Converged Conferencing Solution

Conference Director

Installation and Administration Guide

Release 5.6.2

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Version Information

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If equipment has been purchased from ShoreTel, this equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency, energy and, if not installed and used in accordance with the instructions in this manual, may cause interference with radio communications.

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Typographical Conventions

The following typographical conventions are used in this document

Example Text	Indicates
Normal text	General text explanation
Italics	Emphasis, introduction of a new term, or a document title
Bold	Field or reserved word name/label
Bold Italics	Field or variable value (to be supplied)
Underlined text	Literal Values
`Example Code`	Example HTML/PERL
Grayed text	User Action to be taken

Table of Contents

1 Introduction

1.1 The CCS

ShoreTel's Converged Conferencing Solution is a flexible and secure platform solution for both audio and web conferencing. In addition, the Converged Conferencing Solution offers an integrated contact list with presence ("buddy list") as well as text chat or instant messaging functionality.

These applications all utilize ShoreTel's zero-footprint browser User Interfaces, which are compatible with a variety of browsers and may be deployed without requiring any software installation on client machines. In addition, the Converged Conferencing Solution is managed from a fully web based management console.

1.2 Using This Guide

The target audience for this guide is system administrators. It assumes familiarity with basic networking and telephony concepts and terms.

This System Administration Guide provides a comprehensive reference for administration of the Converged Conferencing Solution. It incorporates the entire set of operations, administration, maintenance, and provisioning (OAM&P) capabilities for all functionality. Configuration options for functionality that you have not licensed may be missing when you use the Administration application.

The Converged Conferencing Solution is delivered as an appliance, with software and licenses pre-installed on Intel-based rack-mountable servers. The features you have licensed will be enabled; others will be disabled.

You may notice that this Guide offers no guidance on managing the system's operating environment – e.g. upgrading the OS. The system software (Linux, server software, and applications) is a fully integrated system. Although the system resides on off-the-shelf hardware, once the software is installed, the system is dedicated to the Converged Conferencing Solution it is not possible to install additional applications and access to the underlying operation environment is not enabled.

2 Installation of the ShoreTel Converged Conferencing Solution

The section provides basic installation instructions.

2.1 Installation notes

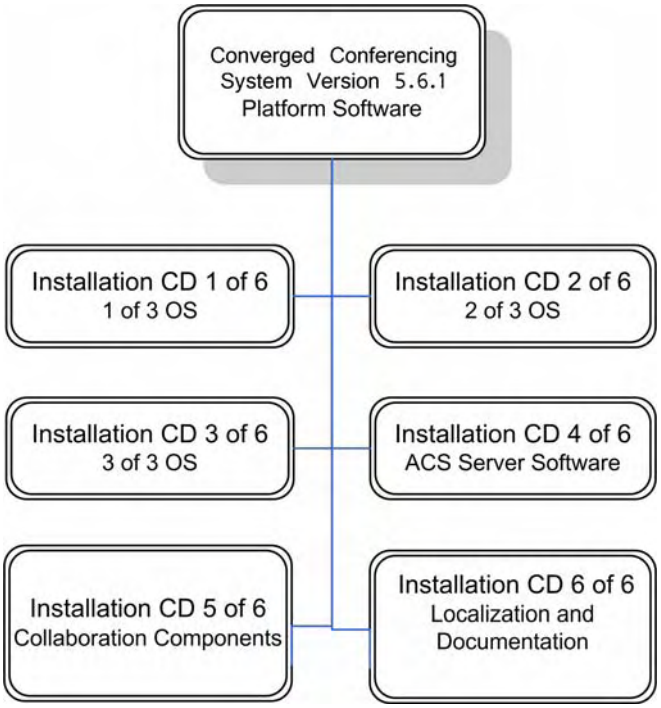
To use data conferencing, you need to install the VMware license you received from the ShoreTel . You will also need to accept the Microsoft licensing terms and conditions. Perform these installation tasks using the ShoreTel CCS administration page, e.g.: https://yourserver1.yourcompany.com/admin/. For instructions, refer section 3.10

Failure to install VMware and/or accept the Microsoft licensing terms means you cannot use the data conferencing features and functions.

2.2 Installation media

The release is distributed on CD. The following diagram illustrates the various deliverables.

Figure 1. CCS Installation Media



2.3 Installation instructions

If you purchased a pre-configured server, the software will already be installed (please proceed to the next section).

If you are configuring a new system using a new hardware server, at this point in the process the CCS software must be installed. You will have received CDs (or perhaps you are downloading directly off a network), along with release notes and other documentation pertaining to the particular version of software you are installing.

2.3.1 Upgrades

To upgrade an existing installation, do the following:

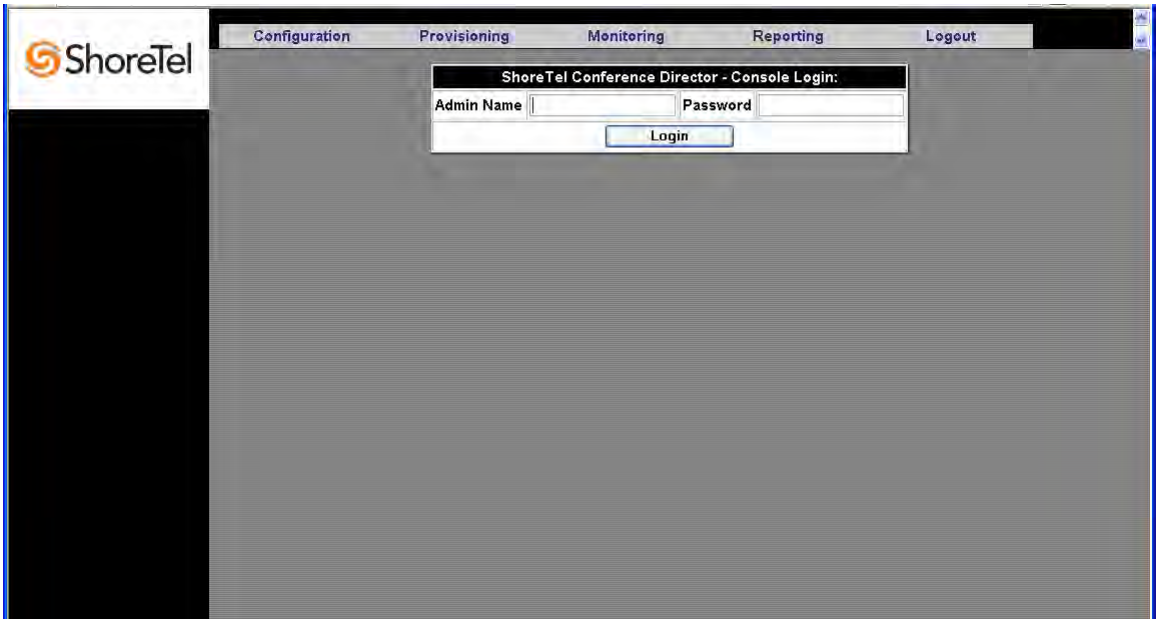
Locate the CCS Server CD (4 of 6).

Insert the CD into the CD ROM drive of your local PC or workstation.

> **Note:** This procedure assumes you will be installing the CCS software from your local PC and not from the CCS hardware server.

Open in your browser the ShoreTel Converged Conference Director Administration Console. (Refer to Section 2.3.1 for additional information.)

You see the following:

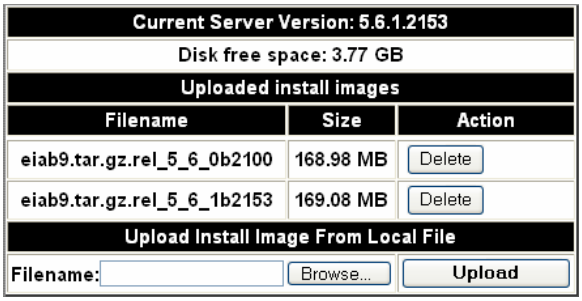


Click Configuration.

You see the following:

Click Upgrade Server Software.

You see the following:



Click Browse in the Upload Install Image From Local File box.

Browse and select the file named eiab9.tar.gz.rel_5_6_1b2245.

Important: When downloading the file from a network, be certain the file is named correctly. Windows XP has been known to truncate the file name (e.g. eiab9.tar.gz[]). Before attempting an upload to the server, please rename the truncated file name to: eiab9.tar.gz.rel_5_6_1b2245. The version and build number may vary according to the release.

Click Upload.

The server begins the upgrade process, which takes approximately 10 minutes; and the server then reboots. Read and follow all prompts.

2.3.2 Assigning an initial IP address

After the server is connected, you will turn the server on and assign its initial IP address. This is done using the “serial console” CCS application.

To enter IP settings:

Turn the power on.

After approximately 30-60 seconds, a User Login prompt will appear.

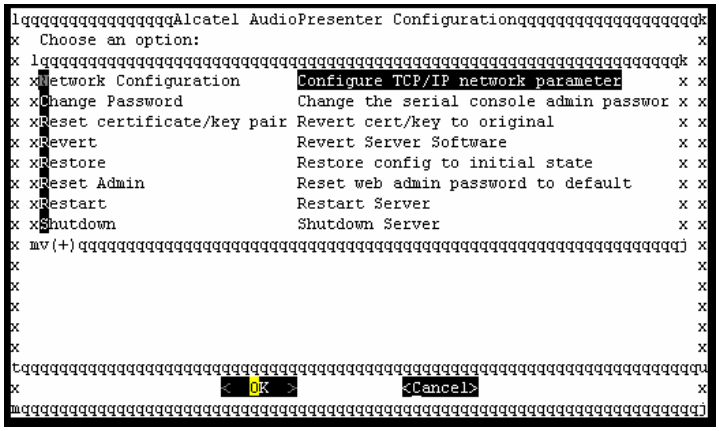
Log in to the server. The first time you log in, use the default login ID and Password.

Login: admin

Password: changeme

All CCS servers are shipped with the same default Login ID and Password. For your server’s security, you should change the ID and Password immediately. (You are allowed to have two distinct passwords: one for console login and one for use to log in to the System Administration Application.)

The main menu for the server console will appear. Using the up/down arrow keys, scroll to the Network Configuration menu choice, and select OK by pressing the Enter key.1



On the next screen (Use DHCP), respond No and proceed to section 5.2.1.1 Using a Static IP Address.

Note: ShoreTel strongly recommends that you use a static IP address. If you use respond Yes to
using DHCP, proceed to section 5.2.1.2 Using DHCP.

2.3.3 Using a Static IP address

On the next screens, enter your TCP/IP parameters.

Enter a valid hostname (e.g., yourserver1) and select OK.

Next, enter a valid domain name with extension (e.g., yourcompany.com) and select OK.

[1] The “+” indicates that more menu items are available by scrolling the display using the up and down arrow keys. See Appendix D in the CCS System Administration Guide for a full explanation of the serial console application.

Enter the IP address (e.g., 192.168.10.140) and select OK.

Enter the netmask (e.g., 255.255.255.0) and select OK.

Enter the server's default gateway and select OK.

Enter your Name server (DNS) and select OK.

Enter an IP address for the primary NTP server (if different from the default) and select OK.2

Enter an IP address for a secondary NTP server and select OK.
Your system will automatically reboot.

2.3.4 Using DHCP

Note: Skip this section if you are using static IP addresses.

To continue your installation via the web interface, do the following.

Select OK.

Scroll to the Restart Server choice and select OK. The following prompt appears.
"Restart ShoreTel server (and lose all current calls)?"

Select OK.
Your system will automatically reboot.

[2] Note that an NTP server is required for successful operation of your CCS. See a sample list of NTP servers in Appendix C of the CCS Administration Guide.

2.4 Initial Configuration

At this point in the installation you should be able to use the CCS's browser-based Administration Console to complete your server's initial configuration.

To connect to the server from a browser on another computer:

Go to another computer that has access to CCS. Open a browser window.

In the address line, type in the hostname.domain.ext you assigned to the CCS server, followed by /admin, (e.g., https://yourserver1.yourcompany.com/admin).

A login screen is displayed:

If the login screen does not appear, the most likely cause is that the server is not connected correctly to the network. You may try the following:

- Check that the server's primary Ethernet port (eth0) is correctly connected to the LAN.
- Verify the server's TCP/IP settings by repeating the procedure in section 5.3.
- Be sure that the computer that you are using for management has access to the server's LAN.
- Validate that both the cable and the LAN's Ethernet port where you have connected the server are functioning.

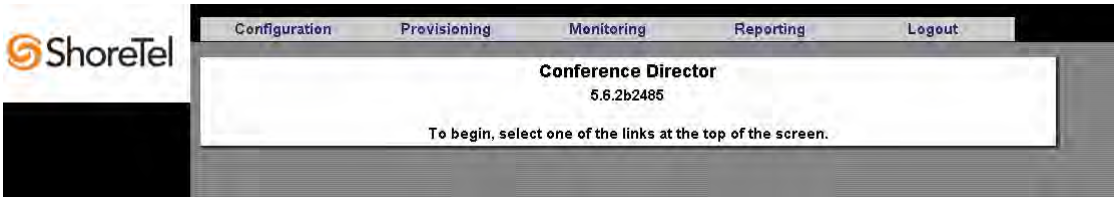
Log into the server using the same Login ID and Password that you used when logging into the erial Console. The default is:

Login: admin

Password: changeme

> **Note:** All Converged Conference Directors are shipped with the same default Login ID and Password. For your server's security, you should change the ID and Password immediately.

The following Welcome Screen is displayed.



To continue configuring the server, choose the Configuration menu item off the menu near the top of the screen. A menu of Configuration screens appears on the left. The server is highly configurable; however, only a subset of the available configuration is required for basic installation. Before attempting to bring up ShoreTel 's CCS applications, please visit the following Configuration screens (order not important):

- Licensing (The system will not allow any calls/sessions unless it has an ShoreTel license installed. Also, document presentation will not work unless the third party licenses are installed and approved. It is likely that licenses were installed before the system was shipped; you may want to validate that the number of ports matches what you purchased.)
- TCP/IP Settings (The settings you configured in the Console will be carried over to this screen, which also offers additional configuration parameters). Verify and click 'Save'.
- System Options (Enter required email addresses. Alarm and alert reporting is set up here.) Verify and click 'Save'.
- If you are using VoIP and must register with a local gateway or PBX in order to make telephone calls, Proxies.
- If you are using PSTN, Voice Interfaces.
- DAS Rules (Set up call routing and dial plan requirements.)

At this point, you may want to provision a user or two (Provisioning/Add User) and try CCS functionality. If basic conferencing and IM is working, proceed to configure optional functionality.

2.5 CCS licensing

The license file is pre-installed in the CCS server. Please contact your sales channel or ShoreTel partner for license issues or if you wish to you acquire an upgrade license.

2.6 Acquiring the CCS and VMware license files from the ShoreTel Welcome Center

To acquire the CCS license files, do the following:

Log in to the Converged Conference Director Administration Console.

Click Configuration.

Click Licensing.

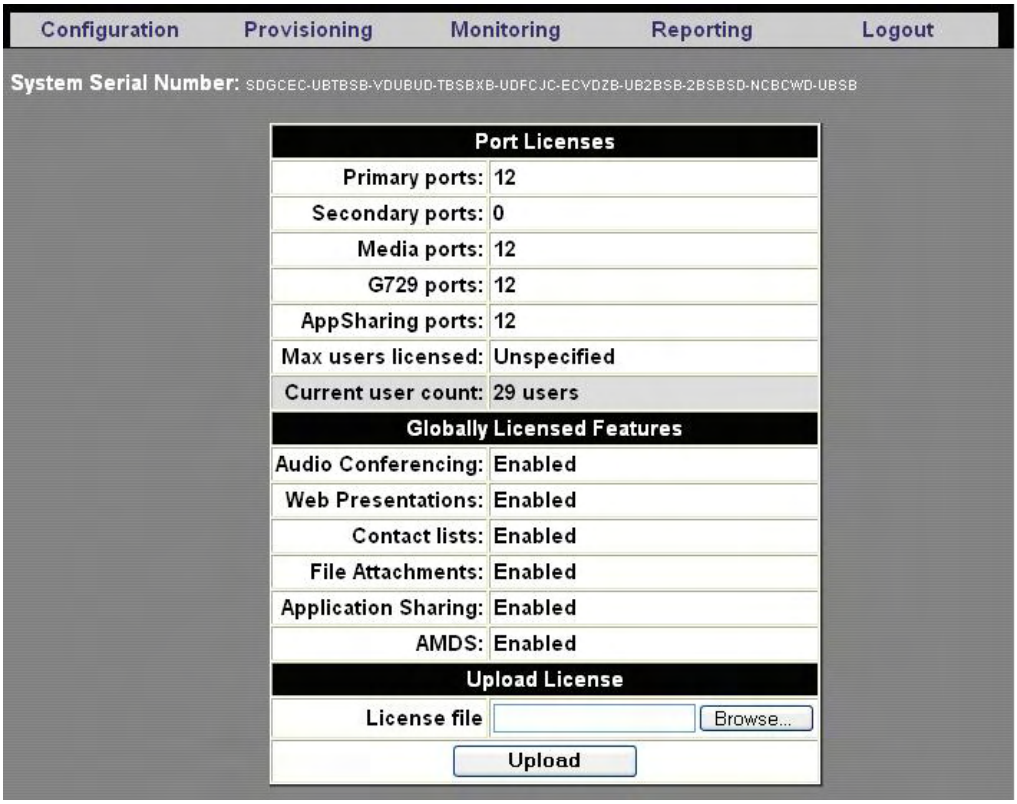
Copy the System Serial Number.

Paste the serial number into the body of an email message.

Note: The serial number text is white. After pasting text into the email, convert the text color to black.

Send the email to your Welcome Center contact.

The Welcome Center uses the System Serial Number to generate the CCS license file.



The Welcome Center will send you the CCS license file and the VMware license file, which you need to save to your local drive and then upload to CCS.

2.7 Installing the CCS license file

To upload and install the CCS license file, do the following from the CCS Administration Console:

Click Configuration.

Click Licensing.

Position your cursor in the Upload License File field, which is toward the bottom of the licensing page.

Click Browse and browse to the license file that you saved to your local drive.

Click Upload.

The license file is loaded to the server.

2.8 Installing the VMware license file

Log in to the Converged Conference Director Administration Console.

Click Configuration.

Click Licensing.

Scroll to the VMware section of the licenses window.

Click Browse and browse to the license file that you saved to your local drive.

Make sure the I Accept radio button below the Microsoft license is selected.

Click the Submit button.

The license file is loaded to the server.

3 System Configuration

To begin configuring the CCS, access the Administration application via URL, e.g.: https://yourserver1.yourcompany.com/admin/

You will see a login screen. After you log in, a welcome screen will appear (see Figure 1).

Click “Configuration” on the top menu bar.

The System Configuration choices will appear in a menu on the left.

Figure 1 ShoreTel Welcome Screen (Config Options)

The configuration menu choices are documented in this section in the order in which they appear in the menu, except for those choices that result in immediate administrator commands to the server (as opposed to configuration). Management Actions are documented in Chapter 4.

3.1 TCP/IP Settings

This screen allows the System Administrator to add or modify the TCP/IP Settings. IP address settings may be changed at any time by entering the new TCP/IP settings and clicking on the Apply button. The configuration automatically overwrites the original configuration information, and takes effect the next time the server is restarted. Care should be taken that the new settings are correct – incorrect IP settings may result in the server being inaccessible to browsers. Should that happen, you must use the console (accessible via the server’s video/keyboard or serial port) to set a valid IP address, (refer to the ShoreTel Conference Director Installation Guide).

Note: A system reboot is suggested as soon as possible when making changes to the IP configuration. The use of DHCP is only for specialized situations – generally the server should be

set up with a static IP address. Contact your support representative if you want to use this feature.

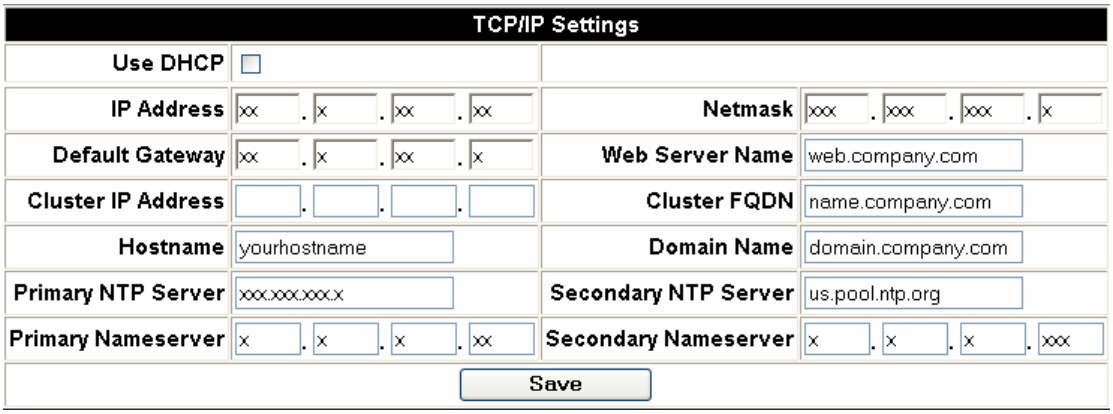


Figure 2 IP Settings

It is recommended that the administrator keep a record of TCP/IP information and keep it for backup purposes. To configure the TCP/IP information for the CCS (**Note**: All these values should be the same as those set during install – refer to the ShoreTel Conference Director Installation Guide):

- IP Address
- Default Gateway
- Cluster IP Address – Not Applicable
- Hostname
- Primary/Secondary NTP Server[3]
- Web Server Name – this is the URL users will enter to access the server from their browsers. (It is typically the hostname.domainname as set in Chapter 2)
- Cluster FQDN (fully qualified domain name) – Not Applicable
- Netmask
- Primary/secondary name server
- Domain Name

Note: Make sure your domain name contains valid characters. Refer to the following Microsoft technote found at http://support.microsoft.com/default.aspx?scid=kb;EN-US;316112: “Cookies Are Not Saved If the Host Name Is Invalid.”

Click the **Save** button.

[3] See Appendix C for a list of NTP servers. Note that an NTP server is required for successful operation of your ShoreTel Conference Director.

3.2 VoIP Settings

The user should not alter the settings in the following screen. The order of CODEC will be used and the router will prioritize packets if certain flags are attached.

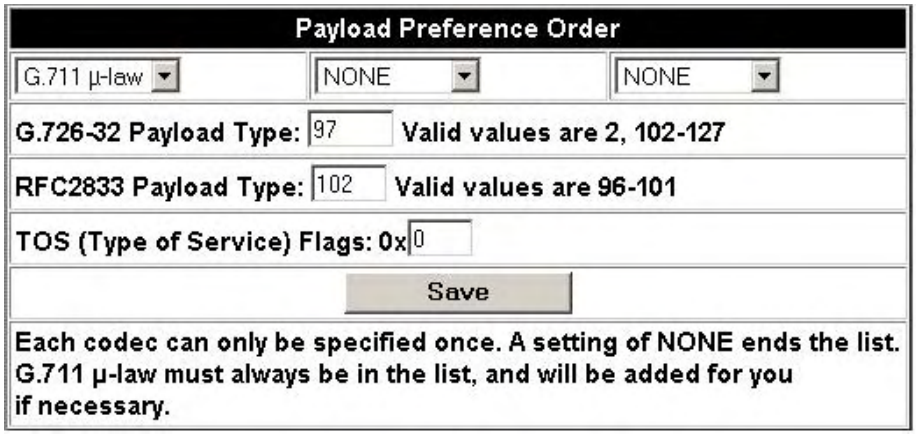
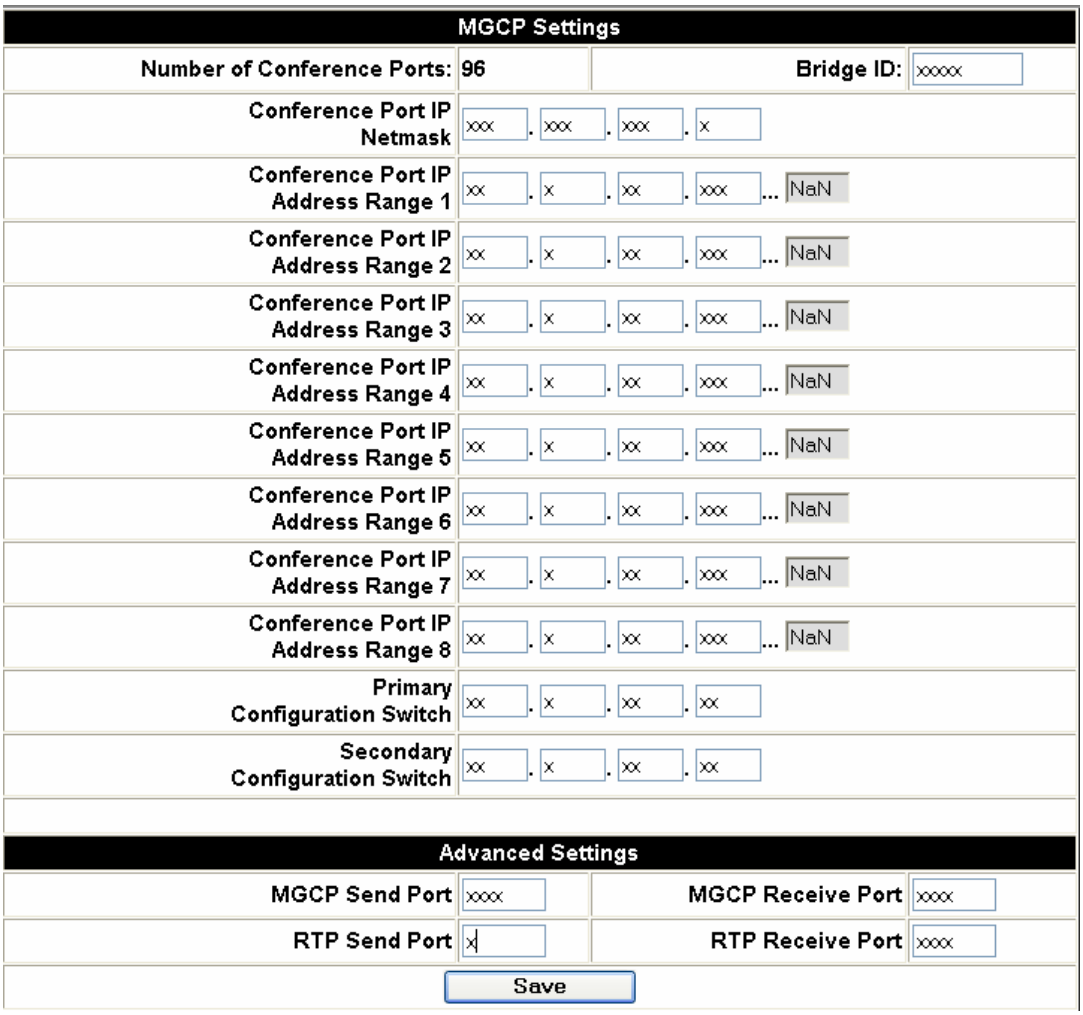


Figure 3 VoIP Settings

NOTE: For SIP devices to operate with functional DTMF detection, the RFC2833 Payload Type must be set to 102. Although the associated text description implies that the only allowable values for this field are 96 through 101 inclusive, 102 is also allowed in the field.

3.3 Bridge Port Settings

Select “Bridge Port Settings” from the Configuration menu.



The fields in this screen are described below.

- **Number of Conference Ports** – The number of Ports is based on your License.
- **Conference Port IP Netmask** – The subnet mask for your network configuration.
- **Conference Port IP Address Range 1-8** – The Port IP addresses assigned based on your License and provided in blocks of 12.
- **Primary Configuration Switch** – The ShoreTel Primary Switch with capacity for IP Phones used by the CCS.
- **Secondary Configuration Switch** – The ShoreTel Secondary Switch with capacity for IP Phones used by the CCS.
- **MGCP Send Port** – Leave as Default at 2727.
- **MGCP Receive Port** – Leave as Default at 2427.

- **RTP Send Port** – Setting value to zero (0) forces dynamic port negotiation. ShoreTel recommends setting to zero (0). (Default is 5004).
- **RTP Receive Port** – Leave as Default (5004).

3.4 System Options

Select “System Options” from the Configuration menu.

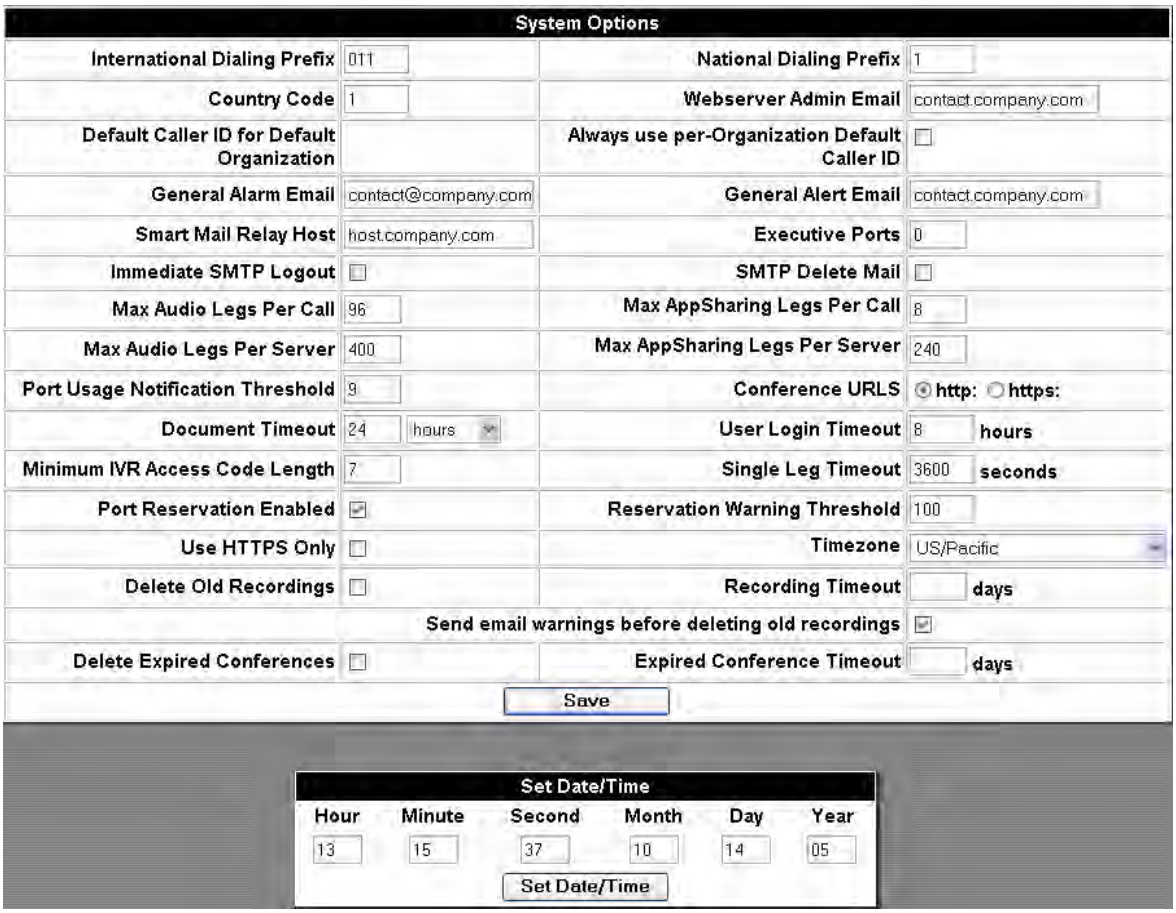


Figure 4 System Options Forms

The fields in this screen are described below. Note that all options are not available for all deployments. Options that are not relevant to your deployment are automatically hidden.

- **International Dialing Prefix** – The digits used before dialing international calls, from the site where the ShoreTel Conference Director is installed.
- **National Dialing Prefix** – The digit(s) required to make domestic toll calls.
- **Country Code** – The country code of the location where the CCS is installed.
- **Webserver Admin Email** – The email address of the system administrator. Webserver alerts are sent to this address.
- **Default Caller ID for Default Organization** – The default caller ID to be provided by the CCS to the PSTN on outgoing calls associated with the Default Organization (see Section 5.8 for instructions on configuring multiple organizations).
- **Always use per-Organization Default Caller ID** – Select this to have distinct caller ID's provided for each separate organization provisioned on the CCS. The organization's caller ID is set when the organization is added to the server, as described in Section 5.2.
- **General Alarm Email** – The email address of the person who gets notified of general alarms (typically the system administrator).
- **General Alert Email** – The email address of the person who gets notified of general alerts (typically the system administrator).
- **Smart Mail Relay Host** – The address of a smart mail relay host (if you are using one).
- **Executive Ports** – The number of ports/voice streams on the system you want to reserve for the exclusive use of high priority users. See Section 5.7.1 to see how to set whether a given user is authorized to use these ports. Executive ports are not used until all non-executive ports have been exhausted. Executive ports are only used by users who have the "Executive" user privilege.
- **Immediate SMTP Logout** – Unused – leave this blank.
- **SMTP Delete Mail** – Unused – leave this blank.
- **Max Audio Legs Per Call** – Used to limit the number of audio legs that can be included in a single conference. The default maximum number of legs in a conference is 96, based on license.
- **Max AppSharing Legs Per Call** – Used to limit the number of applications that can be included in a single conference. The maximum number of applications in a conference is 96, based on license.
- **Max Audio Legs Per Server** – Used to limit the number of audio legs that can be included on a server. The default maximum number of legs is 96, based on license.
- **Max AppSharing Legs Per Server** – Used to limit the number of shared applications that can be included on a server. The maximum number of shared applications on a server is 96, based on license.
- **Port Usage Notification Threshold** – If the number of concurrent ports being used on the server reaches this number, an email is sent to the email address specified in the Voice Interface Alert email field.
- **Conference URLs** – Determines whether conference URLs (including those that are used for web presentations) are protected (encrypted) by SSL (HTTPS) or not (HTTP). If you select HTTPS, be sure that port 443 is open on any firewall you may have deployed between the CCS and the internet.

- **Document Timeout** – This is the length of time that uploaded documents will remain on the ShoreTel server after a call has expired[4]. The server periodically deletes documents that are on the server past this timeout period.
- **User Login Timeout** – The period of time of user inactivity before a user's browser session with the CCS is automatically terminated. Because a session may remain open during a conference call, and because that session may be used for call control at some point well after that call has started, this should be set to long enough that users won't be logged out during a call, but short enough that an open session does not constitute a potential security issue. This defaults to 8 hours. (**Note**: If a user checks the "Automatically log me in on this computer" box on his/her sign-in page, this timeout will not apply to that user on that computer.)
- **Minimum IVR Access Code Length** – This is the minimum number of digits required by the IVR in a valid conference access code. The factory default for this is 7. In standard installations, this should be left unchanged.
- **Single Leg Timeout** – The length of time after which a single leg (i.e., lone phone connection) into a conference is terminated. This is to prevent users from dialing into a conference with no other participants and forgetting to hang up or needlessly occupying server resources. The default is 3600 seconds (one hour), generally enough for someone to dial into a conference and wait for others to join.
- **Port Reservation Enabled** – This setting allows users to specify the number of ports they expect to use when scheduling a one-time or recurring conference. If a conference is scheduled for a time when there are fewer than the 'port reservation' number of ports free, an "Are you sure?" warning message is displayed. The user may then choose to proceed, thus overbooking the system. Note that extensive use of ad-hoc calling may cause ports to be unavailable even when they appeared free when the conference was scheduled.
- **Reservation Warning Threshold** – If the total number of scheduled ports hits this threshold number, then the user receives feedback that the server may be full at that time. The user can then schedule the conference for a time when the server will be less heavily loaded.
- **Use HTTPS Only** – This setting requires that all user sessions and web presentations are handled by SSL encrypted browser connections (HTTPS). If you select this setting, you must also enable port 443 in any firewall that may be deployed between the CCS and the users who access it via the internet.
- **Time Zone** – The time zone of the location where the server is installed. This setting will also determine the default time zone used when scheduling conferences.
- **Delete Old Recordings** – This setting enables the deletion of old recordings.
- **Recording Timeout** – The length of time, in days, after which old recordings are deleted.
- **Send email warnings before deleting old recordings** – This setting enables the sending of a warning via email before old recordings are deleted.
- **Delete Expired Conferences** – This setting enables the deletion of conferences that exceed the configured timeout.
- **Expired Conference Timeout** – The length of time in days after which a conference will expire.
- **Set Date/Time** – The local date and time where the server is physically installed. This time automatically adjusts for daylight savings, based on the time zone setting (above).

[4] A conference has "expired" if its scheduled end time has passed. A reservationless conference does not expire until its entire authorized period (default 6 months, configurable) has passed. A recurring conference does not expire until the last of its series of calls has expired (also a default of 6 months).

Setting System Options

Click on the **System Options** button.
Enter the information in the text and check box(es) provided (as seen in Figure 4).
Click the **Save** button.

Setting Date, Time and Time Zone

Set the server's time zone in the drop-down list shown in Figure 4 ; click **Save**.
Set Date and Time in the Date/Time fields.
Click Set Date/Time.

3.5 LDAP Configuration (Authentication and Auto Provisioning)

CCS is capable of interfacing corporate directories for the purpose of user authorization and auto provisioning.

When a user attempts to log on to the ShoreTel Conference Director, CCS 5.6.2 can use an LDAP query to authenticate that user. Rather than querying its own internal database to see if the username and password are authorized, an LDAP queryy will be launched against the corporate directory. If the response back to the server indicates that the username/password combination is legitimate, the CCS will allow that user to access the system for scheduling and placing calls.

Under this arrangement, the user's password will not be stored on the ShoreTel Conference Director, and the system administrator will not need to administer the user database on the CCS (except to change users who do not have default authorization levels for enhanced service features).

The CCS also uses the LDAP query process to enable auto provisioning. If the LDAP query indicates that the username and password are legitimate but that username has not yet been provisioned as a user on the CCS, then the server will automatically establish an account for that user. The user will be set up with the default level of authorization to use the system's special features and will be able to start using the CCS system immediately. (These defaults are set by the system administrator, generally when the system is initially configured.)

If the user requires authorizations that differ from the system defaults, then the system administrator can use the system administrator's interface to change that user's profile, as described in Section 5.7. (Note also, that during this initial successful logon, the server will prompt the user for his email address. This is requested only once, and is used for internal server uses and future system capabilities.) CCS 5.6.2 has been certified for use with Sun Microsystems IPlanet Directory Server and Microsoft's Active Directory LDAP interfaces.

Click on the LDAP Configuration under Configuration.
Check Use LDAP.
Enter LDAP Server Configuration.

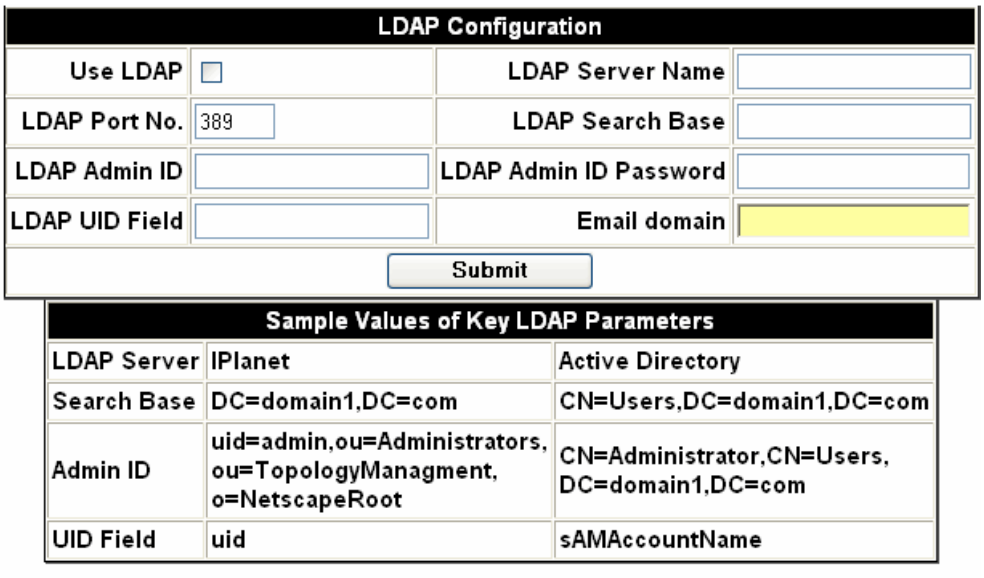


Figure 5 LDAP Configuration Options

Also shown are sample LDAP configuration options for the IPlanet LDAP directory and Microsoft's Active Directory. The specific options you choose will be installation specific; please contact your support representative for assistance, if needed.

3.6 Voice Prompts

The ShoreTel Conference Director comes preloaded with a full set of voice prompts for all interactions between the user and the IVR. The system administrator can install multiple sets of prompts, allowing custom prompts or support for multiple languages. Custom prompts should be stored in 8 kHz, 8 bit, monophonic, .wav format. Other .wav file formats (such as 44 kHz, 16 bit, stereo) formats can be used. The CCS will automatically convert these formats to 8 kHz, 8 bit, monophonic mu-law, for compatibility with telephone networks.

Because the ShoreTel Conference Director uses close to 200 prompts, it is easiest to manage prompts in sets, each set including all prompts for that set. The format and content of a prompt set is described below.

3.6.1 Downloading a Prompt Set File

To update one or more voice prompts, it is most convenient to start with the default prompt set that ships with the ShoreTel Conference Director. You do this by downloading the default prompt set onto your PC.

In the welcome screen (Figure 1),
Click on the **Configuration** tab.
Click on the **Voice Prompts** button.

You will see the following dialog box:

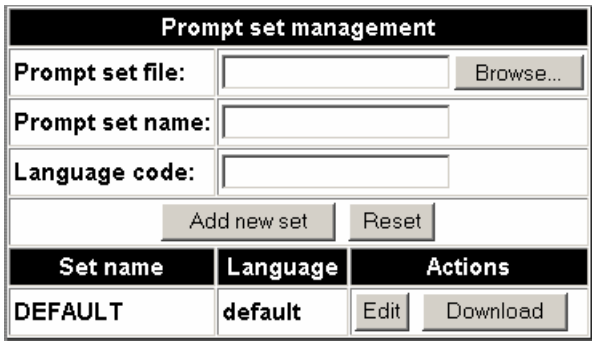


Figure 6 Prompt Set Management Form

Select the prompt set you want to start with (in the example above, there is only one, labeled DEFAULT).
Click Download.

You will see the following dialog box (dependant on your version of Windows):

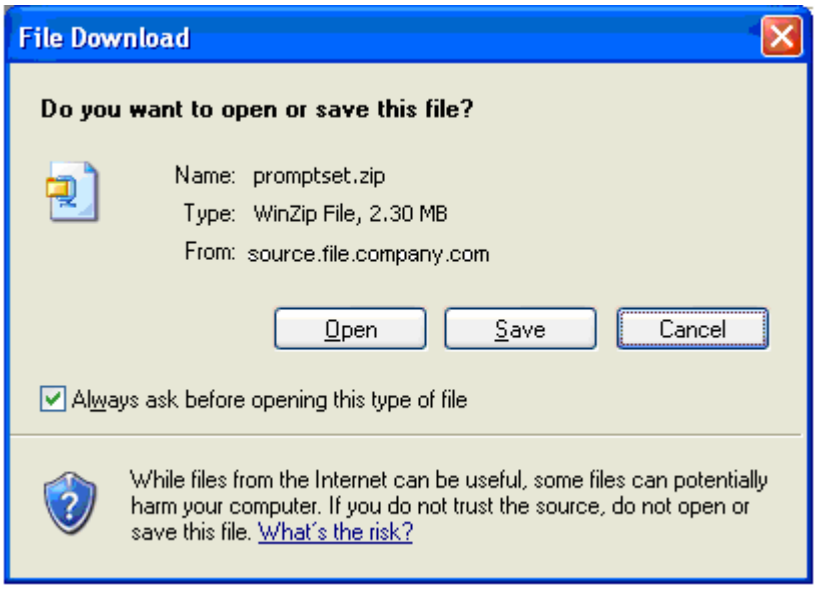


Figure 7 File Download Dialog Box

Click **Save**.
Place the file in a suitable folder on your PC.

The resulting file contains multiple voice prompts.

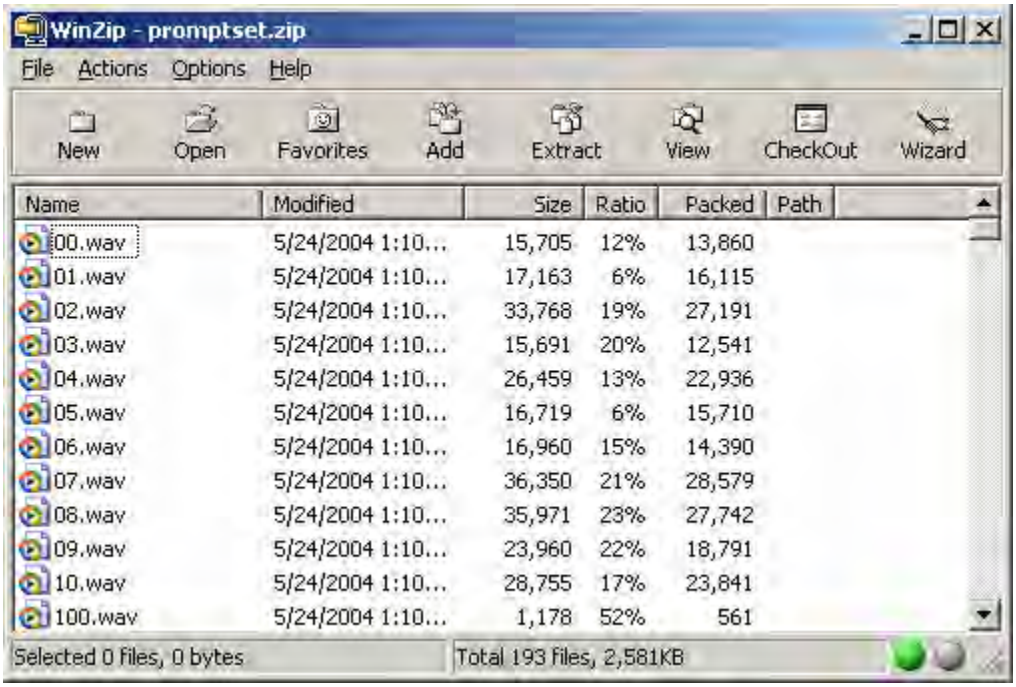


Figure 8 Voice Prompts Files

Each prompt is saved in an 8 kHz, 8 bit, monophonic, .wav format. The complete list of prompts is provided in Appendix B

3.6.2 Installing New Prompts

To update or change the voice prompts, you need to do the following:
Create the individual prompt voice files in 8 kHz, 8 bit .wav format.

The CCS does not support direct recording of prompts to the server. However, many commercial audio recording applications and professional recording services can be used for creating the individual prompt files.

Note that the prompt files should be named 00.wav through 196.wav. The wording of the default prompts is shown in Appendix B.
When uploading a partial prompt set, save updated prompts only in a compressed .zip format file on your PC. If you are uploading all new prompts, a full prompt set in a compressed .zip format file is needed.

Once the new prompt set file is created, upload that prompt set .zip file to the server, by following these steps:

Click on the **Browse** button and select your new prompt set file (or type in the full path name to the new prompt set file).
Enter a Prompt set name (which will make it easier to manage multiple prompt sets in the future). The name must be alphanumeric. It is not case sensitive.
Enter a language code for the prompt set (e.g., EN for English).
Click Add new set.

Note: The language code name 'Default' may not be changed

Figure 9 Adding a Prompt Set

All voice prompt sets are displayed after they have been added:

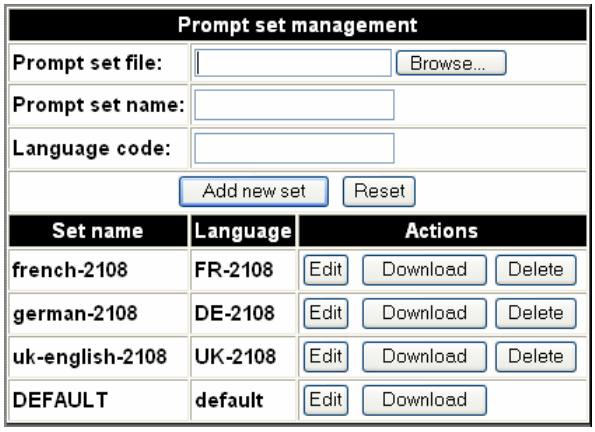


Figure 10 Prompt Sets Loaded

The Set name and the Language designator for any set can be edited by clicking on the **Edit** button next to that prompt set.

Note that if you upload a new version of an existing prompt set (that is, if you upload a new file while editing a prompt set), only the prompts which are defined in the new file will be replaced. Other prompts will be left as they were.

Note: Selecting which prompt set to use is covered in Section 5.1.1 "Setting an Organization's Voice Prompts".

3.7 Translation Tables

The ShoreTel Conference Director comes preloaded with a DEFAULT US English Dictionary. You can download and maintain additional dictionaries.

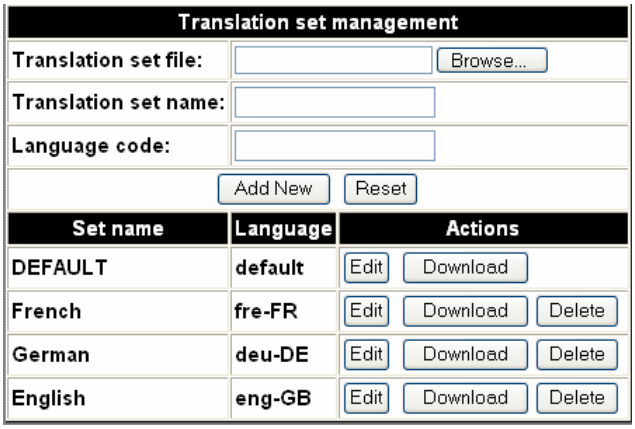


Figure 11 Translation Tables

3.7.1 Adding a Dictionary File

To add a dictionary file:

Click the **Browse** button to locate the xlatset.zip file associated with your required language.

Enter a **Translation set name** and **Language code**.

Click the **Add New** button.
The dictionary is added to the list.

3.7.2 Editing a Dictionary File

To edit a dictionary file:

Click on **Translation Tables** under **Configuration**.

Click on the **Download** button to locate the xlatset.zip file associated with the language you want to edit. The xlatset.zip file contains the dictionary.txt file and all graphic files that may be edited.

Double-click the dictionary file you want to edit.
The file will open in your text editor.

Locate any strings you want to modify and make your changes.

Save your file, when finished.

Note: You should create a new ZIP file if you want to maintain the original file.

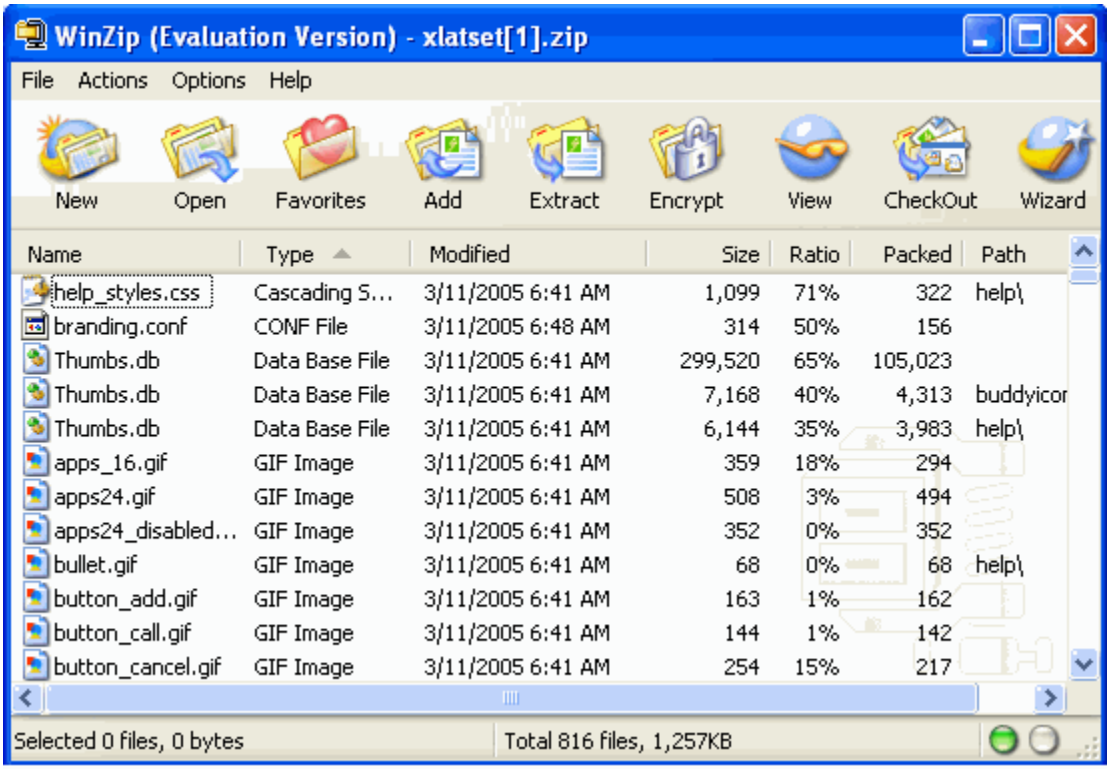


Figure 12 Language Files

3.8 Music on Hold Settings

The ShoreTel Conference Director ships with a .wav file for music on hold. The System Administrator can determine whether music is heard by users on hold, and if so, what music is played. Any alternative music-on-hold file should be stored in a 8 Kb/s, 8 bit, monophonic mu-law .wav file format.

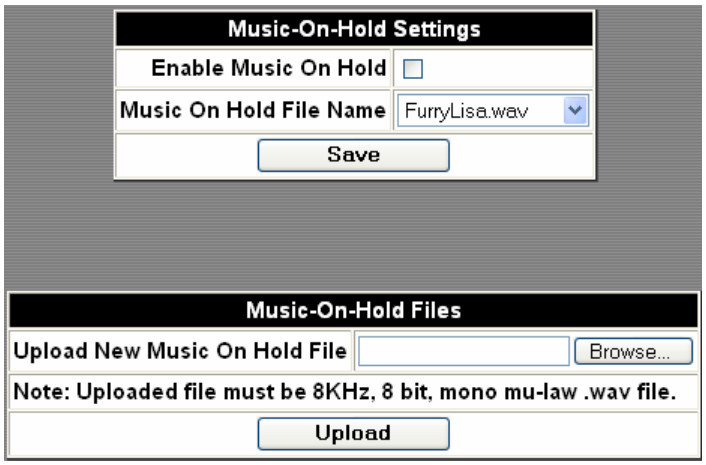


Figure 13 Music on Hold Update Screen

3.9 SSL Certificate (Installing Your Own Digital Certificate)

The ShoreTel CCS comes configured with a default digital certificate, which is used during HTTPS (SSL) sessions. This option allows the Administrator to update or replace the Digital certificate used by the web server. The certificate should be generated on a separate server using standard tools and the specific name of the CCS for which the certificate is being generated.

Click on the **Configuration** tab as shown in Figure 1 .
Click the **SSL Certificate** button.

Enter the path name of the file containing the certificate – optionally use the browse button to find the file. Enter the path name of the file containing the digital key corresponding to the certificate – optionally use the browse button to find the file.

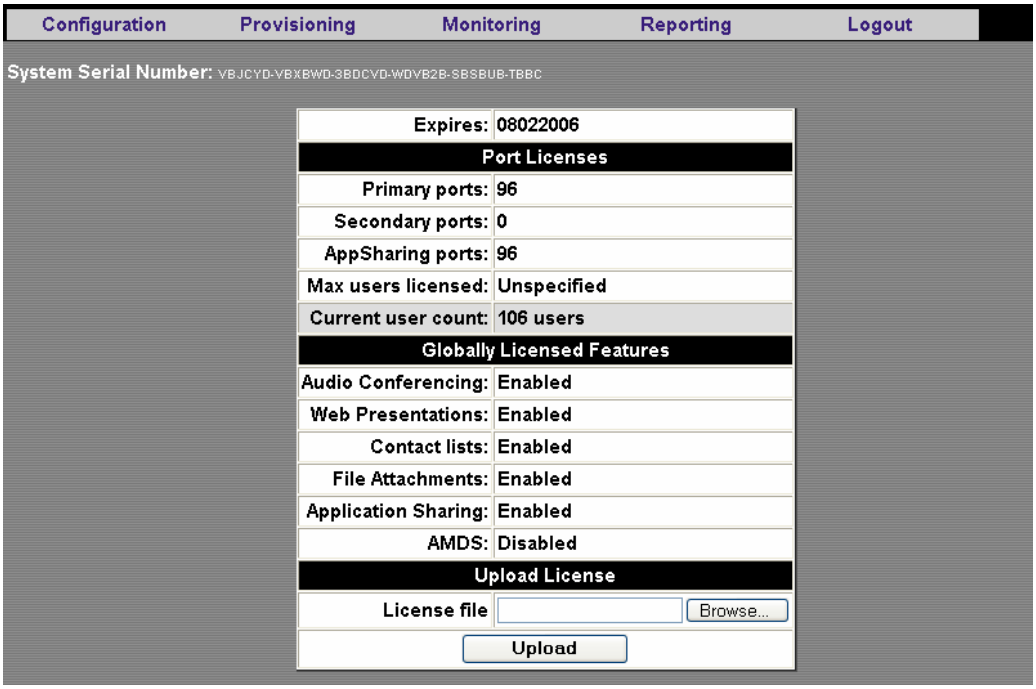
Click the **Upload** button.

Figure 14 SSL Certificate Upload

3.10 Licensing

Port capacity of a ShoreTel Conference Director is controlled by a license certificate. This certificate is tied to the specific server hardware, and is loaded on the server at the time of manufacture. (It is generated based on the System Serial Number shown in the figure that follows. This serial number is unique to each server.)

If you purchase a port upgrade from ShoreTel, or should there be a field repair to your server hardware requiring a new license certificate, your support representative will generate a new certificate; you may be asked to provide the System Serial Number. The following screen is then used to install that certificate on your server. (If licensed, AppSharing ports appear.)



Port License Certificate

Should you need to install the new license certificate, follow these steps:

Click on the **Configuration** tab as shown in Figure 1 .

Click the **Licensing** button.

Enter the path name of the file containing the license certificate – optionally use the browse button to find the file.

Click the **Upload** button.

For servers configured with document sharing/presentation capabilities, certain third party software is installed and must be licensed. Components are licensed from Microsoft and VMware. If your system has been built without document sharing enabled, this part of the screen will not appear.

When the system is installed, the VMware license must be uploaded.

Click on the **Configuration** tab as shown in Figure 1 .
Click the **Licensing** button.

Enter the path name of the file containing the VMware license certificate in the box below – optionally use the browse button to find the file.

Additional components are licensed from Microsoft. The Microsoft license is provided by ShoreTel and must simply be accepted. If either of these two steps (VMware license upload and acceptance of Microsoft license) is not performed, document sharing will not operate.

Click on the **Configuration** tab as shown in Figure 1 .
Click the **Licensing** button.
Click the **Accept** button.
Click on **Submit**. (This uploads VMware license and accepts Microsoft's license.)

Figure 15 Licensing

The ShoreTel Conference Director also uses unmodified open source software components which have their own licenses. These license agreements can be displayed by clicking on the **Open Source** button.

3.11 Automatic Server Backup

CCS 5.6.2 supports automated backup of the server and user data. Backups are performed at a predetermined time of low system traffic. All server databases "dump" an internally consistent snapshot of their contents to a small number of files, and these files are then FTP'd or SCP'd to a storage location on the user's IP network.

Click on the **Configuration** tab as shown in Figure 1
Click the Automatic Server Backup button.
Click the check box for Enable Automated Nightly Backups.
Enter Host name and user information.
Choose Backup method (**SCP** or **FTP**).
Click Save.

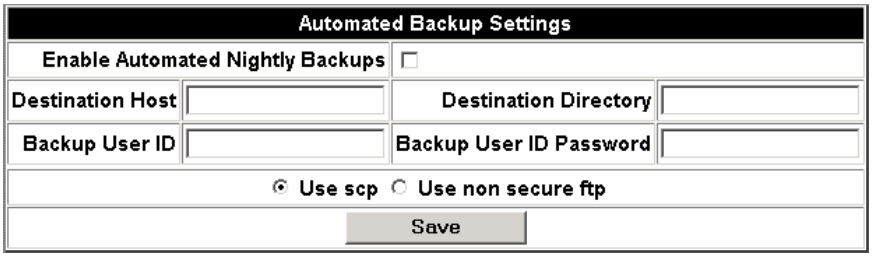


Figure 16 Nightly Backup Settings

3.12 Advanced Settings

Selecting Advanced Settings opens a new menu on the left of the screen. When you are done with the Advanced Settings, select one of the tabs at the top of the screen to proceed. These settings represent infrequently used configurations or actions (the actions are documented in Chapter 4 Management Actions). The Advanced Settings menu presents the following choices (**Note**: Not all may be enabled in your software version):

- Extension Filter
- Phone Number Display Filter
- Restart Servers [documented in section 4.5 Restart Servers (Restart CCS processes)]
- Edit DAS Rules
- Configure SNMP Traps
- Configure Collaboration Subnet
- Configure Sendmail

3.12.1 Extension Filter

This setting is intended to allow extension dialing. The Conference Director allows extension dialing by preceding the dialed digit string with the letter “x”. By entering the regular expression that defines the numbers to be considered extensions, the need for the “x” is removed. In the example below, the user interface will accept 3 to 5 digit extensions as valid numbers to attempt to dial.

Regular expressions are a flexible and powerful syntax for textual pattern matching and replacement. They are commonly used in Unix/Linux (e.g., the grep command) as well as in the Perl language. Numerous tutorials for using regular expressions are available online.

Click on Advanced Settings.
Click on Extension Filter.

Figure 17 Extension Filter Pattern

Enter the extension pattern.
Click **Save**.

For a description of regular expressions, see section 2.18.3.

3.12.2 Phone Number Display Filter

This field allows the system administrator to change the formatting and content of the way telephone numbers are displayed within the user interface and on CDRs (reports).

The filter pattern is a “regular expression” that gets applied to a telephone number before displaying it; it does not affect what numbers are dialed or saved. Regular expressions are a flexible and powerful syntax for textual pattern matching and replacement. They are commonly used in Unix/Linux (e.g., the grep command) as well as in the Perl language. Numerous tutorials for using regular expressions are available online. The Phone Number Display Filter uses the Perl regular expression parser; all parsers support the basic operators generally used in ShoreTel filters.

The “Filter pattern” field requires that you enter a string to match telephone numbers; if a match is made, then the portion of the phone number text preserved inside the search buffer (the text which is matched by the pattern inside the parenthesis) will be displayed.

Click on Advanced Settings.
Click on Phone Number Display Filter.

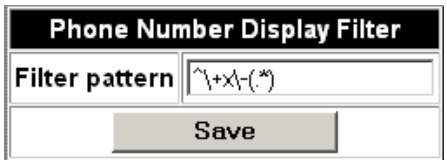


Figure 18 Phone Number Display Filter

Click **Save.**

Note: If you specify an illegal regular expression, some Report screens may get HTML or XML errors when they attempt to display. If this happens, correct the filter and retry the operation. No code or data is corrupted by illegally formatted Phone Display Filters.

3.12.3 Edit DAS Rules

The Conference Director can be configured with rules to handle a broad range of call routing and dial plan requirements. These can be configured to handle international dialing, calling PBX extensions.

The call routing rules are called DAS rules. DAS rules are a set of up to 20 UNIX regular expressions that are applied to the user's dialed digits. The rules are applied in order, one after the other – the output of each rule is the input to the next one. The result is used as the dialed digits to be processed by the ShoreTel Converged Conference Director's call processing engine.

Regular expressions are a flexible and powerful syntax for textual pattern matching and replacement. They are commonly used in UNIX/Linux (e.g., the grep command) as well as in the Perl language. Numerous tutorials for using regular expressions are available online.

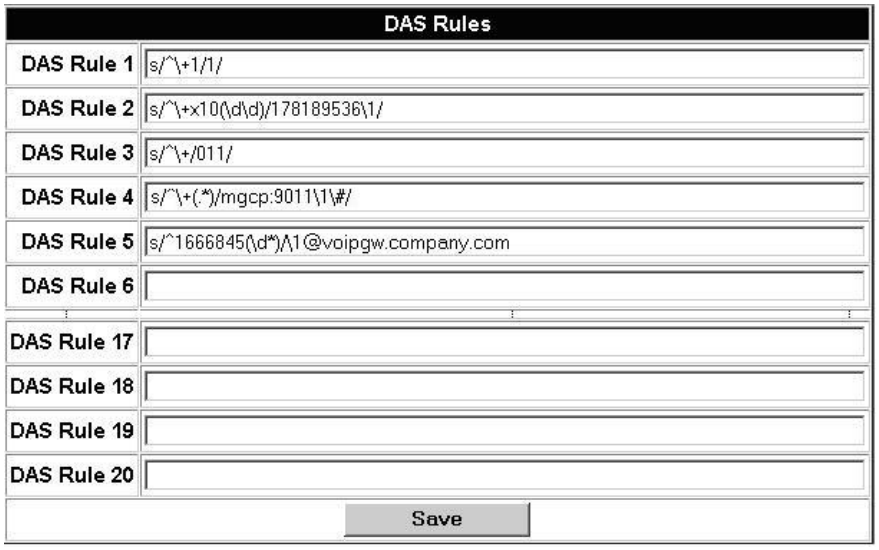


Figure 19 DAS Rules

These are the fields for the individual DAS rules. Sample rules are shown already filled in. (See below for an explanation of these sample rules.)

1. Enter the specific rules you want the server to follow in processing dialed digits.
2. Click Save.
3. When you get the warning box (below), click OK.

   Note: Doing so will disconnect all phone calls on the server at that time.

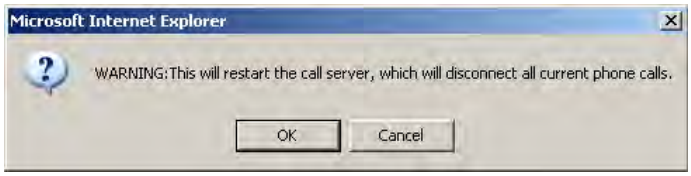


Figure 20 Explorer Warning

4. Close your browser window.

Sample DAS Rules

The sample DAS rules shown above perform the following functions:

s/^\+1/1/	When a digit string starts with “+1”, it substitutes just “1” (domestic US long distance call)
s/^\+x10(\d\d)/178189536\1/	If the resulting string starts with “+x10” followed by 2 digits (for four-digit extension dialing where all extensions start with 10), it substitutes the full outward dial string 178189536 concatenated with the 2 digits for the extension. This would be appropriate for dialing a four digit extension via a server that is connected directly to the PSTN.
s/^\+/011/	If the resulting string starts with a “+” it substitutes “011” (international call)
s/^\+(.*)/mgcp:9011\1\#/	Allows international dialing
s/^1666845(\d*)/\1@voIPgw.company.com	If the resulting string starts with the string “1666845” followed by any digits (for example, an extension), then the result is an address comprising those digits@voIPgw.company.com (for routing VoIP calls)

3.12.4 Configure SNMP Traps

The CCS can be configured to generate alerts and other messages using the SNMP protocol. When enabled, these alerts are sent in addition to the SMTP messages that are automatically enabled for all deployments (System Options). To configure the server to generate SNMP traps, perform the following steps:

Click on the **Configuration** tab.
Click on the **Advanced Settings** button.
Click on Configure SNMP Traps.

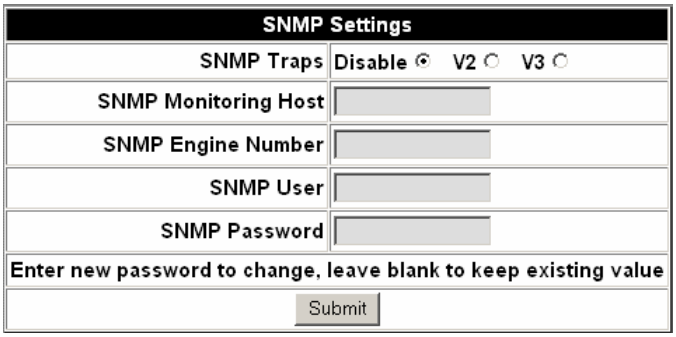


Figure 21 SNMP Settings

The settings are as follows:

- **SNMP Traps**
  - **Disable** – do not use SNMP for system monitoring (default setting)
  - **V2** – use SNMPv2
  - **V3** – use SNMPv3
- **SNMP Monitoring Host** – the host name of the SNMP monitoring system. In all cases, the traps are sent to the host specified as the "SNMP Monitoring Host."
- **SNMP Engine Number** – the authoritative (security) engine ID for SNMP v3 requests. The engine number is specified in hex, e.g. 0x0102030405. It is chosen by the administrator, and must be the same on both the trap sending and trap receiving sides.
- **SNMP User –** the SNMP v3 security name (uses MD5 authentication).
  The SNMP security name is a text string without spaces. It is chosen by the administrator and must be the same on both the trap sending and trap receiving sides.
- **SNMP Password** – the SNMP v3 security pass phrase and privacy pass phrase. The SNMP password is a text string without spaces. Both the trap sending and trap receiving sides must be configured to use the same password for the specified user.

Enter the appropriate information to match your network configuration.
Click on **Submit**.

Appropriate provisioning must be done on the receiving side to enable receipt of these traps.

3.12.5 Configure Collaboration Subnet

This allows a change to the IP range if there is a conflict with the Local Network environment where the subnet is installed.

Return to the Welcome Screen.
Click on the **Configuration** tab.
Click on the **Advanced Settings** button.

Click on Collaboration Subnet.

The first three octets of a Subnet Address appear.

Figure 22 Subnet Setting

Change the Subnet address (first three octets).
Click **Save**.

3.12.6 Configure Sendmail

This is used by customers who need to disable Sendmail functionality if it is not needed.

Return to the Welcome Screen.
Click on the **Configuration** tab.
Click on the **Advanced Settings** button.
Click on Configure Sendmail.

Figure 23 Sendmail

Check the "**Enable Sendmail**" check box.
Click **Save**.

4 Management Actions

The items documented in this chapter all perform immediate actions on the server. They are available from the Configuration menu.

4.1 Manual Server Backup

Periodic backup of server data is strongly recommended. Should the server suffer a catastrophic failure and need to be replaced, the backed up data can be restored to the new server so that system configuration data, user data, CDRs, call schedules, access codes and the like are retained. Backups comprise both data (conference schedules, authorized users, etc.), and server configuration (IP addresses, server SSL certificate, etc.).

User data and server configuration information can be backed up manually or automatically (see section 3.11). In the case of manual backups, this screen is used to identify the data elements that you want to back up.

Click on the **Configuration** tab as shown in Figure 1 .
Click the Manual Server Backup button.
In the screen below, select the items you want to have backed up.

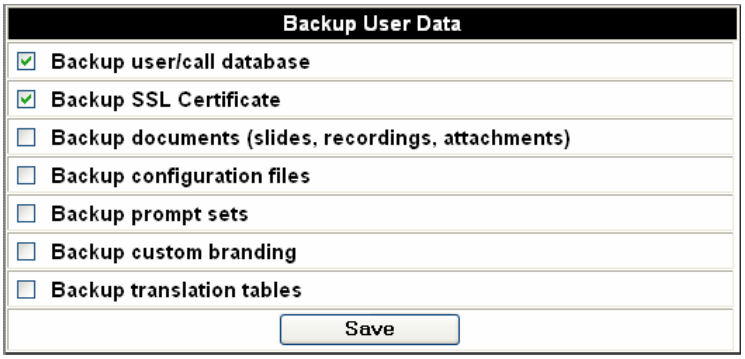


Figure 24 Manual Server Backup

Click **Save**.

After clicking **Save**, you will be presented with a browser dialog box asking where on your local machine or network you want to save the file.

4.2 Manual Server Restore

Note: A system backup can only be restored to a system running the exact software revision that was in use when the backup was created. Also note that the restoration process is destructive. That is, all existing user data and configuration settings will be deleted and replaced with the contents of the backup file.

If you are restoring a stacked system and you are using replication, the following procedure should be followed to avoid missed or anomalous data:

1. Restore primary system
2. Clear secondary system's database (see Section **Error! Reference source not found.**)
3. Replicate primary system to secondary.

Click on the **Configuration** tab as shown in Figure 1
Click the Manual Server Restore button.
Enter File Name (or browse to the file location) to Restore.
Click **Restore**.

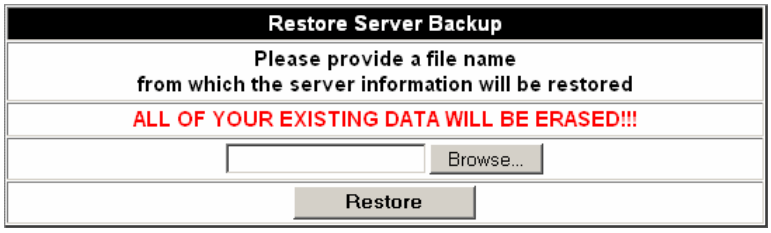


Figure 25 Restore Server

4.3 Shutdown (Graceful server shutdown)

This function allows the Administrator to gracefully shut down the CCS.
Click on the **Configuration** tab.
Click on the **Shutdown** button.

Note: The shutdown will start immediately, terminating any calls or activities in progress.

Figure 26 Shut Down System

Note: Clicking on the "**Restart**" button will perform a full reboot of the ShoreTel Conference Director. The server loses contact with your browser session during the reboot – therefore, you must invoke and log into the CCS's Administration application after the restart has completed in order to check its status.

4.4 Upgrade Server Software

The CCS supports online upgrades of the server software. Upgrades are typically done only to install new releases of the CCS software. Upgrades can be done remotely or locally via an upgrade CD. To perform an upgrade, you will need to know the location of the upgrade file. Your customer support representative can help you identify the correct file to use and its location.

Upgrades are a two-step process:

i) upload the upgrade file (or install the CD), and

ii) apply the upgrade.

Applying the upgrade will terminate calls in progress.

You can install patches from a CD and auxiliary components provided by third-party ShoreTel partners may also be updated from a CD ISO image file.

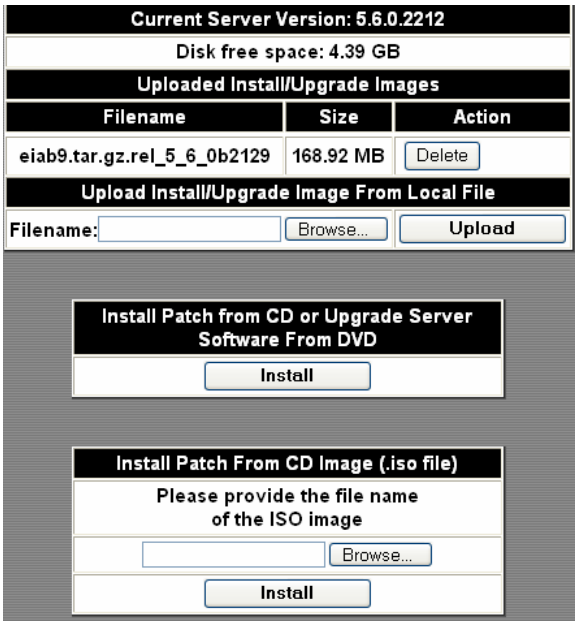


Figure 27 Upgrade Server Software

In the case of a network upgrade, the steps are as follows:

Click on the Browse button in the Upload Install Image From Local File box.
Select the upgrade file you want to apply to your system.
Click on **Upload.**

Once the upgrade process has started (including the upload of the upgrade file), do not perform any other functions with your browser (or close your browser window) until the upgrade is complete. Your browser window will reflect the state of the upgrade process, letting you know when it is complete.

4.5 Restart Servers (Restart CCS processes)

This option is available via the Advanced Settings screen in the Configuration menu.

If for specific maintenance purposes, it is necessary to restart specific server software processes; this window allows you to select which processes to restart. Restarting services can interrupt calls and other user features. It is strongly recommended that you restart processes only under the direction of your customer support representative.

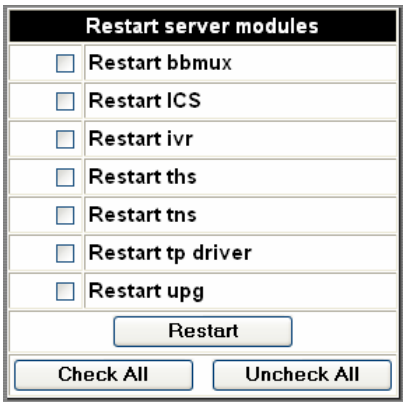


Figure 28 Restart Servers

5 Organization/User Provisioning and Account Management

The ShoreTel Conference Director allows multiple organizations to be hosted on a single system, each organization with its own set of dial-in telephone numbers. Users are assigned to Organizations. Organizations can have as few as a single user assigned.

User accounts on the CCS contain user-specific information needed for those users to log into and use the system. When a user is initially provisioned, most parameters are set to system defaults, but the system administrator can subsequently change specific settings for individual users, as described below.

Note that provisioning can be done either directly on the CCS, or via LDAP querys to a corporate directory. The following sections describe the process for setting users up locally in the ShoreTel server's database. Using LDAP is described in Section 3.5.

Organization and user management is provided through functions available under the Provisioning tab on the Welcome Screen as shown in Figure 1 .

5.1 Provisioning Organizations

The first step in provisioning a Conference Director is to add the organizations that will be using the system. The server comes preconfigured with one organization – the DEFAULT organization. For most ShoreTel deployment, the DEFAULT organization is the only organization that is needed.

Click on **List Organizations** in the left column.

Figure 29 Organization List Screen

Click on the organization name **DEFAULT** in the resulting list of organizations.

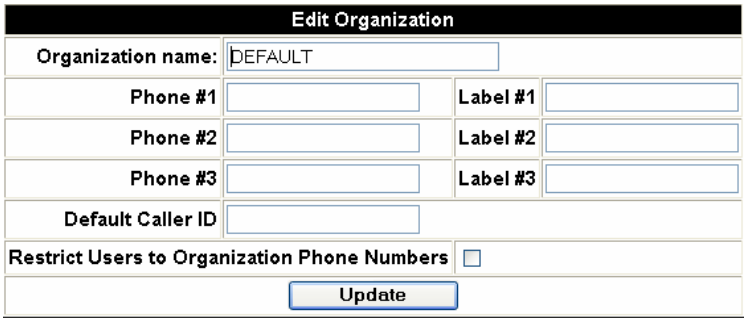


Figure 30 Edit Organization Screen

Change the Organization name (if you prefer).
Enter the telephone numbers and labels you want for this organization.
Enter the caller ID for the organization.
Select whether users in a given organization may only use telephone numbers associated with that organization (typically selected).
Click **Update**.

The fields are defined as follows:

- **Dial-In Phone Number 1** – The first telephone number assigned to the CCS that users dial to join conferences. This is typically a DID (toll) telephone number (but can be a toll free number).
- **Dial-In Phone Number 1 Label** – The label associated with the first telephone number.
- **Dial-In Phone Number 2** – The second telephone number assigned to the CCS that users dial to join conferences. This is typically an 800# (toll free) telephone number (but can be a toll number).
- **Dial-In Phone Number 2 Label** – The label associated with the second telephone number.
- **Dial-In Phone Number 3** – The third telephone number assigned to the CCS that users dial to join conferences. This can be either a toll or toll free telephone number.
- **Dial-In Phone Number 3 Label** – The label associated with the third telephone number.
- **Default Caller ID** – The caller ID presented on outgoing calls from the organization's users.
- **Restrict users to Organization Phone Numbers** – Conferences scheduled by users who are members of an organization can only be accessed by calling that organization's phone #'s (defined above).

The dial-in numbers that are configured here will be visible in various parts of the end-user browser interface as well as being automatically included in the email invitations to scheduled conference calls. Telephone numbers defined for organizations should be unique, particularly if organizations have their own voice prompt sets. If the telephone numbers for two organizations are the same, the system will randomly pick one of their voice prompt sets to play.

5.1.1 Setting an Organization's Voice Prompts

Each organization served by a CCS system may have its own voice prompt set. This way, for example, the system greeting may be customized to a specific organization, or different organizations may use prompts in different languages.

The ShoreTel Conference Director ships with four prompt sets. The DEFAULT set is in US English. The contents of its prompts are shown in Appendix B.

If you want an organization to use a voice prompt set other than the DEFAULT set, you first need to add that new voice prompt set to the server. Adding new voice prompt sets is described in Section 3.6.

Once you have added one or more voice prompt sets, to have an organization use a specific voice prompt set, perform the following steps:

Click on the **Provisioning** tab.
Click on the **List Organizations** button.
Click on the name of the organization whose prompt set you want to change.

In the resulting screen (below), use the dropdown list to select the prompt set you want to use.

Figure 31 Assigned Prompt Set Screen

Click Add to Organization.

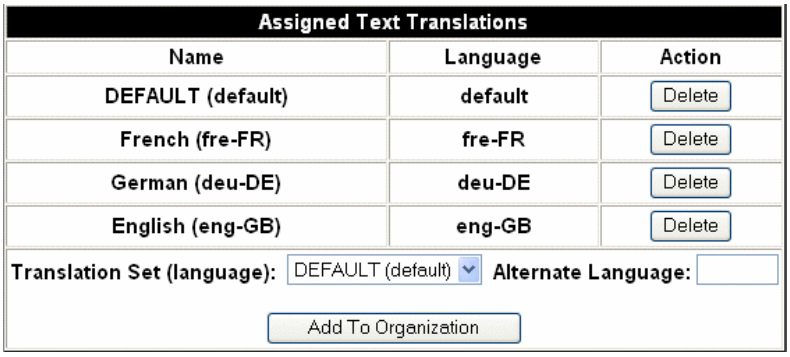


Figure 32 Assigned Text Translations

5.2 Add an Organization

To add a second (or additional) organization:
Click on the **Provisioning** tab.
Click on the **Add Organization** button.

Figure 33 Add an Organization

Enter the Organization's name, phone number and caller ID information in the fields shown.
Select whether users in a specific organization may only use telephone numbers associated with that organization (typically selected).
Click Create Organization.

Note: The DEFAULT organization cannot be deleted. It will remain even if you rename it. Additional organizations created subsequently, however, can be deleted. If an organization is deleted, users assigned to that organization automatically get reassigned to the DEFAULT organization. To delete users, see Section 5.7 "Modify/Delete User Accounts".

5.3 List Organizations

To see a list of the Organizations on your system,
Click on the **Provisioning** tab at the top of the Welcome screen.
Click on the **List Organizations** button.

You will see a screen that lists the organizations hosted on your server.

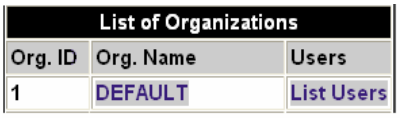


Figure 34 Organization List

If you want to see the users assigned to a specific Organization, click on **List Users** next to the Organization name.

5.4 Create/Add user accounts

This feature is used to add individual accounts.

Click on the **Provisioning** tab at the top of the Welcome screen.
Click on **Add User**.
Enter a user name for the user you are adding (65 characters max). The user name is used as the login ID for ICS. CCS user names must be formatted like email addresses: <name>@<domain.ext>. However, the system does not use the user name as an email address unless requested to (for example, if an ICS user right-clicks on a user name and chooses email). If you never request email to be sent to a user, the specified name@domain.ext need not even be a valid email address. The domain.ext should not be all numeric; specifically, it must not be an IP address.
Enter a password for the new user.
Enter the new user's telephone number.
Select the user's Organization from the dropdown list.
Enter a description of this user (optional).

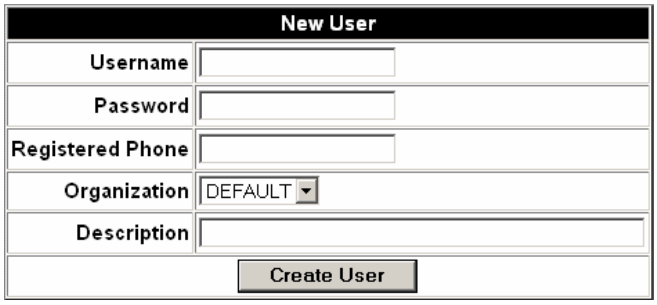


Figure 35 Adding User

Click the **Create User** button.

A screen will pop up to confirm that the new User has been added to the system.

Figure 36 New User Confirmation

5.5 List users

Click on the **Provisioning** tab on the welcome screen.
Click on the **List Users** button.

A screen will appear that shows all of the currently configured users for this organization. They will be listed in the table as shown below with their CCS user name and description (if any).

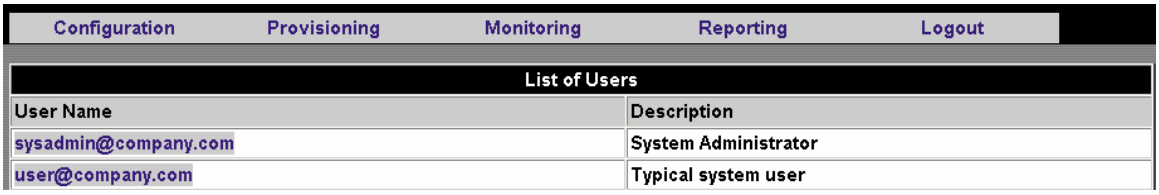


Figure 37 User List

Clicking on a particular user will bring up the modify user screen as shown in Figure 41 .

5.6 Find User

In a multi-server site, or in an installation where multiple systems are federated, you may need to find out which server a particular user is registered on.
Click on the **Find User** button.

Figure 38 Find User

Enter the user name in the text entry field.
Click **Search**.

If that user name is registered on a server, the result will display the site/server and the registered user name:

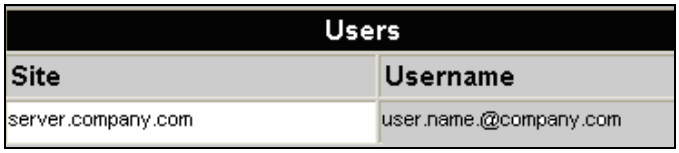


Figure 39 User Name

Click on the username to manage the user's profile, as shown in.

5.7 Modify/Delete user accounts

Click on the **Provisioning** tab on the Welcome screen.
Click the **Administer User** button; the following dialog box will appear:

Figure 40 Administer User

Enter the name of the User whose account you want to administer.
Click on **Search**.

Figure 41 View Options

Click on the setting you want to View/Modify.

These options are described in more detail in the following sections.

5.7.1 Manage User Profile

This selection will present the following screen, which will allow you to view and modify a user's profile:

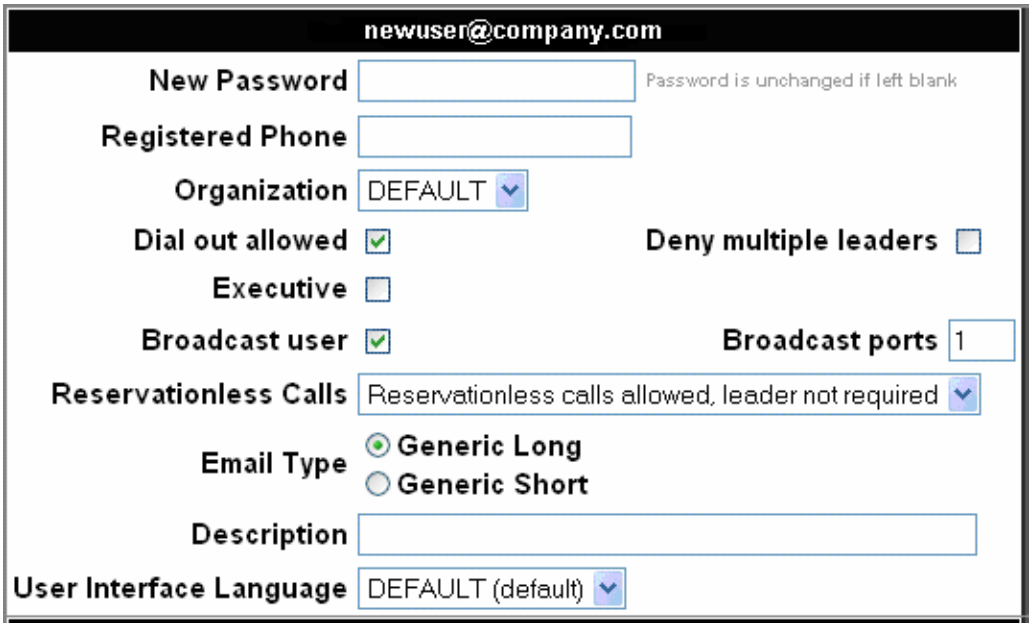


Figure 42 View/Modify User Profile

- **New Password** – The password the end user will use to access the end user web interface.
- **Registered Phone** – The telephone number of the user that the ShoreTel Conference Director will call when calling out to the User ID.
- **Organization** – The Organization the user is assigned to.
- **Dial out allowed** – User can dial out to others using the CCS system.
- **Deny multiple leaders** – If checked, this user may not have multiple callers using the leader access code on conference calls.
- **Executive** – User has access to set ports reserved for the use of "Executive" users. "Executives" can use any ports on a server, but "non-Executives" cannot use so-called "Executive" ports. This assures server ports for high priority ("Executive") system users, even under conditions of high traffic load. This feature is only recommended for use in CCS systems that contain PSTN gateway cards.
- **Broadcast User, Broadcast Ports** – User has access to the Automated Message Broadcast interface (see Section **Error! Reference source not found.** for more details). This feature will only be available to customers who have purchased the Automated Message Delivery System application. This will only appear if the message broadcast feature set is enabled.
- **Reservationless calls** – Three options:

- Reservationless calls allowed, leader not required.
    - The user may schedule a reservationless conference and has the option of allowing a call to begin without the leader having joined the call.
- Reservationless calls allowed, leader required.
    - The user may schedule a reservationless conference, but those calls cannot begin until a leader has joined the conference.
- Reservationless calls not allowed.
    - The user may only schedule one-time and recurring conference calls.

- **Email Type**
    - Generic long – provides longer, more complete conference information in users' email invitations. (Compatible with email clients that can handle longer preloaded messages via html "mailto" hyper-links, such as Microsoft Outlook)
    - Generic Short – provides less detail in users' email invitations. (Compatible with email clients that require shorter preloaded "mailto" messages, such as Lotus Notes.)
- **Description** – Optional text description of this user.
- **User Interface Language** – User can select the interface language from a drop-down list containing the available languages.

5.7.2 View Scheduled Conferences

This selection allows you to view a list of the user's scheduled conferences, including date, time, and access codes. The list will include one-time, recurring, and reservationless conferences that begin or end during the specified date range.

Select the dates you are interested in from the calendar dialog boxes.
Click **View**.

Figure 43 View Scheduled Conferences

The result is a table showing the scheduled conferences for that user during that time period, including conference subjects, dates, times, access codes, and billing and department codes, if any.

5.7.3 View Call Activity Report

To generate a call report for a particular user:
Click on **View Call Activity Report** as shown in Figure 41 .
Select the date range from the dropdown lists in the resulting web screen:

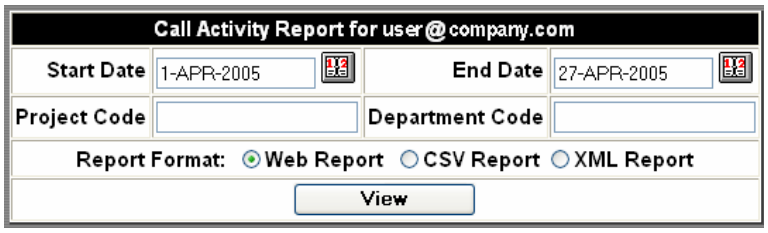


Figure 44 View Call Activity Report

Enter a specific Project Code or Department Code if you want to filter the data based on those parameters.
Select a report format. "Web Report" generates a report in a new web browser window. CSV Report generates a comma separated values file that you can save to your PC and use in other programs such as Excel. XML Report generates a report that can be imported into applications that understand XML.
Click on **View**.

The result will be a detailed table of all call legs for that user, including date, time, phone number, whether the call was incoming or outgoing, the conference ID, which specific server it was on, and which trunk and channel it was on for that server.

5.7.4 Schedule a Reservationless Conference

You may establish reservationless conferences for users of your system. This will enable them to hold conferences at any time, without having to schedule them in advance, and without having to use the end user web interface.

You have the option of pre-defining the user's leader and participant access codes. This access code, which is given to participants dialing into the conference, must be 7 digits long and start with ## where ## is the two digit Node ID (see **Error! Reference source not found.**). If the Node ID is a single digit, then the number should begin with a zero (0).

Optionally enter 7 digit leader and/or participant access codes in the access code fields in the screen below.

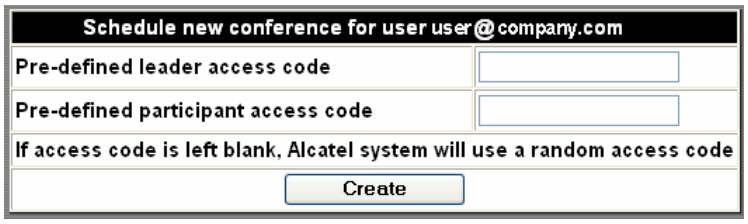


Figure 45 Scheduling a User's Reservationless Conference

Click on **Create**.
Note the resulting participant and leader access codes.

If the participant access code you requested is already in use on the system, you will get an error message that "the access code is not available." In that case, try a different code.

5.7.5 Assign Delegate

A "delegate" is a user who can view and change another user's call schedule. Delegates are often administrative assistants, but may be any registered user on the system.

Click on the **Provisioning** tab.
Click on the **List Users** button.
Click on the name of the user you want to assign a delegate.
Click on **Manage Delegates** (see Figure 41).

Figure 46 Assigning a Delegate

In the resulting window (above), enter the Delegate's username, and click on **Assign**.

Figure 47 Manage Delegates

5.8 Bulk Provision/Modify User Accounts

This feature is used to create multiple user accounts in a single step. The account information is read from an ASCII text, comma separated values (CSV) file that you prepare in advance.

Click on the **Provisioning** tab at the top of the Welcome screen.
Click on the **Bulk Provision Users** button. You will see the following screen:

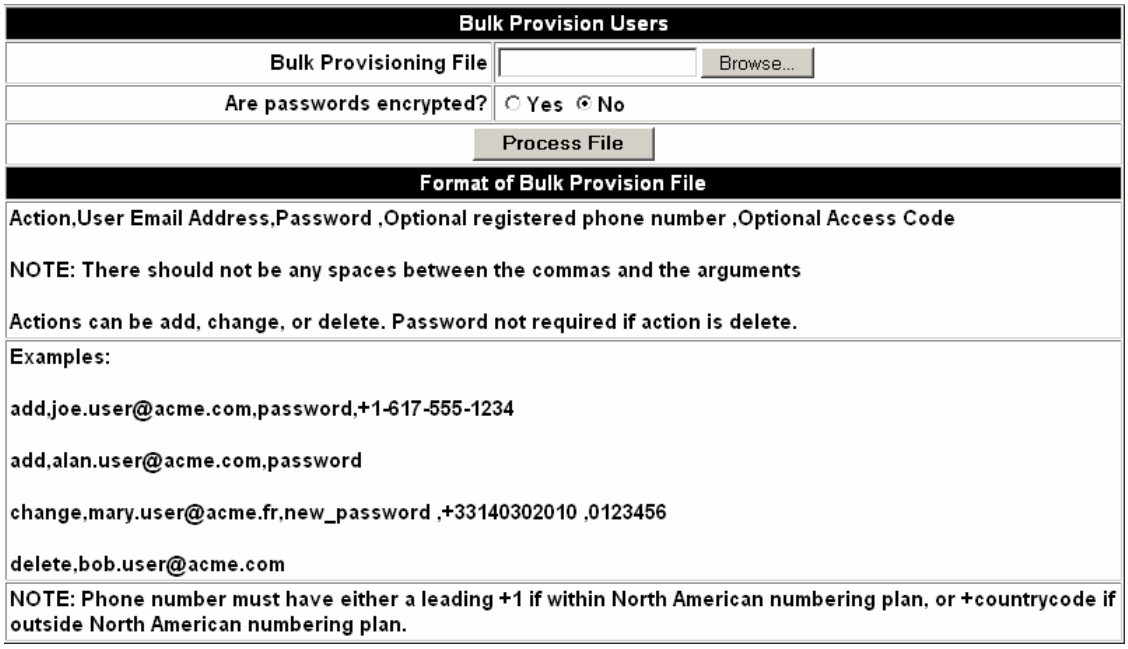


Figure 48 Bulk Provisioning Users

Click on the **Browse** button to locate the CSV file with the user information.
Click on Process File.

The bulk provisioning file format is described in the screen above. Each user is represented by one line in the file. Each line is of the following format:

```
Action,User_Email_Address,Password[,Registered_Phone_Number][,Pre-
assigned_reservationless_access_code]
```

Parameters in brackets are optional, so the minimum information that should be in the CSV file for each user is the action (add, change, delete), the user's email address (User Name in the single-user provisioning screen) which becomes the user's ID for accessing the system, and an assigned password (which the user may subsequently change).

Note: The user name/email address can be up to 65 characters in length. Note that the system does not use the user name as an email address unless requested to. If you never request email to be sent to a user, the specified name@domain.ext need not even be a valid email address. The domain.ext should not be all numeric; specifically, it must not be an IP address.

The optional registered telephone number is the user's phone number where the CCS can call the user to join the user into a call. The user can subsequently change this number from the end user's web user interface, allowing the user to be called wherever he or she happens to be.

The optional pre-assigned reservationless access code allows the system administrator to establish reservationless or "standing" conferences that users can make use of at any time,

without having to schedule them in advance. **Note**: The access code provided here is the Participants' access code. The ShoreTel Conference Director will automatically create the user's Leader access code.

To inform the users of their pre-assigned Leader and Participant access codes, you will need to retrieve the complete list of all users' Participant and Leader access codes by clicking on **Download Reservationless Conferences** in the menu on the **Provisioning** screen (see Section 5.10).

5.9 Bulk Provision Reservationless Conferences

A system administrator can set up reservationless conferences for users of the system. If this is done, then the users do not need to use the system's web UI to set up their own reservationless conferences.

The CCS bulk provisioning process lets the system administrator select the user's participant access code. If the system administrator specifies the participant access code, the corresponding leader access code is automatically generated by the system. Alternatively, the system administrator can let the server set both the participant access code and the leader access code.

In either case, the process is performed using a text file, in CSV (comma separated value) format. Each line starts with a registered user name, and (if selected) a desired participant access code. The access codes must start with the server's 2-digit node ID (typically 01), and be a total of seven digits long (e.g., for a user on node 01, 0123456, or for a user on node 02, 0235671).

This file needs to be prepared in advance using standard PC editing tools, or a spreadsheet that can save in CSV format (e.g., Microsoft Excel).

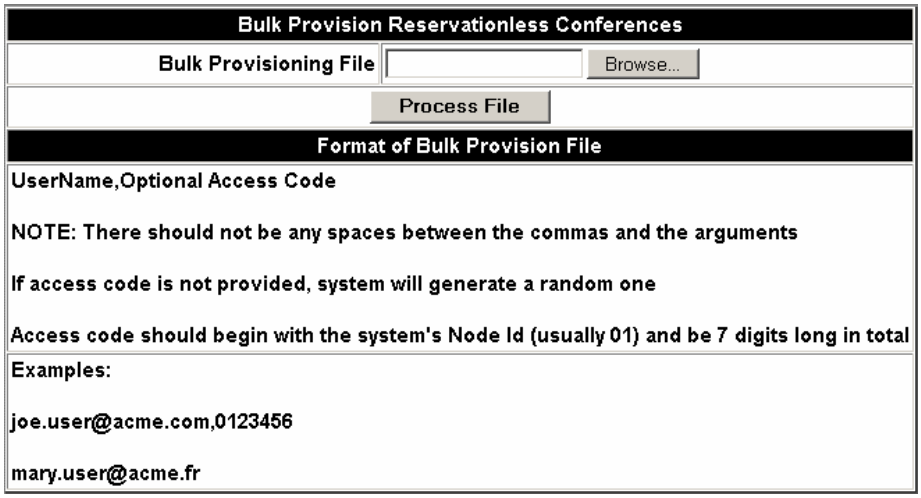


Figure 49 Bulk Provisioning Reservationless Conferences

After the file has been selected and processed, to retrieve the resulting leader/participant access code pairs, the system administrator performs the "Download Reservationless Conferences" step.

5.10 Download Reservationless Conferences

To download all users' reservationless access code sets, use the following steps.

Click on the **Provisioning** tab.
Click on the Download Reservationless Conferences button.
Type in a path and file name (to save on your local PC) for the file that will contain the users' reservationless access code sets.
Click **Save**.

Figure 50 Downloading Reservationless Conferences

Note: The resulting file will contain all the reservationless code sets on the system, including ones users have created for themselves.

5.11 Add Admin User

This screen allows you to add a system administrator.
Click on the **Provisioning** tab.
Click on the **Add Admin User** button.
Enter the new administrator's user name and password.
Click on Create Admin.

Figure 51 Adding a System Administrator

5.12 List Admins

If you want to see what users have system administration rights, do the following:
Click on the **Provisioning** tab.
Click on the **List Admins** button.

From the resulting screen, you can select administrators to delete. You can delete any administrator except the one that is currently logged in. In the screen below, the system administrator is logged in with the "admin" user account.

Figure 52 Listing System Administrators

5.13 Change Administrator Password

A system administrator can change his/her own password. To do so, perform the following steps:
Click on the **Provisioning** tab.
Click on the Change Current Admin Password button.
Enter the new password in both boxes.
Click on **Update**.

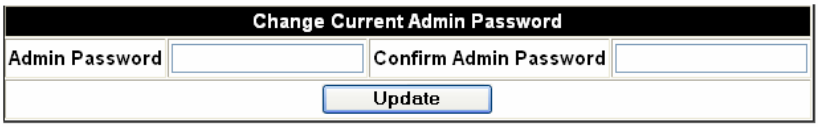


Figure 53 Changing an Administrator's Password

5.14 Default User Settings

When initially provisioned, all users are given the same set of user settings and privileges. These settings are called the "Default User Settings". The system administrator can set the defaults applied to all users who are subsequently provisioned on the system.

To configure these default settings, perform the following steps:
Click on the **Provisioning** tab.
Click on the **Default User Settings** button.

You will see a settings screen like the one below.

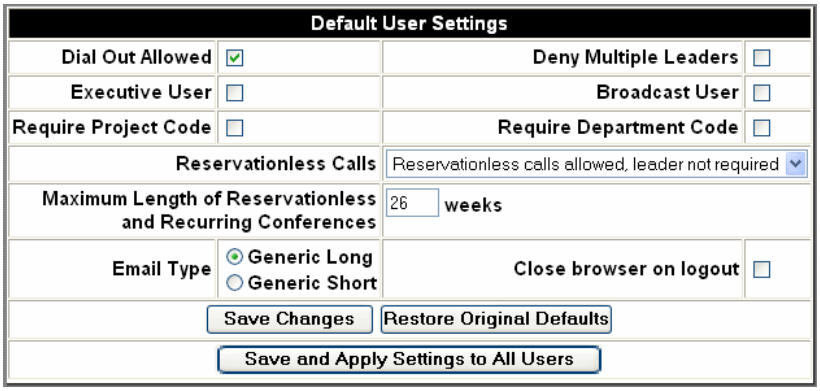


Figure 54 Setting User Defaults

The settings are as follows:

- **Dial out allowed** – User can dial out to others using the CCS system.
- **Deny multiple leaders** – If checked, this user may not have multiple callers using the leader access code on conference calls.
- **Executive User** – User has access to set ports reserved for the use of "Executive" users. "Executives" can use any ports on a server, but "non-Executives" cannot use so-called "Executive" ports. This assures server ports for high priority ("Executive") system users, even under conditions of high traffic load. This feature is only recommended for use in CCS systems that contain PSTN gateway cards.
- **Broadcast User** – User has access to the Automated Message Broadcast interface (see Section 0 for more detail). This option will only be available if the customer has purchased the Automated Message Delivery System application.

- **Require Project Code** – User must enter a Project Code when scheduling a conference
- **Require Department Code** – User must enter a Department Code when scheduling a conference
- **Reservationless calls** – Three options:
    - Reservationless calls allowed, leader not required.
    - Reservationless calls allowed, leader required.
    - Reservationless calls not allowed.
- **Maximum length of Reservationless and Recurring Conferences** – This determines the length of time before a Reservationless or Recurring conference expires[5].
- **Email Type**
    - Generic long – provides longer, more complete conference information in users' email invitations. (Compatible with email clients that can handle longer pre-populated messages, such as Microsoft Outlook.)
    - Generic Short – provides less detail in users' email invitations. (Compatible with email clients that can handle shorter pre-populated messages, such as Lotus Notes.)
- **Close browser on log out** – The user's browser window will automatically close when he/she logs out of the system. This adds extra security to user access of the system.

After you are done setting the desired defaults click on **Save Changes**.

If at any time you need to restore the original system defaults, click on **Restore Original Defaults**.

Note: If the defaults are changed, users who were provisioned before the change do not have their settings changed. To restore all users to the new system defaults, click on **Restore All Users to Defaults**. Any individual settings that differ from the defaults will need to be reapplied as described in section 5.7.1, "Manage User Profile".

[5] A conference is "expired" if its scheduled end time has passed. A reservationless conference does not expire until its entire authorized period is expired. A recurring conference does not expire until the last of its series of calls has expired.

6 Monitoring

Application and Server management is provided through functions available under the Monitoring tab on the welcome screen. The ShoreTel CCS includes a number of screens to allow administrators the ability to monitor both the server itself and activities of system users.

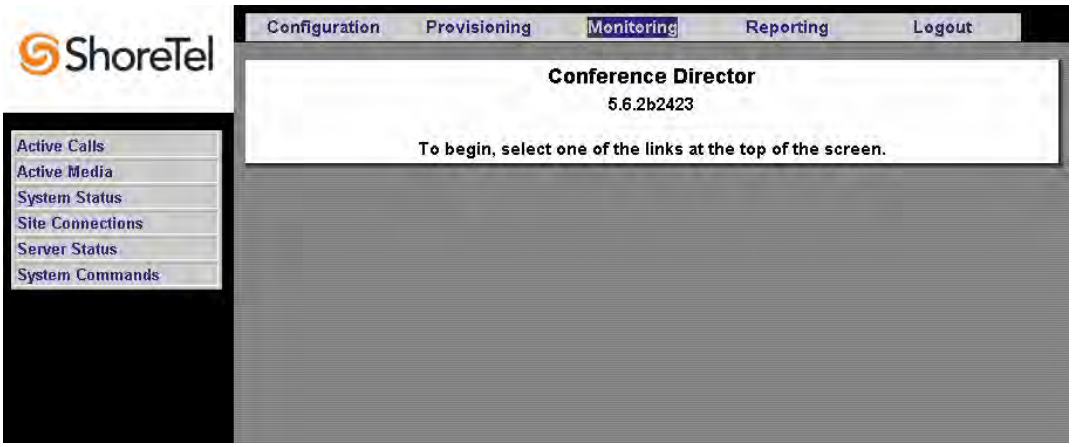


Figure 55 Welcome Screen

6.1 Viewing Active Calls

To see conferences that are currently up on the server, do the following:
Click on the **Monitoring** tab.
Click on the **Active Calls** button.

The Active Calls screen shows the calls and participants currently in those calls on this system.

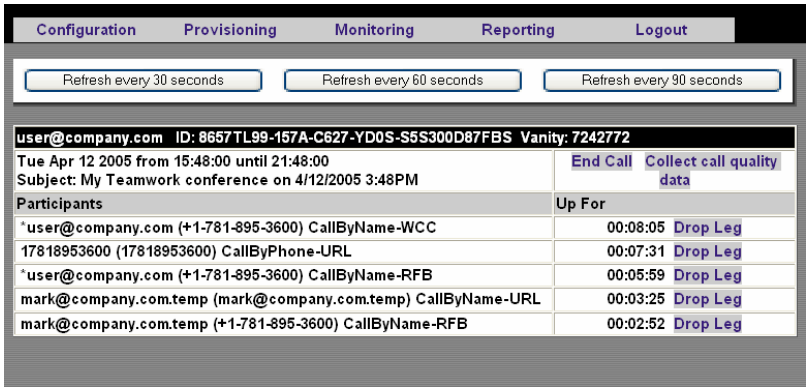


Figure 56 Viewing Active Calls

From this screen, the System Administrator can view all active calls with legs that terminate on this physical system, when they were scheduled for, who the participants are, and how long each leg has been up. In addition, the System Administrator has the ability to:

- drop individual legs (**Drop Leg**)
- end the entire call (**End Call**).

- collect diagnostics data on a problematic call. **Collect call quality data** initiates a collection of one minute's worth of voice quality data, and downloads it to the System Administrator's PC. This feature should only be used when requested by your customer support representative to use this data when assisting with the diagnosis of audio quality issues.

6.2 Viewing Active Media

To see media that are currently up on the server, do the following:
Click on the **Monitoring** tab.
Click on the **Active Media** button.

The Active Media screen shows the call legs currently on this system.

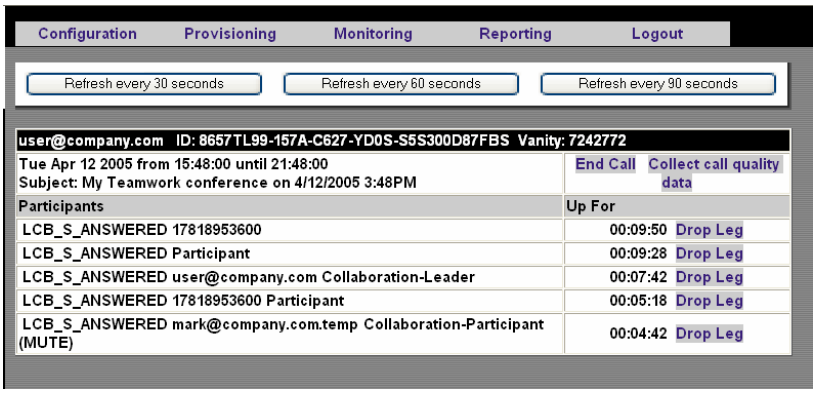


Figure 57 Active Media

6.3 Viewing Active Users

To see a list of users who are currently logged in to the system, do the following:
Click on the **Monitoring** tab.
Click on the **Active Users** button.

This feature will not show users who are signed-in to the Automated Message Delivery System applications as those are actually "sessionless" applications. Only users currently signed in to ICS, the ShoreTel Instant Collaboration System will appear in this list.

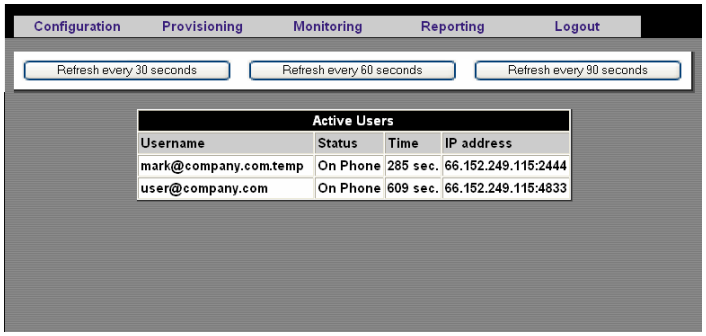


Figure 58 Active Users

6.4 System Status

System status shows the disk usage of the ShoreTel CCS. The system normally operates with disk usage well under 100%. If disk usage approaches 100%, contact your support representative.

To see the system disk status, do the following:
Click on the **Monitoring** tab.
Click on the **System Status** button.

The following screen will appear.

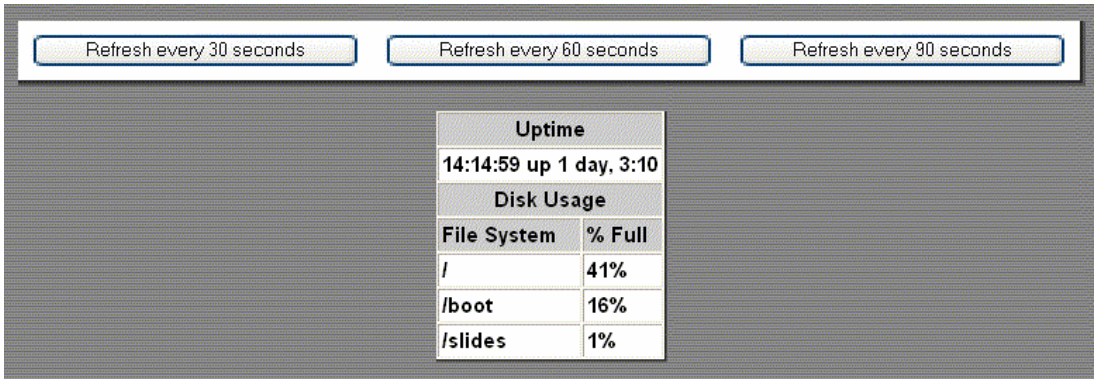


Figure 59 Viewing System Status

6.5 Site Connections

ShoreTel Conference Director may be deployed in a distributed configuration of multiple sites. Each server in a site is configured with information about other sites with which it can establish distributed conferences. The names of the other sites with which a given server is "federated" are shown in the Sites field, along with the number of registered users on this server.

Other sites that are connected to this server have a status of "CONNECTED".

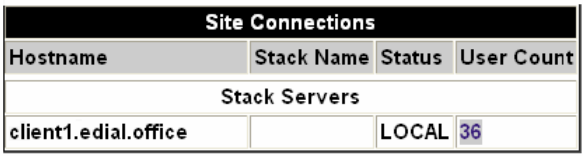


Figure 60 Connected Sites

To see a list of users registered on a given server, click on the number under "User Count" associated with that server.

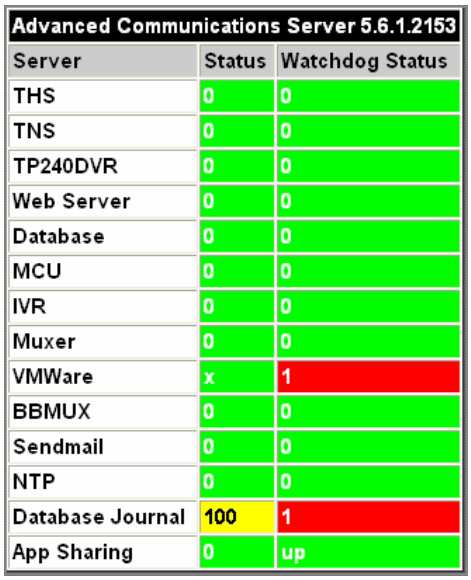
6.6 Server Status

The software in the CCS is comprised of a number of processes, themselves called “servers”. Each of these server processes is governed by a software watchdog to assure proper operation. Under certain error conditions, it may be necessary to restart individual server processes in an CCS. This should be done only under the supervision of your support representative.

To determine which (if any) server processes may need to be restarted, you can check the server process status by following these steps:

Click on the **Monitoring** tab.
Click on the **Server Status** button.

You will see a screen similar to the following:



Advanced Communications Server 5.6.1.2153		
Server	Status	Watchdog Status
THS	0	0
TNS	0	0
TP240DVR	0	0
Web Server	0	0
Database	0	0
MCU	0	0
IVR	0	0
Muxer	0	0
VMWare	x	1
BBMUX	0	0
Sendmail	0	0
NTP	0	0
Database Journal	100	1
App Sharing	0	up

Figure 61 Server Process Status

The status indicators are as follows:

Color	Text
Green – Normal	0 - Normal
Red – Disabled Services	1 – Disabled Services
Yellow – Informational Status	X – Not installed

Provide this information to your support representative if you are asked for it.

6.7 System Commands

ShoreTel Conference Director displays troubleshooting information through selection of the System Commands button. The resulting screen displays information related to which server to ping to test connectivity, network interface information, and routing table information. This information is useful when troubleshooting problems with support via the phone.

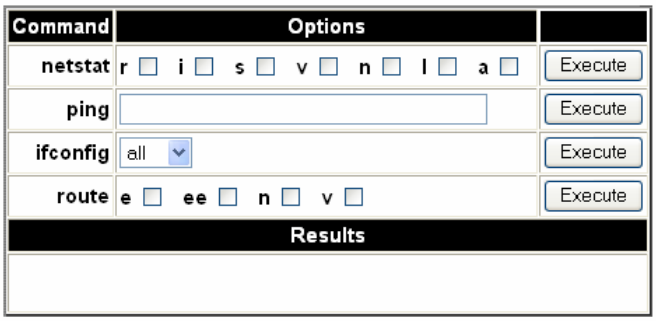


Figure 62 System Commands Information

7 Server Reporting

The CCS provides a number of status and system utilization reports. These contain non-real-time data that is useful in managing the system on an ongoing basis.

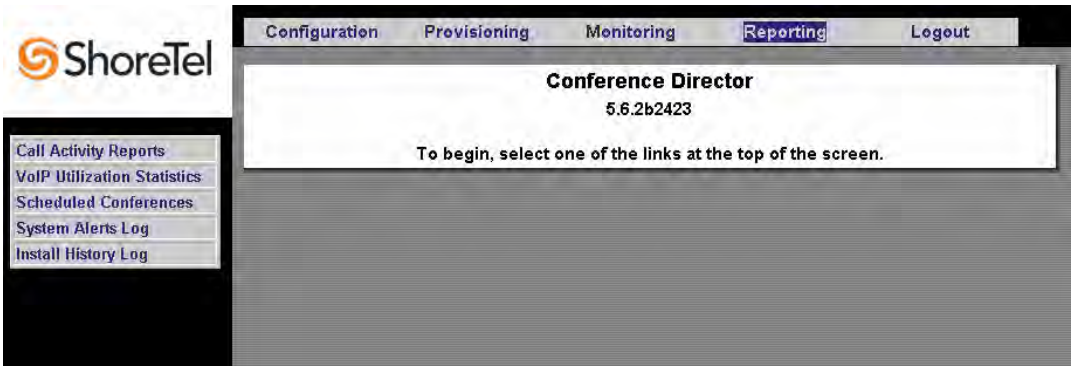


Figure 63 Server Welcome Screen

7.1 Call Activity Reports

System administrators can generate reports that contain detailed information about every leg in every conference within a specified time range.

Click on the **Reporting** tab.
Click on the **Activity Reports** button.

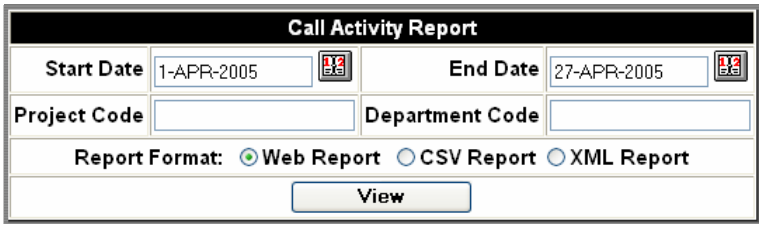


Figure 64 View Call Activity

Select the day(s) from which the report is to be generated.
Enter a Project Code or Department Code if you want to view only system usage associated with those codes.
Click the **View** button.

Call Activity Report									
Call Start Date	Call Start Time	User Name	Phone Number	Leg Start Time	Duration Hour:Min:Sec	Leg Number	Access Code	Project Code	Depa Code
2003-02-24	09:16:00	mike@york.com	+17818950036	09:16:00	00:31:45	1	0118849		
2003-02-24	09:16:00	mike@york.com	+17818950036	09:16:41	00:31:10	2	0128822		
2003-02-24	09:16:00	mike@york.com	+17818950036	09:20:35	00:26:08	3	0128822		
2003-02-24	10:00:02	mike@york.com	+17818950036	10:00:02	00:04:39	1	0128552		
2003-02-24	10:00:02	mike@york.com	+17818950036	10:00:38	00:00:25	2	0138525		
2003-02-24	10:00:02	mike@york.com	+17818950036	10:01:41	00:03:05	3	0138525		

Figure 65 Activity Report

7.2 VoIP Utilization Statistics

In systems configured to handle VoIP traffic the System Administrator can generate reports on VoIP "port" utilization. In this case, "ports" are VoIP RTP voice streams.

To select the time range for which you want to review VoIP utilization, perform the following steps:

Click on the **Reporting** tab.
Click on the VoIP Utilization Statistics button.

You will see the following date range selection dialog box:

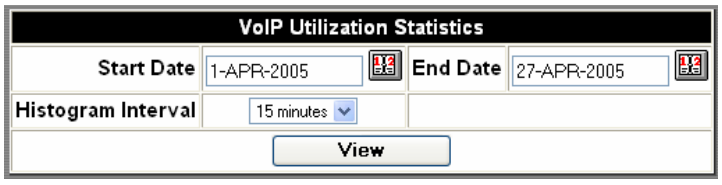


Figure 66 View VoIP Utilization

Select the date range and the data time interval that you desire.
Click **View**.

You will see a histogram like the following. The green bars show the number of active ports (streams) during a given time slot. The red bars show the number of occupied port (stream) seconds.

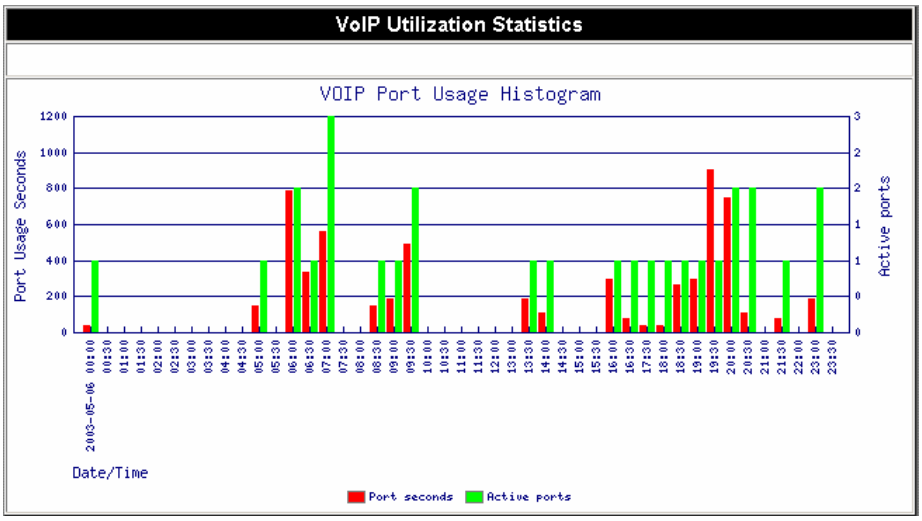


Figure 67 VoIP Utilization Chart

This is useful for monitoring capacity utilization of the server over time.

7.3 Scheduled Conferences

The System Administrator can view all conferences scheduled on a specific server. To do so, perform the following steps:

Click on the **Reporting** tab.
Click on the **Scheduled Conferences** button.

You will see a date range selection dialog box like the following:

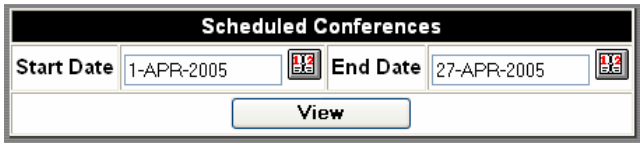


Figure 68 View Scheduled Conferences

Select the date range you want to see.
Click on **View**.

You will see a list of scheduled conferences like the one shown below. Details are shown for each scheduled conference.

Scheduled Conferences									
Owner	Subject	Leader Code	Start Time	End Time	Participant Code	Is Leader Required	Billing Code	Department Code	Are Multiple Leaders Allowed
user@company.com	SI conference on 9/1/2005 4:26PM	0107273	Thu Sep 1 16:26:36 2005	Thu Sep 1 22:26:36 2005	0117246	N			Y
user@company.com	SI conference on 9/2/2005 4:33PM	0127219	Fri Sep 2 16:33:52 2005	Fri Sep 2 22:33:52 2005	0137192	N			Y
user@company.com	SI conference on 9/4/2005 9:49AM	0147165	Sun Sep 4 09:49:04 2005	Sun Sep 4 13:49:04 2005	0157138	N			Y
user@company.com	SI conference on 9/6/2005 11:38AM	0167111	Tue Sep 6 11:38:18 2005	Tue Sep 6 17:38:18 2005	0177084	N			Y
user@company.com	SI conference on 9/7/2005 7:40PM	0187057	Wed Sep 7 19:40:19 2005	Thu Sep 8 01:40:19 2005	0197030	N			Y
user@company.com	Presentation on Sep 08, 2005, 01:36 PM US/Pacific	0107003	Thu Sep 8 13:36:09 2005	Thu Sep 8 19:36:09 2005	0116976	N			N
user@company.com	SI conference on 9/9/2005 2:30PM	0126949	Fri Sep 9 14:30:16 2005	Fri Sep 9 20:30:16 2005	0136922	N			Y

Figure 69 Scheduled Conference Report

The columns in this report are as follows:

- **Owner** – The user who scheduled the call or for whom the call was scheduled by either the user's delegate or the system administrator.
- **Subject** – The description of the call's subject as entered by the user when scheduling the call. For calls with no subject (for example, ad hoc dial-out calls), the phrase "Call on [date, time, time zone] is automatically entered.
- **Leader Code** – The Call Leader's access code.
- **Start Time** – The date and time of the start of the leg of the call represented by that row of the report.
- **End Time** – The date and time of the end of the leg of the call represented by that row or the report.
- **Participant Code** – The Participant's access code.
- **Leader is Required** – Whether the Leader must be on the call for other participants to be conferenced together.
- **Billing Code** – The Billing Code entered (by the Owner or the Owner's Delegate) when the call is scheduled.
- **Department Code** – The Department Code entered (by the Owner or the Owner's Delegate) when the call is scheduled.
- **Are Multiple Leaders Allowed** – Whether multiple callers can join using the Leader's access code. If "N" (No), then only the first caller using the Leader's access code is joined into the conference. If "Y" (Yes), then all callers using the Leader's access code are joined into the conference.

7.4 System Alerts Log

The Administrator can view a history of the notifications that have been issued by the system for a particular date period. The list will include alarms and general notifications that are generated by the server as a result of events on the system.

Click on the **Reporting** tab.
Click on the **System Alerts Log** button.
Select the day from which the report is to be generated.
Click the **View** button.

Figure 70 System Alerts Selection

You will see a list of system alerts that have been sent to the System Administrator, similar to the following:

System Alerts Log

Date	MSGID	Rcpt Class	Rcpts	Subject	Message
Wed Apr 13 05:52:20 EDT 2005	THS-3001	General Alert	admin@company.com	server alert	Sip server restart at Wed Apr 13 05:52:20 EDT 2005
Wed Apr 13 05:53:16 EDT 2005	DBS-3001	General Alert	admin@company.com	server alert	Database server restart at Wed Apr 13 05:53:16 EDT 2005
Wed Apr 13 05:53:42 EDT 2005	THS-3001	General Alert	admin@company.com	server alert	Sip server restart at Wed Apr 13 05:53:42 EDT 2005
Wed Apr 13 05:54:30 EDT 2005	TPS-7005	Trunk Alarm		server alarm	NO ports available at Wed Apr 13 05:54:30 EDT 2005
Wed Apr 13 05:54:35 EDT 2005	MUX-3001	General Alert	admin@company.com	server alert	Sip multiplexor restart at Wed Apr 13 05:54:35 EDT 2005
Wed Apr 13 05:55:04 EDT 2005	THS-7001	General Alarm	admin@company.com	server alarm	Sip server restart again at 2005-04-13-05-55-04 Will not send more mail until server restarts successfully
Wed Apr 13 05:55:06 EDT 2005	TPS-7005	Trunk Alarm		server alarm	NO ports available at Wed Apr 13 05:55:06 EDT 2005

Figure 71 System Alerts Results

7.5 Install History Log

The Administrator can view a history of the system software installations and upgrades that have been applied during the specified time period.

Click on the **Reporting** tab.
Click on the **Install History Log** button.
Select the day from which the report is to be generated.
Click the **View** button.

Figure 72 Install History Selection

You will see a list of software installations, similar to the one shown below in Figure 73 . The Package Type option would normally only be used if requested by a customer support representative. It provides more detail about individual components of the system.

Figure 73 Install History Results

Appendix A. Error Codes and Alarm Conditions

Server Alarm conditions and messages

No trunks available (trunkalert)

Subject="CCS alarm" Message="no phone trunks are operational.

Description: T1/ISDN PRI circuit is out of service.

Server Alert conditions and messages

bbmux restart (alert)

Subject="CCS alert" Message="Blackberry server restart at HH:MM:SS MM/DD/YYYY

Description: A restart of the Blackberry Server at time specified.

ivr restart (alert)

Subject="CCS alert" Message="Incoming call server restart at HH:MM:SS MM/DD/YYYY

Description: A restart of the Incoming call server at the specified time. Dial-in conferences are affected by this restart.

mcu restart (alert)

Subject="CCS alert" Message="Conference server restart at HH:MM:SS MM/DD/YYYY

Description: A restart of the Conference server at specified time.

upg restart (alert)

Subject="CCS alert" Message="http server restart at HH:MM:SS MM/DD/YYYY

Description: A restart of the WEB server at specified time.

database restart (alert)

Subject="CCS alert" Message="database restart at HH:MM:SS MM/DD/YYYY

Description: The Database service was restarted at specified time.

mux restart (alert)

Subject="CCS alert" Message="SIP multiplexor restart at HH:MM:SS MM/DD/YYYY

Description: The SIP service was restarted at specified time.

tns restart (alert)

Subject="CCS alert" Message="Outgoing Call Server restart at HH:MM:SS MM/DD/YYYY

Description: A restart of the Outgoing Call Server at the specified time.

tp240driver restart (alert)

Subject="CCS alert" Message="phone trunk driver restart at HH:MM:SS MM/DD/YYYY

Description: The trunk configuration driver was restarted at the specified time.

Fewer than 9 ports are still available (trunkalert)

Subject="CCS alert" Message= "only %d ports are currently unused at %s",$nlines, HH:MM:SS MM/DD/YYYY

Description: Number of ports available threshold alert.

Subject="CCS alert" Message="trunk lines $linecode went down HH:MM:SS MM/DD/YYYY

Description: Specified trunk ID went out of service.

Subject="CCS info" Messages="trunk lines $linecode ($resultCode) came up HH:MM:SS MM/DD/YYYY

Description: Trunk(s) ID now in service at specified time.

Appendix B. Voice Prompts

#	Script	#	Script
0	To turn off the music, press one.	101	(leave earcon)
1	Welcome to the ShoreTel Converged Conferencing.	102	(mute earcon)
2	Enter an access code, then press pound. To cancel, press star.	103	(un-mute earcon)
3	Cancelled. Please try again.	104	The leader has locked this conference.
4	That access code isn't recognized—please try again.	105	You have a message. To hear the message, press one. To decline, press two.
5	That access code isn't recognized.	106	If you are satisfied with the recording, you may hang up now. To erase and rerecord, press one. To listen to the recording, press two.
6	To enter another code, press star.	107	To speak to an Operator, press zero.
7	To enter another code, press star, or to end this call, press pound.	108	Please hold for an Operator.
8	To enter another code, press star, or for assistance, press zero.	109	Beep sound
9	At the tone, say your name and then press pound. <beep>	110	Beep sound
10	The leader hasn't activated this call yet. Please stay on the line.	111	Twenty one
11	Thank you for using ShoreTel. Goodbye.	112	Twenty two
12	One moment while your call is connected.	113	Twenty three
13	That conference hasn't started yet.	114	Twenty four
14	That conference has already ended.	115	Twenty five
15	That conference isn't available now.	116	Twenty six
16	I'm sorry, the operator isn't available now.	117	Twenty seven
17	You're the first person in this conference. Please stay on the line.	118	Twenty eight
18	Sorry, we're unable to complete your call.	119	Twenty nine
19	That person isn't available right now.	120	Thirty one
20	Zero	121	Thirty two
21	One	122	Thirty three

#	Script	#	Script
22	Two	123	Thirty four
23	Three	124	Thirty five
24	Four	125	Thirty six
25	Five	126	Thirty seven
26	Six	127	Thirty eight
27	Seven	128	Thirty nine
28	Eight	129	Forty one
29	Nine	130	Forty two
30	One moment, please.	131	Forty three
31	All circuits are busy. Please try again in a few minutes.	132	Forty four
32	At any time, you may press the pound key twice for a list of options.	133	Forty five
33	The recording has ended. To start again, press one. Otherwise, you may hang up.	134	Forty six
34	Paused. To resume, press 2	135	Forty seven
35	Recordings	136	Forty eight
36	You have been invited to a conference call. To join, press 1. To decline, press 2.	137	Forty nine
37	Invitation declined. Goodbye	138	Fifty one
38	Record your message at the tone. When you have finished, press pound. <beep>	139	Fifty two
39	Recording saved.	140	Fifty three
40	For a list of names, press 3.	141	Fifty four
41	To place a call, press 2	142	Fifty five
42	Names are not available.	143	Fifty six
43	To return to the conference, press star.	144	Fifty seven
44	Sorry, that's not a recognized option.	145	Fifty eight
45	Sorry, that option isn't available.	146	Fifty nine
46	Returning to conference.	147	Sixty one
47	Do you want to keep this call? To keep the call and return to the conference, press 1. To drop the call and return, press 2.	148	Sixty two

#	Script	#	Script
48	That number is busy.	149	Sixty three
49	To return to the conference, press *. To try another number, press 1.	150	Sixty four
50	I'm sorry. The call leader hasn't given approval for you to join this conference. Goodbye.	151	Sixty five
51	The person you called is no longer on the line.	152	Sixty six
52	Sorry, we couldn't complete your call. Be sure to dial one and the area code. For international numbers, you must include the country code.	153	Sixty seven
53	Now joining…	154	Sixty eight
54	I'm not sure if you recorded a name. To keep this recording, press 1. To try again, press 2.	155	Sixty nine
55	Sorry, I still didn't hear you say a name. You can't join the conference until you record your name. To try again, press 1.	156	Seventy one
56	There's no answer at that number.	157	Seventy two
57	Ready to place a call. To return to the conference at any time, press the star key twice.	158	Seventy three
58	Sorry, I didn't hear you say a name.	159	Seventy four
59	Recording cancelled.	160	Seventy five
60	Names. To cancel the list at any time, press star.	161	Seventy six
61	To return to the conference, press *. To repeat the list, press 1.	162	Seventy seven
62	Cancelled.	163	Seventy eight
63	Enter a phone number including one and the area code. For international calls, be sure to include the country code. When you have finished, press pound.	164	Seventy nine
64	Cancelled. You may dial another number now, or to return to the conference, press star.	165	Eighty one
65	Sorry, we're unable to call that number. You may dial another number now, or to return to the conference, press star.	166	Eighty two

#	Script	#	Script
66	Sorry, that phone number isn't valid. Be sure to dial one and the area code. For international numbers, you must include the country code.	167	Eighty three
67	There are…	168	Eighty four
68	…people in this call	169	Eighty five
69	Ten	170	Eighty six
70	Eleven	171	Eighty seven
71	Twelve	172	Eighty eight
72	Thirteen	173	Eighty nine
73	Fourteen	174	Ninety one
74	Fifteen	175	Ninety two
75	Sixteen	176	Ninety three
76	Seventeen	177	Ninety four
77	Eighteen	178	Ninety five
78	Nineteen	179	Ninety six
79	Twenty	180	Ninety seven
80	Thirty	181	Ninety eight
81	Forty	182	Ninety nine
82	Fifty	183	One hundred
83	Sixty	184	More than one hundred
84	Seventy	185	The recording's duration is
85	Eighty	186	Hours
86	Ninety	187	Hours
87	Hundred	188	Minutes
88	Options.	189	Minutes
89	The call has been dropped.	190	And
90	There is one person in this call.	191	Seconds
91	To mute your line, press 1.	192	Seconds
92	To un-mute your line, press 1.		
93	To hear the number of callers, press 3.		

#	Script	#	Script
94	To return to the conference, press star now. Otherwise, select from the following options.		
95	Names.		
96	All circuits are busy. Please try your call again in a few minutes.		
97	This call is being recorded.		
98	The recording has been stopped.		
99	Please try your call again in a few minutes.		
100	(join earcon)		

Appendix C. NTP Servers

The ShoreTel Conference Director requires an external time reference to maintain the accuracy of its system clock. If you do not run a NTP server within your organization, you may use one of the publicly accessibly time servers used by the NIST Internet Time Service (ITS). The ShoreTel CCS server ships with us.pool.ntp.org as the default. This is an NTP round robin, giving a different NTP server with each access. This assures that if one NTP server is unavailable, another will be accessed.

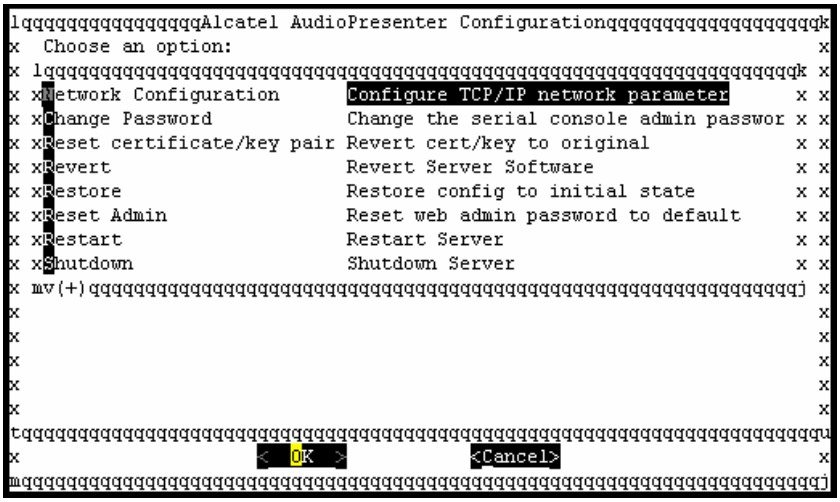
However, if you prefer to use a single NTP server, the table below lists publicly accessible servers. It was obtained at http://www.boulder.nist.gov/timefreq/service/time-servers.html

Name	IP Address	Location
time-a.nist.gov	129.6.15.28	NIST, Gaithersburg, Maryland
time-b.nist.gov	129.6.15.29	NIST, Gaithersburg, Maryland
time-a.timefreq.bldrdoc.gov	132.163.4.101	NIST, Boulder, Colorado
time-b.timefreq.bldrdoc.gov	132.163.4.102	NIST, Boulder, Colorado
time-c.timefreq.bldrdoc.gov	132.163.4.103	NIST, Boulder, Colorado
utcnist.colorado.edu	128.138.140.44	University of Colorado, Boulder
time.nist.gov	192.43.244.18	NCAR, Boulder, Colorado
time-nw.nist.gov	131.107.1.10	Microsoft, Redmond, Washington
nist1.symmetricom.com	69.25.96.13	Symmetricom, San Jose, California
nist1-dc.glassey.com	216.200.93.8	Abovenet, Virginia
nist1-ny.glassey.com	208.184.49.9	Abovenet, New York City
nist1-sj.glassey.com	207.126.98.204	Abovenet, San Jose, California
nist1.aol-ca.truetime.com	207.200.81.113	TrueTime, AOL facility, Sunnyvale, California
nist1.aol-va.truetime.com	64.236.96.53	TrueTime, AOL facility, Virginia

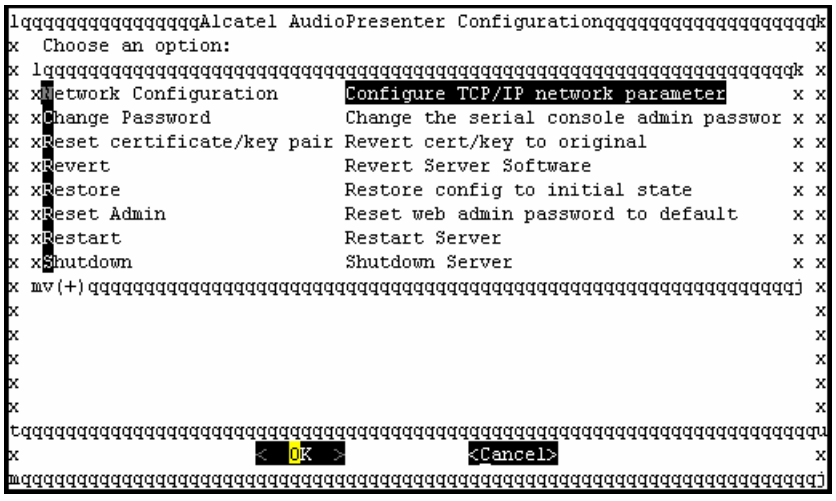
Appendix D. Serial Console Interface: Administrative Functions

This section describes other administrative tasks that can be performed from the console (serial port or video monitor) interface. Generally, it is not necessary to use the console to perform these tasks – they are typically performed from the browser-based interface. However, should you experience problems accessing the browser-based system administrator's application, these console functions can help address configuration issues that affect proper system operation.

The console application is present on the serial port and video/keyboard when the server is booted up. It requires login using the same administrator ID and password used by the browser administration application, after which its menu is displayed (below).



The plus sign "+" at the bottom of the frame indicates that there are more menu items; use the up/down arrow keys to scroll the menu.



Date and Time

For the purpose of properly scheduling conferences, and for the proper operation of the server's cookies, it is **very** important that the ShoreTel Conference Director's system clock be accurately set. When the clock is not set correctly, end-users will have trouble joining scheduled

conferences at the correct time. Typically, the CCS uses a time server (via NTP) to keep its system clock synchronized with the actual time. If such a server is inaccessible, or if there is some other reason the system clock needs to be set manually, the date and time screens allow the system administrator to perform this task.

In the main menu, select **Set Date**.

You should now see the Date screen (see below). Use the tab key to move between fields. The Up and Down arrow keys will change the Month and Year. The date within the selected month can be set using the h, j, k, and l keys:

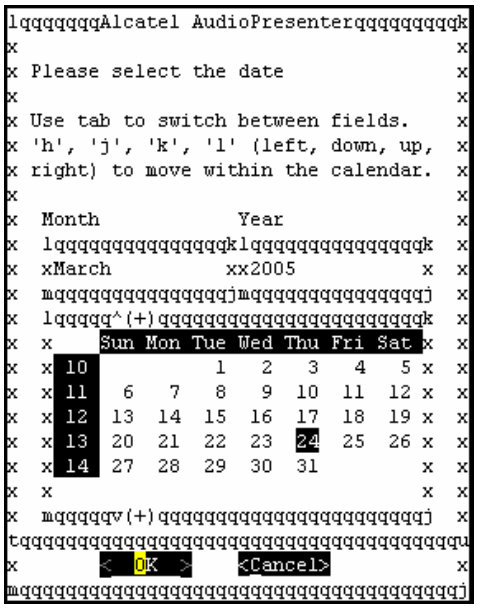
h – left

j – down

k – up

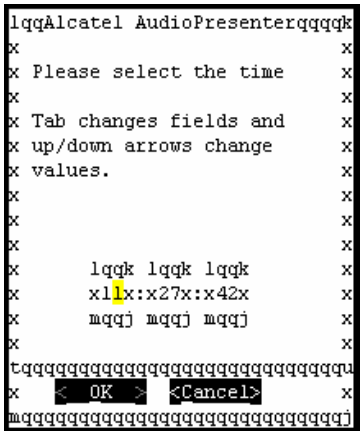
l – right

When you have set the month, year, and date in that month, tab to **OK** and press **Enter**.



Time of Day

In the main menu, select **Set Time**.



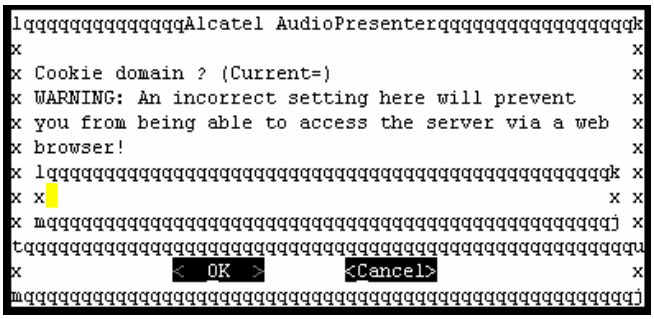
Tab to the field (hour, minute, second) you want to change.
Use the Up and Down arrow keys to select the value you want.
When done, tab to **OK** and press **Enter**.

Set Cookie Domain

The Conference Director uses cookies for a number of security functions associated with logging into the server via the browser UI. It is critical that the domain used in the cookies is identical to the domain of the server itself. If the cookie domain is not identical to the server's domain, users will be unable to log into the server.

In normal setup, the cookie domain is automatically set to be the same as the server domain. However, should the server somehow get misconfigured, this capability allows the cookie domain to be made identical to the server domain.

In the main menu, select **Set COOKIEDOMAIN**



Tab to the text field and enter the cookie domain (host/domain) name.
Tab to **OK** and press **Enter**.

Change Password

This option is used to change the password to the serial port console (not the browser-based administration interface). The username remains **admin**.

Reset Certificate/Key Pair

This option is used to reset the certificate/key pair to the original that shipped with the server. Generally, if you have installed your own security certificate, you will **not** use this option.

Revert Server Software

This option is used to re-install the most recently installed version of CCS software (i.e. the version which is currently running). This process also erases all stored data and restores the configuration to the default. Generally, if you have applied updates or upgrades, you should **not** use this option.

Restore Configuration

This option restores the server configuration to its initial "factory" settings. If you have applied configuration changes (server host/domain name, IP address, etc.) appropriate to your network environment, you should **not** use this option.

Reset Web Admin Password

This option allows you to reset the default administrator's password in the browser interface. The default is the word changeme. You would use this option if, for example, an administrator changes the administrator's password and then forgets what that changed password is. Note that for some customer deployments, this feature has been removed.

Restart Server

This option reboots the server. During this process, all calls in progress are disconnected.

Shutdown Server

This option performs a graceful shutdown of the server in preparation for turning it off (e.g., disconnecting the AC power connection). During shutdown, any calls in progress are disconnected.

End Configuration Session

This option ends the serial port administrator's system configuration session. For security purposes, you should perform this step whenever you are through performing administrative tasks through the console interface.

Appendix E. Cookie Domains

Cookie Basics

Web browsers have built-in rules for receiving and sending cookies. When a browser makes a request to a web server and the web server returns cookies with the response, the browser will only accept a cookie if the domain associated with the cookie matches that of the original request. Similarly, when a browser makes a subsequent request, it will only send those cookies whose domain matches that of the target web server.

These rules are designed to ensure that information encoded in cookies is only "seen" by the web server(s) that the originator of the cookie intended. These rules also ensure that the cookie cannot be corrupted or imitated by another server. By default, the domain associated with a cookie exactly matches that of the server that created it. However, it is possible to modify the domain at the time the cookie is created. Relaxing the cookie domain increases the scope of the cookie's visibility making it available to a wider “audience” of web servers.

For example, if a cookie is created by ShoreTel-1.us.company.com, its domain will usually be set to ShoreTel-1.us.company.com. This means that the browser will only send the cookie to ShoreTel-1.us.company.com. It will never send it to any other servers. However, if at the time of creation (when the server sends the cookie to the browser), the domain of the cookie is set to .us.company.com, the browser will send the cookie to any server whose domain falls within .us.company.com. such as ShoreTel-2.us.company.com or edial-3.us.company.com.

Note: Make sure your domain name contains valid characters. Refer to the following Microsoft technote found at http://support.microsoft.com/default.aspx?scid=kb;EN-US;316112: “Cookies Are Not Saved If the Host Name Is Invalid.”

Cookie Administration for the CCS

In an CCS stack, each server is administered separately. In a deployment, a customer may want to use the same admin ID and password for managing all servers in a stack, or even across sites. The admin interface provides a basic UI navigation feature for moving from one server in the stack to another. To allow the admin session credentials to be shared across the servers, the cookie domain needs to be set to something like “.us.company.com” which is the sub-part of the overall server name that matches all servers in the stack.

If the deployment does not allow this “seamless” admin navigation throughout the stack, the cookie domain can be set explicitly to the appropriate FQDN (fully qualified domain name) for each individual server. It can also be explicitly set to blank (no value) which has the same effect as setting it to the FQDN for each particular server. Note that doing this means that the admin will be prompted to login each time they move to a new server in the stack.

Cookie Mis-configuration

For all the reasons described above, if a server is mis-configured, which in this case specifically means that the cookie domain does not match the FQDN or sub-part of the FQDN, the system administrator will not be able to manage the server via the web interface. To recover from this situation, the cookie domain can be reset via the serial admin interface.

Appendix F. Configuring the Conference Bridge with ShoreWare Director

After you have configured the Shoreline Conference Bridge, complete your configuration by setting up your conference bridge extensions and conference call routing in the Shoreline system through ShoreWare Director. You can do this from any PC connected to the network.

The conference bridge ports will appear as consecutive IP phones in ShoreWare Director.

Viewing the Conference Bridge IP Phone Ports

When you configured the Shoreline Conference Bridge, you defined the IP address assigned to the bridge for conference calls. You can view and modify these IP phone ports through the IP Phone List in ShoreWare Director.

To view the IP phone ports assigned to the conference bridge:

Step 1 Launch ShoreWare Director and log on.

Step 2 Click **IP Phones > Individual IP Phones** from the navigation frame.

Step 3 From the **By Site** drop-down list, select the site that you want to view (the site where you installed the conference bridge). The conference bridge IP Phone ports' default names and MAC addresses begin with "ED" as shown in IP Phone List Page

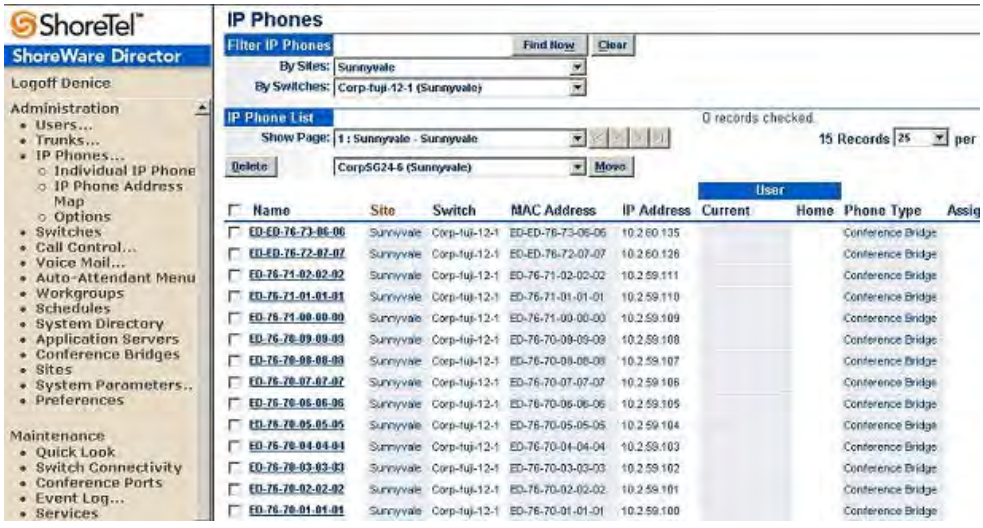


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Figure 74 IP Phone List Page

You may change the default names to any name you choose.

There should be a minimum of 12 IP Phone ports available for the conference bridge. Additional sets of 12 IP phones will appear according to the number of bridges and licenses you have.

> **NOTE** If a complete set of 12 or more conference IP phone ports do not appear on the list, you have booted the conference bridge without allocating enough IP phone ports on the ShoreGear voice switches. Make sure you have enough available ports and then reboot the conference bridge.

Configuring Users for the Conference Bridge

You must configure a user for each conference bridge port. As you add users, you must give each port a user name that identifies it as a conference bridge port (for example, confer01-confer12). To make the bridge behave correctly when ports are being used, you must also make specific changes to the call handling mode.

To configure the conference bridge ports:

Step 1 In ShoreWare Director, click **Users>Individual Users** from the navigation frame.

Step 2 Select the site where the bridge is installed from the **Add new user at site:** drop-down list.

Step 3 Click **Go**.

The **User**s edit page appears as shown below.

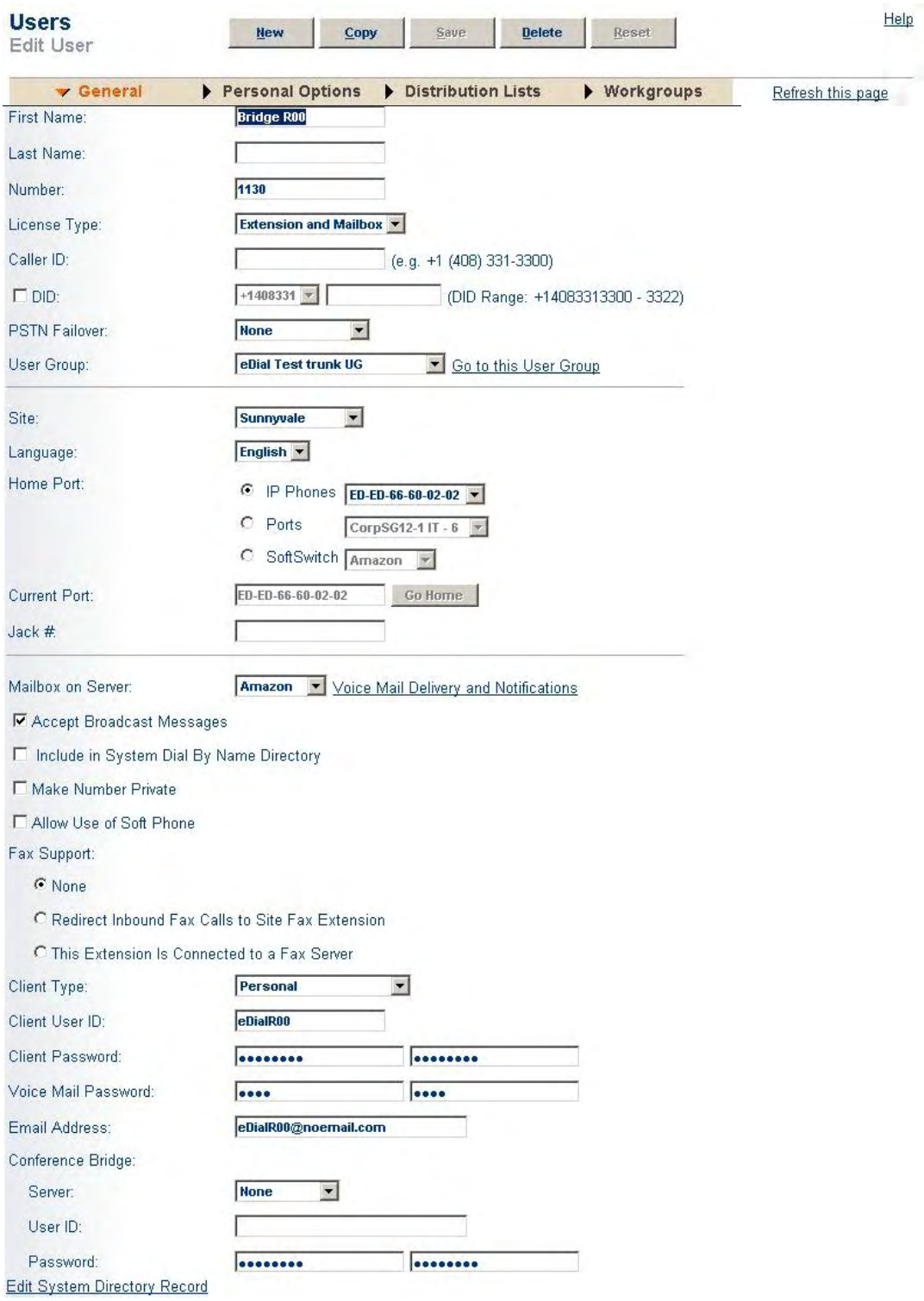

Figure 75 Users Edit Page

Step 4 Enter a name for the bridge port (for example, User Name: “Bridge R00”). This assigns a dialable number to the conference bridge port and allows configuration of call handling.

Step 5 Assign an extension number to this “user.” This is the dialable number for the associated port. This should be the extension number defined for bridge access.

Step 6 Assign a home port for this “user.” The home port must be one of the conference bridge ports (for example, ED-DE-CC-A0-01-01).

NOTE Ensure that the “Include in Dial By Name Directory” check box is not checked.

Step 7 Click **Personal Options**. The **Personal Options** edit page appears as shown below

Figure 76 Personal Options Edit Page

Step 8 Set the Current Call Stack size to 1. This causes a busy condition and invokes call handling when this conference bridge port is in use.

Step 9 Click **Save**.

Creating a Bridge Workgroup

It is important that calls to the bridge find available ports or are routed to an alternate destination when no ports are available. The most effective call routing method is to create a workgroup of the conference bridge ports. By setting the call handling options for the bridge workgroup, calls are routed in top down order to the next available port. When all bridge ports are busy, calls are routed to the queue where they hear a message and have the option of reaching an operator.

There are three general steps to setting up the bridge workgroup:

- Create the bridge workgroup
- Add agents (conference bridge ports) to the workgroup
- Edit queue handling

These tasks are described in the following procedures.

Creating a Bridge Workgroup

To create a bridge workgroup:

Step 1 From the navigation frame in ShoreWare Director, click **Workgroups**. The **Workgroup** list page appears as shown in Workgroup List Page.

Figure 77 Workgroup List Page

Step 2 From the **Workgroup** list page, click **Add New**. The Workgroup edit page appears as shown in Workgroup Edit Page on Workgroup Edit Page.

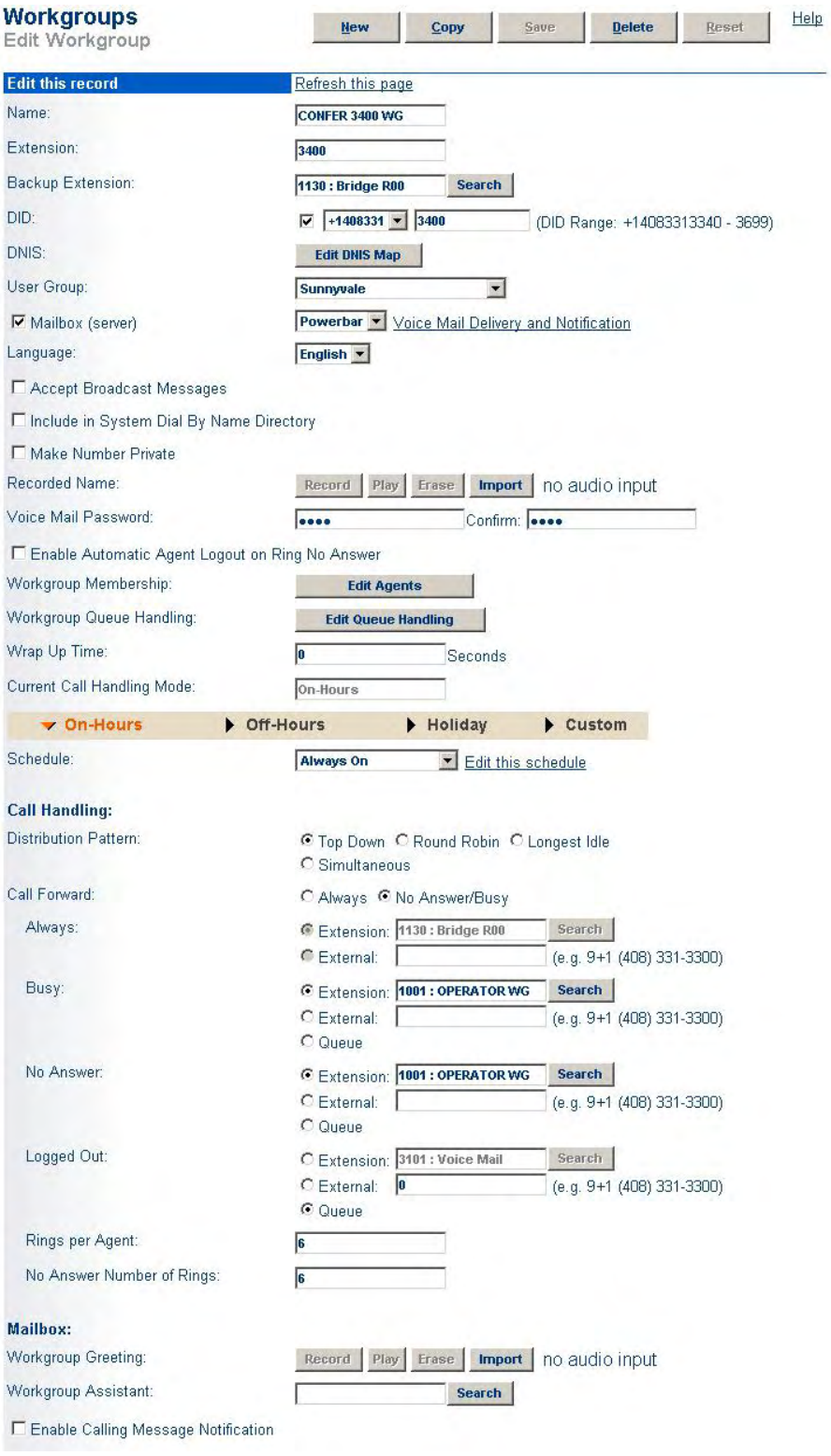

Figure 78 Workgroup Edit Page

Step 3 Enter a name for the bridge workgroup in the **Name** text entry box.

Step 4 Enter the extension for the workgroup in the **Extension** text entry box. Workgroups require unique extension numbers.

Step 5 Enter a backup extension in the **Backup Extension** text box. This should be the first bridge port in the hunt order. Calls are then redirected to the first bridge extension and the call handling options you set in the next section will route the call.

Step 6 Enter a DID number for the bridge.

Step 7 Select a user group from the **User Group** pull-down menu.

Step 8 Uncheck the **Mailbox (server)**, **Accept Broadcast Messages**, and **Include in Dial By Name Messages** check boxes.

Adding Bridge Ports to the Workgroup

To add bridge ports to the workgroup:

Step 1 From the **Workgroup** edit page, click the **Edit Agents** button to the right of **Workgroup Membership (**see Workgroup Membership Edit Page**)**. The **Workgroup Membership** edit page appears as shown in Workgroup Membership Edit Page.

Figure 79 Workgroup Membership Edit Page

Step 2 Using the **Add>>** button, add the conference bridge ports to the workgroup. Workgroup agents are added to the group in the logged out state.

Step 3 To login the bridge ports (workgroup agents), double-click the bridge port name from the **Name** list, and the **Edit Workgroup Member** dialog box (Edit Workgroup Member Dialog Box)
appears.

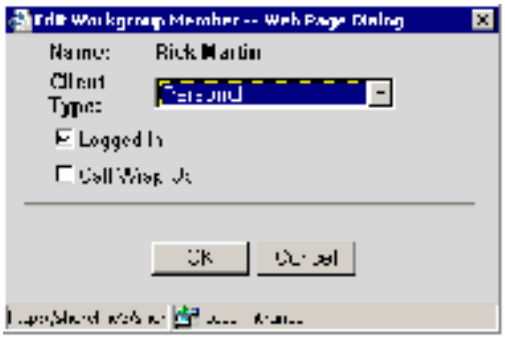

Figure 80 Edit Workgroup Member Dialog Box

Step 4 Click the **Logged In** check box and click **OK** to commit the changes. The change is reflected in the **Name** list on the **Workgroup Membership** edit page.

Call Routing Without a Bridge Workgroup

If you chose not to use a bridge workgroup or you want to have alternate call routing if the workgroup server becomes unavailable, you can set call handling for each bridge port through the **User** edit page in ShoreWare Director.

Step 1 In ShoreWare Director, click **Users > Individual Users** from the navigation frame.

Step 2 Select the first bridge port from the User list by double clicking the port name. The **User** edit page appears as shown in Users Edit Page.

NOTE For the first bridge port only, click the **Include in Dial By Name Directory** check box.

Step 3 Click **Personal Options**. The **Personal Options** edit page appears as shown in the Personal Options Edit Page (Figure 81).

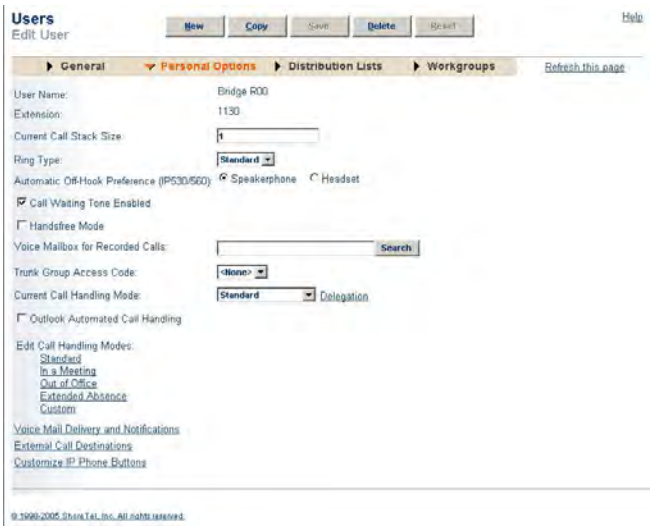

Figure 81 Personal Options Edit Page

Step 4 Set the Current Call Stack size to 1. This causes a busy condition and invokes call handling when this conference bridge port is in use.

Step 5 Set current **Call Handling Mode** to **Standard**.

Step 6 Click **Save.**

Step 7 Click **Edit the Standard Call Handling Mode** (see Standard Mode Edit Page).

You must set the call forwarding options so that calls are forwarded to the next bridge port if the current conference bridge port is in use.

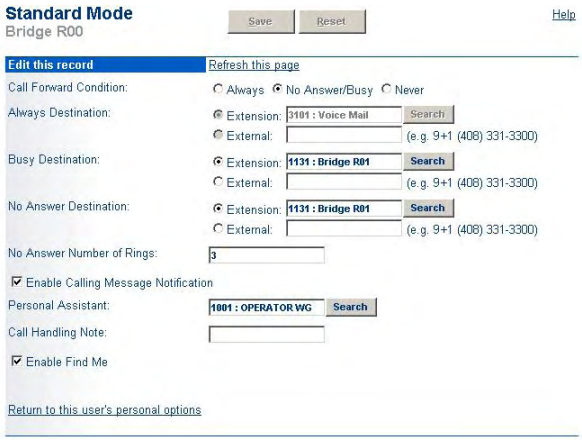

Figure 82 Standard Mode Edit Page

Step 8 Set **Call Forward Condition** to **No Answer/Busy.**

NOTE The Standard Call Handling Mode for the “last” Conference Bridge User/Port can be set to **Never** or you can direct the call to the auto-attendant. Setting the call forward condition to **Never** for the last user will creates a busy tone to calling parties if all conference bridge ports are in use.

Step 9 Set **Busy Destination** to the next conference bridge “user.” For example, Confer01 should be set to call forward on busy to Confer02; Conver02 should be set to call forward on busy to Confer03 and so on.

Step 10 Set **No Answer Destination** to the next conference bridge “user.”

Repeat Click through Set until you have configured all the conference bridge “users.”

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