain Microsoft Exchange integration with the IM and Presence Service.

Organization

This guide contains the following sections:

Chapter	Title	Description
1	Introduction to IM and Presence Service Integration with Microsoft Exchange, on page 5	Introduction to Microsoft Exchange Integration with the IM and Presence Service.
2	Planning for IM and Presence Service Integration with Microsoft Exchange, on page 9	Describes the prerequisite configuration tasks, configuration and security considerations, and how to get more information.

Chapter	Title	Description
3	Configure Microsoft Exchange Server 2003 and 2007 to Integrate with the IM and Presence Service over WebDAV, on page 15	Describes the integration of the IM and Presence Service with Microsoft Exchange Server 2003 and 2007 over WebDAV.
4	Configure Exchange Server 2007 and Later to Integrate with the IM and Presence Service over Exchange Web Services, on page 25	Describes the integration of the IM and Presence Service with Microsoft Exchange Server 2007 and 2010 over Exchange Web Services.
5	Configure the IM and Presence Service to Integrate with the Microsoft Exchange Server, on page 39	Describes common configuration tasks.
6	Troubleshooting Exchange Calendaring Integrations, on page 63	Describes the most common troubleshooting tasks and fixes for common problems.

Conventions

This document uses the following conventions:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
`courier` font	Terminal sessions and information the system displays appear in `courier` font.

Note Means reader take note. Notes contain helpful suggestions or references to material not covered in the manual.

Tip Means *the following information helps you solve a problem*. The tips information might not be troubleshooting or even an action, but could be useful information, similar to a Timesaver.

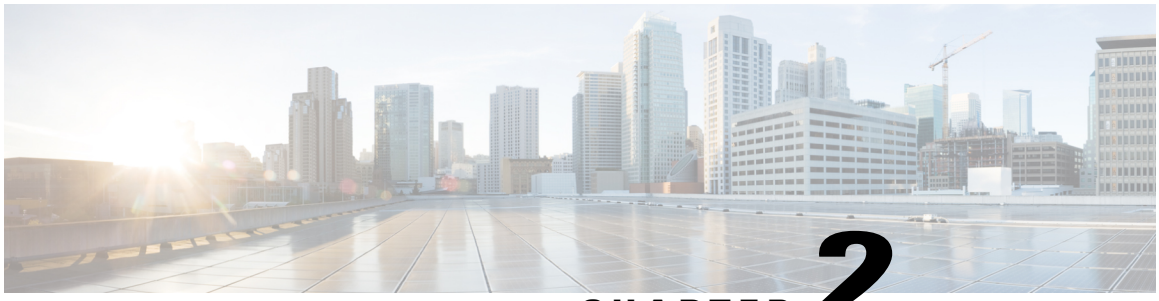
Caution Means reader be careful. In this situation, you might perform an action that could result in equipment damage or loss of data.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.



CHAPTER 2

Introduction to IM and Presence Service Integration with Microsoft Exchange

- Overview, page 5
- Deployment, page 5
- Microsoft Outlook Calendaring States on the IM and Presence Service , page 6
- Restrictions and Limitations, page 7

Overview

Microsoft Exchange integration with the IM and Presence Service allows users to incorporate their calendar/meeting status in Microsoft Outlook into their availability status on the IM and Presence Service.

Deployment

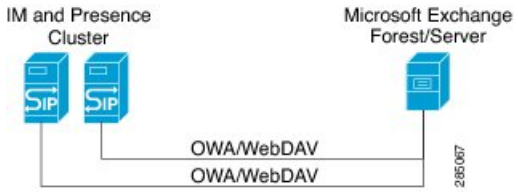
The following sections identify the types of deployments available and describe each.

WebDAV

WebDav (Web Distributed Authoring and Versioning) is an extension of HTTP that facilitates creating, changing, and moving documents on a server as well as editing properties of a file. WebDAV can be used to access Microsoft Exchange mailboxes over HTTP connectivity. Each folder, message, calendar event, contact,

and so on, has a URL that can be used to access it. The IM and Presence Service can use WebDAV to gather information on calendar events. WebDAV is deprecated in Microsoft Exchange 2010 and beyond.

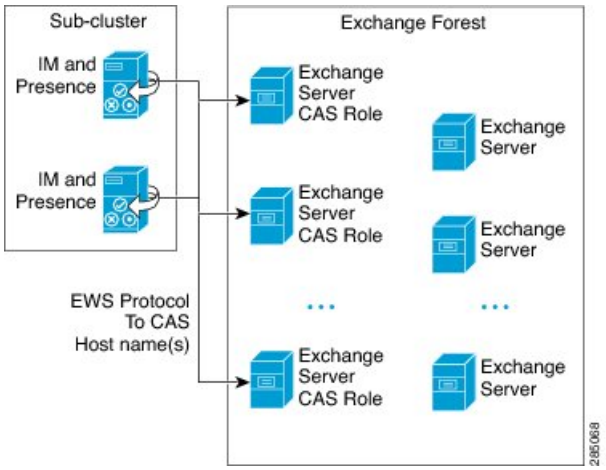
Figure 1: Microsoft Exchange Integration with WebDAV over the IM and Presence Service



Exchange Web Services

Exchange Web Services (EWS) is a newer set of web services that allow interaction with Microsoft Exchange mailboxes and contents over HTTP. EWS provides access to much of the same data that is made available through Microsoft Outlook. It provides more services, is more robust, and it is easier to use than WebDAV, as well as being better able to handle exchange-specific data. EWS moves several responsibilities from the client computer to the server.

Figure 2: Microsoft Exchange Integration with the IM and Presence Service over EWS



Microsoft Outlook Calendaring States on the IM and Presence Service

Microsoft Exchange integration with the IM and Presence Service allows users to incorporate their calendar/meeting status in Microsoft Outlook into their availability status on the IM and Presence Service. The table below shows the reachability mappings, and how the IM and Presence Service correlates the status of meetings (as shown in Microsoft Outlook calendar) in the availability status of users on the IM and Presence Service.

Table 1: Aggregated Availability State Based on Calendar State

Microsoft Outlook State	IM and Presence Service State
Free/Tentative	Available
Busy	In a meeting
Out-of-Office[1]	Away
Away[2]	Away

[1] Microsoft Outlook 2003, Microsoft Outlook 2007, and Microsoft Outlook 2010 desktop client.

[2] Microsoft Outlook Web Access (OWA) 2010.

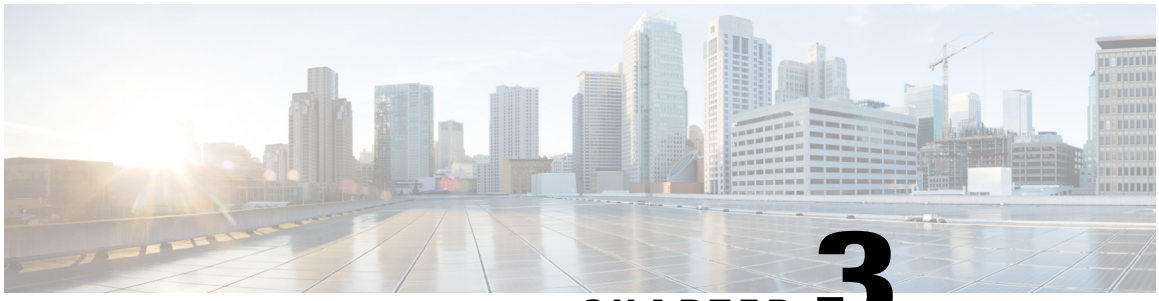
Presence Gateway Options

You must configure a Microsoft Exchange Server as a Presence Gateway for calendaring information exchange on the IM and Presence Service. The Presence Gateway to Exchange enables the IM and Presence Service node to reflect the availability status of the user on a per-user basis.

Restrictions and Limitations

The following are restrictions and limitations for integrating the IM and Presence Service with Microsoft Exchange:

- You can either configure one WebDAV Server or multiple Exchange Web Services (EWS) servers. You can not mix WebDAV and EWS server types in your deployment.
- You can add, update, or delete one or more EWS servers with no maximum limit. However, the **Troubleshooter** on the **Presence Gateway Configuration** window is designed to only verify and report status of the first 10 EWS servers that you configure.
- This release of the IM and Presence Service does not support the Exchange autodiscover service. The autodiscover service assumes that a load-balancing mechanism is already in place across the Client Access Server (CAS) or servers.



CHAPTER 3

Planning for IM and Presence Service Integration with Microsoft Exchange

- Prerequisite Configuration Tasks, page 9
- Configuration Considerations, page 10
- Security Considerations, page 13
- Getting More Information, page 13

Prerequisite Configuration Tasks

Before you configure Microsoft Exchange integration with the IM and Presence Service, consult the compatibility matrix below and make sure that you have installed and configured the required components for this integration:

Table 2: Compatibility Matrix

Component	Install Compatible Version
Windows Server	• Service Packs for Windows Server 2003 (SP2) • Service Packs for Windows Server 2008 (SP2) • Service Packs for Windows Server 2012 (Standard)
Cisco Unified Communications Manager	The Cisco Unified Communications Manager release must match the IM and Presence Service release.
IM and Presence Service	The IM and Presence Service release must match the Cisco Unified Communications Manager release.
Microsoft Exchange Server 2007	Service Packs for Microsoft Exchange 2007 (SP1).
Microsoft Exchange Server 2010	Service Packs for Microsoft Exchange 2010 (SP1).

Component	Install Compatible Version
Active Directory	• Active Directory 2003 with Windows Server 2003 (SP2) -- OR -- • Active Directory 2008 with Windows Server 2008 (SP2) **Note** User names configured in Active Directory must be identical to those names defined in Cisco Unified Communications Manager.
A Third-Party Certificate OR Certificate Server	One or the other of these is required to generate the certificates.

The following table shows the Exchange servers required to support WebDAV and Exchange Web Services (EWS).

Table 3: Microsoft Exchange Versions that Support WebDAV and EWS

Exchange Version	Supports WebDAV	Supports EWS
EX2003	Yes	No
EX2007	Yes	Yes
EX2010	No	Yes

Configuration Considerations

Integration with Microsoft Exchange Server 2003 and 2007 over WebDAV

Microsoft Exchange Server (2003 and 2007 versions) supports WebDAV-based calendar integration. The Exchange Server (2003 and 2007 versions) integrates with the IM and Presence Service using the WebDAV protocol, over the Outlook Web Access (OWA) interface exposed by the Exchange Server.

The IM and Presence Service can only communicate with a single WebDAV front-end Exchange Server. The front-end Exchange Server communicates with multiple back-end Exchange servers that you configure during the WebDAV setup. Exchange communicates with the IM and Presence Service through a Presence Gateway configured for the Exchange Server on the IM and Presence Service.

Administrative Roles and Permissions in Exchange Server 2003 and 2007

By default in Microsoft Exchange 2003 and 2007, administrators are denied permission to log in to a user mailbox on the Exchange Server. In order for the IM and Presence Service to connect to mailbox stores on the Exchange Server and query end-user calendaring data, it requires an Exchange account with special permissions, referred to as a 'Receive-As' account.

Presence Gateway Configuration for Microsoft Exchange Server 2003 and 2007 Integrations

A single Presence Gateway using WebDAV, is configured on the IM and Presence Service, and requires a restart of the Cisco Presence Engine when added, updated, or deleted.

Known Issues with WebDAV Integration

See the Troubleshooting section of this guide to learn about issues that are known to impact WebDAV integrations. See Issues Known to Impact Microsoft Exchange Integrations, on page 68.

Integration with Microsoft Exchange Server 2007 and 2010 over Exchange Web Services

In addition to WebDAV integration, Exchange 2007 introduces Exchange Web Services (EWS) for calendaring integration using a Simple Object Access Protocol-like (SOAP) interface to the Exchange Server. For Exchange 2010, WebDAV is no longer supported and customers can only use EWS for calendaring integration. For Exchange 2007, WebDAV is supported.

When configuring your EWS Presence Gateway for Exchange integrations in the **Cisco Unified CM IM and Presence Service Administration** user interface, note the following:

- You cannot deploy a mixed environment of WebDAV and EWS servers.
- You can add, update, or delete one or more EWS servers with no maximum limit. However, the Troubleshooter on the **Presence Gateway Configuration** window is designed to only verify and report status of the first 10 EWS servers that you configure.
- EWS Server gateways share the credentials (Account Name and Password) that you configure for the first EWS Server Gateway. If you change the credentials for one EWS Server Gateway, the credentials change accordingly on all of the configured EWS gateways.
- You must restart the Cisco Presence Engine after you add, update, or delete one or more EWS servers for your configuration changes to take effect. If you add multiple EWS servers one after another, you can restart the Cisco Presence Engine once to make all of the changes simultaneously.

Administrative Roles and Permissions in Exchange Server 2007 and 2010

Exchange Web Services (EWS) requires a special account to enable access to all user calendaring information. This account is referred to as the impersonation account.

Microsoft Exchange Server 2007

For a caller to access the email account of another user with Exchange Server 2007, the EWS integration requires an account with Impersonation permissions. The caller impersonates a given user account using the permissions that are associated with the impersonated account instead of the permissions that are associated with the account of the caller.

The impersonated account must be granted the **ms-Exch-EPI-Impersonation** permission on the Client Access Server (CAS) running Exchange 2007. This gives the caller the permission to impersonate a user email account using the CAS. In addition, the caller must be granted the **ms-Exch-EPI-MayImpersonate** permission on either the mailbox database or on the individual user objects in the directory.

Note that the Access Control List (ACL) for an individual user takes precedence over the mailbox database setting so that you can allow a caller access to all mailboxes in the database but if required, deny access on certain mailboxes in that database.

Microsoft Exchange Server 2010

Microsoft Exchange Server 2010 uses Role-Based Access Control (RBAC) to assign permissions to impersonation accounts and allow users to perform tasks specific to their function in the organization. Depending on whether the user is an administrator, super user, or an end-user, there are two primary methods to apply RBAC permissions:

- Management role groups—Microsoft provides 11 default management role groups during the Exchange setup process with associated permissions specific to the role of the group. The Recipient Management and Help Desk, for example, are built-in role groups. Typically, super users who need to perform specific tasks are assigned to the relevant management role group and inherit the associated permissions. For example, a Product Support representative who needs to be able to modify the contact details of any user across the entire Exchange organization may be assigned as a member of the Help Desk management role group.
- Management role assignment policies—For normal users who are not administrators or super users, management role assignment policies control the specific mailboxes such users can modify. The **ApplicationImpersonation** role, when assigned to the user using the **New-ManagementRoleAssignment** cmdlet, enables an account to impersonate users in an organization to perform tasks on behalf of the user. The scope of the role assignments are managed individually using the **New-ManagementScope** cmdlet, and can be filtered to target specific recipients or specific servers.

Note With RBAC, you do not need to modify and manage the ACL as required for Exchange Server 2007.

Presence Gateway Configuration for Exchange Server 2007 and 2010 Integrations

To support a large number of users (with EWS calendar integration enabled), the IM and Presence Service must distribute the load of EWS traffic among multiple Client Access Servers (CASs). The IM and Presence Service can connect to a number of CASs by way of EWS, and it uses the following round robin strategy to support the traffic load that it encounters:

- The first time that a user's calendar subscription is enabled, the user is assigned a CAS from a pool of eligible CAS hosts configured by the administrator.
- The user retains the assignment until their calendar subscription fails.
- If the user's calendar subscription fails, the user is again assigned a CAS from the pool of eligible CAS hosts.

Known Issues with Exchange Web Services Integration

- See the Troubleshooting Exchange Calendaring Integrations, on page 63 chapter of this guide to learn about issues that are known to impact Exchange Web Services (EWS) integrations.
- See Issues Known to Impact Microsoft Exchange Integrations, on page 68.

Security Considerations

Windows Security Policy Settings

IM and Presence Service integration with Microsoft Exchange supports various authentication methods including Windows Integrated authentication (NTLM).

Note The IM and Presence Service supports NTLMv1 Windows Integrated authentication only and does not currently support NTLMv2.

Some Windows network security policies allow NTLMv2 authentication only, which prevents the integration between the IM and Presence Service and Exchange from functioning (both WebDAV and EWS). You must verify that NTLMv2 authentication is not enabled on each Windows server running Exchange. If NTLMv2 authentication is enabled, disable the setting and reboot the server to properly apply the new security setting.

Getting More Information

Cisco Unified Communications Manager and IM and Presence Service Documentation

http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html

Microsoft Exchange 2003 Documentation

http://technet.microsoft.com/en-us/library/bb123872.aspx

Microsoft Exchange 2007 Documentation

http://technet.microsoft.com/en-us/library/bb124558(EXCHG.80).aspx

For more information about how to configure Forms Based Authentication for Microsoft Outlook Web Access in Exchange 2007, see the following URL:

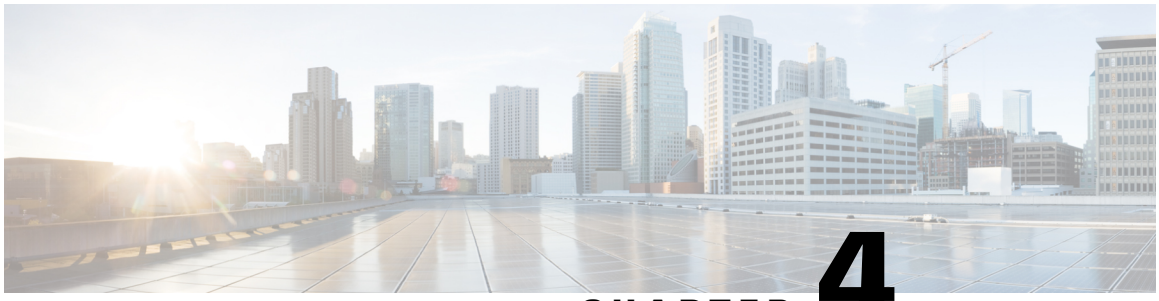
http://technet.microsoft.com/en-us/library/aa998867(EXCHG.80).aspx

Microsoft Exchange 2010 Documentation

http://technet.microsoft.com/en-us/library/bb124558.aspx

Microsoft Active Directory Documentation

http://www.microsoft.com/windowsserver2008/en/us/ad-main.aspx



CHAPTER 4

Configure Microsoft Exchange Server 2003 and 2007 to Integrate with the IM and Presence Service over WebDAV

Note This module describes the integration of the IM and Presence Service with Exchange Server 2003 and 2007 over WebDAV. If you are integrating with the Exchange server 2007 or 2010 over Exchange Web Services (EWS), see Configure Exchange Server 2007 and Later to Integrate with the IM and Presence Service over Exchange Web Services, on page 25 For an overview of each type of Exchange integration, we recommend that you review Planning for IM and Presence Service Integration with Microsoft Exchange, on page 9.

- Microsoft Exchange 2003 Configuration over WebDAV, page 15
- Microsoft Exchange 2007 Configuration over WebDAV, page 19
- Enable Authentication on the Microsoft Exchange 2003 and 2007 Virtual Directories, page 24

Microsoft Exchange 2003 Configuration over WebDAV

You must complete the following tasks when configuring access to mailboxes on the Exchange Server 2003.

- Verifying Windows Security Settings, on page 16
- Adding a New Service Account as a Member of the Exchange View Only Administrator Security Group, on page 17
- Delegating Exchange View Only Administrator Control to the User Account , on page 17
- Granting Receive-As Permissions on User Mailboxes, on page 18
- Verifying Permissions on the Microsoft Exchange 2003 Account, on page 18

For detailed instructions, see the Microsoft Server 2003 documentation at the following URL: http://technet.microsoft.com/en-us/library/bb123872(EXCHG.65).aspx

Tip

- If the characters ~, #, **%**, +, **&**, |, ***, or / are part of a user's email address, then Exchange calendar integration using WebDAV does not work for that user.
- If you receive an error message in the Exchange Server Status area of the **Presence Gateway Configuration** window that indicates the Exchange Server is unreachable but that the certificate is configured properly, then the Receive-As account is configured improperly. You must recreate the account following the procedures in this section.

Windows Security Policy Settings

IM and Presence Service integration with Exchange supports various authentication methods including Windows Integrated authentication (NTLM).

Note The IM and Presence Service supports NTLMv1 Windows Integrated authentication only and does not currently support NTLMv2.

Some Windows network security policies allow NTLMv2 authentication only, which prevents the integration between the IM and Presence Service and Exchange from functioning (both WebDAV and EWS). You must verify that NTLMv2 authentication is not enabled on each Windows server running Exchange. If NTLMv2 authentication is enabled, disable the setting and reboot the server to properly apply the new security setting.

Complete the following procedure to verify the current value of NTLM authentication and if necessary, to disable NTLMv2 authentication.

Verifying Windows Security Settings

Procedure

Step 1 On the Windows Server running Exchange, choose **Start** > **Administrative Tools** > **Local Security Policy**.

Step 2 Navigate to **Security Settings** > **Local Policies** > **Security Options**.

Step 3 Choose **Network Security: Minimum session security for NTLM SSP based (including secure RPC) servers**.

Step 4 Verify that the **Require NTLMv2 session security** check box is unchecked.

Step 5 If the **Require NTLMv2 session security** check box is checked, complete the following steps:

a) Uncheck the check box **Require NTLMv2 session security**.

b) Click **OK**.

Step 6 Reboot the Windows Server running Exchange to apply the new security settings.

Adding a New Service Account as a Member of the Exchange View Only Administrator Security Group

An administrator account may already be configured on the Microsoft Exchange Server. It is recommended that you create a separate administrator account for Exchange integration, as the default administrator configuration may not allow you to log in to other user accounts on the Exchange Server.

Procedure

Step 1 On the Exchange Server, in **Active Directory Users and Computers** (ADUC), complete the following tasks:

a) Create a new service account.
b) Create a new security group and name it Exchange View Only Administrator.
c) Right-click the Exchange View Only Administrator group that you created, and choose **Properties**.
d) Under the **Members** tab, add the service account that you created to the group.

Step 2 On the Exchange Server, open **System Manager** and under **Administrative Groups**, navigate to the Exchange View Only Administrator group.

Step 3 Right-click the group and choose **Delegate Control** to start the **Exchange Administration Delegation** Wizard.

Step 4 Click **Add** then navigate to the group that you created and choose it.

Step 5 Assign the Exchange View Only Administrator role to the group.

What to Do Next

Delegating Exchange View Only Administrator Control to the User Account , on page 17

Delegating Exchange View Only Administrator Control to the User Account

In a Microsoft Exchange 2003 environment, you must delegate “Exchange View Only Administrator” permissions to the user account to allow only administrators (with Exchange View Only permissions) to log in to the user accounts on the Exchange Server and view the Exchange configuration.

A user account is a standard Windows account used by a regular Exchange user.

Procedure

Step 1 Log in to the Exchange Server user interface and create a new user account.

Step 2 Open **System Manager** and under Administrative Groups, navigate to the administrative group to which you want to add the account that you created.

Step 3 Right-click the group and choose **Delegate Control** to start the **Exchange Administration Delegation** wizard.

Step 4 Click **Add**, navigate to the user account that you created, and choose it.

Step 5 Assign the Exchange View Only Administrator role to the account.

What to Do Next

Granting Receive-As Permissions on User Mailboxes , on page 22

Granting Receive-As Permissions on User Mailboxes

The IM and Presence Service requires additional Receive-As account permissions to inspect the calendars of users on the Microsoft Exchange Server. We recommend that you assign this permission at a higher level (such as mail storage group) to enable read-only access to all the mailboxes in the mail storage group.

Procedure

Step 1 On the Exchange Server, open the **System Manager**.

Step 2 Under Administrative Groups, navigate to **First Administrative Group** > **Servers** > **First Server** > **Mailbox Store**.

Step 3 Right-click the mailbox store, and choose Properties. Under the Security tab, enter the name of the account for which you need to access calendaring information.

Note The IM and Presence Service only requires Receive-As permissions on the account to enable it to log in to that account when it connects to the Exchange Server. This account does not typically receive mail so you do not need to be concerned about allocating space for it.

What to Do Next

Verifying Permissions on the Microsoft Exchange 2003 Account, on page 18

Verifying Permissions on the Microsoft Exchange 2003 Account

Follow this procedure to verify the permissions on the Exchange 2003 account.

Before You Begin

This procedure applies to Exchange Server 2003 SP1 and later releases.

Procedure

Step 1 Use Internet Explorer to connect to the following URL:
`https://server/exchange/user@domain`

Where *server* = server name, *user* = user name (some user other than Receive-As account), *domain* = exchange domain.

Step 2 Log in using the Receive-As credentials. If these credentials allow you to access the OWA account, it verifies that the permissions have propagated successfully to the Exchange Server.

What to Do Next

Configuring the Presence Gateway for Microsoft Exchange Integration, on page 39

Microsoft Exchange 2007 Configuration over WebDAV

You must complete the following tasks when configuring access to mailboxes on the Exchange 2007 Server.

- Verifying Windows Security Settings, on page 20
- Adding a Mailbox to the Exchange View Only Administrator Account, on page 20
- Exchange View Only Administrator Control Delegation to the User Account, on page 21
- Granting Receive-As Permissions on User Mailboxes , on page 22
- Verifying Permissions on the Microsoft Exchange 2007 Account, on page 22
- Enable Authentication on the Microsoft Exchange 2003 and 2007 Virtual Directories, on page 24

For detailed instructions, see the Exchange Server 2007 documentation at the following URL: http://technet.microsoft.com/en-us/library/bb124558(EXCHG.80).aspx

Tip

- If the characters ~, #, **%**, +, **&**, |, ***, or / are part of a user's email address, then Exchange calendar integration using WebDAV does not work for that user.
- If you receive an error message in the Exchange Server Status area of the **Presence Gateway Configuration** window that indicates the Exchange Server is unreachable but that the certificate is configured properly, then the Receive-As account is configured improperly. You must recreate the account following the procedures in this section.

Windows Security Policy Settings

IM and Presence Service integration with Microsoft Exchange supports various authentication methods including Windows Integrated authentication (NTLM).

Note The IM and Presence Service supports NTLMv1 Windows Integrated authentication only and does not currently support NTLMv2.

Some Windows network security policies allow NTLMv2 authentication only, which prevents the integration between the IM and Presence Service and Exchange from functioning (both WebDAV and EWS). You must verify that NTLMv2 authentication is not enabled on each Windows server running Exchange. If NTLMv2 authentication is enabled, disable the setting and reboot the server to properly apply the new security setting.

Complete the following procedure to verify the current value of NTLM authentication and if necessary, to disable NTLMv2 authentication.

Verifying Windows Security Settings

Procedure

Step 1 On the Windows Server running Exchange, choose **Start** > **Administrative Tools** > **Local Security Policy**.

Step 2 Navigate to **Security Settings** > **Local Policies** > **Security Options**.

Step 3 Choose **Network Security: Minimum session security for NTLM SSP based (including secure RPC) servers**.

Step 4 Verify that the **Require NTLMv2 session security** check box is unchecked.

Step 5 If the **Require NTLMv2 session security** check box is checked, complete the following steps:

a) Uncheck the check box **Require NTLMv2 session security**.

b) Click **OK**.

Step 6 Reboot the Windows Server running Exchange to apply the new security settings.

What to Do Next

Adding a Mailbox to the Exchange View Only Administrator Account, on page 20

Adding a Mailbox to the Exchange View Only Administrator Account

Follow this procedure to add a mailbox to the Exchange View Only Administrator account.

Note Accounts without a mailbox in the specified storage do not work, and the account stops functioning if you remove the mailbox at any stage.

Procedure

Step 1 Log in to Microsoft Exchange Server 2007 user interface using an account that has been delegated the Exchange View Only Administrator role.

Step 2 Open the Exchange Management Console (EMC) on the Exchange 2007 Server.

Step 3 Choose **Recipient Configuration** in the console tree.

Step 4 Click **New Mailbox**, and complete the **New Mailbox** wizard:
For User Logon Name (User Principal Name), enter the Microsoft domain name in which the user account resides followed by the name that the user requires to log in to the mailbox.

Example

*msoft-domain-name**username*

What to Do Next

Exchange View Only Administrator Control Delegation to the User Account, on page 21

Exchange View Only Administrator Control Delegation to the User Account

In an Exchange 2007 environment, you must delegate “Exchange View Only Administrator” permissions to the user account to allow only administrators (with Exchange View Only permissions) to log in to the user accounts on the Exchange Server and view the Exchange configuration.

A user account is a standard Windows account used by a regular Exchange user.

You can delegate “Exchange View Only Administrator” permissions to the user account through the Exchange Management Console (EMC) or the Exchange Management Shell (EMS).

Delegating Through the Microsoft Exchange Management Console

Procedure

Step 1 On Exchange Server 2007, open the Exchange Management Console (EMC).

Step 2 In the console tree, right-click **Organization Configuration**.

Step 3 Choose **Add Exchange Administrator**, navigate to the account that you created, and choose it.

Step 4 Assign the Exchange View Only Administrator role to the account.

What to Do Next

Granting Receive-As Permissions on User Mailboxes , on page 22

Delegating Through the Microsoft Exchange Management Shell

Procedure

Step 1 For command line entry, open the Exchange Management Shell (EMS).

Step 2 Run the Add-Exchange command with associated arguments from the Run line or from the Command Prompt in the EMS.
The following provides the syntax and example of the command:

Syntax

```
Add-ExchangeAdministrator -Role role -Identity identity
```

Example

```
Add-ExchangeAdministrator -Role ViewOnlyAdmin -Identity impsdmin
```

What to Do Next

Granting Receive-As Permissions on User Mailboxes , on page 22

Granting Receive-As Permissions on User Mailboxes

Use the following procedure to grant "Receive-As" permissions on the user mailboxes.

Note This task cannot be completed using the Exchange Management Console (EMC).

Procedure

Step 1 Open the Exchange Management Shell (EMS) for command line entry.

Step 2 Run the Add-ADPermission command in the EMS as follows:

Syntax

```
Add-ADPermission -Identity Mailbox_Store -User Trusted_User -ExtendedRights Receive-As
```

Example

```
Add-ADPermission -Identity First_Storage_Group -User imps_admin -ExtendedRights Receive-As
```

What to Do Next

Verifying Permissions on the Microsoft Exchange 2007 Account, on page 22

Verifying Permissions on the Microsoft Exchange 2007 Account

After you have assigned the permissions to the Exchange 2007 account, you must verify that the permissions propagate to mailbox level and that you can access the mailbox of the end-user. On Exchange 2007, it takes some time for the permissions to propagate to mailboxes.

Before You Begin

- Delegate the appropriate roles and Receive-As permissions to the Exchange account. See the topic, Granting Impersonation Permissions to the Service Account and User Mailboxes, on page 30.
- For the purpose of the examples in the following procedures, the Exchange account is named *imps_admin* and the mail storage group is named *First_Storage_Group*.

Procedure

Step 1 Open the Exchange Management Shell (EMS) for command line entry.

Step 2 Verify that the Exchange account is a member of the"ExchangeView-Only Administrator" group as follows:

a) Run this command in the EMS:

```
([ADSI]"LDAP://CN=imps_admin,CN=Users,DC=r7,DC=com").memberof
```

Note The **CN**=*imps_admin*, **CN**=*users*, **DC**=*r7*, **DC**=*com* is the DN (Distinguished Name) of the Exchange account. To determine the DN, use **adsiedit.msc**. Also verify the DN with your Active Directory administrator if required.

b) Ensure that the command output indicates the Exchange account is a member of "Exchange View-Only Administrator" group, as follows:

Example Command Output

```
CN=Exchange View-Only Administrators,OU=Microsoft Exchange Security Groups,DC=r7,DC=com
```

Step 3 Verify that the Exchange account has "Receive-As" permissions on the mail storage group as follows:

a) Run this command in the EMS:

Get-ADPermission *First_Storage_Group* **-User** *imps_admin* | **Format-Table -AutoSize**

Note The *First_Storage_Group* is the name of the mail storage group and *imps_admin* is the Exchange account.

b) Ensure that the command output indicates the Exchange account has "Receive-As" permission on the mail storage group, as follows:

Example Command Output

Identity--------	User-------	Deny---------	Inherited--------	Rights--------
HTLUO-MAIL\ First_Storage_Group	R7\imps_admin	False	False	ReceiveAs-

Step 4 Verify that the Exchange account has permissions on an end-user mailbox as follows:

a) Run this command in the EMS:

Get-MailboxPermission *jdoe* **-User** *imps_admin* **| Format-Table -AutoSize**

Note The *jdoe* is the mailbox of the end-user and *imps_admin* is the Exchange account.

b) Ensure that the command output indicates that the Exchange account has FullAccess permission on *jdoe*'*s* mailbox, as follows:

Example Command Output

Identity------	User-----	AccessRights-----	AccessRights-----	IsInherited-----
r7.com/Dallas/jdoe	R7\imps_admin	{FullAccess}	{FullAccess}	True

Note Full Access permission on a user mailbox is inherited from the higher-level permission, in this instance, from the *First_Storage_Group*. If the command (that you run in Step 4) fails to return output, the permission has not yet propagated to the mailbox. Do not proceed until you see that the Exchange account has FullAccess on the mailbox of the end-user.

What to Do Next

Enable Authentication on the Exchange 2007 and Later Editions Virtual Directories, on page 36

Enable Authentication on the Microsoft Exchange 2003 and 2007 Virtual Directories

You must enable basic authentication on the Exchange virtual directories (`/exchange` and `/exchweb`) for Microsoft Office Outlook Web Access (OWA) to work properly. The `/exchange` directory handles mailbox access requests for OWA and WebDAV. The `/exchweb` directory contains resource files used by OWA and WebDAV. You can also optionally enable Windows Integrated Authentication on the Exchange virtual directories. Furthermore, Forms Based Authentication (FBA) can be optionally enabled.

The procedure that follows is for WebDAV integrations on Exchange Server 2003 and 2007 running Windows Server 2003.

Procedure

Step 1 From Administrative Tools, open **Internet Information Services** and choose the server.

Step 2 Choose **Web Sites**.

Step 3 Choose **Default Web Site**.

Step 4 Right click either the `/exchange` or `/exchweb` directory folder and choose **Properties**.

Step 5 Choose the **Directory Security** tab.

Step 6 Under **Authentication and access control**, click **Edit**.

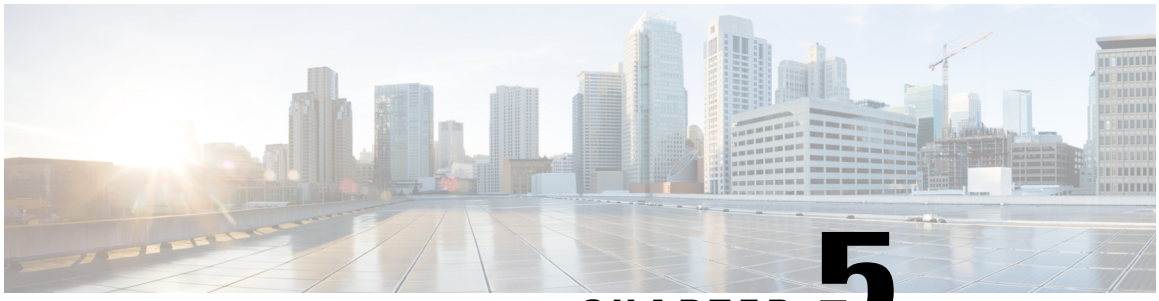
Step 7 Under **Authentication**, ensure that the **Basic Authentication** and **Integrated Windows** check boxes are checked.

Step 8 [Optional] If you want to enable FBA for the WebDAV integration between the IM and Presence Service and Exchange, complete the following steps:
Basic authentication is enabled by default for OWA when FBA is chosen.

a) Open the Exchange Management Console (EMC).
b) From the left pane, choose **Server Configuration** > **Mailbox**.
c) Choose the appropriate server in the **Mailbox** pane and choose the **WebDAV** tab.
d) Right-click **Exchange** and choose **Properties**.
e) Choose the **Authentication** tab.
f) Choose **Use forms-based authentication** and under **Logon Format** choose **Domain\user name**.
g) Click **OK**.
h) Right-click **ExchWeb** and choose **Properties**.
i) Choose the **Authentication** tab.
j) Choose **Use forms-based authentication** and under **Logon Format** choose **Domain\user name**.
k) Click **OK**.

Related Topics

Managing Outlook Web Access Virtual Directories in Exchange 2007



CHAPTER 5

Configure Exchange Server 2007 and Later to Integrate with the IM and Presence Service over Exchange Web Services

This module describes the integration of the IM and Presence Service with Exchange Server 2007 and 2010 over Exchange Web Services (EWS). If you are integrating with the Exchange server 2003 or 2007 over WebDAV, see Configure Microsoft Exchange Server 2003 and 2007 to Integrate with the IM and Presence Service over WebDAV, on page 15. For an overview of each type of Exchange integration, we recommend that you review Planning for IM and Presence Service Integration with Microsoft Exchange, on page 9.

- Microsoft Exchange 2007 Configuration over Exchange Web Services, page 25
- Microsoft Exchange 2010 Configuration over Exchange Web Services, page 31
- Enable Authentication on the Exchange 2007 and Later Editions Virtual Directories, page 36

Microsoft Exchange 2007 Configuration over Exchange Web Services

Before You Begin

Note that the steps required to configure Exchange Server 2007 differ depending on whether you use Windows Server 2003 or Windows Server 2008.

You must complete the following tasks when configuring access to mailboxes on the Exchange Server 2007. For detailed instructions, see the Exchange Server 2007 documentation at the following URL:http://technet.microsoft.com/en-us/library/bb124558(EXCHG.80).aspx.

- Verifying Windows Security Settings, on page 26
- Grant Users Permission to Sign in to the Service Account Locally, on page 26
- Setting Impersonation Permissions at the Server Level , on page 28
- Granting Send As Permissions to the Service Account and User Mailboxes, on page 29

- Granting Impersonation Permissions to the Service Account and User Mailboxes, on page 30
- Verifying Permissions on the Microsoft Exchange 2007 Account, on page 31

Tip The IM and Presence Service only requires impersonation permissions on the account to enable it to log in to that account when it connects to the Exchange Server. Note that this account does not typically receive mail so you do not need to be concerned about allocating space for it.

Windows Security Policy Settings

IM and Presence Service integration with Microsoft Exchange supports various authentication methods including Windows Integrated authentication (NTLM).

Note The IM and Presence Service supports NTLMv1 Windows Integrated authentication only and does not currently support NTLMv2.

Some Windows network security policies allow NTLMv2 authentication only, which prevents the integration between the IM and Presence Service and Exchange from functioning (both WebDAV and EWS). You must verify that NTLMv2 authentication is not enabled on each Windows server running Exchange. If NTLMv2 authentication is enabled, disable the setting and reboot the server to properly apply the new security setting.

Verifying Windows Security Settings

Procedure

Step 1 On the Windows Server running Exchange, choose **Start** > **Administrative Tools** > **Local Security Policy**.

Step 2 Navigate to **Security Settings** > **Local Policies** > **Security Options**.

Step 3 Choose **Network Security: Minimum session security for NTLM SSP based (including secure RPC) servers**.

Step 4 Verify that the **Require NTLMv2 session security** check box is unchecked.

Step 5 If the **Require NTLMv2 session security** check box is checked, complete the following steps:

a) Uncheck the check box **Require NTLMv2 session security**.

b) Click **OK**.

Step 6 Reboot the Windows Server running Exchange to apply the new security settings.

Grant Users Permission to Sign in to the Service Account Locally

Complete one of the following procedures to configure users to log in to the service account locally.

Before you begin

- For Exchange impersonation to work, all Microsoft Exchange servers must be members of the Windows Authorization Access Group.
- The service account should not be a member of any of the Exchange Administrative Groups. Exchange explicitly denies Impersonation for all accounts in those groups.

Configuring Microsoft Exchange 2007 on Windows Server 2003

Procedure

Step 1 Log in to the Exchange Server 2007 user interface using a service account that has been delegated the Exchange View Only Administrator role.

Step 2 In the left pane, under Security Settings, navigate to **Local Policies** > **User Rights Assignments**.

Step 3 In the right pane of the console, double-click **Allow Log On Locally**.

Step 4 Choose **Add User or Group** then navigate to the service account that you created and choose it.

Step 5 Choose **Check Names**, and verify that the specified user is correct.

Step 6 Click **OK**.

What to Do Next

Setting Impersonation Permissions at the Server Level , on page 28

Configuring Microsoft Exchange 2007 on Windows Server 2008

Procedure

Step 1 Log in to Exchange Server 2007 using a service account that has been delegated the Exchange View Only Administrator role.

Step 2 Choose Start.

Step 3 Type gpmc.msc.

Step 4 Choose Enter.

Step 5 Open the **Domain Controller Security Settings** window on the Exchange Server.

Step 6 In the left pane, under **Security Settings**, navigate to **Local Policies** > **User Rights Assignments**.

Step 7 In the right pane of the console, double-click **Allow Log On Locally**.

Step 8 Ensure that the **Define these policy settings** check box is checked.

Step 9 Choose **Add User or Group** and navigate to the service account that you previously created and choose it. Then click **OK**.

Step 10 Choose **Check Names**, and verify that the specified user is correct. Then click **OK**.

Step 11 Click **Apply** then click **OK** in the **Allow Log On Locally Properties** dialog box.

Step 12 Determine if your users SMTP address is *alias@FQDN*. If it is not, you must impersonate using the user principal name (UPN). This is defined as *alias@FQDN*.

What to Do Next

Setting Impersonation Permissions at the Server Level , on page 28

Setting Impersonation Permissions at the Server Level

The command in the following procedure allows you to grant impersonation permissions at the server level. You can also grant permissions at the database, user, and contact levels.

Before you begin

- If you wish to only grant the service account rights to access individual Microsoft Exchange servers, replace

  Get-OrganizationConfig

  with the string

  Get-ExchangeServer -Identity *ServerName*

  where *ServerName* is the name of the Exchange Server.

  Example

  Add-ADPermission -Identity (Get-ExchangeServer -Identity *exchangeserver1***).DistinguishedName -User (Get-User -Identity** *user* **| select-object).identity -ExtendedRights Send-As**

- Verify that the SMTP address of your users is defined as alias@FQDN. If it is not, you must impersonate the user account using the User Principal Name (UPN).

Procedure

Step 1 Open the Exchange Management Shell (EMS) for command line entry.

Step 2 Run this Add-ADPermission command to add the impersonation permissions on the server.

Syntax

Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User -Identity *User* **| select-object).identity -AccessRights GenericAll -InheritanceType Descendents**

Example

Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User -Identity *Ex2007* **| select-object).identity -AccessRights GenericAll -InheritanceType Descendents**

What to Do Next

Setting Active Directory Service Extended Permissions for the Service Account, on page 29

Setting Active Directory Service Extended Permissions for the Service Account

Before You Begin

You must set these permissions on the Client Access Server (CAS) for the service account that performs the impersonation.

- If the CAS is located behind a load-balancer, grant the **ms-Exch-EPI-Impersonation** rights to the Microsoft Exchange 2007 account for all CASs behind the load-balancer.
- If your mailbox servers are located on a different machine to the CASs, grant **ms-Exch-EPI-Impersonation** rights for the Exchange 2007 account for all mailbox servers.
- You can also set these permissions by using **Active Directory Sites and Services** or the **Active Directory Users and Computers** user interfaces.

Procedure

Step 1 Open the Exchange Management Shell (EMS).

Step 2 Run this Add-ADPermission command in the EMS to add the impersonation permissions on the server for the identified service account (for example, Exchange 2007).

Syntax

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity User | select-object).identity -ExtendedRight ms-Exch-EPI-Impersonation
```

Example

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity Ex2007 | select-object).identity -ExtendedRight ms-Exch-EPI-Impersonation
```

Step 3 Run this Add-ADPermission command in the EMS to add the impersonation permissions to the service account on each mailbox that it impersonates:

Syntax

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity User | select-object).identity -ExtendedRight ms-Exch-EPI-May-Impersonate
```

Example

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity Ex2007 | select-object).identity -ExtendedRight ms-Exch-EPI-May-Impersonate
```

What to Do Next

Granting Send As Permissions to the Service Account and User Mailboxes, on page 29

Granting Send As Permissions to the Service Account and User Mailboxes

Follow this procedure to grant send as permissions to the service account and user mailboxes.

Note You cannot use the Microsoft Exchange Management Console (EMC) to complete this step.

Procedure

Step 1 Open the Exchange Management Shell (EMS).

Step 2 Run this Add-ADPermission command in the EMS to grant Send As permissions to the service account and all associated mailbox stores:

Syntax

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity User | select-object).identity -ExtendedRights Send-As
```

Example

```
Add-ADPermission -Identity (Get-OrganizationConfig).DistinguishedName -User (Get-User
-Identity Ex2007 | select-object).identity -ExtendedRights Send-As
```

What to Do Next

Granting Impersonation Permissions to the Service Account and User Mailboxes, on page 30

Granting Impersonation Permissions to the Service Account and User Mailboxes

Follow this procedure to grant impersonation permissions to the service account and user mailboxes.

Note You cannot use the Microsoft Exchange Management Console (EMC) to complete this step.

Procedure

Step 1 Open the Exchange Management Shell (EMS).

Step 2 Run this **Add-ADPermission** command in the EMS to grant impersonation permissions on the service account all associated mailbox stores:

Syntax

```
Add-ADPermission -Identity (Get-OrganizationConfig) .DistinguishedName -User (Get-User
-Identity User | select-object) .identity -ExtendedRights Receive-As
```

Example

```
Add-ADPermission -Identity (Get-OrganizationConfig) .DistinguishedName -User (Get-User
-Identity EX2007 | select-object) .identity -ExtendedRights Receive-As
```

Note The IM and Presence Service only requires impersonation permissions on the account to enable it to log in to that account when it connects to the Exchange Server. This account does not typically receive mail so you do not need to be concerned about allocating space for it.

What to Do Next

Verifying Permissions on the Microsoft Exchange 2007 Account, on page 31

Verifying Permissions on the Microsoft Exchange 2007 Account

After you have assigned the permissions to the Exchange 2007 account, you must verify that the permissions propagate to the mailbox level and that a specified user can access the mailbox and impersonate the account of another user. On Exchange 2007, it takes some time for the permissions to propagate to mailboxes.

Before You Begin

Delegate the appropriate permissions to the Exchange 2007 account. See, Microsoft Exchange 2007 Configuration over Exchange Web Services, on page 25.

Procedure

Step 1 In the Exchange Management Console (EMC) on Exchange Server 2007, right-click **Active Directory Sites and Services** in the console tree.

Step 2 Point to **View**, and then choose **Show Services Node**.

Step 3 Expand the service node, for example, `Services/MS Exchange/First Organization/Admin Group/Exchange Admin Group/Servers`.

Step 4 Verify that the Client Access Server (CAS) is listed for th e service node that you chose.

Step 5 View the “Properties” of each CAS, and under the Security tab, verify that:

a) Your service account is listed.

b) The permissions granted on the services account indicate (with a checked check box) that the Exchange Web Services Impersonation permission is allowed on the account.

Note If the account or the impersonation permissions do not display as advised in Step 5, you may need to recreate the service account and ensure that the required impersonation permissions are granted to the account.

Step 6 Verify that the service account (for example, Ex2007) has been granted Allow impersonationpermission on the storage group and the mailbox store to enable it to exchange personal information and to Send As and Receive-As another user account.

Step 7 You may be required to restart the Exchange Server for the changes to take effect. This has been observed during testing.

What to Do Next

Enable Authentication on the Exchange 2007 and Later Editions Virtual Directories, on page 36

Microsoft Exchange 2010 Configuration over Exchange Web Services

Follow the below tasks when configuring access to mailboxes on the Exchange 2010 Server.

- Verifying Windows Security Settings, on page 33
- Setting Exchange Impersonation Permissions for Specific Users or Groups, on page 33
- Verifying Permissions on the Microsoft Exchange 2010 Account, on page 34

Before You Begin

Before you use Exchange Web Services (EWS) to integrate Exchange 2010 Server with the IM and Presence Service, ensure that you configure the following throttle policy parameter values on the Exchange Server. These are the values that are required for the EWS calendaring integration with the IM and Presence Service to work.

Table 4: Recommended Throttle Policy Parameter Values on the Exchange 2010 Server

Parameter	Recommended Configuration Value
EWSMaxConcurrency	It has been observed during Cisco tests that the default throttling policy value is sufficient to support 50% calendaring-enabled users. If you have a higher load of EWS requests to the Client Access Server (CAS), we recommend that you increase this parameter to 100.
EWSPercentTimeInAD	50
EWSPercentTimeInCAS	90
EWSPercentTimeInMailboxRPC	60
EWSMaxSubscriptions	Null
EWSFastSearchTimeoutInSeconds	60
EWSFindCountLimit	1000

Related Topics

Verify Windows Security Policy Settings
Microsoft Exchange Server 2010 Documentation
Microsoft Exchange Server Parameters

Windows Security Policy Settings

IM and Presence Service integration with Microsoft Exchange supports various authentication methods including Windows Integrated authentication (NTLM).

Note The IM and Presence Service supports NTLMv1 Windows Integrated authentication only and does not currently support NTLMv2.

Some Windows network security policies allow NTLMv2 authentication only, which prevents the integration between the IM and Presence Service and Exchange from functioning (both WebDAV and EWS). You must verify that NTLMv2 authentication is not enabled on each Windows server running Exchange. If NTLMv2 authentication is enabled, disable the setting and reboot the server to properly apply the new security setting.

Verifying Windows Security Settings

Procedure

Step 1 On the Windows Server running Exchange, choose **Start** > **Administrative Tools** > **Local Security Policy**.

Step 2 Navigate to **Security Settings** > **Local Policies** > **Security Options**.

Step 3 Choose **Network Security: Minimum session security for NTLM SSP based (including secure RPC) servers**.

Step 4 Verify that the **Require NTLMv2 session security** check box is unchecked.

Step 5 If the **Require NTLMv2 session security** check box is checked, complete the following steps:

a) Uncheck the check box **Require NTLMv2 session security**.

b) Click **OK**.

Step 6 Reboot the Windows Server running Exchange to apply the new security settings.

Setting Exchange Impersonation Permissions for Specific Users or Groups

Complete the following procedure using the Microsoft Exchange Management Shell (EMS) to set the Exchange impersonation permissions for specific users or a group of users.

Procedure

Step 1 Create the account in Active Directory.

Step 2 Open the EMS for command line entry.

Step 3 Run the New-ManagementRoleAssignment command in the EMS to grant a specified existing domain service account (for example, *Ex2010*) the permission to impersonate other user accounts:

Syntax

```
New-ManagementRoleAssignment -Name:_suImpersonateRoleAsg -Role:ApplicationImpersonation
-User:user@domain
```

Example

```
New-ManagementRoleAssignment -Name:_suImpersonateRoleAsg -Role:ApplicationImpersonation
-User:Ex2010@contoso.com
```

Step 4 Run this New-ManagementRoleAssignment command to define the scope to which the impersonation permissions apply. In this example, the *Ex2010* account is granted the permission to impersonate all accounts on a specified Exchange Server.

Syntax

```
New-ManagementScope -Name:_suImpersonateScope -ServerList:server_name
```

Example

```
New-ManagementScope -Name:_suImpersonateScope -ServerList:nw066b-227
```

Step 5 Run the New-ThrottlingPolicy command to create a new Throttling Policy with the recommended values defined in Microsoft Exchange 2010 Configuration over Exchange Web Services, on page 31.

Syntax

```
New-ThrottlingPolicy -Name:Policy_Name -EWSMaxConcurrency:100 -EWSPercentTimeInAD:50
-EWSPercentTimeInCAS:90 -EWSPercentTimeInMailboxRPC:60 -EWSMaxSubscriptions:NULL
-EWSFastSearchTimeoutInSeconds:60 -EWSFindCountLimit:1000
```

Example

```
New-ThrottlingPolicy -Name:IM_and_Presence_ThrottlingPolicy -EWSMaxConcurrency:100
-EWSPercentTimeInAD:50 -EWSPercentTimeInCAS:90 -EWSPercentTimeInMailboxRPC:60
-EWSMaxSubscriptions:NULL -EWSFastSearchTimeoutInSeconds:60 -EWSFindCountLimit:1000
```

Note: Only available with supported Exchange SP1.

Step 6 Run the Set-ThrottlingPolicyAssociation command to associate the new Throttling Policy with the service account used in Step 2.

Syntax

```
Set-ThrottlingPolicyAssociation -Identity Username -ThrottlingPolicy Policy_Name
```

Example

```
Set-ThrottlingPolicyAssociation -Identity Ex2010 -ThrottlingPolicy
IM_and_Presence_ThrottlingPolicy
```

What to Do Next

Verifying Permissions on the Microsoft Exchange 2010 Account, on page 34

Related Topics

Exchange Server 2010

Verifying Permissions on the Microsoft Exchange 2010 Account

After you have assigned the permissions to the Exchange 2010 account, you must verify that the permissions propagate to mailbox level and that a specified user can access the mailbox and impersonate the account of another user. On Exchange 2010, it takes some time for the permissions to propagate to mailboxes.

Procedure

Step 1 On the Active Directory Server, verify that the Impersonation account exists.

Step 2 Open the Exchange Management Shell (EMS) for command line entry.

Step 3 On the Exchange Server verify that the service account has been granted the required Impersonation permissions:

a) Run this command in the EMS:

```
Get-ManagementRoleAssignment -Role ApplicationImpersonation
```

b) Ensure that the command output indicates role assignments with the Role ApplicationImpersonation for the specified account as follows:

Example Command Output

Name - - - -	Role - - -	Role AssigneeName-	Role AssigneeType-	Assignment Method- - -	Effective UserName
_suImpersonate RoleAs	Application Impersonation	ex2010	User	Direct	ex2010

Step 4 Verify that the management scope that applies to the service account is correct:

a) Run this command in the EMS:

```
Get-ManagementScope _suImpersonateScope
```

b) Ensure that the command output returns the impersonation account name as follows:

Example Command Output

Name - - -	Scope RestrictionType	Exclusive	Recipient Root - -	Recipient Filter -	Server Filter- - -
_suImpersonate Scope	ServerScope	False	User	Direct	Distinguished Name

Step 5 Verify that the ThrottlingPolicy parameters match what is defined in Table 4: Recommended Throttle Policy Parameter Values on the Exchange 2010 Server, on page 32 by running this command in the EMS.

```
Get-ThrottlingPolicy -Identity Policy_Name | findstr ^EWS
```

What to Do Next

Enable Authentication on the Exchange 2007 and Later Editions Virtual Directories, on page 36

Enable Authentication on the Exchange 2007 and Later Editions Virtual Directories

For the Exchange Web Services (EWS) integration to work properly, Basic Authentication, Windows Integrated Authentication, or both must be enabled on the EWS virtual directory (/EWS) for Exchange 2007 and Exchange 2010.

Enabling Authentication on Exchange 2007 Running Windows Server 2003

Procedure

Step 1 From Administrative Tools, open **Internet Information Services** and choose the server.

Step 2 Choose **Web Sites**.

Step 3 Choose **Default Web Site**.

Step 4 Right-click **EWS** directory folder and choose **Properties**.

Step 5 Choose the **Directory Security** tab.

Step 6 Under **Authentication and access control**, click **Edit**.

Step 7 Under **Authentication Methods**, verify that the following check box is unchecked:

- **Enable anonymous access**

Step 8 Under **Authentication Methods Authenticated Access**, verify that both of the following check boxes are checked:

- **Integrated Windows authentication**
- **Basic Authentication (password is sent in clear text)**

Step 9 Click **OK**.

What to Do Next

Configuring the Presence Gateway for Microsoft Exchange Integration, on page 39

Enabling Authentication on Exchange 2010 Running Windows Server 2008

Procedure

Step 1 From Administrative Tools, open **Internet Information Services** and choose the server.

Step 2 Choose **Web Sites**.

Step 3 Choose **Default Web Site**.

Step 4 Choose **EWS**.

Step 5 Under the IIS section, choose **Authentication**.

Step 6 Verify that the following Authentication methods are enabled:

- **Anonymous Authentication**
- **Windows Authentication and/or Basic Authentication**

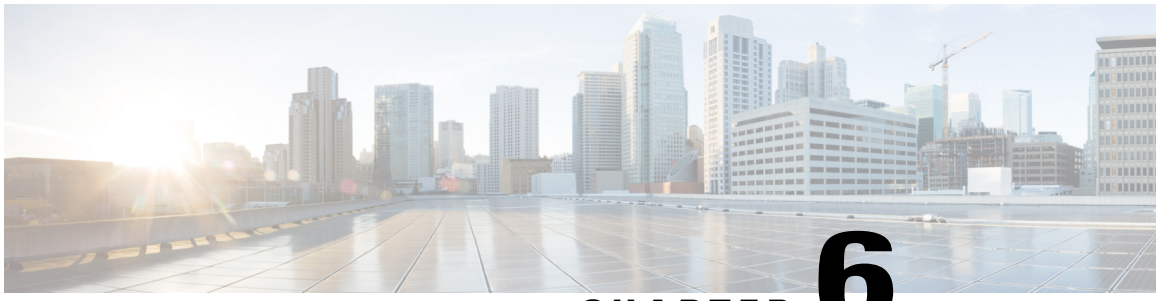
Step 7 Use the **Enable/Disable** link in the Actions column to configure appropriately.

What to Do Next

Configuring the Presence Gateway for Microsoft Exchange Integration, on page 39

Related Topics

Managing Outlook Web App Virtual Directories
Enable or Disable SSL on Exchange Web Services Virtual Directories



CHAPTER 6

Configure the IM and Presence Service to Integrate with the Microsoft Exchange Server

- Configuring the Presence Gateway for Microsoft Exchange Integration, page 39
- SAN and Wildcard Certificate Support, page 43
- Configure Secure Certificate Exchange Between the IM and Presence Service and Microsoft Exchange, page 43
- Enabling Calendar Integration, page 54
- [Optional] Configure the Frequency of Exchange Calendar Notifications Sent Over Exchange Web Services, page 55
- [Optional] Configuration of Multilingual Support for Calendar Integration, page 56
- [Optional] Configure the Microsoft Exchange Notification Port, page 60
- [Optional] Configuring the Duration Range of Microsoft Exchange Calendar Notifications, page 61
- Other Microsoft Exchange Calendaring Parameters, page 62

Configuring the Presence Gateway for Microsoft Exchange Integration

You must configure an Exchange Server (Microsoft Outlook) as a Presence Gateway for calendaring information exchange. The Exchange gateway enables the IM and Presence Service node to reflect the availability information of the user on a per-user basis.

When you configure the Presence Gateway, you can use one of the following values to connect the Exchange Server:

- FQDN (resolvable by DNS)
- IP address

Note For an overview of each type of Exchange integration, we recommend that you review Planning for IM and Presence Service Integration with Microsoft Exchange, on page 9.

When configuring your Exchange Web Services (EWS) Presence Gateway for Exchange integration through the **Cisco Unified CM IM and Presence Administration** user interface, note the following:

- You cannot deploy a mixed environment of WebDAV and EWS servers. You must either configure a single WebDAV Server or one or more EWS Server gateways but not both.
- You can add, update, or delete *one or more* EWS servers with no maximum limit. However, the Troubleshooter on the **Presence Gateway Configuration** window is designed to only verify and report status of the first 10 EWS servers that you configure.
- EWS Server gateways share the Impersonation Account credentials (Account Name and Password) that you configure for the first EWS Server Gateway. If you change the credentials for one EWS Server Gateway, the credentials change accordingly on all of the configured EWS gateways.
- You must restart the Cisco Presence Engine after you add, update, or delete one or more EWS servers for your configuration changes to take effect. If you add multiple EWS servers one after another, you can restart the Cisco Presence Engine once to effect all your changes simultaneously.

Note

- For SAN certificates, the protected host must be contained in the list of hostnames/IP addresses in the Subject Alternative Name field.
- When you are configuring the Presence Gateway, the Presence Gateway field must exactly match the protected host listed in the Subject Alternative Name field.

Configuring Microsoft Exchange 2003 and 2007 as a Presence Gateway over WebDAV

Before You Begin

- You must upload a valid certificate chain to the IM and Presence Service.
-

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface.

Step 2 Choose **Presence** > **Gateways**.

Step 3 Click **Add New**.

Step 4 To integrate Exchange Server 2003 or 2007 over WebDAV, choose **Exchange -- WebDAV** for the Presence Gateway type.
For the configuration changes to take effect, you must restart the Cisco Presence Engine after you add, update, or delete a WebDAV Server or multiple Exchange Web Services (EWS) servers. However, you cannot mix

WebDAV and EWS server types in your deployment. If you add multiple EWS servers one after another, you can restart the Cisco Presence Engine once to effect all your changes simultaneously.

Step 5 In the **Description** field, enter a meaningful description that helps you to distinguish between Presence Gateway instances when you have configured more than one type of gateway.

Step 6 In the **Presence Gateway** field, enter the server location for the Presence Gateway and ensure that it matches the Subject Common Name (CN) or is present in the Subject Alternative Name field of the Exchange Server certificate. One of these values must be used to connect with the Exchange Server:

- FQDN
- IP address

To configure a Presence Gateway for use with a Wildcard Certificate, the node location value that you specify must be part of the subdomain that is protected by the Wildcard Certificate. For example, if a Wildcard Certificate protects the `*.imp.cisco.com` subdomain, you must enter a node location value of *`server_name`*`.imp.cisco.com` in the Presence Gateway field.

Note If you enter a FQDN, it must match the Subject Common Name (CN) or match one of the protected hosts in the Subject Alternative Name field on the Exchange Server leaf certificate in the certificate chain. The FQDN must resolve to the address that services the request and uses the certificate.

Step 7 In the **Account Name** field, enter the name of the Receive-As account that the IM and Presence Service uses to connect to the Exchange Server in the **`domain\username`** format. Consider the following:

- If the Exchange Server is configured to specify a default domain, it may not be necessary to include the domain as part of the username.
- To avoid potential certificate errors (401 and 404 authentication responses), specify the domain in front of the account name.

Step 8 Enter the Exchange Account Password that is required for the IM and Presence Service to connect to the Exchange Server. Enter the password again to confirm it. This value must match the Account Password of the previously configured account on the Exchange Server.

Step 9 Enter the port that is used to connect with the Exchange Server. The IM and Presence Service integration with Exchange occurs over a secure HTTP connection. Cisco recommend that you use port 443 (default port) and do not change the other ports.

Step 10 Click **Save**.

Step 11 Confirm that the Exchange Server status is showing green for **Exchange Reachability (pingable)** and **Exchange SSL Connection/Certification Verification**.

Configuring Exchange 2007 or 2010 as a Presence Gateway over Exchange Web Services

Before You Begin

Before you configure a Presence Gateway, you must upload a valid certificate chain to the IM and Presence Service.

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface.

Step 2 Choose **Presence** > **Gateways**.

Step 3 Click **Add New**.

Step 4 Choose **Exchange -- EWS Server** for the Presence Gateway Type.
For configuration changes to take effect, you must restart the Cisco Presence Engine after you add, update, or delete one or more EWS servers. If you add multiple EWS servers one after another, you can restart the Cisco Presence Engine once to effect all your changes simultaneously.

Step 5 Enter a meaningful description in the **Description** field that helps you to distinguish between Presence Gateway instances when you have configured more than one type of gateway.

Step 6 For the Presence Gateway field, enter the server location for the Presence Gateway and ensure that it matches the Subject Common Name (CN) or is present in the Subject Alternative Name field of the Exchange Server certificate. One of these values must be used to connect with the Exchange Server:

- FQDN
- IP address

To configure a Presence Gateway for use with a Wildcard Certificate, the node location value that you specify must be part of the subdomain that is protected by the Wildcard Certificate. For example, if a Wildcard Certificate protects the subdomain `*.imp.cisco.com`, you must enter a node value of *`server_name`*`.imp.cisco.com` in the Presence Gateway field.

Note If you enter a FQDN, it must match the Subject Common Name (CN) or match one of the protected hosts in the Subject Alternative Name field on the Exchange Server leaf certificate in the certificate chain. The FQDN must resolve to the address that services the request and uses the certificate.

Step 7 Enter the name of the Impersonation account that the IM and Presence Service uses to connect to the Exchange Server, either in the form of a User Principal Name (for example, user@domain), or a Down-Level Logon Name (for example, domain\user).

Step 8 Enter the Exchange Account Password required for the IM and Presence Service to connect to the Exchange Server. Enter the password again to confirm it. This value must match the Account Password of the previously configured account on the Exchange Server.

Step 9 Enter the port that is used to connect with the Exchange Server. The IM and Presence Service integration with Exchange occurs over a secure HTTP connection. Cisco recommends that you use port 443 (default port) and not change to other ports.

Step 10 Click **Save**.

Step 11 Confirm the Exchange Server status is showing green for:

- **Exchange Reachability (pingable)**
- **Exchange SSL Connection/Certification Verification**
- **Account Name and Password Validation**

What to Do Next

After you configure the Exchange Presence Gateway, verify the following:

- Did the connection between the IM and Presence Service and the Exchange Server succeed? The Exchange Server Status area in the **Presence Gateway Configuration** window reports the connection status. If you need to take corrective action, see Troubleshooting Exchange Server Connection Status, on page 63.
- Is the status of the Exchange SSL certificate chain correct (verified)? The Exchange Server Status area in the **Presence Gateway Configuration** window indicates if there is a certificate Subject CN mismatch. If you need to take corrective action, see Troubleshooting SSL Connection/Certificate Status, on page 64.
- Are the Account Name and Password credentials correct (authenticated)? The Exchange Server Status area in the **Presence Gateway Configuration** window reports the validation of the impersonation account username and password credentials. If you need to take corrective action, see Troubleshooting Account Name and Password.

SAN and Wildcard Certificate Support

The IM and Presence Service uses X.509 certificates for secure calendaring integration with Microsoft Exchange. The IM and Presence Service supports SAN and wildcard certificates, along with standard certificates.

SAN certificates allow multiple hostnames and IP addresses to be protected by a single certificate, by specifying a list of hostnames, IP addresses, or both in the X509v3 Subject Alternative Name field.

Wildcard certificates allow a domain and unlimited sub-domains to be represented by specifying an asterisk (*) in the domain name. Names may contain the wildcard character * which is considered to match any single domain name component. For example, *.a.com matches foo.a.com but not bar.foo.a.com.

Note For SAN certificates, the protected host must be contained in the list of hostnames/IP addresses in the Subject Alternative Name field. When you configure the Presence Gateway, the Presence Gateway field must exactly match the protected host listed in the Subject Alternative Name field.
Wildcards can be placed in the Common Name (CN) field for standard certificates, and in the Subject Alternative Name field for SAN certificates.

Configure Secure Certificate Exchange Between the IM and Presence Service and Microsoft Exchange

How to Install the Certificate Authority Service

Although the Certificate Authority (CA) can run on the Exchange Server, we recommend that you use a different Windows Server as a CA to provide extended security for third-party certificate exchanges.

- Installing a CA on Windows Server 2003, on page 44
- Installing a CA on Windows Server 2008, on page 44

Installing a CA on Windows Server 2003

Before You Begin

- In order to install the CA you must first install Internet Information Services (IIS) on a Windows Server 2003 computer. IIS is not installed with the default Windows 2003 installation.
- Ensure that you have Windows Server disc 1 and SP1 discs.

Procedure

Step 1 Choose **Start** > **Control Panel** > **Add or Remove Programs**.

Step 2 In the **Add or Remove Programs** window, choose **Add/Remove Windows Components**.

Step 3 Complete the **Windows Component** wizard:

a) In the **Windows Components** window, check the check box for **Certificate Services** and click **Yes** when the warning displays about domain partnership and computer renaming constraints.

b) In the **CA Type** window, choose **Stand-alone Root CA** and click **Next** .

c) In the **CA Identifying Information** window, enter the name of the server in the Common Name field for the CA Server. If there is no DNS, type the IP address and click **Next**.

Note Remember that the CA is a third-party authority. The common name of the CA should not be the same as the common name used to generate a CSR.

d) In the **Certificate Database Settings** window, accept the default settings and click **Next**.

Step 4 Click **Yes** when you are prompted to stop Internet Information Services.

Step 5 Click **Yes** when you are prompted to enable Active Server Pages (ASP).

Step 6 Click **Finish** after the installation process completes.

What to Do Next

Generating a CSR – Running Windows Server 2003 , on page 45

Installing a CA on Windows Server 2008

Procedure

Step 1 Choose **Start** > **Administrative Tools** > **Server Manager**.

Step 2 In the console tree, choose **Roles**.

Step 3 Choose **Action** > **Add Roles**.

Step 4 Complete the **Add Roles** wizard:

a) In the **Before You Begin** window, ensure that you have completed all prerequisites listed and click **Next**.

b) In the **Select Server Roles** window, check the check box for **Active Directory Certificate Services** and click **Next**.

c) In the **Introduction Window** window, click **Next**.

d) In the **Select Role Services** window, check these check boxes and click **Next**.

- Certificate Authority
- Certificate Authority Web Enrollment
- Online Responder

e) In the **Specify Setup Type** window, click **Standalone**.
f) In the **Specify CA Type** window, click **Root CA**.
g) In the **Set Up Private Key** window, click **Create a new private key**.
h) In the **Configure Cryptography for CA** window, choose the default cryptographic service provider.
i) In the **Configure CA Name** window, enter a common name to identify the CA.
j) In the **Set Validity Period** window, set the validity period for the certificate generated for the CA.
Note The CA issues valid certificates only up to the expiration date that you specify.
k) In the **Configure Certificate Database** window, choose the default certificate database locations.
l) In the **Confirm Installation Selections** window, click **Install**.
m) In the **Installation Results** window, verify that the **Installation Succeeded** message displays for all components and click **Close**.
Note The Active Directory Certificate Services is now listed as one of the roles on the Server Manager.

What to Do Next

Generating a CSR – Running Windows Server 2008 , on page 46

Generation of a CSR on IIS of a Microsoft Exchange Server

Generating a CSR – Running Windows Server 2003

You must generate a Certificate Signing Request (CSR) on the IIS Server for Exchange, which is subsequently signed by the CA Server. If the Certificate has the Subject Alternative Name (SAN) field populated, it must match the Common Name (CN) of the certificate.

Before You Begin

[Self-signed Certificates] Install the certificate CA service if required.

Procedure

Step 1 From Administrative Tools, open **Internet Information Services**.
a) Right-click **Default Web Site**.
b) Choose **Properties**.
Step 2 Choose the **Directory Security** tab.
Step 3 Choose **Server Certificate**.
Step 4 Click **Next** when the **Web Server Certificate** wizard displays.
Step 5 Complete the **Server Certificate** wizard:
a) In the **Server Certificate** window, choose **Create a new certificate** and click **Next**.

b) In the **Delayed or Immediate Request** window, choose **Prepare the request now, but send it later** and click **Next**.
c) In the **Name and Security Settings** window, accept the Default Web Site certificate name, choose **1024** for the bit length, and click **Next**.
d) In the **Organization Information** window, enter your Company name in the Organization field, the organizational unit of your company in the Organizational Unit field, and click **Next**
e) In the **Your Site's Common Name** window, enter the Exchange Server hostname or IP address and click **Next**.

Note The IIS certificate Common Name that you enter is used to configure the Presence Gateway on the IM and Presence Service, and must be identical to the Host (URI or IP address) you are trying to reach.

f) In the **Geographical Information** window, enter your geographical information, as follows, and click **Next**.

- Country/region
- State/province
- City/locality

g) In the **Certificate Request File Name** window, enter an appropriate filename for the certificate request, specify the path and file name where you want to save your CSR, and click **Next**.

Note Make sure that you save the CSR without any extension (.txt) and remember where you save it because you need to be able to find this CSR file after. Only use Notepad to open the file.

h) In the **Request File Summary** window, confirm that the information is correct in the **Request File Summary** window and click **Next**.
i) In the **Web Server Certificate Completion** window, click **Finish**.

What to Do Next

Submitting a CSR to the CA Server/Certificate Authority, on page 47

Generating a CSR – Running Windows Server 2008

You must generate a Certificate Signing Request (CSR) on the IIS Server for Exchange, which is subsequently signed by the CA Server.

Procedure

Step 1 From Administrative Tools, open the **Internet Information Services (IIS) Manager** window.
Step 2 Under Connections in the left pane of the IIS Manager, choose the Exchange Server.
Step 3 Double-click **Server Certificates**.
Step 4 Under Actions in the right pane of the IIS Manager, choose **Create Certificate Request**.
Step 5 Complete the **Request Certificate** wizard:
a) In the **Distinguished Name Properties** window, enter the following information:

- In the **Common Name** field, enter the Exchange Server hostname or IP address.
- In the **Organization** field, enter your company name

- In the **Organizational Unit** field, enter the organizational unit that your company belongs to.

b) Enter your geographic information as follows and click **Next**.

- City/locality
- State/province
- Country/region

Note The IIS certificate Common Name that you enter is used to configure the Presence Gateway on the IM and Presence Service, and must be identical to the host (URI or IP address) you are trying to reach.

c) In the **Cryptographic Service Provider Properties** window, accept the default Cryptographic service provider, choose **2048** for the bit length, and click **Next**.

d) In the **Certificate Request File Name** window, enter the appropriate filename for the certificate request and click **Next**.

Note Make sure that you save the CSR without any extension (.txt) and remember where you save it because you need to be able to find this CSR file later. Only use Notepad to open the file.

e) In the **Request File Summary** window, confirm that the information is correct and click **Next**.

f) In the **Request Certificate Completion** window, click **Finish**.

What to Do Next

Submitting a CSR to the CA Server/Certificate Authority, on page 47

Submitting a CSR to the CA Server/Certificate Authority

We recommend that the default SSL certificate, generated for Exchange on IIS, should use the Fully Qualified Domain Name (FQDN) of the Exchange Server and be signed by a Certificate Authority that the IM and Presence Service trusts. This procedure allows the CA to sign the CSR from Exchange IIS. Perform the following procedure on your CA Server, and configure the FQDN of the Exchange Server in the:

- Exchange certificate.
- Presence Gateway field of the Exchange Presence Gateway in **Cisco Unified CM IM and Presence Administration**.

Before You Begin

Generate a CSR on IIS of the Exchange Server.

Procedure

Step 1 Copy the certificate request file to your CA Server.

Step 2 Open one of the following URLs:

- Windows 2003 or Windows 2008: http://*locall_server*/certserv

or

- Windows 2003: http://127.0.0.1/certserv
- Windows 2008: http://127.0.0.1/certsrv

Step 3 Choose **Request a certificate**.

Step 4 Choose **advanced certificate request**.

Step 5 Choose **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file**.

Step 6 Using a text editor like Notepad, open the CSR that you generated.

Step 7 Copy all information from and including
-----BEGIN CERTIFICATE REQUEST

to and including

END CERTIFICATE REQUEST-----

Step 8 Paste the content of the CSR into the Certificate Request text box.

Step 9 (Optional) By default the Certificate Template drop-down list defaults to the Administrator template, which may or may not produce a valid signed certificate appropriate for server authentication. If you have an enterprise root CA, choose the Web Server certificate template from the Certificate Template drop-down list. The Web Server certificate template may not display, and therefore this step may not apply, if you have already modified your CA configuration.

Step 10 Click **Submit**.

Step 11 In the **Administrative Tools** window, choose **Start** > **Administrative Tools** > **Certification** > **Authority** > **CA name** > **Pending Request** to open the **Certification Authority** window. The **Certificate Authority** window displays the request you just submitted under Pending Requests.

Step 12 Right click on your request, and complete these actions:

- Navigate to **All Tasks**.
- Choose **Issue**.

Step 13 Choose **Issued certificates** and verify that your certificate has been issued.

What to Do Next

Downloading a Signed Certificate, on page 48

Downloading a Signed Certificate

Before You Begin

[Self-signed Certificates] Submit the Certificate signing request (CSR) to the CA server.

[Third-Party Certificates] Request the CSR from your Certificate Authority.

Procedure

Step 1 In Administrative Tools, open the Certification Authority. The Certificate Request that you issued displays in the Issued Requests area.

Step 2 Right click the request and choose **Open**.

Step 3 Choose the **Details** tab.

Step 4 Choose **Copy to File**.

Step 5 When the **Certificate Export** wizard displays, click **Next**.

Step 6 Complete the **Certificate Export** wizard:

a) In the **Export File Format** window, choose **Base-64 encoded X.509** and click **Next**.

b) In the **File to Export** window, enter the location where you want to store the certificate, use cert.cer for the certificate name, and choose `c:\cert.cer`.

c) In the **Certificate Export Wizard Completion** window, review the summary information, verify that the export was successful, then click **Finish**.

Step 7 Copy or FTP the cert.cer to the computer that you use to administer the IM and Presence Service.

What to Do Next

Upload of Signed Certificate onto Exchange IIS, on page 49

Upload of Signed Certificate onto Exchange IIS

Uploading a Signed Certificate – Running Windows 2003

This procedure takes the signed CSR and uploads it onto IIS. To upload the signed certificate, perform the following steps on the computer that you use to administer the IM and Presence Service.

Before You Begin

[Self-signed Certificates] Download the signed certificate.

[Third-party Certificates] Your Certificate Authority provides you with the signed certificate.

Procedure

Step 1 From Administrative Tools, open **Internet Information Services**.

Step 2 Complete the following steps in the **Internet Information Services** window:

a) Right-click **Default Web Site**.

b) Choose **Properties**.

Step 3 In the **Default Web Site Properties** window, complete the following steps:

a) Choose the **Directory Security** tab.

b) Choose **Server Certificate**.

Step 4 When the **Web Server Certificate** wizard window displays, click **Next** .

Step 5 Complete the **Web Server Certificate** wizard:

a) In the **Pending Certificate Request** window, choose **Process the pending request and install the certificate** and click **Next**.
b) In the **Process a Pending Request** window, click **Browse** to locate your certificate and navigate to the correct path and filename.
c) In the **SSL Port** window, enter 443 for the SSL port and click **Next**.
d) In the **Web Server Certificate Completion** window, click **Finish**.

Tip

If your certificate is not in the trusted certificates store, the signed CSR is not trusted. To establish trust, complete these actions:

- Under the **Directory Security** tab, click **View Certificate**.
- Choose **Details** > **Highlight root certificate**, and click **View**.
- Choose the **Details** tab for the root certificate and install the certificate.

What to Do Next

Downloading a Root Certificate, on page 51

Uploading a Signed Certificate – Running Windows 2008

This procedure takes the signed CSR and uploads it onto IIS. To upload the signed certificate, perform the following step on the computer that you use to administer the IM and Presence Service.

Before You Begin

[Self-signed Certificates] Download the signed certificate.

[Third-party Certificates] Your Certificate Authority provides the signed certificate.

Procedure

Step 1 From Administrative Tools, open the **Internet Information Services (IIS) Manager** window.

Step 2 Under Connections in the left pane of the IIS Manager, choose the Exchange Server.

Step 3 Double-click **Server Certificates**.

Step 4 Under Actions in the right pane of the IIS Manager, choose **Complete Certificate Request**.

Step 5 In the **Specify Certificate Authority Response** window, complete these actions:

a) To locate your certificate, choose the ellipsis [...].
b) Navigate to the correct path and filename.
c) Enter a user-friendly name for your certificate.

d) Click **Ok**. The certificate that you completed displays in the certificate list.

Step 6 In the **Internet Information Services** window, complete the following steps to bind the certificate:

a) Choose **Default Web Site**.

b) Under Actions in the right pane of the IIS Manager, choose **Bindings**.

Step 7 Complete the following steps in the **Site Bindings** window:

a) Choose **https**.

b) Choose **Edit**.

Step 8 In the **Edit Site Binding** window, complete the following steps :

a) Choose the certificate that you just created from the SSL certificate drop-down list. The name that you applied to the certificate displays.

b) Click **Ok**.

What to Do Next

Downloading a Root Certificate, on page 51

Downloading a Root Certificate

Before You Begin

Upload the Signed Certificate onto Exchange IIS.

Procedure

Step 1 Log in to your CA Server user interface and open a web browser.

Step 2 Open the URL specific to your Windows platform type:

a) Windows Server 2003 – http://127.0.0.1/certserv

b) Windows Server 2008 – https://127.0.0.1/certsrv

Step 3 Choose **Download a CA certificate, certificate chain, or CRL**.

Step 4 For the Encoding Method, choose **Base 64**.

Step 5 Click **Download CA Certificate**.

Step 6 Save the certificate, **certnew.cer**, to the local disk.

Tip

If you do not know the Subject Common Name (CN) of the root certificate, you can use an external certificate management tool to find this information. On a Windows operating system, right-click the certificate file with a .cer extension and open the certificate properties.

What to Do Next

Upload a Root Certificate to the IM and Presence Service Node, on page 52

Upload a Root Certificate to the IM and Presence Service Node

Before You Begin

- [Self-signed Certificates] Download the root certificate.
- [Third-party Certificates] Request the root certificate from your Certificate Authority. If you have a third-party CA-signed Exchange server certificate, note that you must upload all CA certificates in the certificate chain to the IM and Presence Service as a Cisco Unified Presence Trust certificate (cup-trust).

Procedure

Step 1 Use the Certificate Import Tool in **Cisco Unified CM IM and Presence Administration** to upload the certificate:

Upload the certificate via:	Actions
Certificate Import Tool in **Cisco Unified CM IM and Presence Administration**. The Certificate Import tool simplifies the process of installing trust certificates on the IM and Presence Service and is the primary method for certificate exchange. The tool allows you to specify the host and port of the Exchange server and attempts to download the certificate chain from the server. Once approved, the tool automatically installs missing certificates. **Note** This procedure describes one way to access and configure the Certificate Import Tool in **Cisco Unified CM IM and Presence Administration**. You can also view a customized version of the Certificate Import Tool in **Cisco Unified Presence Administration** when you configure the Exchange Presence Gateway for a specific type of calendaring integration (Log in to **Cisco Unified CM IM and Presence Administration** and choose **Presence** > **Gateways**).	1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface. 2 Choose **System** > **Security** > **Certificate Import Tool**. 3 Choose **IM and Presence(IM/P) Trust** as the Certificate Trust Store where you want to install the certificates. This stores the Presence Engine trust certificates required for Exchange integration. 4 Enter one of these values to connect with the Exchange Server: • IP address • Hostname • FQDN The value that you enter in this Peer Server field must exactly match the IP address, hostname or FQDN of the Exchange Server. 5 Enter the port that is used to communicate with the Exchange Server. This value must match the available port on the Exchange Server. 6 Click **Submit**. After the tool finishes, it reports these states for each test: • Peer Server Reachability Status — indicates whether or not the IM and Presence Service can reach (ping) the Exchange Server. See Troubleshooting Exchange Server Connection Status, on page 63. • SSL Connection/Certificate Verification Status — indicates whether or not the Certificate Import Tool succeeded in downloading certificates from the specified peer server and whether or not a secure connection has been established between the IM and Presence Service and the remote server. See Troubleshooting SSL Connection/Certificate Status, on page 64.

Step 2 If the Certificate Import Tool indicates that certificates are missing (typically the CA certificate is missing on Microsoft servers), manually upload the CA certificate(s) using the **Cisco Unified OS Admin Certificate Management** window.

Upload the certificate via:	Actions
Cisco Unified IM and Presence Operating System Administration If the Exchange Server does not provide the CA certificates during the SSL/TLS handshake, you cannot use the Certificate Import Tool to import those certificates. In this case, you must manually import the missing certificates using the Certificate Management tool in (Log in to **Cisco Unified IM and Presence Operating System Administration**. Choose **Security** > **Certificate Management**).	1 Copy or FTP the **certnew.cer** certificate file to the computer that you use to administer your IM and Presence Service node. 2 Log in to the **Cisco Unified IM and Presence Operating System Administration** user interface. 3 Choose **Security** > **Certificate Management**. 4 In the **Certificate List** window, choose **Upload Certificate/Certificate Chain**. 5 Complete these actions when the **Upload Certificate/Certificate Chain** dialog box opens: • From the Certificate Name drop-down list, choose **cup-trust**. • Enter the root certificate name without any extension. 6 Click **Browse** and choose **certnew.cer**. 7 Click **Upload File**.

Step 3 Return to the Certificate Import Tool (Step 1, on page 52) and verify that all status tests succeed.

Step 4 Restart the Cisco Presence Engine and SIP Proxy service after you upload all Exchange trust certificates. Log in to the **Cisco Unified IM and Presence Serviceability** user interface. Choose **Tools** > **Control Center - Feature Services**.

Tips

The IM and Presence Service allows you to upload Exchange Server trust certificates with or without a Subject Common Name (CN).

Enabling Calendar Integration

Server-side calendar integration can be enabled on a per-user basis only and must be done by the end user rather than the Administrator. It can be modified either on the **Cisco Unified CM IM and Presence User Options** page on the IM and Presence Service server, or on the Jabber client under **File** > **Options**.

Complete the following procedure to allow users to set this option to display their meeting status.

Note Calendar integration can only be enabled on an individual basis, however calendar integration can be disabled for all users by removing the last calendar Presence Gateway from the configuration.

Before You Begin

Ensure the Presence Gateway is configured on the IM and Presence Service. For more information, see Configuring the Presence Gateway for Microsoft Exchange Integration, on page 39.

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence User Options** user interface.
Step 2 Choose **User Options** > **Preferences**.
Step 3 Under **Calendar Settings**, set **Include Calendar Information in my Presence Status** to On.
Step 4 Click **Save**.

[Optional] Configure the Frequency of Exchange Calendar Notifications Sent Over Exchange Web Services

Note This procedure only applies if you are integrating Microsoft Exchange Server 2007 or 2010 over Exchange Web Services (EWS). These steps are not required for WebDAV calendar integration.

The EWS Status Frequency parameter specifies an interval (in minutes) that determines how long it takes before the Exchange Server updates the subscription on the IM and Presence Service. By default this parameter is 60 minutes. Shorten this duration if you want the Presence Engine on the IM and Presence Service to detect that it has lost the subscription more frequently than every 60 minutes (default). Error detection improves if you shorten the duration but there is a corresponding increased load on the Exchange Server and the IM and Presence Service node.

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface.
Step 2 Choose **System** > **Service Parameters**.
Step 3 From the Server drop-down list, choose the IM and Presence Service node.
Step 4 From the Service drop-down list, choose Cisco Presence Engine (Active).
Step 5 In the Calendaring Configuration (Parameters that apply to all servers) area, edit the parameter value in the EWS Status Frequency field, this parameter limit is 1440 minutes. By default this parameter is 60 minutes.
Step 6 Click **Save**.

What to Do Next

EWS Status Frequency parameter changes are updated incrementally as calendar integration occurs on a per-user basis. However, we recommend that you restart the Cisco Presence Engine to effect the parameter change for all users at once. Log in to the **Cisco Unified IM and Presence Serviceability** user interface. Choose **Tools** > **Service Activation**.

[Optional] Configuration of Multilingual Support for Calendar Integration

Note that this procedure only applies if you are integrating Microsoft Exchange Server 2003 or 2007 over WebDAV. These steps are not required for Exchange Web Services calendar integration.

User locales are country-specific, and user locale files provide the translated text for user applications and user web pages in a given locale. If you want to expand your Exchange deployment to support multiple languages, you must configure Cisco Unified Communications Manager and the IM and Presence Service to support the user locales that you require in your calendaring integration. There is no limit to the number of supported languages.

Installing the Locale Installer on Cisco Unified Communications Manager

Before you begin this procedure, consider the following caveats:

- You must install a compatible release of Cisco Unified Communications Manager on every node in the cluster before you install the Cisco Unified Communications Manager locale installer.
- The default setting for installed locales is English, United States. We strongly recommend that you install the appropriate language/locale on Cisco Unified Communications Manager and choose the appropriate language/locale on the Exchange Server the first time the user logs in.

  Note the following considerations that apply to WebDAV integrations only:

  - If you set the default language (English) on the Exchange Mailbox of an end-user when there is a different language/local installed on Cisco Unified Communications Manager, you cannot change the locale for the user later. For more information about this issue, see Localization Caveat with WebDAV Calendar Integrations, on page 70.
  - If you set a locale other than English, you must install the appropriate language installers on both Cisco Unified Communications Manager and on the IM and Presence Service. Ensure the locale installer is installed on every node in the cluster (install on the IM and Presence Service database publisher node before the IM and Presence Service subscriber nodes).

- User locales should *not* be set until all appropriate locale installers are loaded on *both* systems. Users may experience problems with calendaring if they inadvertently set their user locale *after* the locale installer is loaded on Cisco Unified Communications Manager but *before* the locale installer is loaded on the IM and Presence Service. If issues are reported, we recommend that you notify each user to log in to **Cisco Unified Communications Manager User Options** and change their locale from the current setting to English and then back again to the appropriate language. You can also use the Bulk Administration Tool to synchronize user locales to the appropriate language.
- You must restart the node for the changes to take effect. After you complete all locale installation procedures, restart each node in the cluster. Updates do not occur in the system until you restart all nodes in the cluster; services restart after the node reboots.
- Make sure that you install the same components on every node in the cluster.

To complete this procedure on Cisco Unified Communications Manager, see the *Cisco Unified Communications Operating System Administration Guide* here: http://www.cisco.com/en/us/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

What to Do Next

Installing the Locale Installer on the IM and Presence Service, on page 57

Installing the Locale Installer on the IM and Presence Service

Before You Begin

- Install the locale installer on Cisco Unified Communications Manager. If you want to use a locale other than English, you must install the appropriate language installers on both Cisco Unified Communications Manager and the IM and Presence Service.
- If your IM and Presence Service cluster has more than one node, make sure that the locale installer is installed on every node in the cluster (install on the IM and Presence Service database publisher node before the IM and Presence Service subscriber nodes).
- User locales should not be set until all appropriate locale installers are loaded on both systems. Users may experience problems with calendaring if they inadvertently set their user locale after the locale installer is loaded on Cisco Unified Communications Manager but before the locale installer is loaded on the IM and Presence Service. If issues are reported, we recommend that you notify each user to log in to **Cisco Unified Communications Manager User Options** pages and change their locale from the current setting to English and then back again to the appropriate language. You can also use the Cisco Unified Communications Manager Bulk Administration Tool to synchronize user locales to the appropriate language.
- You must restart the node for the changes to take effect. After you complete all locale installation procedures, restart each node in the cluster. Updates do not occur in the system until you restart all nodes in the cluster; services restart after the node reboots.

Procedure

Step 1 Browse to this location on Cisco.com to locate the IM and Presence Service locale installer.

Step 2 Choose the version of the IM and Presence Service locale installer that is appropriate for your working environment.

Step 3 After downloading the file, save the file to the hard drive and note the location of the saved file.

Step 4 Copy this file to a server that supports SFTP.

Step 5 Log in to the **Cisco Unified IM and Presence Operating System Administration** user interface, using your administrator account and password.

Step 6 Choose **Software Upgrades** > **Install/Upgrade**.

Step 7 Choose **Remote File System** as the software location source.

Step 8 In the Directory field, enter the file location, for example /tmp.

Step 9 Enter the name of the server that contains the locale installer file (the server that you specified in Step 4). This copies the file to your IM and Presence Service node where you can install it.

Step 10 In the User Name and User Password fields, enter your username and password credentials.

Step 11 For the Transfer Protocol, choose **SFTP**.

Step 12 Click **Next**.

Step 13 Choose the IM and Presence Service locale installer from the list of search results.

Step 14 Click **Next** to load the installer file and validate it.

Step 15 After you complete the locale installation, restart each node in the cluster.

Step 16 The default setting for installed locales is "English, United States". While your IM and Presence Service node is restarting, change the language of your browser, if necessary, to match the locale of the installer that you have downloaded.

Browser	Configuration Steps
Internet Explorer Version 6.x	1 Choose **Tools** > **Internet Options**. 2 Choose the General tab. 3 Choose **Languages**. 4 Click the **Move Up** button to move your preferred language to the top of the list. 5 Click **OK**.
Mozilla Firefox Version 3.x	1 Choose **Tools** > **Options**. 2 Choose the Content tab. 3 In the Languages area of the window, choose **Choose** . 4 Click the **Move Up** button to move your preferred language to the top of the list. 5 Click **OK**.

Step 17 Verify that your users can choose the locale(s) for supported products.

Tips

- Make sure that you install the same components on every node in the cluster.
- [Optional] If you are localizing your Calendaring integration, does the Exchange Server URL contain the localized word for "Calendar"? If you need to take corrective action, see Verifying That the Microsoft Exchange Server URL Contains the Localized Word for Calendar, on page 70.

What to Do Next

Setting User Locales for Multilingual Calendar Integration, on page 59

Setting User Locales for Multilingual Calendar Integration

Before You Begin

- Install the Cisco Unified Communications Manager and the IM and Presence Service locale installers that contain all the available languages. User locales should *not* be set until all appropriate locale installers are loaded on *both* systems.
- The default setting for installed locales is English, United States. We strongly recommend that you install the appropriate language/locale on Cisco Unified Communications Manager and choose the appropriate language/locale on the Exchange Server the first time the user logs in. Note that if you set the default language (English) on the Exchange Mailbox of an end-user when there is a different language/locale installed on Cisco Unified Communications Manager, you cannot change the locale for the user later. For more information about this issue, see topics related to localization caveats with WebDAV calendar integrations.
- You may experience problems with calendaring if you inadvertently set your user locale *after* the locale installer is loaded on Cisco Unified Communications Manager but *before* the locale installer is loaded on the IM and Presence Service. To force the system to use the appropriate language, we recommend that you log in to Cisco Unified Communications Manager user pages and change the language from the current setting to English. Then reset the locale to the language that you require.

Complete the procedure specific to your role (administrator or user), as follows:

Administrator

Procedure

Step 1 Log in to the **Cisco Unified CM Administration** user interface, using the administrator account and password.
Step 2 Choose **User Management** > **End User**.
Step 3 Use the Find and List functionality to search for and locate the appropriate user or click **Find** to list all users.
Step 4 Click the User ID hyperlink for the appropriate user.
Step 5 From the User Locale drop-down list, choose the language for the user.
Step 6 Click **Save**.

User

Procedure

Step 1 Log in to the **Cisco Unified CM User Options** user interface, using the user account and password.
Step 2 Choose **User Options** > **User Settings Configuration**
Step 3 From the User Locale drop-down list, choose the appropriate language.
Step 4 Click **Save**.

[Optional] Configure the Microsoft Exchange Notification Port

This topic only applies if you want the Cisco Presence Engine to listen for incoming notifications from the Exchange Server on another port specific to your network configuration.

This procedure can apply to both WebDAV and Exchange Web Services (EWS) Exchange configurations. If you have a WebDAV integration, UDP port 50020 is used by default to receive the HTTPU notifications. If you have an EWS integration, a TCP port is used by default to receive the HTTP notifications.

Before You Begin

If you change from the default port, make sure that the replacement port that you assign is not already in use.

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface.

Step 2 Choose **System** > **Service Parameters**.

Step 3 From the Server drop-down list, choose the IM and Presence Service node.

Step 4 From the Service drop-down list, choose Cisco Presence Engine (Active).

Step 5 In the Calendaring Configuration area, edit the parameter value for the Microsoft Exchange Notification Port field and click **Save**.

Note By default this parameter is 50020 for WebDAV configurations.

What to Do Next

We recommend that you restart the Cisco Presence Engine to effect the parameter change for all users at once. Log in to the **Cisco Unified IM and Presence Serviceability** user interface. Choose **Tools** > **Control Center - Feature Services**.

Tip

- If you change from the default port, the Cisco Presence Engine continues to use the existing calendar information for users, (including the number of meetings and the start and end times) until such time as the Exchange subscription for the user is renewed. It may take up to an hour for the Cisco Presence Engine to receive notifications that a user's calendar has changed.
- We recommend that you restart the Cisco Presence Engine to effect the change for all users at once.

[Optional] Configuring the Duration Range of Microsoft Exchange Calendar Notifications

By default, the Cisco Presence Engine allows for meeting/busy notifications to be sent 50 seconds after the top-of-the-minute. If you have a small user base, we recommend that your shorten this delay using the formula specified in this procedure. However, note that this topic is optional and only applies if you want to change the duration range for any reason specific to your network configuration.

Before You Begin

Use this formula to configure this field value (in seconds): Maximum number of assigned users / 100. For example, if a node has a maximum number of users of 1000, then the offset range is 10 seconds.

Procedure

Step 1 Log in to the **Cisco Unified CM IM and Presence Administration** user interface.

Step 2 Choose **System** > **Service Parameters**.

Step 3 From the Server drop-down list, choose the IM and Presence Service node.

Step 4 From the Service drop-down list, choose Cisco Presence Engine (Active).

Step 5 In the Calendaring Configuration area, edit the parameter value in the Calendar Spread field. This parameter limit is 59 seconds. If meetings start or end more than one minute late, it interferes with meeting start/end counters and notifications. By default this parameter is 50.

Step 6 Click **Save**.

What to Do Next

Calendar Spread parameter changes are updated incrementally as calendar integration occurs on a per-user basis. However, we recommend that you restart the Cisco Presence Engine to effect the parameter change for all users at once. Log in to **Cisco Unified IM and Presence Serviceability**. Choose **Tools** > **Control Center - Feature Services**.

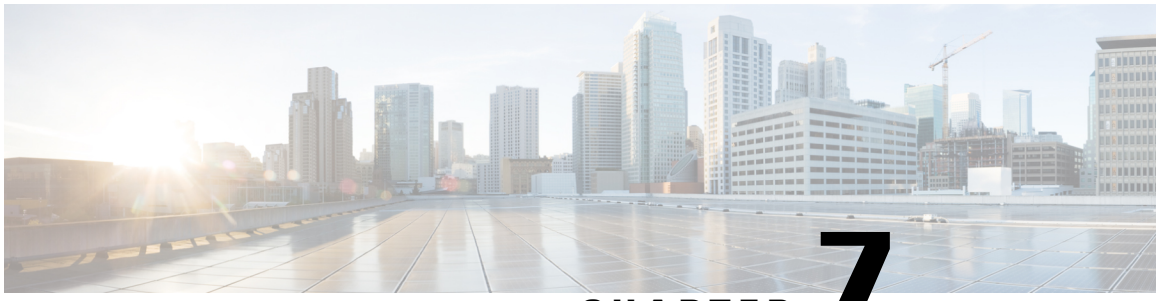
Tip If a very large number of users transition either in or out of meetings, a mass notification event occurs that may delay some notifications up to a few minutes.

Other Microsoft Exchange Calendaring Parameters

There are three other Exchange calendaring parameters that you can configure in the **Service Parameters** window of **Cisco Unified CM IM and Presence Administration**:

- Exchange Timeout (seconds) — the duration, in seconds, before a request made to an Exchange Server times out.
- Exchange Queue — the length of the request queue.
- Exchange Threads — the number of threads used to service Exchange requests.

Caution We do not recommend that you change the default settings of these parameters because any changes may adversely affect your Exchange integration. Contact Cisco Technical Assistance Center (TAC) for support.



CHAPTER 7

Troubleshooting Exchange Calendaring Integrations

- Troubleshooting Exchange Server Connection Status, page 63
- Troubleshooting SSL Connection/Certificate Status, page 64
- Issues Known to Impact Microsoft Exchange Integrations, page 68

Troubleshooting Exchange Server Connection Status

Exchange Server connection status displays under the **Cisco Unified CM IM and Presence Administration** window after you configure the Exchange Presence Gateway for either a WebDAV or Exchange Web Services (EWS) calendaring integration (choose **Presence** > **Gateways**). The Exchange Server Status area in the **Presence Gateway Configuration** window reports the status on the connection between the IM and Presence Service and the Exchange Server.

Note You can add, update or delete one or more EWS servers with no maximum limit. However, the Exchange Server Status area in the **Presence Gateway Configuration** window is designed to only verify and report status of the first 10 EWS servers that you configure.

.

Test	Status Description and Recommended Action
Exchange Reachability (pingable)	The IM and Presence Service successfully reached (pinged) the Exchange Server.

Test	Status Description and Recommended Action
Exchange Reachability (unreachable)	The IM and Presence Service failed to ping the Exchange Server. The server may not be reachable due to an incorrect field value or an issue with the customer's network, for example, cabling. To resolve this, ensure that the Presence Gateway field contains the correct value (FQDN or IP address) to reach the Exchange Server over the network. Note that the UI does not require the Presence Gateway field value to be the Subject CN value. If you have connection problems with the Exchange Server, also see the System Troubleshooter in **Cisco Unified CM IM and Presence Administration** and implement the recommended solution. Choose **Diagnostics** > **System Troubleshooter**.

Troubleshooting SSL Connection/Certificate Status

SSL Connection/Certificate Verification status displays in **Cisco Unified CM IM and Presence Administration** window when you configure the Exchange Presence Gateway for a either a WebDAV or Exchange Web Services (EWS) calendaring integration (choose **Presence** > **Gateways**). The Exchange Server Status area in the **Presence Gateway Configuration** window indicates if there is a certificate Subject CN mismatch or a SAN mismatch.

Note You can add, update or delete *one or more* EWS servers with no maximum limit. However, the Troubleshooter on the **Presence Gateway** window is designed to only verify and report status of the first 10 EWS servers that you configure.

Test	Status Description and Recommended Action
SSL Connection/Certificate Verification - Verified	The IM and Presence Service verified the SSL connection with the Exchange Server. Click **View** for the certificate details.

Test	Status Description and Recommended Action
SSL Connection/Certificate Verification Failed - Certificate Missing From Chain **Note** These instructions describe the view of the customized Certificate Import Tool. If you are simply verifying connection status, the tool indicates the verified status but you do not have the option to **Save**.	

Test	Status Description and Recommended Action
	One or more certificates that the IM and Presence Service requires to establish a secure connection to the Exchange Server are missing. The Certificate Viewer can provide details of the missing certificates. Complete these steps in the Certificate Viewer to display any missing certificates: **1** Chose **Configure** to open the Certificate Viewer. **2** Check the **Accept Certificate Chain** check box . **3** Click **Save**. **4** The certificate chain details display. Note any certificates with a status of Missing. **5** Close the Certificate Viewer. To complete the certificate chain, you must: **1** Download the missing certificates files from the Exchange Server. **2** Copy or FTP the missing certificate files to the computer that you use to administer the IM and Presence Service. **3** Use **Cisco Unified IM and Presence OS Administration** to upload any of the required missing certificates. **Troubleshooting Tips** • If the certificates are not available in the Certificate Viewer, you may need to manually download and install the missing certificates from the Exchange Server, and upload these certificates in **Cisco Unified IM and Presence OS Administration** as follows: ◦ Log in to the **Cisco Unified IM and Presence OS Administration** and user interface and upload certificates to complete the certificate chain. ◦ Return to the **Presence Gateway Configuration** window under the **Cisco Unified CM IM and Presence Administration** user interface, reopen the Certificate Viewer, and verify that all certificates in the certificate chain now have a status of Verified. • You must restart the Cisco Presence Engine after you upload Exchange trust certificates. • Log in to **Cisco Unified IM and Presence Serviceability** user interface. • Choose **Tools** > **Service Activation**. Note that this can affect Calendaring connectivity. • Choose either **Configure** or **View** to launch the Certificate Chain Viewer where you can view the details of the certificate chain. The **Configure** button displays if there are any issues with the certificate chain that the IM and Presence Service downloads from the Exchange Server - for example, the missing certificates scenario described above. Once you

Test	Status Description and Recommended Action
	successfully import and verify the certificate chain, the SSL Connection / Certificate Verification status updates to Verified and the **View** button replaces **Configure**.
SSL Connection/Certificate Verification Failed-Subject CN Mismatch	The Presence Gateway field value must match the Subject CN value of the leaf certificate in the Certificate Chain. You can resolve this by entering the correct value in the Presence Gateway field. Verify that your entry in the Presence Gateway field is correct as follows: **1** Re-enter the correct Subject CN value in the Presence Gateway field. The IM and Presence Service uses the Presence Gateway field value to ping the server. The host (FQDN or IP address) that you enter must exactly match the IIS certificate Subject Common Name. **2** Click **Save**. **Tip** Choose either **Configure** or **View** to launch the Certificate Chain Viewer where you can view the details of the certificate chain. The **Configure** button displays if there are any issues with the certificate chain downloaded from the Exchange Server - for example, the missing certificates scenario described above. Once you successfully import and verify the certificate chain, the SSL Connection / Certificate Verification status updates to Verified and the **View** button replaces **Configure**.
SSL Connection/Certificate Verification Failed - SAN Mismatch	The Presence Gateway field value must match one of the Subject Alternative Name (SAN) values of the leaf certificate in the Certificate Chain. You can resolve this by entering the correct value in the Presence Gateway field. Verify that your entry in the Presence Gateway field is correct as follows: **1** Re-enter the correct SAN value in the Presence Gateway field. The IM and Presence Service uses the Presence Gateway field value to ping the server. The host (FQDN or IP address) that you enter must exactly match one of the entries in the certificate Subject Alternative Name. **2** Click **Save**. **Tip** Choose either **Configure** or **View** to launch the Certificate Chain Viewer where you can view the details of the certificate chain. The **Configure** button displays if there are any issues with the certificate chain downloaded from the Exchange Server - for example, the missing certificates scenario described above. Once you successfully import and verify the certificate chain, the SSL Connection / Certificate Verification status updates to Verified and the **View** button replaces **Configure**.

Test	Status Description and Recommended Action
SSL Connection/Certificate Verification Failed - Bad Certificates	Information in the certificate is incorrect, which renders it invalid. Typically, this occurs if the certificate matches the required Subject CN but not the public key. This could happen if the Exchange Server regenerates the certificate but the IM and Presence Service node still maintains the old certificate. To resolve this, complete these actions: • Choose the logs to determine the cause of the error. • If the error is due to a bad signature, you need to remove the outdated certificate from the IM and Presence Service in Cisco Unified IM and Presence OS Administration, and then upload a new certificate in Cisco Unified IM and Presence OS Administration. • If the error is due to an unsupported algorithm, you need to upload a new certificate that contains the supported algorithm in Cisco Unified IM and Presence OS Administration.
SSL Connection / Certificate Verification Failed - Network Error	Due to network issues, for example, a no-response timeout, the IM and Presence Service cannot verify the SSL connection. We recommend that you verify the network connectivity to the Exchange Server, and ensure that the Exchange Server is accepting connections using the correct IP address and port number.
SSL Connection/Certificate Verification Failed	Verification failed for a non-specific reason or because the IM and Presence Service cannot perform the reachability test. We recommend that you review the debug log files for more information.

Issues Known to Impact Microsoft Exchange Integrations

This section describes known issues that are common or specific to Microsoft Exchange Server 2003, 2007, and 2010.

Scale Limitations for Calendar Integrations

Cisco Unified Communications Manager IM and Presence Service and Exchange calendaring integrations have been validated with up to X% of the users subscribing to calendar presence and with up to Y% of the users doing simultaneous calendar transitions (for example, joining or leaving meetings simultaneously). See Table 5: Scale Limitations for Specific Cisco Unified Presence Releases, on page 69 for percentage values pertaining to specific releases of Cisco Unified Presence.

Table 5: Scale Limitations for Specific Cisco Unified Presence Releases

Software Release	% of Users Subscribing to Calendar Presence	% of Users Performing Simultaneous Calendar Transitions
8.5(1)	50	30
8.5(2) and later	100	50

Calendar State Does Not Update if a User Moves Between Microsoft Exchange Servers

Problem

If an Exchange administrator moves a user from one Exchange Server to another in an Exchange integration, the calendaring state change does not update for that user.

Cause

The condition occurs because the Exchange Server does not signal when a user is moved from one server to another.

Solution

The IM and Presence Service administrator or user must disable and then reenable calendar integration for that user *after* the Exchange administrator has moved the user from one Exchange Server to another.

LDAP User Removal Takes at Least 24 Hours to Replicate on the IM and Presence Service

Problem

If a user is deleted from LDAP, the user state changes to Inactive on Cisco Unified Communications Manager and user authentication on client applications subsequently fails. However, it has been observed during testing that once Cisco Unified Communications Manager synchronizes the change from LDAP, the user is not removed for 24 hours *after* the synchronization occurred (either by the Administrator forcing the synchronization or scheduling it to occur at a specific time).

The Cisco Sync Agent on the IM and Presence Service does not synchronize any user state change until the user is removed. Until then, that user still exists on Cisco Unified Communications Manager and all IM and Presence Service capabilities (including Exchange calendaring subscriptions) remain licensed for that user for 24 hours. This delay means that users who were logged in to Cisco Jabber before the user was removed from LDAP are not logged out automatically. The user's pre-existing calendar state (Available, Busy) persists for that user on the IM and Presence Service until the user logs out of the client.

Cause

The condition occurs when Cisco Unified Communications Manager is set up and LDAP authentication is used. When a user is deleted from LDAP, calendaring subscriptions continue to be established and updated for that user on the IM and Presence Service for a period of at least 24 hours.

Solution

If a user is removed from LDAP, you can manually remove the license for that user so that the IM and Presence Service ends the Exchange calendaring subscriptions with immediate effect and logs the user out of the client application. Otherwise, be aware that there may be a 24 hour delay.

Localization Caveat with WebDAV Calendar Integrations

Problem

If you set the default language (English) on the user's Exchange Mailbox when a different language/locale is installed on Cisco Unified Communications Manager, the Exchange Server maintains the default calendar name (in English) and you cannot change the language/locale for that user. A 404 error returns for calendaring subscriptions.

Cause

This condition only occurs in localized Exchange 2003 and 2007 integrations over WebDAV. The issue does not affect Exchange Web Services (EWS) integrations.

Solution

- To prevent this issue occurring, we recommend that you set languages correctly during the Exchange setup. Install the appropriate language/locale on Cisco Unified Communications Manager and select the appropriate language/locale on the Exchange Server the first time the user logs in.
- If the language on the user's Exchange Mailbox is set to English when a different language/locale is installed on Cisco Unified Communications Manager, you must switch the language/locale on Cisco Unified Communications Manager back to English for that user. To do this, see Setting User Locales for Multilingual Calendar Integration, on page 59.

Verifying That the Microsoft Exchange Server URL Contains the Localized Word for Calendar

If you are localizing your Calendaring integration, verify that the Exchange Server URL contains the localized word for Calendar.

Procedure

Step 1 Install the same language locales (load the locale installer) on both the IM and Presence Service and Cisco Unified Communications Manager. For more information about installing locales on the IM and Presence Service, see [Optional] Configuration of Multilingual Support for Calendar Integration, on page 56.

Step 2 Restart the IM and Presence Service node, and log in to the **Cisco Unified CM IM and Presence Administration** user interface.

Step 3 Find and delete the existing Exchange Presence Gateway that supports a different locale for calendaring (choose **Presence** > **Gateways**).

Step 4 Add a new Exchange Presence (Outlook) Gateway. Click **Add New**.

Step 5 Verify in the database (pebackendgateway table) that the 'localecalendarname' attribute is in whichever language locale you have installed.

Step 6 Ensure the user locale is set after the locale is installed on both the IM and Presence Service and toggling the user locale on the Cisco Unified Communications Manager, if necessary.

Applying Microsoft HotFix KB841561

Note that this issue is specific to Microsoft Exchange Server 2003. Apply Microsoft HotFix KB841561 if you encounter problems with Exchange 2003 and it returns a "500 Internal Server Error".

Procedure

Step 1 Uninstall SP2 for Windows Server 2003 and for Exchange 2003.

Step 2 Install SP1 for Windows Server 2003 and Exchange 2003.

Step 3 Download and install KB841561 from the following URL: http://www.microsoft.com/downloads/details.aspx?familyid=050be883-11fc-4045-b988-c737e79c65d0&displaylang=en

Step 4 Install SP2 for Windows Server 2003 and for Exchange 2003.

Fixing the "HTTP 503 Service Unavailable" Error from Microsoft Exchange 2007

Note This issue only affects Exchange 2007.

Problem

Since Exchange 2007, Microsoft changed the Outlook Web Access (OWA) URL from **/exchange** to **/owa**, which is the virtual directory that OWA uses to access mailboxes on Exchange 2007 mailbox servers. However, the IM and Presence Service always sends SUSCRIBE requests to the **/exchange** virtual directory, which is the URL that is still used for WebDAV integration with Exchange 2007. During testing with Exchange Server 2007 (SP1), it was observed that if you change the http://*server*/exchange URL to redirect to http://*server*/owa URL, an error (HTTP 503 Service Unavailable) displays on the Internet Information Services (IIS) Manager console in Exchange 2007.

Cause

The condition occurs when Exchange 2007 SP1 is in use, and the Exchange virtual directory target address is modified to redirect to the default OWA directory for webmail.

Solution

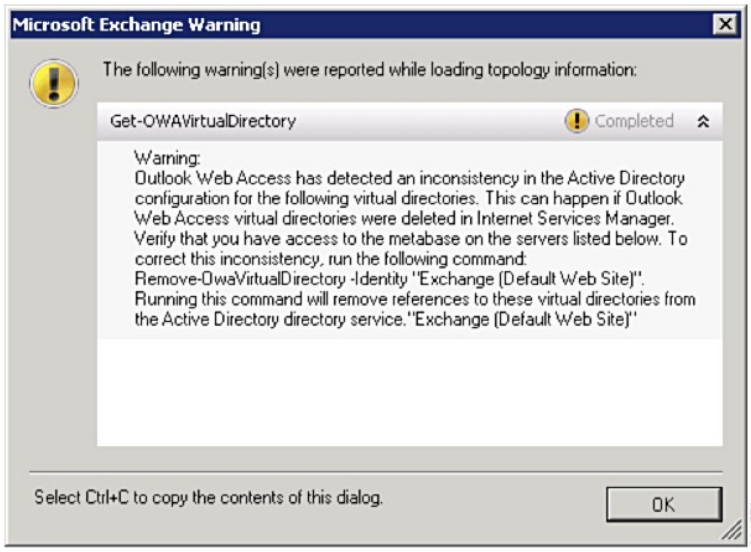
If the "503 Service Unavailable" error message displays, perform the following steps:

Procedure

Step 1 From **Administrative Tools**, open **Internet Information Services**.

Step 2 Delete the Exchange virtual directory in IIS.

Step 3 Review the warning, and run the recommended cmdlet in the Exchange Management Shell (EMS):



Step 4 Run this cmdlet in the EMS to ensure that the Exchange virtual directory is set up correctly and to add the directory again in IIS.

```
SyntaxNew-OwaVirtualDirectory -name exchange -OWAVersion Exchange2003or2000
-VirtualDirectoryType mailboxes
```

Step 5 Wait for the Exchange Server to populate the virtual directory into IIS.

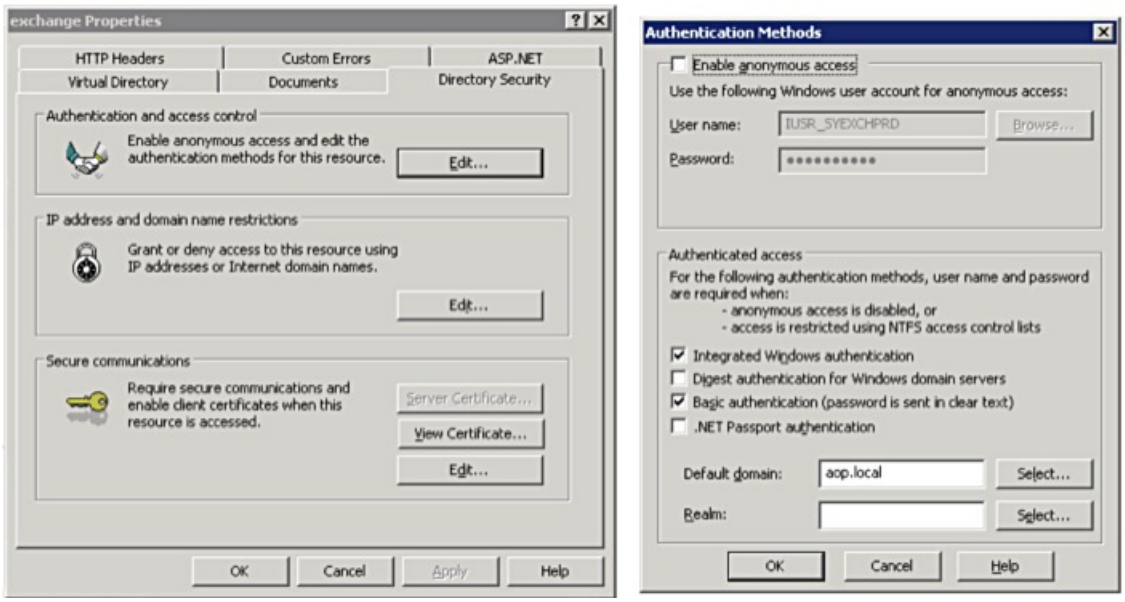
Step 6 Restart the IIS.

Step 7 Test your http://*server*/exchange/*user_email_address*/calendar URL, using the full target address for example, http://*mail.contoso.com*/exchange/*user@contoso.com*/calendar

Step 8 Ensure that you are prompted for a username and password. This indicates that WebDAV is enabled and configured correctly on the virtual directory. Enter your Active Directory credentials.

Step 9 Check the IIS logs that display for the IM and Presence Service.

Step 10 If the logs indicate that there is a 401 authentication issue, add the domain to authenticate access.



Step 11 Restart the IIS.

Step 12 Log in to the **Cisco Unified IM and Presence Serviceability** user interface.

Step 13 Choose **Tools** > **Service Activation** and restart the Cisco Presence Engine.

Step 14 Check the IIS logs again and verify that the SUBSCRIBE messages are present and correct for your calendar.

Tip This procedure also applies to Apple MAC users who require WebDAV to view their emails using Microsoft Entourage 2008.