

Converged Conferencing Solution

Conference Director Installation and Administration Guide

Release 5.6.2

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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		Intro	duction	7
	1.1	The	CCS	7
	1.2	Usin	g This Guide	7
2		Insta	Ilation of the ShoreTel Converged Conferencing Solution	8
	2.1	Insta	Illation notes	8
	2.2	Insta	Ilation media	8
	2.3	Insta	Ilation instructions	9
	2.3	8.1	Upgrades	9
	2.3	8.2	Assigning an initial IP address	11
	2.3	3.3	Using a Static IP address	11
	2.3	8.4	Using DHCP	12
	2.4	Initia	I Configuration	13
	2.5	CCS	licensing	14
	2.6	Acqu	iring the CCS and VMware license files from the ShoreTel Welcome Center	14
	2.7	Insta	Iling the CCS license file	15
	2.8	Insta	Iling the VMware license file	15
3		Syst	em Configuration	16
	3.1	TCP	/IP Settings	16
	3.2	VolF	Settings	18
	3.3	Bridg	ge Port Settings	19
	3.4	Syst	em Options	20
	3.5	LDA	P Configuration (Authentication and Auto Provisioning)	23
	3.6	Voic	e Prompts	24
	3.6	6.1	Downloading a Prompt Set File	24
	3.6	6.2	Installing New Prompts	26
	3.7	Tran	slation Tables	28
	3.7	'.1	Adding a Dictionary File	28
	3.7	' .2	Editing a Dictionary File	28
	3.8	Mus	c on Hold Settings	30
	3.9	SSL	Certificate (Installing Your Own Digital Certificate)	30
	3.10	Li	censing	31
	3.11	A	utomatic Server Backup	32
	3.12	A	dvanced Settings	33
	3.1	2.1	Extension Filter	34
	3.1	2.2	Phone Number Display Filter	34

	3.1	2.3	Edit DAS Rules	35
	3.1	2.4	Configure SNMP Traps	37
	3.1	2.5	Configure Collaboration Subnet	38
	3.1	2.6	Configure Sendmail	38
4		Man	agement Actions	39
	4.1	Man	ual Server Backup	39
	4.2	Man	ual Server Restore	39
	4.3	Shut	down (Graceful server shutdown)	40
	4.4	Upgı	ade Server Software	40
	4.5	Rest	art Servers (Restart CCS processes)	42
5		Orga	nization/User Provisioning and Account Management	43
	5.1	Prov	isioning Organizations	43
	5.1	.1	Setting an Organization's Voice Prompts	45
	5.2	Add	an Organization	46
	5.3	List (Organizations	46
	5.4	Crea	te/Add user accounts	47
	5.5	List u	Jsers	48
	5.6	Find	User	48
	5.7	Mod	ify/Delete user accounts	49
	5.7	' .1	Manage User Profile	50
	5.7	. 2	View Scheduled Conferences	51
	5.7	' .3	View Call Activity Report	52
	5.7	. 4	Schedule a Reservationless Conference	52
	5.7	<i>.</i> 5	Assign Delegate	53
	5.8	Bulk	Provision/Modify User Accounts	54
	5.9	Bulk	Provision Reservationless Conferences	55
	5.10	D	ownload Reservationless Conferences	55
	5.11	A	dd Admin User	56
	5.12	Li	st Admins	56
	5.13	C	hange Administrator Password	57
	5.14	D	efault User Settings	57
6		Mon	itoring	59
	6.1	View	ring Active Calls	59
	6.2	View	ring Active Media	60
	6.3	View	ring Active Users	60
	6.4	Syst	em Status	60
	6.5	Site	Connections	61

6.6	Server S	tatus	62					
6.7	System (System Commands						
7	Server R	eporting	64					
7.1	Call Activ	vity Reports	64					
7.2	VoIP Util	ization Statistics	65					
7.3	Schedule	Scheduled Conferences						
7.4	System Alerts Log							
7.5	Install Hi	story Log	69					
Apper	ndix A.	Error Codes and Alarm Conditions	70					
Apper	ndix B.	Voice Prompts	72					
Apper	ndix C.	NTP Servers	77					
Apper	ndix D.	Serial Console Interface: Administrative Functions	78					
Appendix E. Cookie Domains		Cookie Domains	82					
Apper	ndix F.	Configuring the Conference Bridge with ShoreWare Director	83					
Index	94							

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:

Chartel	Configuration	Provisioning	Monitoring	Reporting	Logout	
Shorelei		ShoreT	el Conference Directo	or - Console Login:		
_		Admin Name	Pas	sword		
			Login			
		and the second s	-			

Click Configuration.

You see the following:

Chan Tal	Configuration	Provisioning	Monitoring	Reporting	Logout	~
Snorelei			Conference Dire 5.6.2b2423	ector		
TCP/IP Settings		To begin, select	t one of the links at	the top of the screen		
VOIP Settings	-					-
Bridge Port Settings						
System Options						
LDAP Configuration						
Voice Prompts						
Translation Tables						
Music On Hold Settings						
SSL Certificate						
Licensing						
Manual Server Backup						
Automatic Server Backup						
Manual Server Restore						
Shutdown						
Upgrade Server Software						
Advanced Settings						

Click Upgrade Server Software.

You see the following:

Current Server Version: 5.6.1.2153							
Disk free space: 3.77 GB							
Uploaded install images							
Filename Size Action							
eiab9.tar.gz.rel_5_6_0b2100	168.98 MB	Delete					
eiab9.tar.gz.rel_5_6_1b2153	eiab9.tar.gz.rel_5_6_1b2153 169.08 MB Delete						
Upload Install Image From Local File							
Filename:	Browse	Upload					

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:

Configuration	Provisioning	Monitoring	Reporting	Logout	~
	ShoreT	el Conference Di			
	Admin Name		Password		
		Log	in		
	Configuration	Configuration Provisioning ShoreT Admin Name	Configuration Provisioning Monitoring ShoreTel Conference Di Admin Name Log	Configuration Provisioning Monitoring Reporting ShoreTel Conference Director - Console Login: Admin Name Dassword Login	Configuration Provisioning Monitoring Reporting Logout ShoreTel Conference Director - Console Login: Admin Name Login Login

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.

ShoreTel	Configuration	Provisioning	Monitoring	Reporting	Logout				
	Conference Director								
	U.U.2.202400								

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.

Configuration	Provisioning M	onitoring	Reporting	Logout
System Serial Numb	er: SDGCEC-UBTBSB-VDUBUD-TBSB	3XB-UDFCJC-ECVD	ZB-UB2BSB-2BSBSD-NCBCW	D-UBSB
		Port License	5	
	Primary port	s: 12		
	Secondary port	s: 0		
	Media port	s: 12		
	G729 port	s: 12		
	AppSharing port	s: 12		
	Max users license	d: Unspecifie	d	
	Current user coun	t: 29 users		
	Globa	ly Licensed F	eatures	
	Audio Conferencing	g: Enabled		
	Web Presentation	s: Enabled		
	Contact list	s: Enabled		
	File Attachment	s: Enabled		
	Application Sharing	g: Enabled		
	AMDS	S: Enabled		
		Upload Licen	5e	
	License fil	e	Browse	
		Upload		

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 <u>only</u> 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.

TCP/IP Settings							
Use DHCP							
IP Address	× . ×	. 🖂	. 🖂	Netmask	xxx . xxx	. 👓	. ×
Default Gateway	× . ×	. 🖂	. ×	Web Server Name	web.company.	com]
Cluster IP Address				Cluster FQDN	name.company	/.com]
Hostname	yourhostname)		Domain Name	domain.compa	iny.com]
Primary NTP Server	xxx.xxx.xxx.x			Secondary NTP Server	us.pool.ntp.org]
Primary Nameserver	× . ×	. ×	. 🗙	Secondary Nameserver	x . x	. ×	. 👓
Save							

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 Server³
- 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.

	Payloa	d Preferenc	e Order
G.711 μ-law 💌	NONE	-	NONE
G.726-32 Payload Type	: 97	Valid value	es are 2, 102-127
RFC2833 Payload Type	: 102	Valid value	es are 96-101
TOS (Type of Service)	Flags: (0x0	
		Save	
Each codec can only be G.711 μ-law must alway if necessary.	e speci Is be in	fied once. A the list, and	setting of NONE ends the list. I will be added for you

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.

	MGCP Settings						
Number of Conference Ports:	96	Bridge ID: 🗵					
Conference Port IP Netmask	xxx . xxx	. xxx . x					
Conference Port IP Address Range 1	×× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 2	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 3	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 4	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 5	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 6	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 7	× . ×	. 🗙 . 🗙 NaN					
Conference Port IP Address Range 8	× . ×	. 🗙 . 🗙 NaN					
Primary Configuration Switch	× . ×	. 🗙 . 🗙					
Secondary Configuration Switch	× . ×	. 🗙 . 🗙					
A	dvanced Set	tings					
MGCP Send Port	XXXX	MGCP Receive Port					
RTP Send Port	×	RTP Receive Port					
<u>ا</u>	Save	· ''					

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.

		Sys	tem Options		
International Dialing Prefix	011		National Dialing Prefix	1	
Country Code	1		Webserver Admin Email	conta	et.company.com
Default Caller ID for Default Organization	-		Always use per-Organization Default Caller ID		
General Alarm Email	conta	ct@company.com	General Alert Email	conta	ct.company.com
Smart Mail Relay Host	host.c	ompany.com	Executive Ports	D]
Immediate SMTP Logout			SMTP Delete Mail		
Max Audio Legs Per Call	96		Max AppSharing Legs Per Call	8	
Max Audio Legs Per Server	400		Max AppSharing Legs Per Server	240	
Port Usage Notification Threshold	9		Conference URLS	🛈 htt	p: ©https:
Document Timeout	24	hours 😁	User Login Timeout	8	hours
Minimum IVR Access Code Length	7		Single Leg Timeout	3600	seconds
Port Reservation Enabled	P		Reservation Warning Threshold	100	
Use HTTPS Only			Timezone		acific
Delete Old Recordings			Recording Timeout		days
Line Contract of the second		Send email w	arnings before deleting old recordings	e	
Delete Expired Conferences			Expired Conference Timeout	Γ	days
			Save		
		Set	t Date/Time		
Ho	ur	Minute Sec 15 37 Set	ond Month Day Year 10 14 05 t Date/Time		

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 <u>expired</u>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.

		LDAF	^o Configura	ation		
	Use LDAP		LDA	P Server Name		
LD	AP Port No.	389	LDA	AP Search Base		
LD.	AP Admin ID		LDAP Admin ID Password			
LD/	AP UID Field Email domain					
			Submit			
		Sample Values	of Key LD/	AP Parameters		
	LDAP Serve	r IPlanet		Acti∨e Director	/	
	Search Base DC=domain1,DC=com		m	CN=Users,DC=domain1,DC=com		
uid=admin,ou=Admin Admin ID ou=TopologyManag o=NetscapeRoot		nistrators, ment,	CN=Administrat DC=domain1,D	cor,CN=Users, C=com		
	UID Field	uid		sAMAccountNa	me	

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 multiple 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:

Prompt set management					
Prompt set fil	e:			Browse	
Prompt set name:					
Language co	de:				
	Ad	ld new set	Reset		
Set name		Language	, i	Actions	
DEFAULT		default	Edit	Download	

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.

WinZip - pro	omptse	t.zip		_				- OX
File Actions (Options	Help						
New of	B Open) Favorites	Add	ිනී Extra	ct	ाई View	CheckOut	Wizard
Name		Modified		Size	Ratio	Packed	Path	*
🛐 00.wav		5/24/2004 1	:10	15,705	12%	13,860		
💽 01.wav		5/24/2004 1	:10	17,163	6%	16,115		
🕺 02. wav		5/24/2004 1	:10	33,768	19%	27,191		
👩 03.wav		5/24/2004 1	:10	15,691	20%	12,541		
🕺 04.wav		5/24/2004 1	:10	26,459	13%	22,936		
💿 05.wav		5/24/2004 1	:10	16,719	6%	15,710		
06.wav		5/24/2004 1	:10	16,960	15%	14,390		
0107.wav		5/24/2004 1	:10	36,350	21%	28,579		
🔂 08.wav		5/24/2004 1	:10	35,971	23%	27,742		
09.wav		5/24/2004 1	:10	23,960	22%	18,791		
🔄 10.wav		5/24/2004 1	:10	28,755	17%	23,841		
🔁 100.wav		5/24/2004 1	:10	1,178	52%	561		*
Selected O files, () bytes		Ţ	otal 193 files	, 2,581	KB		00%

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

Prompt set management					
Prompt set file:	C:\newpromptset.zip Browse				
Prompt set name:	New Prompts				
Language code:	FR-2108				
Add new set Reset					

Figure 9 Adding a Prompt Set

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

Prompt set management					
Prompt set file:			Browse		
Prompt set name:]		
Language code:]		
	Add new set Reset				
Set name	Language		Actions		
french-2108	FR-2108	Edit C	ownload	Delete	
german-2108	DE-2108	Edit C	ownload	Delete	
uk-english-2108	UK-2108	Edit C	ownload	Delete	
DEFAULT	default	Edit C	ownload		

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.

Translation set management						
Translation set file:	Browse					
Translation set name:						
Language code:						
	Add New	Rese	t			
Set name	Language		Actions			
Set name DEFAULT	Language default	Edit	Actions Download			
Set name DEFAULT French	Language default fre-FR	Edit Edit	Actions Download Download	Delete		
Set name DEFAULT French German	Language default fre-FR deu-DE	Edit Edit Edit	Actions Download Download Download	Delete Delete		

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.

🗐 WinZip (Evalu	ation Version)	- xlatset[1].	zip			
File Actions Optio	ins Help					
۵ 🕼		E	e e	6	6	9
New Oper	n Favorites	Add Ex	tract Encryp	it View	CheckOu	ut Wizard
Name	Туре 🔺	Modified		Size Ratio	Packed	Path 🔼
help_styles.css	Cascading S	3/11/2005 6:	41 AM 1	,099 71%	322	help\
🖬 branding.conf	CONF File	3/11/2005 6:-	48 AM	314 50%	156	
🕥 Thumbs.db	Data Base File	3/11/2005 6:-	41 AM 299	,520 65%	105,023	
🕥 Thumbs.db	Data Base File	3/11/2005 6:-	41 AM 7	,168 40%	4,313	buddyicor
🕥 Thumbs.db	Data Base File	3/11/2005 6:-	41 AM 6	,144 35%	3,983	help\
🔊 apps_16.gif	GIF Image	3/11/2005 6:	41 AM	359 18%	294	
🔊 apps24.gif	GIF Image	3/11/2005 6:	41 AM	508 3%	494	도
🔊 apps24_disabled.	GIF Image	3/11/2005 6:-	41 AM	352 0%	352	25 I I
🖻 bullet.gif	GIF Image	3/11/2005 6:-	41 AM	68 0%	68	help\
🔊 button_add.gif	GIF Image	3/11/2005 6:-	41 AM	163 1%	162	
🔊 button_call.gif	GIF Image	3/11/2005 6:-	41 AM	144 1%	142	En ol
🔊 button_cancel.gif	GIF Image	3/11/2005 6:	41 AM	254 15%	217	
<		Ш				
Selected 0 files, 0 byt	es	Total	816 files, 1,257	(B		00.,;

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.

	Music-On-Hold	Settings			
	Enable Music On Hold				
	Music On Hold File Name	FurryLisa.wav	~		
	Save				
	Music-On-Hol	d Files			
Upload N	ew Music On Hold File		Browse		
Note: Uploaded file must be 8KHz, 8 bit, mono mu-law .wav file.					
Upload					

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.

Install Server-Specific SSL Certificate				
Certificate	Browse			
Key	Browse			
Password				
Ge	nerate SSL Certificates			
Genera	e an SSL certificate request			
Generate self-signed SSL cert				

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.)

Configuration	Provisioning	Monitoring	Reporting	Logout
System Serial Number	VBJCYD-VBXBWD-3BDCVD-V	VDVB2B-SBSBUB-TBBC		
·				
		Expires: 08022006		
		Port Licens	ses	
	Prin	nary ports: 96		
	Second	lary ports: 0		
	AppSha	ring ports: 96		
	Max users	licensed: Unspecifi	ied	
	Current u	ser count: 106 users	5	
		Globally Licensed	Features	
	Audio Con	ferencing: Enabled		
	Web Pres	entations: Enabled		
	Co	ntact lists: Enabled		
	File Att	achments: Enabled		
	Applicatio	n Sharing: Enabled		
		AMDS: Disabled		
		Upload Lice	ense	
	Li	cense file	Browse	
		Upload		

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.)

	VMware License
Current Serial Number: 68H8D-	DRT80-V4661-49Q9J
Upload License file:	Browse
Mi	crosoft License Agreement
The Microsoft products contained or refer Microsoft software packages or Microsoft integrated or pre-installed as part of Th product is subject to its respective Micr Agreements outsined in the accompanying s agreements with the exception that the Mi a integrated in This Product may differ Microsoft product and any issues concerni Performance of This Product and the Micro directed to the vendor from whom you purc	<pre>enced in the accompanying license agreement have been its Product. Each Microsoft cosoft End User License software packages or license lerosoft product functionality from a non-integrated ing the functionality or soft products should be chased This Product and not to </pre>
۲	I Accept 🛛 I do not Accept
	Submit
	Third Party Licenses
This Product makes use of unmodified open so icense conditions and copyrights. Please sele	urce software components, each of which has its own applicable ct "Open Source" below if you wish to view these agreeements.

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.

Automated Backup Settings			
Enable Automated Nightly Backups			
Destination Host	Destination Directory		
Backup User ID	Backup User ID Password		
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.

Extension Filter		
Extension pattern	/^\s*x?(\d{3.5})\s*\$/	
Save		

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.

Phone Number Display Filter		
Filter patte	ern [^\+x\-(.*)	
Save		

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.

	DAS Rules		
DAS Rule 1	s/^\+1/1/		
DAS Rule 2	s/^\+×10(\d\d)/178189536\1/		
DAS Rule 3	s/^\+/011/		
DAS Rule 4	s/^\+(*)/mgcp:9011\1\#/		
DAS Rule 5	s/^1666845(\d*)\/1@voipgw.company.com		
DAS Rule 6			
DAS Rule 17			
DAS Rule 18			
DAS Rule 19			
DAS Rule 20			
	Save		

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 <u>disconnect</u> 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.co m	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.

SNMP Settings			
SNMP Traps	Disable ⊙ V2 ⊂ V3 ⊂		
SNMP Monitoring Host			
SNMP Engine Number			
SNMP User			
SNMP Password			
Enter new password to change, leave blank to keep existing value			
Si	ibmit		

Figure 21 SNMP Settings

The settings are as follows:

- SNMP Traps
 - **Disable** do not use SNMP for system monitoring (default setting)
 - o 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.

Collaboration Subnet Setting				
Collaboration Subnet	xxxxxxxd			
Save				

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.

Sendmail management		
Enable Sendmail		
Save		

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.

Backup User Data			
🗹 Backup user/call database			
✓ Backup SSL Certificate			
Backup documents (slides, recordings, attachments)			
Backup configuration files			
Backup prompt sets			
Backup custom branding			
Backup translation tables			
Save			

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**.

Restore Server Backup		
Please provide a file name from which the server information will be restored		
ALL OF YOUR EXISTING DATA WILL BE ERASED!!!		
Browse		
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.

Current Server Version: 5.6.0.2212					
Disk free space: 4.39 GB					
Uploaded Instal	Uploaded Install/Upgrade Images				
Filename	Size	Action			
eiab9.tar.gz.rel_5_6_0b2129	168.92 MB	Delete			
Upload Install/Upgrad	e Image Fror	n Local File			
Filename:	Browse	Upload			
Install Patch from CD or Upgrade Server Software From DVD Install					
Please provide the file name of the ISO image					
Browse Install					

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), <u>do not</u> 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.

	Restart server modules		
	Restart bbmux		
	Restart ICS		
	Restart ivr		
	Restart ths		
	Restart tns		
	Restart tp driver		
	Restart upg		
Restart			
Check All Uncheck All			

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.

Edit Organization		
Organization name:	DEFAULT	
Phone #1		Label #1
Phone #2		Label #2
Phone #3		Label #3
Default Caller ID		
Restrict Users to Organization Phone Numbers		
	Update	

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.

Assigned Voice Prompt Sets				
Name		Language		Action
DEFAULT (defa	ault)	defau	ult	Delete
Prompt Set (language):	e): DEFAULT (default) 💌 Alternate Language:			
Add To Organization				

Figure 31 Assigned Prompt Set Screen

Click Add to Organization.

Assigned Text Translations				
Name	Language	Action		
DEFAULT (default)	default	Delete		
French (fre-FR)	fre-FR	Delete		
German (deu-DE)	deu-DE	Delete		
English (eng-GB)	eng-GB	Delete		
Translation Set (language): DEFAULT (default) 🔽 Alternate Language:				
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.

New Organization		
Organization		
Phone #1		Label #1
Phone #2		Label #2
Phone #3		Label #3
Default Caller ID		
Restrict Users to Organization Phone Numbers 🔲		
Create Organization		

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.

List of Organizations			
Org. ID Org. Name Users			
1	DEFAULT	List Users	

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).

	New User
Username	
Password	
Registered Phone	
Organization	DEFAULT 💌
Description	
	Create User

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.

Configuration	Provisioning	Monitoring	Reporting	Logout
	User newusername@company.com was provisioned successfully			

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).

Configuration	Provisioning	Monitoring	Reporting	Logout	
		List of Users			
User Name Description					
sysadmin@company.com		S	ystem Administrator		
user@company.com		Т	ypical system user		

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.

User Lookup		
Username user@company.com		
Search		

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:

Users			
Site Username			
server.comp	any.com	user.name.@company.com	

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:

User Lookup		
Username	user@company.com	
	Search	

Figure 40 Administer User

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

newuser@company.com
Manage User Profile
View Scheduled Conferences
View Call Activity Report
Schedule a Reservationless Conference
Manage Delegates

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:

	newuser@company.com				
New Password		Password is unchanged if left blank			
Registered Phone					
Organization	DEFAULT 🚩				
Dial out allowed	v	Deny multiple leaders 📃			
Executive					
Broadcast user	✓	Broadcast ports 1			
Reservationless Calls	Reservationless calls a	llowed, leader not required 🔽			
Email Type	● Generic Long ○ Generic Short				
Description					
Description					

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 dropdown 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**.

Sche	duled Confere	nces fo	or user@co	ompany.com	
Start Date	1-APR-2005	!!!	End Date	27-APR-2005	!!!
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:

	Call Activity Report for user@company.com				
Start Date	1-APR-2005	End Date	27-APR-2005		
Project Code		Department Code			
Report	Report Format: ⊙Web Report ○CSV Report ○XML Report				
View					

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.

Schedule new conference for user user	@company.com
Pre-defined leader access code	
Pre-defined participant access code	
If access code is left blank, Alcatel system will	use a random access code
Create	

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).

Add a delegate for user: chris.johnson@bigcity.com		
Delegate Name		
	Assign	

Figure 46 Assigning a Delegate

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

List of Assistants				
Delegate Delete?				
delegate@company.com				
Delete				

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:

Bul	k Provision Users				
Bulk Provisioning File	Browse				
Are passwords encrypted? O Yes 💿 No					
Process File					
Format	of Bulk Provision File				
Action,User Email Address,Password ,Optional re	gistered phone number ,Optional Access Code				
NOTE: There should not be any spaces between the commas and the arguments					
Actions can be add, change, or delete. Password	not required if action is delete.				
Examples:					
add,joe.user@acme.com,password,+1-617-555-1234					
add,alan.user@acme.com,password					
change,mary.user@acme.fr,new_password ,+33140302010 ,0123456					
delete,bob.user@acme.com					
NOTE: Phone number must have either a leading outside North American numbering plan.	+1 if within North American numbering plan, or +countrycode if				

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][,Preassigned_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 <u>Participants'</u> 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).

Bulk Provision Reservationless Conferences					
Bulk Provisioning File		Browse			
	Process File				
Forma	t of Bulk Provisio	n File			
UserName,Optional Access Code					
NOTE: There should not be any space	NOTE: There should not be any spaces between the commas and the arguments				
If access code is not provided, systen	If access code is not provided, system will generate a random one				
Access code should begin with the sy	stem's Node Id (u	sually 01) and be 7 digits long in total			
Examples:					
joe.user@acme.com,0123456					
mary.user@acme.fr					

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.

Download Users' Reservationless Conferences				
Please provide a file path on your local machine (file name will have .txt appended automatically)				
File Name				
	Save			

Figure 50 Downloading Reservationless Conferences

Note: The resulting file will contain <u>all</u> 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.

New Admin User			
Admin Username			
Password			
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.

List of Admins				
Admin Name Delete?				
admin				
user@company.com 🗆				
Delete				

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.

Change Current Admin Password				
Admin Password Confirm Admin Password				
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.

Default User Settings				
Dial Out Allowed		Deny Multiple Leaders		
Executive User		Broadcast User		
Require Project Code 🔲		Require Department Code		
Reservationless Calls Reservationless calls allowed, leader not requ			iired 🔽	
Maximum Length o and Recur	f Reservationless ring Conferences	26 weeks		
Email Type Seneric Long Close browser on log				
Save Changes Restore Original Defaults				
Save and Apply Settings to All Users				

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 expires⁵.
- 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.

Configuration	Provisioning	Monitoring	Reporting	ı Log	jout	
Refresh every 30) seconds	Refresh every 60 se	conds	Refresh ever	y 90 seconds	
user@company.com	ID: 8657 TL99-157	A-C627-YD0S-S5S30	0D87FBS Vani	ty: 7242772		
Tue Apr 12 2005 from Subject: My Teamwo	n 15:48:00 until 21:4 ork conference on 4	8:00 I/12/2005 3:48PM		End Call Co	ollect call qu data	ality
Participants				Up For		
*user@company.co	m (+1-781-895-3600)) CallByName-WCC		00:08:05	Drop Leg	
17818953600 (17818	953600) CallByPhor	ne-URL		00:07:31	Drop Leg	
*user@company.co	m (+1-781-895-3600)) CallByName-RFB		00:05:59	Drop Leg	
mark@company.com	n.temp (mark@com	pany.com.temp) Call	ByName-URL	00:03:25	Drop Leg	
mark@company.com	n.temp (+1-781-895-	3600) CallByName-F	FB	00:02:52	2 Drop Leg	

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.

Configuration	Provisioning	Monitoring	Reporting	Logo	ut	
Refresh every 30	seconds	Refresh every 60 se	conds	Refresh every	90 seconds	
user@company.com	ID: 8657 TL99-157A	-C627-YD0S-S5S30	DB7FBS Vanity	: 7242772		
Tue Apr 12 2005 from Subject: My Teamwo	n 15:48:00 until 21:48 rk conference on 4/	::00 12/2005 3:48PM		End Call Co d	llect call q lata	uality
Participants				Up For		
LCB_S_ANSWERED	17818953600			00:09:50	Drop Leg	
LCB_S_ANSWERED	Participant			00:09:28	Drop Leg	
LCB_S_ANSWERED	user@company.co	m Collaboration-Le	ader	00:07:42	Drop Leg	1
LCB_S_ANSWERED	17818953600 Partic	ipant		00:05:18	Drop Leg	1
LCB_S_ANSWERED (MUTE)	mark@company.co	m.temp Collaborati	on-Participant	00:04:42	Drop Leg	

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.

	Username	Active User Status	6 Time	IP address	
	mark@company.com.temp	On Phone	285 sec.	66.152.249.115:2444	
	user@company.com	On Phone	609 sec.	66.152.249.115:4833	

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.

Refresh every 30 seconds	Refresh every 8	i0 seconds	Refresh every 90 seconds
	Uptim	ie	
	14:14:59 up 1 day, 3:10 Disk Usage		
	File System	% Full	
	1	41%	
	/boot	16%	
	/slides	1%	

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".

Site Connections								
Hostname	Stack Name	Status	User Count					
Stack Servers								
client1.edial.office		LOCAL	36					

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					
мси	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:

<u>Color</u>	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-realtime data that is useful in managing the system on an ongoing basis.

Call Activity Reports VolP Utilization Statistics Scheduled Conferences
Call Activity Reports To begin, select one of the links at the top of the screen. VolP Utilization Statistics Scheduled Conferences
Scheduled Conferences
System Alerts Log
Install History Log

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.

Call Activity Report								
Start Date	1-APR-2005	!!!	End Date	27-APR-2005				
Project Code Department Code								
Report Format: ⊙Web Report ○CSV Report ○XML Report								
View								

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	Dep Cod
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:

VoIP Utilization Statistics									
Start Date	1-APR-2005	🔢 End D	ate 27-APR-2005	!! ?					
Histogram Interval	15 minutes 💌								
	View	٧							

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:

Scheduled Conferences							
Start Date 1-/	APR-2005	🔡 End	Date	27-APR-2005	12		

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	ls 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.

Start Date 4/1/2005 End Date 4/27/2005	System Alerts Log						
	🔢 End Date 4/27/2005 🔛	Start Date 4/1/2005					
View							

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	Repts	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	ser∨er 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.

Install History Log							
Date	Package	Build	Installer				
Tue Apr 26 06:39:02 EDT 2005	server	5.6.1b2153	admin				

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 <u>another</u> code, press star.	107	To speak to an Operator, press zero.
7	To enter <u>another</u> code, press star, or to end this call, press pound.	108	Please hold for an Operator.
8	To enter <u>another</u> code, press star, or for assistance, press zero.	109	Beep sound
9	At the tone, say your name and then press pound. deep>	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. 	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 <u>keep</u> the call and return to the conference, press 1. To <u>drop</u> 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 <u>name</u> . 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.		
10 0	(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).

lç	qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq	1do	lĸ
х	Choose an option:		х
х	$1\overline{a}$ aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	ļk	х
х	xNetwork Configuration Configure TCP/IP network parameter	х	х
x	x hange Password Change the serial console admin passwor	х	х
х	xReset certificate/key pair Revert cert/key to original	х	х
x	xNevert Revert Server Software	х	х
х	xRestore Restore config to initial state	х	х
х	xNeset Admin Reset web admin password to default	х	х
х	xBestart Restart Server	х	х
x	xShutdown Shutdown Server	х	х
x	$m_{\Lambda}(+)$ dddddddddddddddddddddddddddddddddddd	ij	х
х			х
x			х
x			х
х			х
х			х
tç	laaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	1de	qu
х	< <u>OK</u> > < <u>C</u> ancel>		х
шç	laaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	1d(ij

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 I keys:

h – left

j – down

k – up

I – right

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

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x	Please	sel	ect	the	date	2				x
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x	'h', '	j',	'k',	, '1'	(16)	eft,	dowr	ւ, պ	þ,	x
x	right)	to	move	e wit	hin	the	cale	enda	c.	x
x										x
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x	x	Sun	Mon	Tue	Wed	Thu	Fri	Sat	х	x
x	x 10			1	2	3	4	5	х	x
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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 <u>identical</u> 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 (<u>not</u> 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 <u>changeme</u>. 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

GShoreTel"	IP Phones				-		
ShoreWare Director Logoff Denice	Filter IP Phones By Sites: By Switches:	Sunnyvale Corp-tuji-12-1 (S	Sunnyvale)	Find Now	Cipar		
Administration Users Trunks IP Phones It dividual UP Phones	IP Phone List Show Page:	1 : Sunnyvale - S CoroSG24-5 (Su	iunnyvale novsale)			O records checked. 1	15 Records 25 💌 per
o IP Phone Address Map	E Name	Site	Switch	MAC Address	IP Address	User Current Hom	e Phone Type Assia
 o Options Switches Call Control Yoice Moil Auto-Attendant Menu Workgroups Schedules System Directory Application Servers Conference Bridges Sites System Parameters Preferences 	□ 100.10 □ 100.00 □ 100.20 □ 100.20 □ 100.76 <td>Sunvale Sunvale Sunvale</td> <td>Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1</td> <td>ED-ED-76-73-05-0 ED-ED-76-71-02-02-0 ED-76-71-02-02-0 ED-76-71-02-02-0 ED-76-71-02-00-02-0 ED-76-70-08-09-0 ED-76-70-08-08-0 ED-76-70-08-08-0 ED-76-70-06-08-0</td> <td>In particular 6 10.2 60 1135 7 10.2 65 115 1 10.2 59 111 1 10.2 59 110 0 10.2 59 109 9 10.2 59 100 1 10.2 59 107 7 10.2 59 106 6 10.2 59 105</td> <td></td> <td>Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge</td>	Sunvale Sunvale	Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1 Corp-10-12-1	ED-ED-76-73-05-0 ED-ED-76-71-02-02-0 ED-76-71-02-02-0 ED-76-71-02-02-0 ED-76-71-02-00-02-0 ED-76-70-08-09-0 ED-76-70-08-08-0 ED-76-70-08-08-0 ED-76-70-06-08-0	In particular 6 10.2 60 1135 7 10.2 65 115 1 10.2 59 111 1 10.2 59 110 0 10.2 59 109 9 10.2 59 100 1 10.2 59 107 7 10.2 59 106 6 10.2 59 105		Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge Contento Bridge
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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 Users edit page appears as shown below.

Users Edit User	<u>N</u> ew <u>C</u> o	py <u>S</u> ave	Delete	Reset	<u>Hel</u>
🔻 General	Personal Options	Distribution	1 Lists	▶ Workgroups	Refresh this page
First Name:	Bridge R00				
Last Name:					
Number:	1130				
License Type:	Extension and Mailt	NOX 💌			
Caller ID:		(e.g. +1 (408) 3	31-3300)		
DID:	+1408331	(DID R:	ange: +140	83313300 - 3322)	
PSTN Failover:	None	1			
User Group:	eDial Test trunk UG	Go to	<u>this User G</u>	Group	
Site:	Sunnyvale				
Language:	English 💌				
Home Port:	IP Phones E	-ED-66-60-02-02 🔻			
	C Ports Co	orpSG12-1 IT - 6 💌			
	C SoftSwitch	nazon 💌			
Current Port:	ED-ED-66-60-02-02	Go Home			
Jack #.					
Mailbox on Server:	Amazon 💌 Voic	e Mail Delivery and	Notificatior	15	
Accept Broadcast Mes	ssages				
🗖 Include in System Dia	I By Name Directory				
Make Number Private					
Allow Use of Soft Phor	ne				
Fax Support:					
None					
C Redirect Inbound Fa	ax Calls to Site Fax Extens	ion			
C This Extension Is C	onnected to a Fax Server				
Client Type:	Personal	•			
Client User ID:	eDialR00				
Client Password:					
Voice Mail Password:					
Email Address:	eDialR00@noemail.c	om			
Conference Bridge:					
Server:	None				
User ID:					
Password:				3	
Edit System Directory Rec	cord				

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

Users Edit User	New Copy Save Delete Reset
🕨 General 🛛 👻	rsonal Options Distribution Lists Divergeoups Refresh this page
User Name:	Bridge R00
Extension:	1130
Current Call Stack Size:	13
Ring Type:	Standard 💌
Automatic Off-Hook Preference	⊃530/560); . O Speakerphone C Headset
Call Waiting Tone Enabled	
T Handsfree Mode	
Voice Mailbox for Recorded Ca	Search
Trunk Group Access Code:	<none></none>
Current Call Handling Mode:	Standard Delegation
C Outlook Automated Call Ha	ling
Edit Call Handling Modes: Standard In a Meeting Out of Office Extended Absence Custom	
Voice Mail Delivery and Notifica	<u>ins</u>
External Call Destinations	
Customize IP Phone Buttons	

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.

rsion Agents 2	5 <u>Ahravs On</u> 5 <u>Ahravs On</u> 6 5 1 <u>Susport Hours</u>	Scher Holiday Holdeys	dules Custom
nsion Agent 2	s On-Hours 5 Always On 0 5 1 Support Hours	Holiday Holidays	Custom
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	Support Hours		
		Holdays	
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	9 Support Hours	Holidaya	
	5 Support Hours		
	9		
	5 Corporate Hours	Holdeys	Skeleton Crew
-	3		
	7 Support Hours	Holidays	
	4	Holidays	
	2		
	0 asatest		
		5 Susport Hours 9 5 Corporate Hours 3 7 Susport Hours 4 2 0 assitest	5 Susset Hours Holdevs 9 5 Comonste Hours Holdevs 3 7 Susset Hours Holdevs 4 Holdevs 4 106devs 0 assitest

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.

END AND CONTRACTOR	Defect this second
Earr unis record	Refresh this page
Future.	CONFER 3400 WG
Extension:	3400
Backup Extension:	1130 : Bridge R00 Search
DID:	✓ +1408331 ✓ 3400 (DID Range: +14083313340 - 3699)
DNIS:	Edit DNIS Map
User Group:	Sunnyvale
Mailbox (server)	Powerbar 💌 Voice Mail Delivery and Notification
Language:	English 💌
C Accept Broadcast Messages	
□ Include in System Dial By Name	Directory
Make Number Private	
Recorded Name:	Record Play Erase Import no audio input
Voice Mail Password:	•••• Confirm: ••••
Enable Automatic Agent Logout of	on Ring No Answer
Workgroup Membership:	Edit Agents
Workgroup Queue Handling:	Edit Queue Handling
Wrap Up Time:	0 Seconds
Current Call Handling Mode:	On-Hours
- On-Hours	Off-Hours Holiday Custom
On-Hours C Schedule:	Off-Hours Holiday Custom
✓ On-Hours ► C Schedule:	Off-Hours Holiday Custom Always On Edit this schedule
✓ On-Hours ► C Schedule: Call Handling:	Always On Edit this schedule
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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.

Edit this record	Eenesh this page		
Filter Users By: First Name:	Last Name	Extension	_
Select Agents From List: Show Page 11+ASPDN-DIG	- 		
1155 : Bindge R25	Add >> << Sgmote More Up ^ More Down H	1139: Siridge RAB(Logged In) 1139: Siridge RAB(Logged In) 1122: Uridge RAB(Logged In) 1122: Uridge RAB(Logged In) 1131: Uridge RAB(Logged In) 1134: Uridge RAB(Logged In) 1135: Uridge RAB(Logged In) 1135: Uridge RAB(Logged In) 1135: Uridge RAB(Logged In) 1136: Uridge RAB(Logged In) 1137: Uridge R	1
23-18 : Alexandra Masul 3358 : Call Center BackUp		1152 : Bridge R220, ogged ku 1151 : Bridge R210, ogged ku	2
Hirt. Double click user in the right bin if y	ou need to change his L	ogged in status	
Return to this worksroup			

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.

🐴 i dir Waskgr	nap Member Web Page Dialog	×
Name:	Rick Martin	
Client Type:	Persond	
E Logge	dh	
E Call W	iar Ju	
	OK Oursel	
) upp/Sharef was	San 🚰 ana - Anana	

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).

🕨 General 🛛 💙 Personal	Options Distribution Lists Workgroups	Refresh this page
User Name:	Bridge R00	
Extension	1130	
Current Call Stack Size	1	
Ring Type:	Stendard -	
Automatic Off-Hook Preference (IPS30/560)	Speakerphone C Headset	
Call Waiting Tone Enabled		
T Handsfree Mode		
Voice Mailbox for Recorded Calls	Search	
Trunk Group Access Code:	(tione) ·	
Current Call Handling Mode:	Standard Delegation	
Coullook Automated Call Handling		
Edit Call Handling Modes: Standard In a Meeting Out of Office Extended Absence Custom		
Voice Mail Delivery and Notifications		
External Call Destinations Customize IP Phone Buttons		

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.

Edit this record	Refresh this page	
Call Forward Condition:	C Always @ No Answer/Busy C	D Never
Always Destination:	Extension: 3101 : Voice Mail	Search
	C External:	(e.g. 9+1 (408) 331-3300)
Busy Destination:	• Extension: 1131 : Bridge R01	Search
	C External:	(e.g. 9+1 (408) 331-3300)
No Answer Destination:	• Extension: 1131 : Bridge R01	Search
	C External:	(e.g. 9+1 (408) 331-3300)
No Answer Number of Rings:	3	
Enable Calling Message Notifi	cation	
Personal Assistant:	1801 : OPERATOR WG Search	
Call Handling Note:		
Enable Find Me		



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

NOTEThe 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."

Index

A

account management · 43 active calls · 59 active media \cdot 60 active users \cdot 60 add organization · 46 ad-hoc calling \cdot 22 admin user · 56 administrator password, change · 57 advanced settings · 33 alarm conditions · 70 AppSharing ports · 31 audio quality \cdot 60 authentication \cdot 23 auto provisioning · 23 Automated Message Delivery System · 58 automatic server backup \cdot 32

B

billing code \cdot broadcast ports \cdot broadcast user \cdot 50, 58 bulk provision \cdot bulk provisioning \cdot

С

call activity report · 52 call activity reports · 64 caller ID \cdot 21, 44 caller ID, default · 21 CD ISO image file \cdot 40 certificate/key pair · 80 Cluster FQDN (fully qualified domain name) · 17 Cluster IP address · 17 CODEC · 18 collaboration subnet \cdot 33, 38 conference ID \cdot 52 conference port IP address range · 19 conference port IP netmask · 19 conference timeout \cdot 23 conference URLs \cdot 22 cookie domain · 80, 82 corporate directory \cdot 23 country code \cdot 21 CSV file · 54 CSV format · 55 CSV report \cdot 52

D

DAS rules · 33, 35, 36 date/time \cdot 78 date/time, set · 23 daylight savings · 23 default dictionary \cdot 28 default organization · 21, 46 delegate \cdot 53 delete old recordings \cdot 22 department code \cdot 58, 67 DHCP · 16 dictionary file · 28 DID number · 44 digital certificate · 30 document timeout · 22 domain name · 17 drop leg \cdot 59

E

email type \cdot 51, 58 email warnings \cdot end call \cdot error codes \cdot executive \cdot executive ports \cdot executive user \cdot expired conferences \cdot extension dialing \cdot extension filter \cdot

F

federated · 61 filter pattern · 34 find user · 48 firewall · 22 FQDN (Fully Qualified Domain Name) · 82

G

gateway, default · 17 general alarm email · 21 general alert email · 21

H

 $\begin{array}{l} histogram \cdot 65 \\ history \ log \cdot 69 \end{array}$

hostname \cdot 17

Ι

international dialing prefix · 21 IP address · 17, 77 IP address settings · 16 IPlanet LDAP directory · 24 IVR · 24

L

language code name \cdot language files \cdot LDAP \cdot LDAP query \cdot 23, 43 leader code \cdot license certificate \cdot licensing \cdot list organizations \cdot list users \cdot

М

mail to messages · 51 manual server backup · 39 manual server restore · 39 maximum AppSharing legs per call · 21 maximum AppSharing legs per server · 21 maximum audio legs per call \cdot 21 maximum audio legs per server · 21 mgcp receive port · 20 mgcp send port · 19 Microsoft Active Directory · 24 Microsoft Active Directory LDAP interfaces · 23 minimum IVR access code length \cdot 22 monitoring \cdot 59 monophonic · 26 monophonic mu-law · 30 multiple leaders \cdot 58, 67 music on hold \cdot 30

N

national dialing prefix · 21 Netmask · 17 node ID · 52 NTP server, primary/secondary · 17 NTP servers · 77 number of conference ports · 19

0

open source software · 32

organization · 50 organizations · 43

P

package type \cdot 69 participant code · 67 password · 23, 50, 80 Perl language \cdot 34, 35 phone display filter · 35 port license certificate · 31 port reservation enabled \cdot 22 port upgrade · 31 port usage notification threshold · 21 ports, active \cdot 65 ports, occupied · 65 primary configuration switch · 19 project code · 58 prompt set file $\cdot 24$ prompt set management · 25 provisioning · 43 PSTN · 21, 36, 50, 58

R

recording prompts \cdot recording timeout \cdot recurring conferences \cdot registered users \cdot regular expressions \cdot reservation warning threshold \cdot reservationless access code \cdot reservationless calls \cdot 50, 58 reservationless conference \cdot 51, 52, 55 restart \cdot restart SCD processes \cdot routing table \cdot rtp receive port \cdot rtp send port \cdot

S

SCD user name \cdot scheduled conference \cdot scheduled conferences \cdot secondary configuration switch \cdot send mail \cdot 33, 38 serial console \cdot server process status \cdot server reporting \cdot server status \cdot sessionless application \cdot set name \cdot shutdown \cdot 40, 81 single leg timeout \cdot site connections \cdot smart mail relay host \cdot 21 SNMP engine number \cdot 37 SNMP monitoring host \cdot 37 SNMP password · 37 SNMP traps · 33, 37, 83 SNMP user \cdot 37 SSL certificate \cdot 30 SSL certificate upload \cdot 30 SSL encrypted browser connections (HTTPS) · 22 status indicators · 62 Sun Microsystems IPlanet Directory Server · 23 system alerts $\log \cdot 68$ system clock \cdot 77 system commands \cdot 63 System Configuration · 16 system monitoring · 37 system options \cdot 23 system serial number · 31 system status \cdot 60

T

 $\begin{array}{l} TCP/IP \cdot 17 \\ TCP/IP \ settings \cdot 16 \\ time \ zone \cdot 22, \ 23 \\ toll \ free \cdot 44 \\ translation \ tables \cdot 28 \end{array}$

U

update/change voice prompts · 26

upgrade server software \cdot user account \cdot user accounts \cdot 47, 49 user count \cdot user ID \cdot user interface language \cdot user login timeout \cdot user name \cdot user profile \cdot

V

VMware · 31 VMware license · 32 voice interface alert · 21 voice prompts · 24, 45, 72 VoIP settings · 18 VoIP statistics · 65

W

web administrator password · 81 web report · 52 web server name · 17 webserver administrator email · 21

X

XML report \cdot 52