C H A P T E R 12

Configuring Cisco WebEx OneTouch for Cisco TelePresence Manager

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Note You must be running CTS-Manager, CTMS, CTS software release 1.7 or later to schedule TelePresence meetings with WebEx.

Contents

This chapter contains the following sections:

Introduction

This chapter explains how to set up Cisco WebEx OneTouch in CTS-Manager, which allows WebEx participants to join TelePresence meetings. Beginning with release 1.9, CTS-Manager provides the following new feature:

- TelePresence meetings with WebEx can now be scheduled directly from Microsoft Outlook. For more information, refer to: Using Microsoft Outlook and the WebEx Productivity Tools Plug-in, page 12-20

Post-Install Guidelines for CTS-Manager

The purpose of this chapter is to outline the information you need to configure WebEx after installation and initialization.

The flow of tasks for additional configurations of CTS-Manager are provided in the following table.

Table 12-1   Post-Install Guidelines for Configuring CTS-Manager

Setup Procedure Guidelines after Installing CTS-Manager	Description	Location
Configuring Cisco TelePresence WebEx OneTouch for CTS-Manager	Describes how to set up Cisco TelePresence WebEx OneTouch in CTS-Manager, which allows WebEx participants to join TelePresence meetings.	Current chapter
Monitoring and Supporting CTS-Manager	Describes the support features available when you log into CTS-Manager using a Live Desk role.	Chapter 13, "Monitoring and Supporting Cisco TelePresence Manager"

If at any time you encounter problems, go to Chapter 16, "Troubleshooting Cisco TelePresence Manager" to see how to correct the problem.

Before Configuring Cisco WebEx in CTS-Manager

Before configuring WebEx in CTS-Manager, you must have the following information:

Information	Description
WebEx hostname	A name identifying the WebEx site hostname to the administrator. This typically can be the same name as the hostname used in the site URL.
	Note Multiple WebEx sites can have the same hostname. This is not used to connect to the WebEx site and therefore is not validated during testing of connection.
WebEx Admin Username	WebEx site administrator's username (provided by the WebEx team).
WebEx Admin Access Code	WebEx site administrator's access code (provided by the WebEx team).
WebEx Site URL	URL for WebEx Scheduling Server (provided by the WebEx team).

Information	Description
WebEx Hostname Certificate	Security certificate of WebEx scheduling server. For more information, see First-Time Scheduling of TelePresence Meetings with WebEx, page 12-15
Default WebEx user role setting for new users	You must decide whether you want new users to be Permitted or Non-Permitted users by default.
	For more information, see First-Time Scheduling of TelePresence Meetings with WebEx, page 12-15.

Note   To use WebEx in a scheduled network multipoint meeting, CTMS release 1.9 is required. WebEx uses one segment from the Rendezvous Point CTMS to establish the connection to the WebEx site.

Setting Up Cisco WebEx Administration Site Account

You have access to the Cisco WebEx Administration Site interface through your Cisco WebEx administrator using a unique Cisco WebEx administration URL and access code. As a site administrator, you can log in to access current Cisco WebEx user and administration guides for the services and features that have been configured on your Cisco TelePresence system.

Specifying Cisco TelePresence Integration Options

To integrate Cisco TelePresence to Cisco WebEx on the Cisco WebEx site, follow these steps:

Step 1   Log in to the Cisco WebEx Site Administration interface.

Step 2   Choose **Manage Site** > **Site Settings**. The Site Settings screen appears, as shown in Figure 12-1.

Figure 12-1   Configuring Cisco WebEx Connection Settings

Step 3   Click to select **Enable Cisco TelePresence Integration** (**MC only**). If not checked, Cisco WebEx will be disabled on this site.

Step 4   Enter your CTS Manager access code (SiteID and ConferenceID). This combined access code identifies a prefix number which is exclusively assigned to Cisco Telepresence deployments that are integrated with the Cisco WebEx solution. This code allows the CTMS to connect to the Cisco TelePresence gateway to initiate your meeting.

Step 5   Click to select **List Cisco TelePresence meetings on calendar** so that scheduled meetings appear on the Cisco WebEx calendar.

Step 6   Click to select **Send invitation email to meeting host**. This allows the meeting information email to be sent to the Cisco WebEx host after the meeting is scheduled.

Step 7   Click to select **Display toll-free number to attendees**.

Step 8   Click to select: **Enable Video**. This enables video on the Cisco WebEx meeting user interface. Click both **Cisco TelePresence Video** (CIF) and **Cisco WebEx Multipoint Video**.

Step 9   In the Cisco WebEx VOIP and Video Connection field, click to select **TCP SSL** (recommended). This selects the connection method between the Cisco WebEx client and the multimedia server (VOIP and video).

Step 10   Click **Save** to save your settings.

Cisco WebEx First-Time Setup in CTS-Manager

This section describes how to enable WebEx and select the default WebEx user type, as well as perform the one-time initial registration in CTS-Manager that specifies the Cisco WebEx account information so that you can add Cisco WebEx functionality to Cisco TelePresence meetings.

Before You Begin

You will need at least one CTMS configured in CTS-Manager before you can configure CTS-Manager for Cisco WebEx. The CTMS communicates with the Cisco WebEx Telephony Gateway to establish the audio portion of a Cisco WebEx meeting.

CTS-Manager requires that all scheduled CTMSes are registered with a WebEx Telepresence Gateway.

To register a CTMS with a WebEx Telepresence Gateway, log in to the CTMS administration UI and go to **Configure > WebEx**.

Complete the steps in Chapter 2, "Configuring Cisco WebEx OneTouch on the Cisco TelePresence Multipoint Switch."in the "Cisco WebEx OneTouch Configuration Guide for the Cisco TelePresence System" at the following URL:
http://www.cisco.com/en/US/docs/telepresence/cts_admin/webex_solutions/guide/cts_webex_ctms.html

Once you have configured the CTMS, proceed with the following tasks:

- Enabling WebEx and Selecting Default WebEx User Type, page 12-5
- Configuring a Cisco WebEx Site, page 12-7
- First-Time Scheduling of TelePresence Meetings with WebEx, page 12-15

Enabling WebEx and Selecting Default WebEx User Type

To select Permitted and Non-Permitted Cisco WebEx user types, follow these steps in the CTS-Manager administration interface:

Step 1   Choose **Configure > Application Settings**.

Step 2   Select the **Bridges and Servers** tab. The Application Settings > Bridges and Servers window appears, as shown in Figure 12-2.

Figure 12-2   Enabling WebEx and Configuring Default User Type

Step 3   For WebEx Enable Feature, click the **Yes** radio button.

Step 4   For Default User Type, click one of the following radio buttons:

- **Permitted** (default)—These users are permitted to request Cisco WebEx for specific meetings using CTS-Manager.

- **Non-Permitted**—These users are not permitted to request Cisco WebEx; no Cisco WebEx meeting options are available to these users.

Note   The default user type is the WebEx role assigned to users until the CTS-Manager administrator assigns them to a specific role using the Configure > Access Management window.

Step 5   In the Interoperability with Video Conferencing Interop Quality field, click the **CIF** radio button.

Step 6   Click **Apply** and then click **OK** in the confirmation window.

Configuring a Cisco WebEx Site

To configure a new site for Cisco WebEx, follow these steps:

Step 1   Log in to the CTS-Manager administration interface.

Step 2   Choose **Configure** > **Bridges and Servers**. The Bridges and Servers page appears.

Step 3   Click **New**. The New Bridge or Server page appears in a new window.

Step 4   From the Type drop-down menu, select **WebEx**.

Step 5   In the Hostname field, enter the hostname to uniquely identify the WebEx site being configured. For example: example.webex.com.

Step 6   In the Site URL field, enter your unique Cisco WebEx Site URL obtained from the Cisco WebEx administrator. For example: https://example.webex.com/example.

Step 7   In the WebEx Admin Username field, enter your Cisco WebEx Administration account username. For example, wbxAdmin. This is the user account that was created by your Cisco WebEx administator that grants you Cisco WebEx Administration Site privileges.

Step 8   In the WebEx Admin Access Code field, enter your Cisco WebEx Site Administration account access code. For example, 123456.

Step 9   Enter the rest of the information for the remaining fields. For more information, refer to Table 12-2 on page 12-8.

Step 10   Click **Save** to save your settings and close the New Bridge or Server page.

Step 11   Verify your settings by checking that the Service Status reads "OK" on the Bridges and Server page.

Step 12   Proceed to Obtaining the Cisco WebEx Site Security Server Certificate.

WebEx Proxy Server

To provide an extra level of security, an enterprise might require communication between the enterprise and the Cisco WebEx cloud to go through a proxy server. In such a case, the administrator must configure CTS-Manager to connect to WebEx site through the proxy server.

The following modes of proxy connection are available:

- Connection specifying the proxy server host and port (with no authentication)
- Connection specifying the proxy server host and port using Basic authentication using username and password

Note No other form of proxy authentication (such as Digest, NTLM, certificate based, Kerberos) is supported. A proxy server supporting multiple protocols should have basic authentication as the default authentication mechanism between CTS-Manager and WebEx.

Table 12-2   New Bridge or Server Window for WebEx Information

Field	Description or Settings
Type	Select WebEx from the pull-down list menu. **Note** If WebEx does not appear in the drop-down list, make sure WebEx is enabled in the Configure > Application Settings > Bridges and Servers window.
Hostname	A name identifying the WebEx site hostname to the administrator. This typically can be the same name as the hostname used in the site URL. **Note** Multiple WebEx sites can have the same hostname. This is not used to connect to the WebEx site and therefore is not validated during testing of connection.
Site URL	The address used to construct the URL that's used to access this meeting. This is the actual URL that CTS-Manager uses to communicate with WebEx. This is published in the email from CTS-Manager, and is displayed to users on the WebEx page of the CTS display device.
WebEx Admin Username	WebEx administrator's username (provided by the WebEx team)
WebEx Admin Access Code	WebEx administrator's access code (provided by the WebEx team)
Certificate	Certificate from the hostname (WebEx scheduling server) **Note** To get the certificate, open a web browser window and go to the hostname URL and download the certificate to your computer, then click Browse to select it and upload it to CTS-Manager. For detailed instructions on downloading the certificate with different browsers, see Obtaining the Cisco WebEx Site Security Server Certificate, page 12-9.
Connection Type	Choose the type of connection to establish with the WebEx scheduling server: Direct or Via Proxy Server. Selecting the proxy server option allows you to filter IP traffic and increase security.
WebEx Proxy Server Settings	
Host Name	Host name of proxy server
Port	Port number of proxy server
Requires Authentication	Yes or No. Select Yes if the Proxy server requires authentication and then enter username and password.
Username	Username for proxy server
Password	Password for proxy server

Multiple WebEx Sites

You can configure up to five WebEx sites to support more WebEx users for TelePresence meetings. The meeting organizer can, however, select any of the available WebEx sites to register with. The meeting organizer can only register one WebEx account on one of the available sites configured in CTS-Manager.

Obtaining the Cisco WebEx Site Security Server Certificate

Use the information in this section to obtain and add your Cisco WebEx site security server certificate to CTS-Manager:

- Obtaining Your Certificate Using Internet Explorer, page 12-9
- Obtaining Your Certificate Using Firefox, page 12-10
- Adding Your Certificate to CTS-Manager, page 12-10

Obtaining Your Certificate Using Internet Explorer

To obtain your Cisco WebEx site security certificate using Internet Explorer (IE), follow these steps:

Step 1   Open a new browser window.

Step 2   Enter the unique Cisco WebEx scheduling server hostname from CTS-Manager Host field in Step 5 of Configuring a Cisco WebEx Site and press Enter. (For example, https://qamctp.webex.com/qamctp)

Step 3   IE 7.x or earlier: In the bottom right-hand corner of the browser window, double-click the lock icon.

IE 8.x or later: Click the Certificate Error in the top of the browser after the URL and click **View certificates**.

The certificate window appears.

Step 4   Click the **Certification Path** tab.

Step 5   Select the top-level certificate (CA root, .e.g Verisign).

Step 6   Click **View Certificate**.

The Certificate window appears.

Step 7   Click the **Details** tab.

Step 8   Click **Copy to File**.

The Certificate Export Wizard window appears.

Step 9   Click **Next**.

Step 10   Select the **DER encoded binary** option and click **Next**.

Step 11   Click **Browse**.

The Save As window appears.

Step 12   Create a file name for the certificate.

Step 13   Navigate to the location where you want to save the certificate and click **Save**.

Step 14   Click **Next** and then click **Finish**.

When the export is complete, the message "The export was successful" appears.

Step 15   Click **OK** to close the message and **OK** again to close the Certificate window.

Step 16   Proceed to Adding Your Certificate to CTS-Manager.

Obtaining Your Certificate Using Firefox

To obtain your Cisco WebEx site security certificate using Firefox, follow these steps:

Step 1   Open a new browser window.

Step 2   Enter the Cisco WebEx scheduling server hostname from CTS-Manager Host field in Step 5 of Configuring a Cisco WebEx Site and press Enter. (For example, https://qamctp.webex.com/qamctp)

Step 3   For Firefox 4.x or earlier: In the bottom right-hand corner of the browser window, double-click the lock icon.

Step 4   For Firefox 5.x or later: In the upper left corner of the browser, before the URL, click the site name (in blue).

The site info popup window appears showing the security information for the site.

Step 5   Click the **More Information** button.

The Page Info window appears with the Security tab selected.

Step 6   Click **View Certificate**.

The Certificate Viewer window appears.

Step 7   Click the **Details** tab.

Step 8   Select the top level of the Certificate Hierarchy (e.g. Builtin Object Token: Verisign Class 3 Public Primary Certification Authority - G2).

Step 9   Click **Export**.

The Save Certificate To File window appears.

Step 10   (Optional) Modify the file name.

Step 11   Navigate to the location where you want to save the certificate and click **Save**.

Step 12   Click **Close** to close the Certificate Viewer window.

Step 13   Proceed to Adding Your Certificate to CTS-Manager.

Adding Your Certificate to CTS-Manager

To add your certificate to CTS-Manager, follow these steps in the CTS-Manager administration interface:

Step 1   Choose **Configure** > **Bridges and Servers**. The Bridges and Servers page appears.

Step 2   Select the Cisco WebEx site and click **Edit**. The Edit Bridge or Server window appears showing your Cisco WebEx configuration settings, as shown in Figure 12-3.

Figure 12-3 Edit...Bridge or Server Dialog
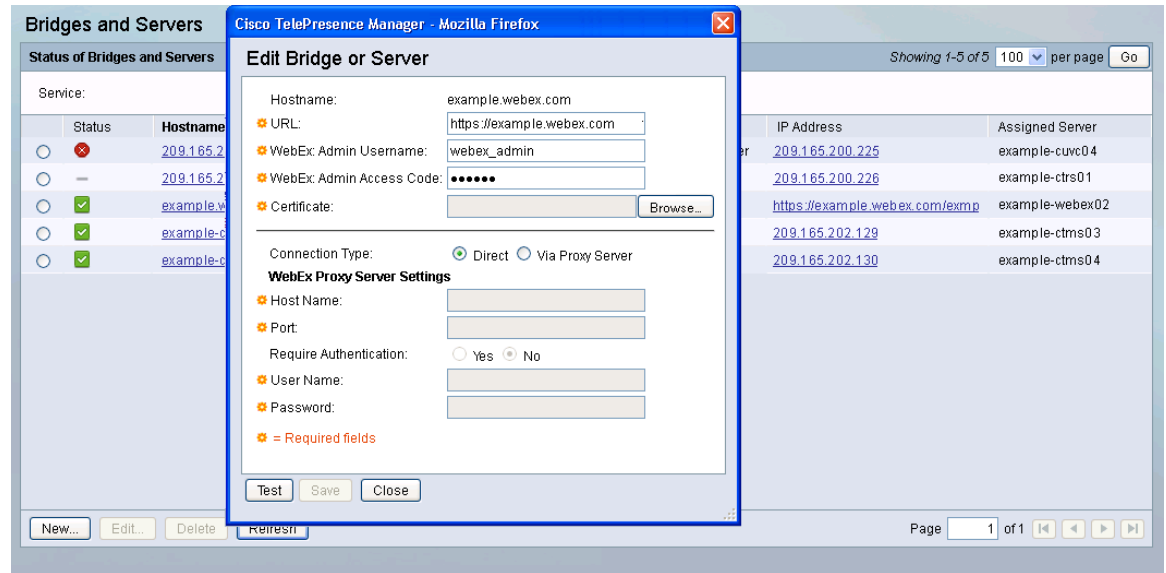
Step 3 Click **Browse** to find and add the certificate you just obtained in Obtaining the Cisco WebEx Site Security Server Certificate.

Step 4 Click **Test**. The system checks for the certificate and responds with confirmation or an error message.

Step 5 Click **OK** to dismiss the message.

Tip If the certificate is not found and an error message appears, make sure that you browsed to the correct certificate in your local directory and try again.

Step 6 Click **Save** to save your settings and to dismiss the Edit Bridge or Server window.

Step 7 The Bridges and Servers window should show OK in for Service, as shown in Figure 12-4.

Figure 12-4 Service OK

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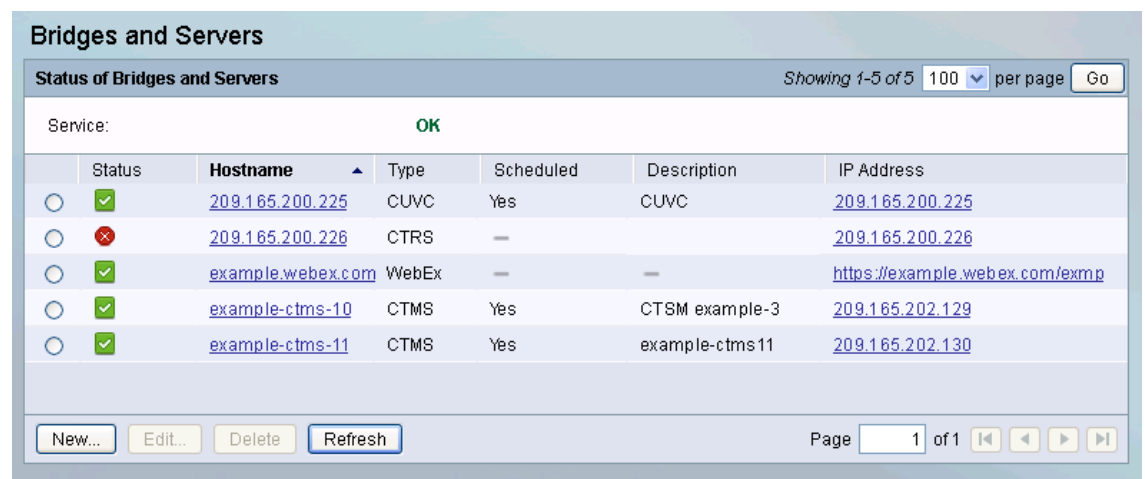
Tip   If you do not see the expected green OK, click your browser's reload or refresh button to update the system and see your changes.

Step 8   Proceed to Configuring Cisco WebEx Users in CTS-Manager.

Configuring Cisco WebEx Users in CTS-Manager

This section contains the following information:

WebEx User Types

The meeting organizer can schedule meetings with options defined in Cisco TelePresence Manager based upon one of three possible WebEx user types configured in CTS-Manager:

- **Premium User—Cisco WebEx Always-On**. Use this option if you want to use Cisco WebEx Meeting Center for every Cisco TelePresence meeting. "Always-On" users select the Cisco TelePresence endpoints in the calendaring application and the Cisco WebEx session is automatically set up. A meeting confirmation e-mail is sent from Cisco TelePresence Manager with Cisco WebEx session details that the scheduler can forward to the Cisco WebEx attendees.

✎

Note   To prevent over-scheduling of CTMS resources, do not to add all users to the Premium user group, especially if you anticipate that the feature will not be used for most Cisco TelePresence meetings.

- **Permitted User—Enable Cisco WebEx Per Meeting**. This option requires the meeting organizer to add WebEx to a Cisco TelePresence meeting by doing the following:

  a. Select Cisco TelePresence endpoints in the Microsoft Outlook or Lotus Notes client.

  b. Add WebEx to the meeting in Microsoft Outlook using the WebEx Productivity Tools Plug-in or by clicking the WebEx button provided in the Cisco TelePresence Manager confirmation e-mail message by enabling the WebEx option in the Cisco TelePresence Manager. For more information, see First-Time Scheduling of TelePresence Meetings with WebEx, page 12-15.

  c. Receive a confirmation e-mail message from Cisco TelePresence Manager with the Cisco WebEx session details. The Cisco TelePresence meeting organizer forwards the e-mail to the Cisco WebEx attendees.

  When the meeting is scheduled, CTS-Manager pushes the schedule information, along with the Cisco WebEx meeting details, to the CTMS Conference Manager. This information is maintained in the Conference Manager until the meeting starts.

- **Non-Permitted User—Disallow Cisco WebEx**. You can configure CTS-Manager to disallow Cisco WebEx support entirely. Users configured in this mode may not use the Cisco WebEx feature, and may only schedule standard multipoint CTMS meetings.


Configuring WebEx Users

Using the Access Management window in CTS-Manager, you can configure the three different types of WebEx users mentioned in the previous section WebEx User Types, page 12-12. To assign a WebEx role, you must add the user group to the WebEx user role by following these steps in the CTS-Manager administration interface:

To configure WebEx users in CTS-Manager:

Step 1   Choose **Configure > Access Management** and click **Add**.

The LDAP Tree Selector window appears.

Step 2   From the Role drop-down menu, select the WebEx role you want to assign.

Step 3   Traverse the LDAP tree to find and select the user group by checking the box next to the user group name, as shown in Figure 12-5.

Figure 12-5   Assigning a User Group to WebEx User Role
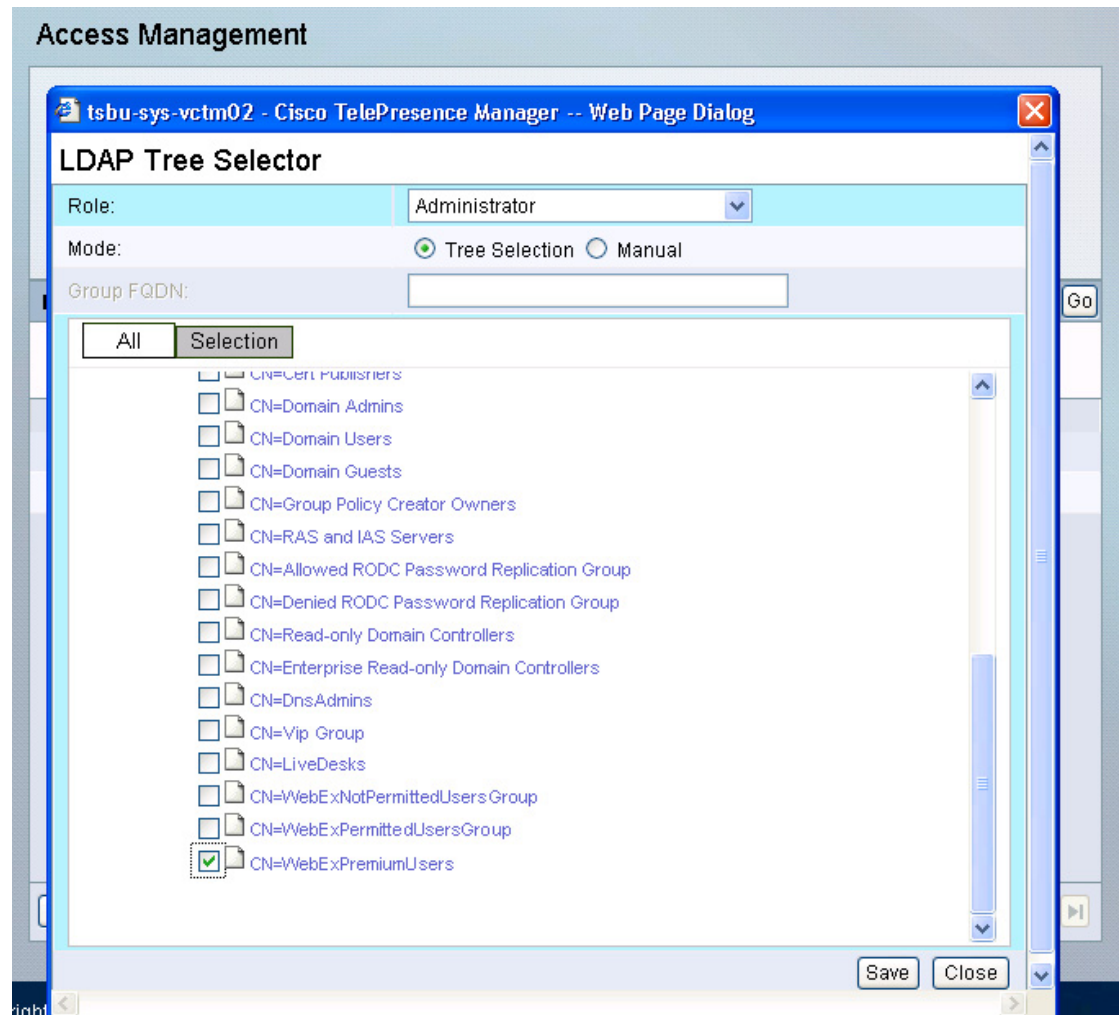
Step 4   Click **Save**.

The user group is added to the selected WebEx user role.

Step 5   Proceed to First-Time Scheduling of TelePresence Meetings with WebEx.

First-Time Scheduling of TelePresence Meetings with WebEx

The first time a meeting organizer schedules a TelePresence meeting with WebEx, they register with the WebEx site. You can do first-time scheduling either of the following ways:

- Using Calendar Client and Meeting Manager, page 12-15

    You schedule the meeting in your calendar client, then log in to CTS-Manager to add WebEx to your meeting.

- Using Microsoft Outlook and the WebEx Productivity Tools Plug-in, page 12-20

    You schedule and add WebEx to your meeting in Microsoft Outlook.

Using Calendar Client and Meeting Manager

To schedule a TelePresence meeting with WebEx using a calendar client and Meeting Manager, do the following:

Step 1   Schedule the meeting as usual with Microsoft Outlook, Lotus Notes or another supported client and include one or more Cisco TelePresence System (CTS) endpoints. See the Configuring Microsoft Exchange for Cisco TelePresence Manager, page 3-1 for instructions.
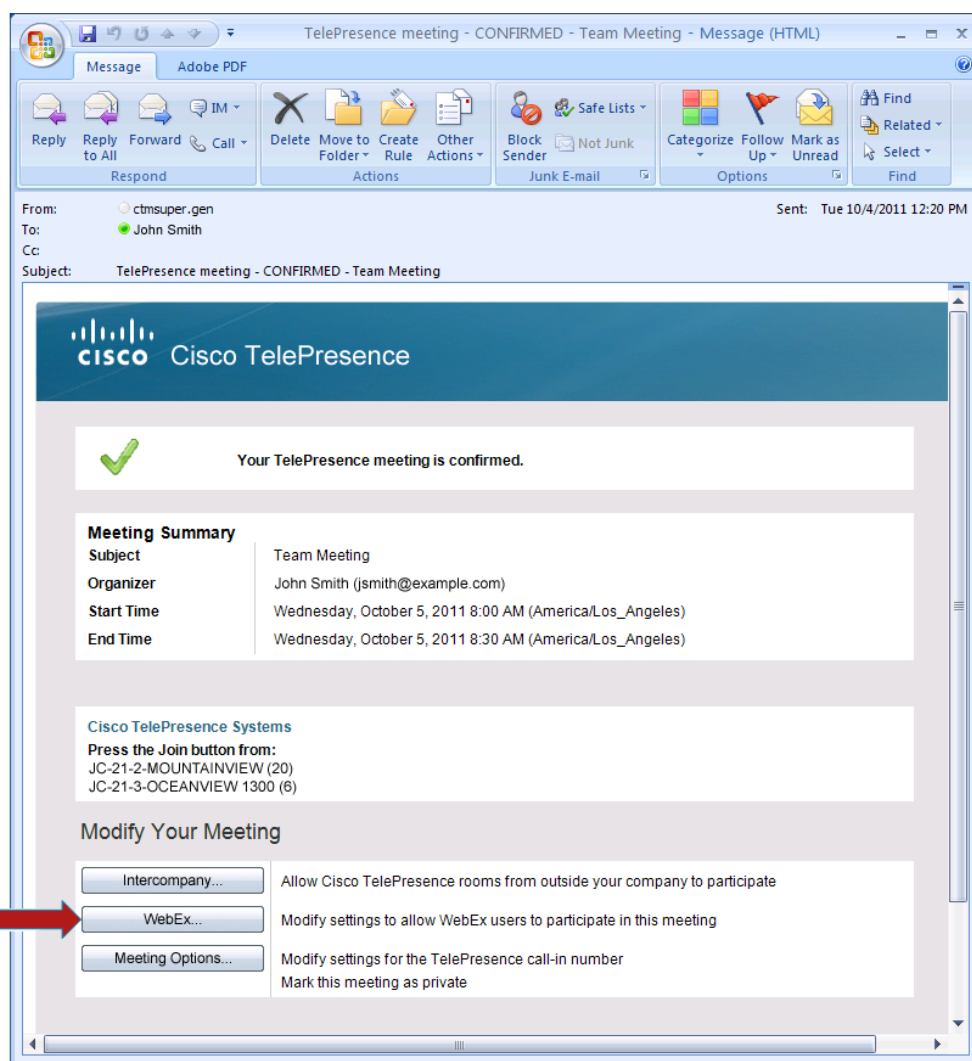
Figure 12-6   Schedule Meeting
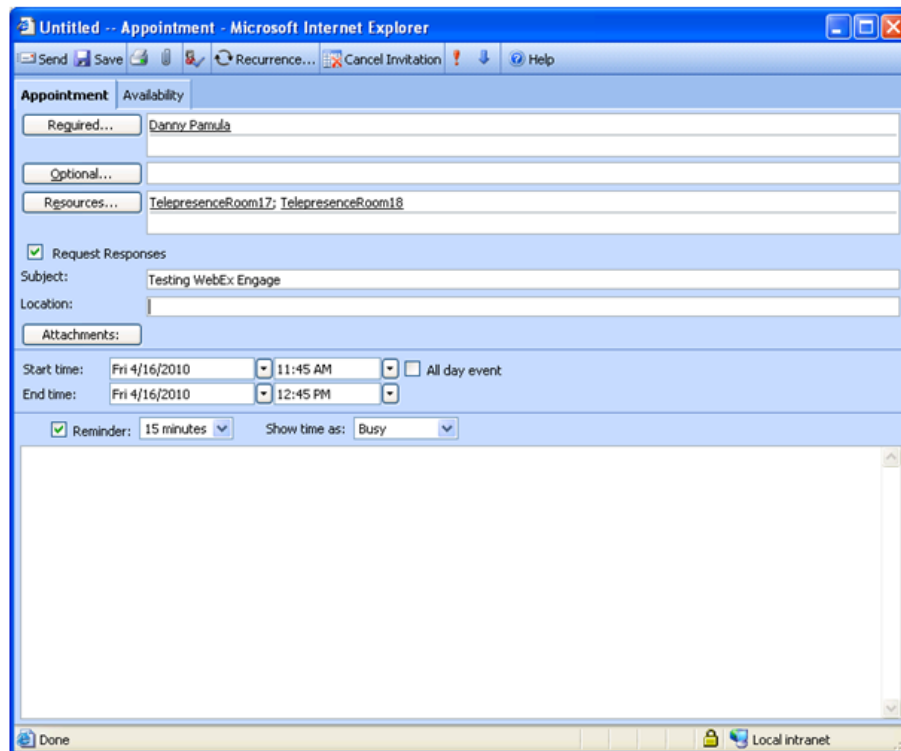
Step 2   Wait for email confirmation from CTS-Manager.

**Step 3**   To enable WebEx for the meeting, click the **WebEx** button in the email, as shown in Figure 12-7.

- The WebEx button does not appear if the meeting organizer is a WebEx Non-Permitted user.

*Figure 12-7*   *Click the WebEx Button in Meeting Email Confirmation*

**Step 4**   Depending on which browser you use, you may be presented with a security warning message:

- If you are using Internet Explorer Version 8 and a security warning appears, click **Continue** to proceed, as shown in Figure 12-8.

Figure 12-8   Security Warning in Internet Explorer Version 8
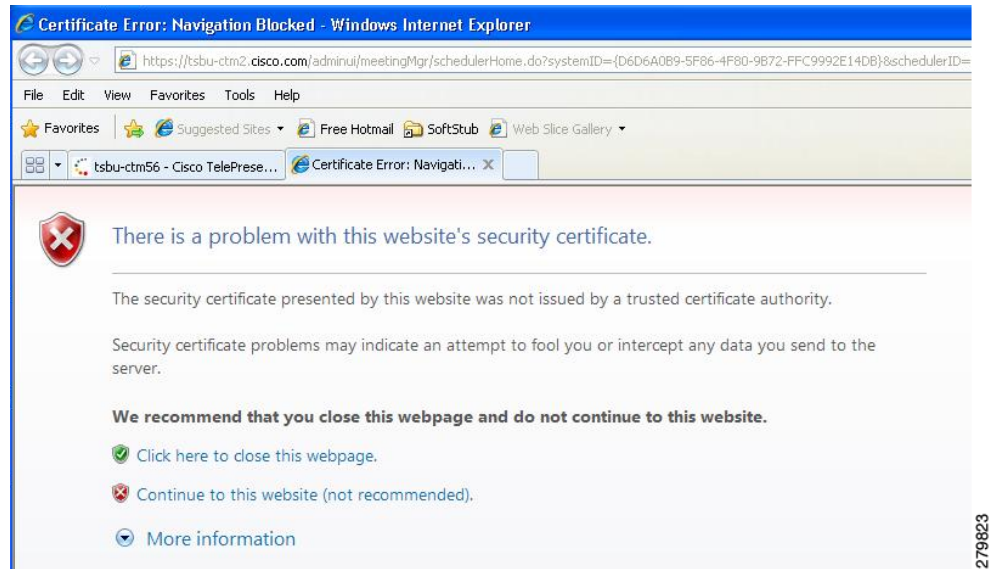
- If you are using Firefox and a security warning appears, click **"I understand the risks"** to proceed, as shown in Figure 12-9.

Figure 12-9   Security Warning in Firefox
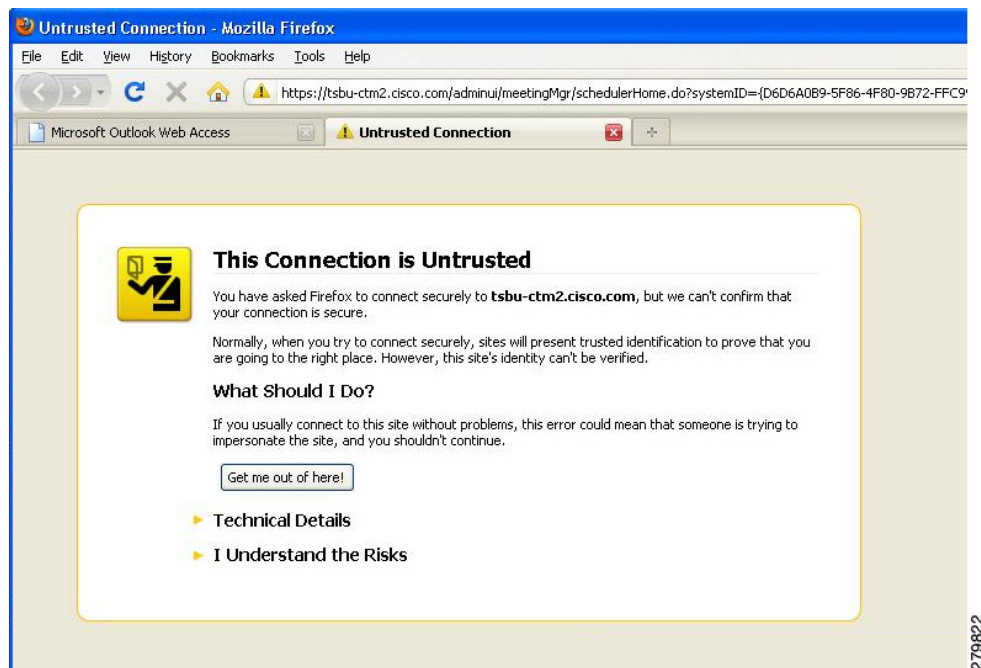
Step 5   Once you have dismissed any security warnings, the CTS-Manager log in window appears, as show in Figure 12-10.
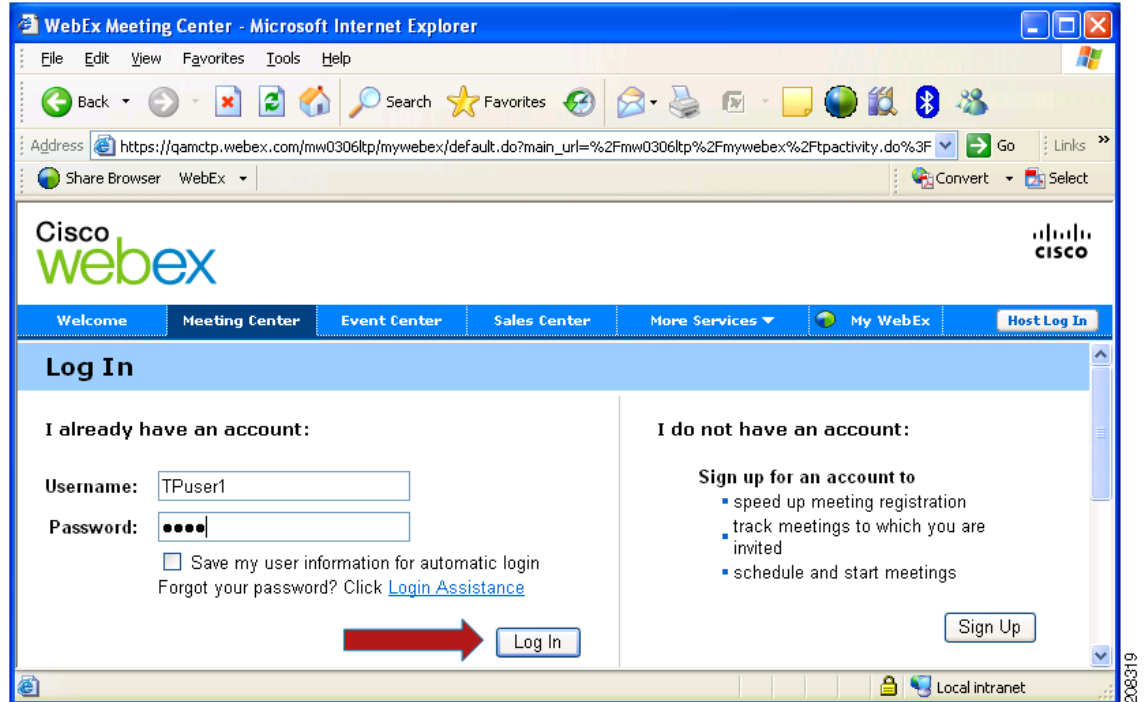
Figure 12-10   CTS Manager Log In
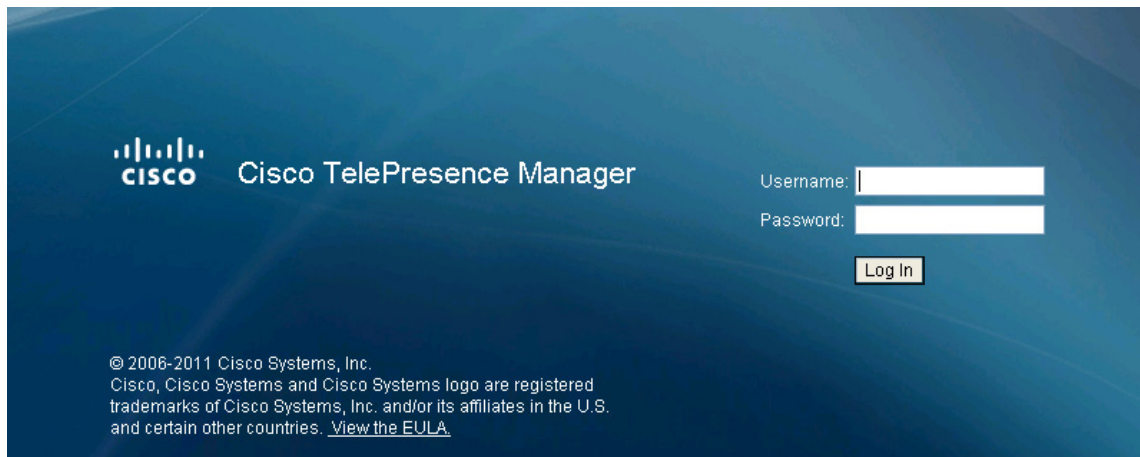
Step 6   Log in to CTS-Manager using your enterprise email ID and password.

The meeting details window for your meeting appears, with the WebEx tab selected.

Step 7   The first time you schedule a meeting with WebEx, you must register your WebEx account with CTS-Manager by doing the following:

    a.   If there are multiple WebEx sites available, select the WebEx site on which you have an account.

    b.   Click **Register**.

Figure 12-11   Authenticate with Cisco WebEx Internet Explorer Version 7

    –   If you are using Internet Explorer Version 8, click **Register** and click **No** at the security warning pop-up.

    –   If you are using Firefox, there is no security warning at this step; simply click **Register**.

This redirects you to the Cisco WebEx site. The Cisco WebEx login page appears, as shown in Figure 12-12.

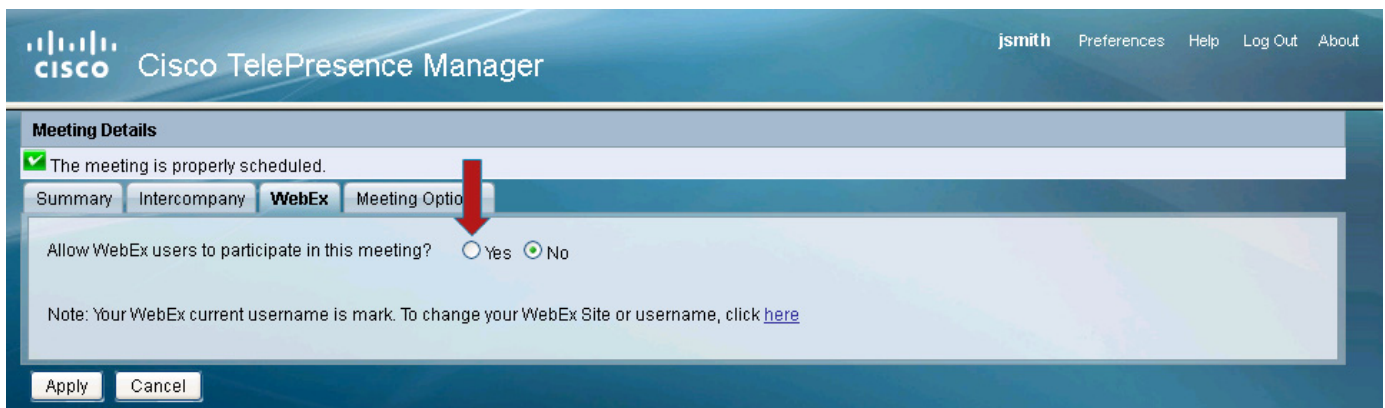*Figure 12-12   Log in to Cisco WebEx*

c. Enter your Cisco WebEx username and password and click **Log In**.

Upon successful authentication, you are directed back to the CTS-Manager meeting details window with the WebEx tab selected, as shown in Figure 12-13.

Figure 12-13   Cisco WebEx Tab in CTS Manager Meeting Details

Step 8   Select the **Yes** radio button to allow WebEx users to participate in this meeting and click **Apply**.

WebEx OneTouch is now set up for the meeting organizer and enabled for the selected meeting. To schedule future meetings with WebEx, you will not need to log in to the Cisco WebEx site.

Using Microsoft Outlook and the WebEx Productivity Tools Plug-in

To use Microsoft Outlook and the WebEx Productivity Tools plug-in to schedule a TelePresence meeting with WebEx, do the following:

Step 1   Download and install the WebEx Productivity Tools plug-in.

    a. Open a browser and go to the WebEx site on which you have an account.

    b. On the left-hand side of the window, click **Support** and then **Downloads**.

> **Note**   If you do not see Support, make sure the Meeting Center tab is selected at the top of the window.

    c. Next to the Productivity Tools description click **Download now (Login Required).**

    d. Log in to your account using the username and password of your WebEx account.

    e. Next to the Productivity Tools description click **Download now**.

    f. Install the plug-in:

    • For IE: the File Download window appears. Click **Run** and follow the on-screen instructions to install the plug-in.

    • For Firefox: the Opening ptools.msi window appears. Click **Save File**. After the file is downloaded, open it and follow the on-screen instructions to install the plug-in.

    When installation is complete, the WebEx Productivity Tools window appears.

Figure 12-14   *WebEx Productivity Tools window*

   **g.** Enter your WebEx User Name and Password and click **Login**.

    In a few moments, you will be logged into the WebEx server. When the installation is complete, the Cisco WebEx One-Click window appears.

Figure 12-15   Cisco WebEx One-Click window
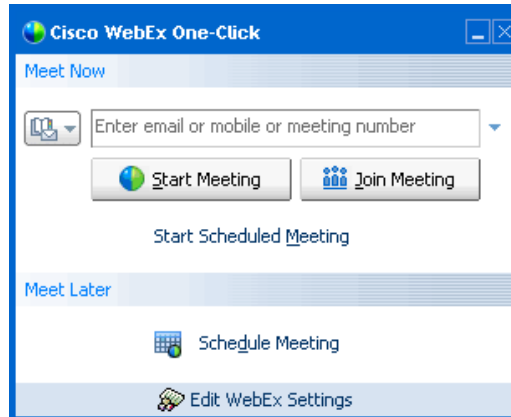
    h.   Close the Cisco WebEx One-Click window.

Step 2   Open Microsoft Outlook

Step 3   Schedule the meeting as usual and include one or more Cisco TelePresence System (CTS) endpoints.

Figure 12-16   Schedule Meeting
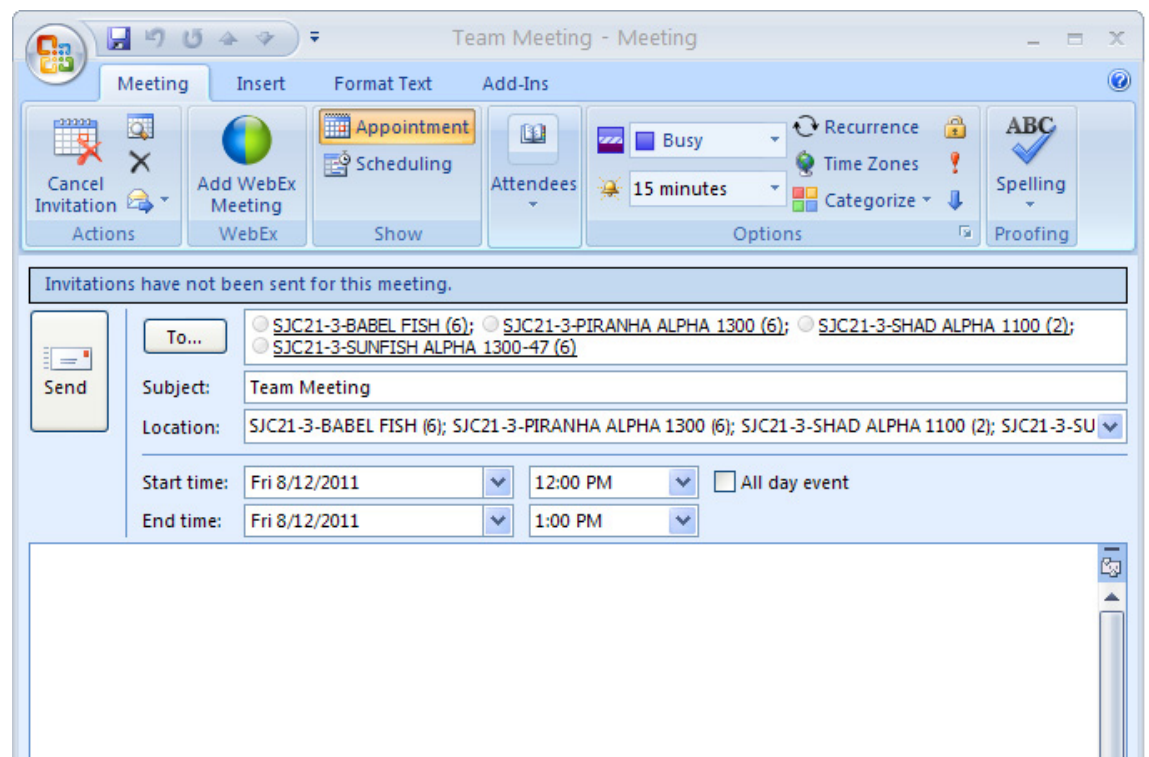
Step 4   Click the **Add WebEx Meeting** button in the top part of the Meeting window.

Step 5   The WebEx Settings window appears.

Figure 12-17   WebEx Settings window

Step 6   (Optional) If you want to create a password for the meeting, enter it in the Meeting Password field.

Step 7   Make sure Service type is set to **Meeting Center Pro Meeting** and Conference type is set to **WebEx Audio** and click **OK**.

> **Note**   Both of these selections are required or WebEx will not work properly.

Step 8   Click **Send** to send the meeting invitation.

The WebEx information is added to the meeting invitation and then it is sent.

Step 9   After the meeting is confirmed, you will receive a meeting confirmation email from CTS-Manager which also includes the WebEx information along with the other meeting details.

> **Note**   After first-time scheduling, WebEx users configured as Premium Users have WebEx added to their Cisco TelePresence meetings automatically. WebEx Permitted Users must enable WebEx for each meeting. To prevent overscheduling Webex when the feature is used for most TelePresence Meetings, Cisco recommends to not add all users to the Premium user group. For more information about WebEx users, see WebEx User Types, page 12-12.

Notes About Using CTS-Manager and the WebEx Productivity Tools Plug-in for Adding WebEx to TelePresence Meetings

WebEx enabled via Outlook takes precedence over WebEx enabled via the Meeting Manager window of CTS-Manager. For example, if the meeting organizer schedules a TelePresence meeting and adds WebEx via CTS-Manager and later, enables WebEx using Outlook, the plug-in generated WebEx meeting information will replace the WebEx information enabled via CTS-Manager.

If the meeting organizer enables WebEx via the Outlook plug-in, they can only disable WebEx using the plug-in (by clicking **Cancel WebEx** in Outlook).

Configuring Other Applications

For the Cisco TelePresence WebEx OneTouch feature to work, other applications, including CTMS, must also be configured. For complete details on how to configure and use this feature, refer to the "Cisco WebEx OneTouch Configuration Guide for the Cisco TelePresence System" at the following URL:

http://www.cisco.com/en/US/docs/telepresence/cts_admin/webex_solutions/guide/cts_webex_config.html

This document also describes how to manage and monitor scheduled meeting interoperability between Cisco TelePresence System (CTS), Cisco TelePresence MultiPoint Switch (CTMS) multipoint meetings, CTS-Manager, Cisco Unified Communications Manager (Cisco Unified CM), and the Cisco WebEx meeting server.