



ALLO.com's

Conference Server

(On 2nd Gen PRI Card with LEC)

User Manual

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About this manual

This manual describes the Allo product application and explains how to work and use its major features. It serves as a means to describe the user interface and how to use it to accomplish common tasks. This manual also describes the underlying assumptions and users make the underlying data model.

Document Conventions

In this manual, certain words are represented in different fonts, typefaces, sizes, and weights. This highlighting is systematic; different words are represented in the same style to indicate their inclusion in a specific category. Additionally, this document has different strategies to draw User attention to certain pieces of information. In order of how critical the information is to your system, these items are marked as a note, tip, important, caution, or warning.

Icon	Purpose
	Note
	Tip/Best Practice
	Important
	Caution
	Warning

- **Bold** indicates the name of the menu items, options, dialog boxes, windows and functions.
- The color [blue](#) with underline is used to indicate cross-references and hyperlinks.
- Numbered Paragraphs - Numbered paragraphs are used to indicate tasks that need to be carried out. Text in paragraphs without numbering represents ordinary information.
- The Courier font indicates a command sequence, file type, URL, Folder/File name e.g. www.allo.com

Support Information

Every effort has been made to ensure the accuracy of the document. If you have comments, questions, or ideas regarding the document contact online support: <http://support.allo.com>

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1. Introduction

The ALLO Conference Server allows you to schedule and manage conference calls using a Web-based interface.

Tele conferencing is an important part of modern business communications, connecting offices, remote workers and customers. Conferencing can save thousands of dollars and hours otherwise spent on travel, lodging and logistics for face-to-face meetings. Unfortunately, traditional conferencing systems tend to be proprietary, difficult to integrate and prohibitively expensive. Asterisk changes that.

Allo has integrated conferencing features any company can operate its own conference server for a fraction of the price of traditional commercial systems. Allo conference servers can operate as stand-alone devices connected directly to the PSTN, or as private resources connected behind existing PBX systems. VoIP-only systems require no additional hardware and no per server or per seat license fee. Systems that connect with analog or digital telephony technologies require only an ALLO interface card.

2. Features

1. Different user modes like admin, marked and normal.
2. Run AGI script while user enters into conference.
3. Announcements like user count, user join/leave, and marked user entered, kicked from conference, custom intro file play back.
4. Music on hold when the conference has a single caller.
5. Allow user to exit the conference by pressing a single digit.
6. Record conference.
7. Conference menu for user and admin users on pressing *.
8. Allow user to exit the conference by entering a valid single digit extension.
9. Time out for user/conference rooms.
10. Invite user by outbound call.
11. Play the last recorded file.
12. Monitor (list active conference rooms and users) and control the Conference (kick user, invite user etc) from the UI.

3. Overview

In conference, all the voice samples of the users are added and the resulting signal will be sent to each user after removing its own samples. The mixer is the main part of a conference bridge which will make the process of adding all channel samples and consume CPU.

Figure 1 shows the normal conference server where the mixing is done the host CPU.

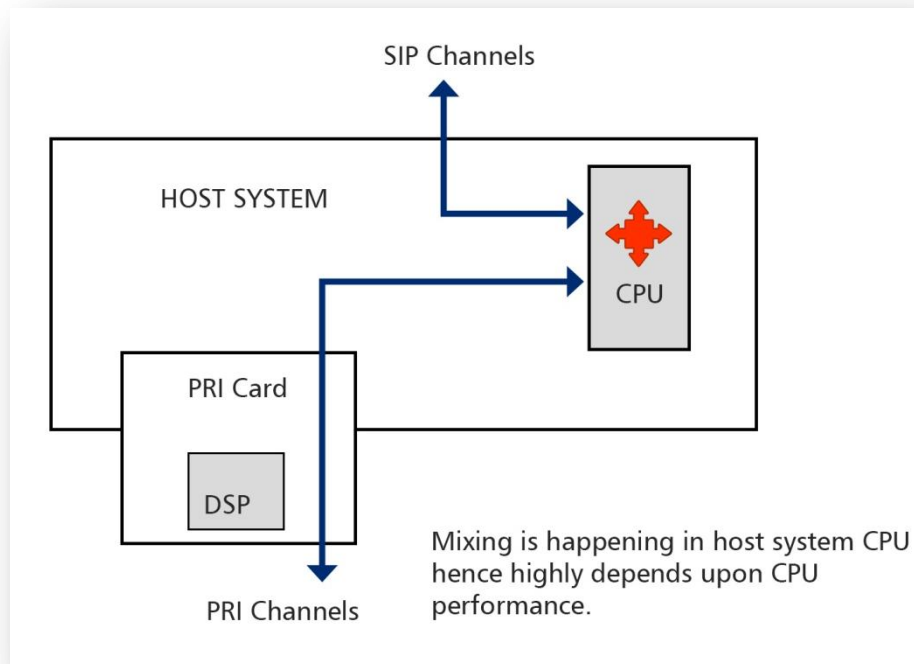


Figure 1: Normal Conference Setup

On the PRI conference server the mixing is done by the DSP on the PRI card (figure 2) hence it consumes very less host CPU cycles when compared to the normal conference.

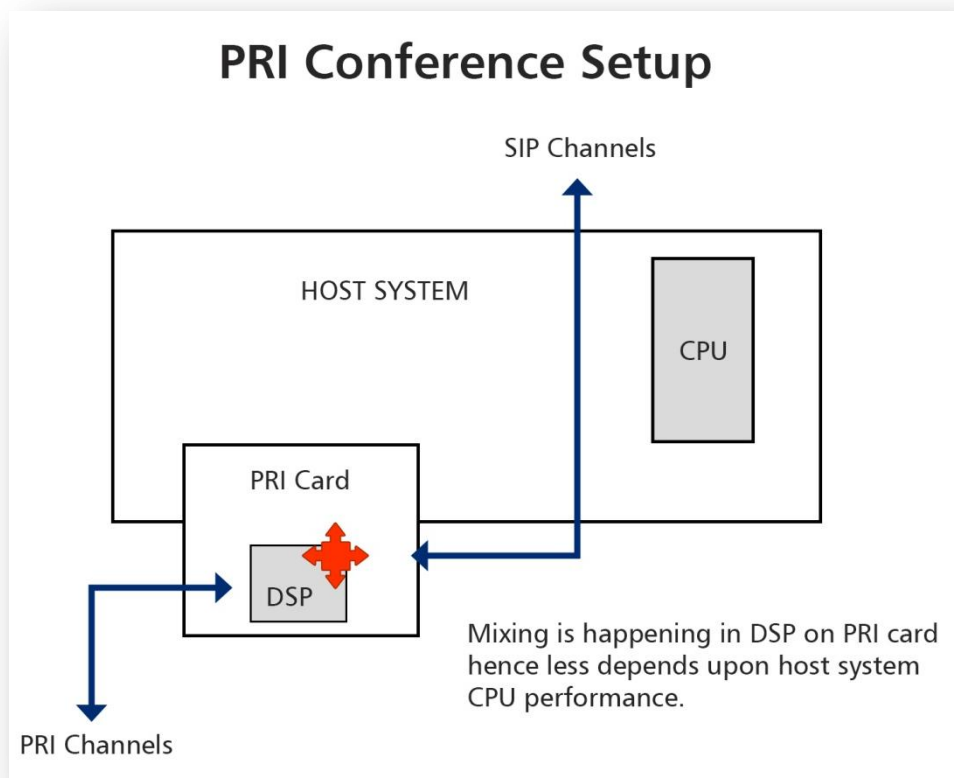


Figure 2: PRI Conference Setup

3.1 Calculation of maximum number of channels available for conference

Maximum number of channels available for conference = (total number of B channels on PRI card - no. conf rooms * 2)

Maximum number of channels available for the conference again divided into PRI and SIP channels. PRI channels will be the number of real PRI channels available and SIP channels will be the number of available dummy channels.

SIP channels = maximum number of channels available for conference - real PRI channels

3.1.1 For 4 span PRI card (with 3, 4 spans loop backed)

Maximum number of channels available for conference = (120 - no.conf rooms * 2)

SIP channels = maximum number of channels available for conference - 60

No of Conference Rooms	Available channels	PRI	SIP
1	118	60	58
2	116	60	56
3	114	60	54
4	112	60	52
5	110	60	50
6	108	60	48
7	106	60	46
8	104	60	44
9	102	60	42
10	100	60	40
11	98	60	38
12	96	60	36
13	94	60	34
14	92	60	32
15	90	60	30
16	88	60	28
17	86	60	26
18	84	60	24
19	82	60	22
20	80	60	20
21	78	60	18
22	76	60	16
23	74	60	14
24	72	60	12

3.2 Calculation of max number of conference rooms

Max no. rooms = total number of B channels on PRI card / (channels per conf room + 2)

3.2.1 For 4 span PRI card (with 3, 4 spans loop backed)

Max no. rooms = 120 / (channels per conf room + 2)

Channels per conference Room	No of Rooms
3	24
4	20
5	17
6	15
7	13
8	12
9	10
10	10
11	9
12	8
13	8
14	7
15	7
16	6
17	6
18	6
19-22	5
23-28	4
29-38	3
39-58	2
59-118	1

3.2.2 Dummy channels:

As the PRI conference server used DSP Conference Bridge the SIP channel data need to be brought to DSP which is on the PRI card. So user has to reserve at least one span for this purpose. Channels on this span/s are called dummy channels.

The number of SIP channels can be added to the conference is proportional to the number of dummy channels. For card with one span user have to use the same span for dummy channels(Eg:-group id -11), in this case the number of SIP channels can be added is proportional to number of free channels in the span and user cannot use the same channel at the same time as dummy channel and normal channel for calls.

For cards with more than two spans, dummy channels can be created by physically looping back two spans, in this case user have to combine the two spans in a group and configure the common group id.

4. Installation Steps

4.1 Installation of Pre-requisite packages

Dahdi version (2.9.1.1) from allo.com and

Asterisk (12.1.1) from source

Install all of Asterisk's dependencies that are required to compile asterisk.

The conference server source code can be obtained through ALLO.com. The conference server application is tested with an Asterisk 12.1.1 standard open source code.

The software also needs webserver, php (version ≥ 5.3) and sqlite (version 3) software packages. The user can use the existing packages in their PC or use installation script to install it.



The installation script present in the source code can be used for installing the software. The script will patch dahdi and Asterisk source code; the paths for both sources need to be entered by the user while running the installation script.

4.2 Conference Server Installation Steps

1. The file downloaded will need to be extracted before compiling. Use the GNU tar application to extract the source code from compressed archive. This is a simple process that can be achieved through the following commands:

```
$tar xvfz conferenceserver_<version>.tar.gz
```

2. Go to PCS folder then execute.

```
$cd PCS
```

3. Run Install Script

```
$/install_script.sh
```

- I. Enter the dahdi 2.9.1.1 source path
- II. Enter the asterisk 12.1.1 source path.
- III. If user have own web server they can configure it by using the steps given below. Other wise choose installation script to install the packages and configure it.

While installing webserver, using the installation script choose the type of OS in use.

- IV. Select installation script to install sqlite3, if it's not presented.
- V. Select installation script to install php, if it's not presented.

If everything goes fine "success" will be printed.

4. For card with 4 spans, make sure that span 3 and span 4 are UP in asterisk by connecting a loop back cable for the dummy channels.
5. Configure AMI (Asterisk Manager Interface) in manager.conf .You can use the previous settings if any.

Eg:-

```
[general]
enabled = yes
webenabled = yes
port = 5038
bindaddr = 0.0.0.0
```

```
[admin]
secret = admin
```

```
all
read = system,call,log,verbose,agent,user,config,dtmf,reporting,cdr,dialplan
write = system,call,agent,user,config,command,reporting,originate,message
```

6. Include CEM_Meetmeallo.conf file at the end of all incoming contexts as required using

```
#include CEM_Meetmeallo.conf
```

7. Create an outbound call context for making out-bound calls from the conference.
8. Mail Transfer Agent configuration. You can use the existing MTA if any or follow the below steps to install and configure the MTA.

I. Install ssmtp

For Ubuntu

```
$sudo apt-get install ssmtp
```

For centos

```
$wget -c http://dl.fedoraproject.org/pub/epel/5/x86\_64/epel-release-5-4.noarch.rpm
```

```
$rpm -ivh epel-release-5-4.noarch.rpm
```

```
$yum -y install ssmtp
```

```
$alternatives --config mta # select sendmail.ssmtp
```

II. sudo vim /etc/ssmtp/ssmtp.conf

```
# Config file for sSMTP sendmail
#
root=MyEmailAddress@gmail.com
mailhub=smtp.gmail.com:587
AuthUser=MyEmailAddress@gmail.com
AuthPass=MyPassword
UseTLS=YES
UseSTARTTLS=YES
```

```
rewriteDomain=gmail.com
hostname=MyEmailAddress@gmail.com
FromLineOverride=YES
```

III. `sudo vim /etc/ssmtp/revaliases`

```
root:YourFromName@gmail.com:smtp.gmail.com:587
```

IV. 8.4. Test the mta with

```
$echo "hello" | ssmtp ToName@gmail.com
```

In centos if you get 'sendmail: Cannot open smtp.gmail.com:587' error add
`TLS_CA_File=/etc/pki/tls/certs/ca-bundle.crt`
at the end of `/etc/ssmtp/ssmtp.conf`



For step II and III replace with your own credentials.

5. Manual Configuration for Webserver

1. Copy the Conference GUI folder to the http server document root path and provide proper permissions.

```
Ex-
cp -rf GUI /var/www/
chmod 777 -R /var/www/GUI/DB
chown www-data: www-data -R /var/www/GUI/DB
```



The document root may vary for different web server.

2. Add root permission for the web server user.

On the command prompt run visudo.

Add the following line to the file and save it.

```
<http-server-username> ALL= NOPASSWD: ALL
```

Ex-

```
www-data ALL= NOPASSWD: ALL
```



The web server user may vary for different web server.

3. Configure php cgi.



Configuration for php may vary for different web server. Not providing an example.

Your Installation of conference server is now complete.

6. Conference Server

6.1 Accessing the WEB GUI

Conference Server Web GUI can be accessed through browser at <http://<conferenceserver IP>/GUI>

Eg: <http://192.168.1.100/GUI> .

There are three types of users for the conference server.

1. System Admin
2. Creator
3. Conference admin

1. System Admin

Login using the default username & password (Default: Username: admin; Password: admin).

Successful login takes you to the ALLO.COM'S Conference Server.

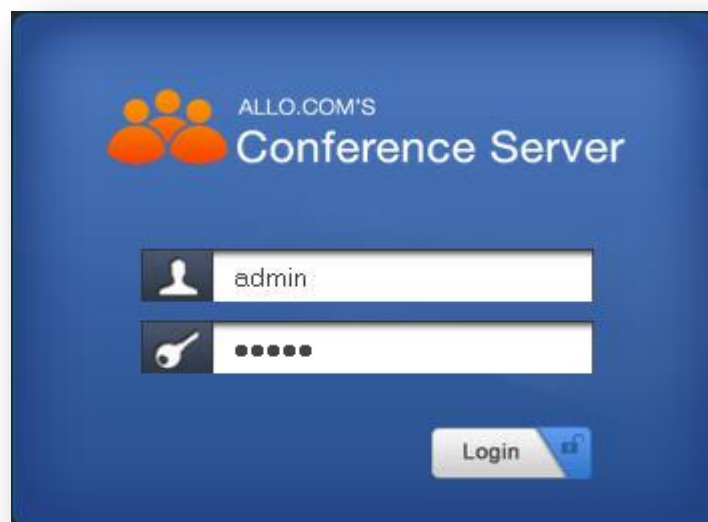


Figure 3: Login Page



The Recommended web browser to access GUI is Mozilla Firefox.

Please change the default administrator password to alphanumeric, to prevent hacking.



Figure 4: Log out

Web Settings: Here you can change the administrator password settings.



Figure 5: Web Settings

Web Session Timeout: Duration after which current web login session expires. Default: 3600 sec

Default Filtering: Number of entries in a table per page to be displayed.

Change Password: Modify Administrator password here.

Click on “**SAVE**” button, followed by “**APPLY CHANGES**” button to update the configuration changes.

Logout: It will take you out of the web interface.

7. System Admin

7.1 AMI Configuration (Asterisk Manager Interface)

The conference GUI will communicate with the asterisk using the AMI. Enter the AMI configuration details of the Asterisk. (Please refer installation steps)

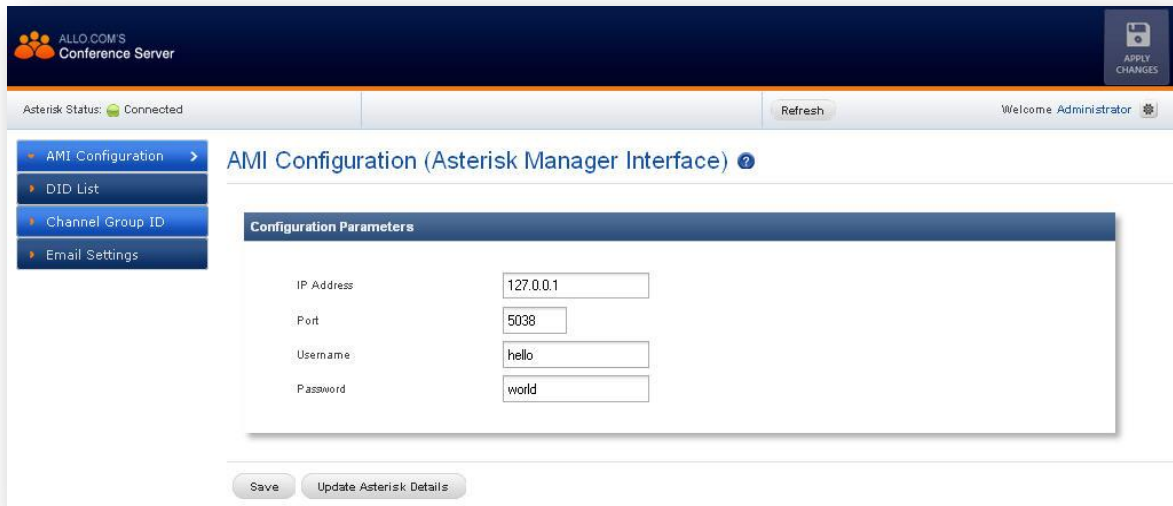


Figure 6: AMI Configuration

Configuration Parameters

IP Address	Do not change the IP address.
Port	Enter the Port number used for AMI. E.g.: 5038 (required entry).
Username	It specifies the name of AMI user. (Required entry).
Password	Enter the password to authenticate AMI registrations for the users.

7.2 DID List

For each PRI line, the service provider would provide more around 100-500 numbers which can be used by outsiders to call the extension directly.

The 'Add DID' dialog box features a blue header with the title 'Add DID' and a close button (X). Below the header, there is a label 'DID No' followed by a text input field containing the number '4007'. At the bottom right of the dialog, there are two buttons: a yellow 'SAVE' button and a grey 'CANCEL' button.

Figure 7: Add DID Number

Here you can configure the range of the DID numbers provided by the service provider, e.g.: 5000 to 5010.

The 'Create DID Range' dialog box has a blue header with the title 'Create DID Range' and a close button (X). The main area contains the label 'DID Range' followed by two text input fields. The first field contains '4001' and the second field contains '4008', with the word 'To' positioned between them. At the bottom right, there are two buttons: a yellow 'SAVE' button and a grey 'CANCEL' button.

Figure 8: Create DID Range

The 'DID Routing' interface includes a left-hand navigation menu with the following items: 'AMI Configuration', 'DID List' (highlighted with a right-pointing arrow), 'Channel Group ID', and 'Email Settings'. The main content area is titled 'DID Routing' and contains a table with the following structure:

Show All entries		Search:
<input type="checkbox"/>	DID	Options
<input type="checkbox"/>	100	<input type="checkbox"/>
<input type="checkbox"/>	101	<input type="checkbox"/>
<input type="checkbox"/>	102	<input type="checkbox"/>
<input type="checkbox"/>	103	<input type="checkbox"/>
<input type="checkbox"/>	104	<input type="checkbox"/>
<input type="checkbox"/>	105	<input type="checkbox"/>
<input type="checkbox"/>	106	<input type="checkbox"/>
<input type="checkbox"/>	107	<input type="checkbox"/>

Below the table, it indicates 'Showing 1 to 11 of 11 entries' and provides navigation links: 'First', 'Previous', '1', 'Next', 'Last'. At the bottom of the interface, there are three buttons: 'Add New', 'Add DID Range', and 'Delete Selected'.

Figure 9: DID Routing

Channel Group ID

Enter the span group ID to be used for dummy channels.



Figure 10: Channel Group ID



The dummy channels are used in the PRI card for announcement, recording and connecting SIP channels into conference. For 1 port card, the id will be same as the real span id.

7.3 Email Settings

Email settings for the sender name, contents of the emails send to conference admin and end user.

7.3.1 Server Settings

Navigate through **Email Settings > Server Settings**



Please enter your email address (e.g., myname@allo.com) and the same is configured in the MTA.

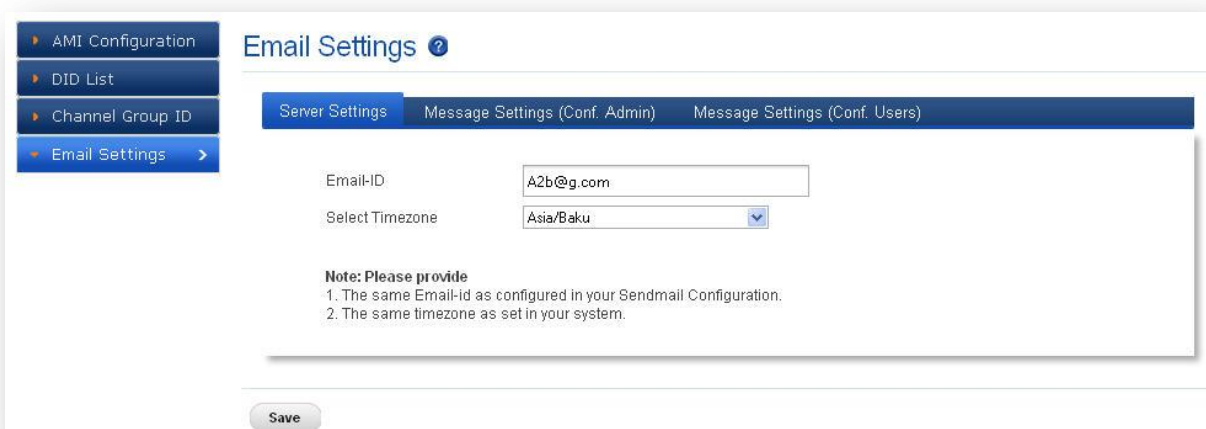


Figure 11: Email Settings

Email ID	Enter the email id for the server settings. E.g.: abc@gmail.com
Select Time zone	Select the correct time zone for the location where the conference is happened using the Time Zone dropdown box. Default: Asia/Kolkata .



1. The same Email-id as configured in your Send mail configuration.
2. The same time zone as set in your system

7.3.2 Message Settings (Conf.Admin)

Navigate through **Email Settings > Message Settings**

Here, the content of the email send to the corresponding conference administrator when a conference is created/modified.

When the customized conference messages are being updated with “Add Headers” button, that specific header will be added at the end of the message. It’s similar to the following appearing on the screen. A message appears confirming that the customized message have been added to the defaults.

E.g.: Conference ID

#CONFID will be added in the body of message.

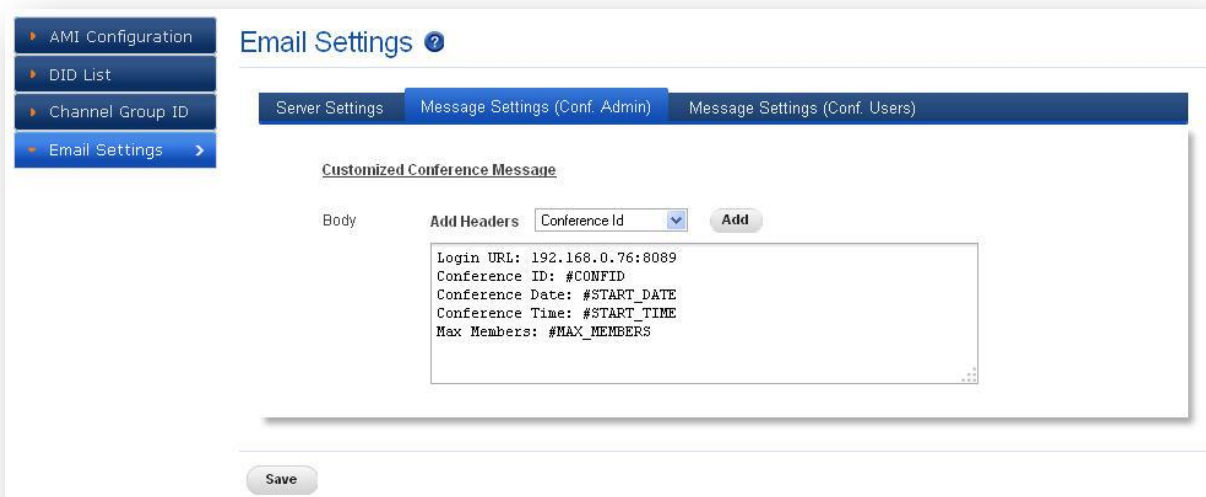
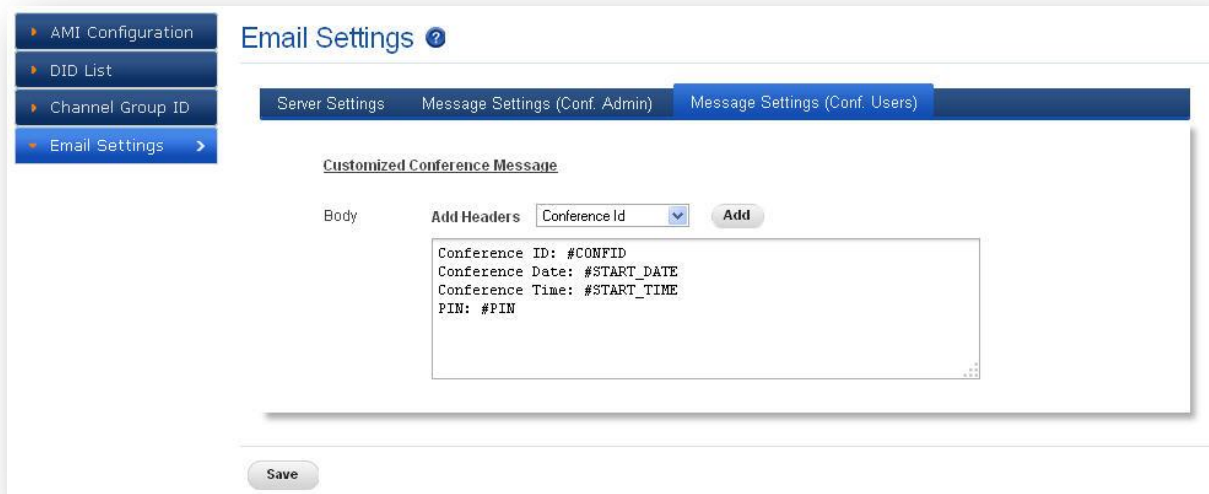


Figure 12: Message Settings (Conf.Admin)

7.3.3 Message Settings (Conf.Users)

Navigate through **Email Settings > Message Settings**

This is the content of the email send to the corresponding conference end users when conference administrator creates/modifies a conference.



AMI Configuration
DID List
Channel Group ID
Email Settings >

Email Settings ?

Server Settings Message Settings (Conf. Admin) **Message Settings (Conf. Users)**

Customized Conference Message

Body Add Headers Conference Id Add

```
Conference ID: #CONFID
Conference Date: #START_DATE
Conference Time: #START_TIME
PIN: #PIN
```

Save

Figure 13: Message Settings (Conf.Users)

8. Conference Creator


Login as Conference Creator (username: creator / password: creator)

8.1 Create Conference

Create conference for the conference admin.

Figure 14: Create Conference

Conference Number	Enter the unique conference number for create conference (positive integer).
Created For (User ID)	Enter the name of the conference admin to whom creator wants to create a conference.
Created For (Email ID)	Enter the email id for the conference admin.
Max Participants	It specifies maximum number of participants allowed.
Conf. Extension No	Enter the extension no for the internal SIP users to enter

	into conference.
DID Extension No	Enter the DID number to dial for the external users.
Date (mm/dd/yyyy)	Enter the date or date range when the conference allowed happening.  Click date, to display the calendar and select the desired date.
Conference duration	Enter the maximum duration of the conference once it started. This should not exceed time.
Start time	Enter the starting time of the conference slot and it should be in 24 hour format.
Dial-in Duration	Enter the duration up to what time users are allowed to enter into the conference.
Repeat on days	Select if conference to be repeated in selected day of a week. By default it is all days.

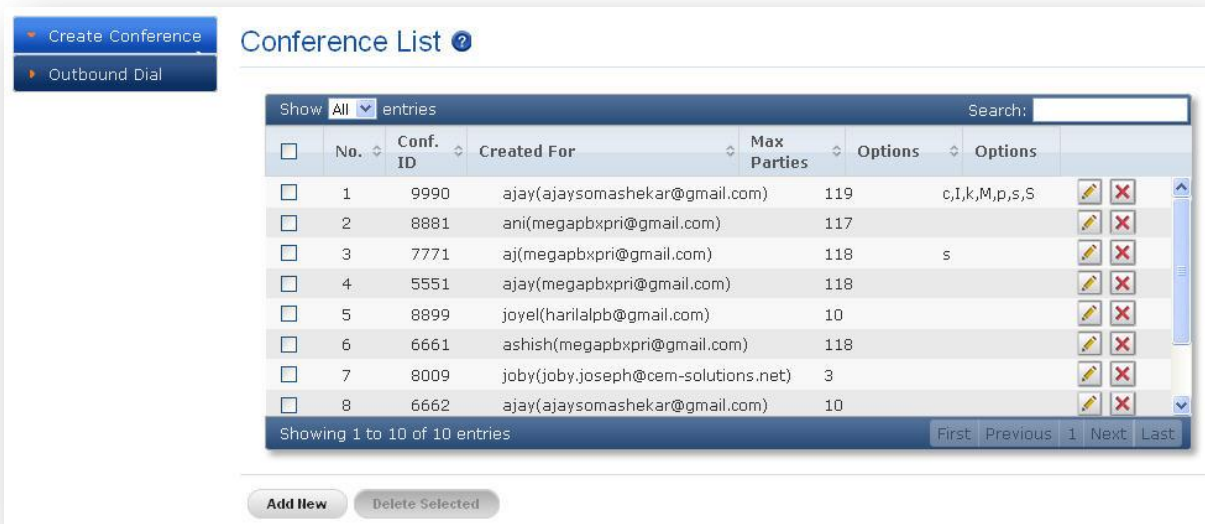


Figure 15: Conference List

The Conference lists that have been created are displayed.

You have the options to select the conference name that you wish to Edit/Delete on screen.

Click icon to delete the selected items.



Figure 16: Delete

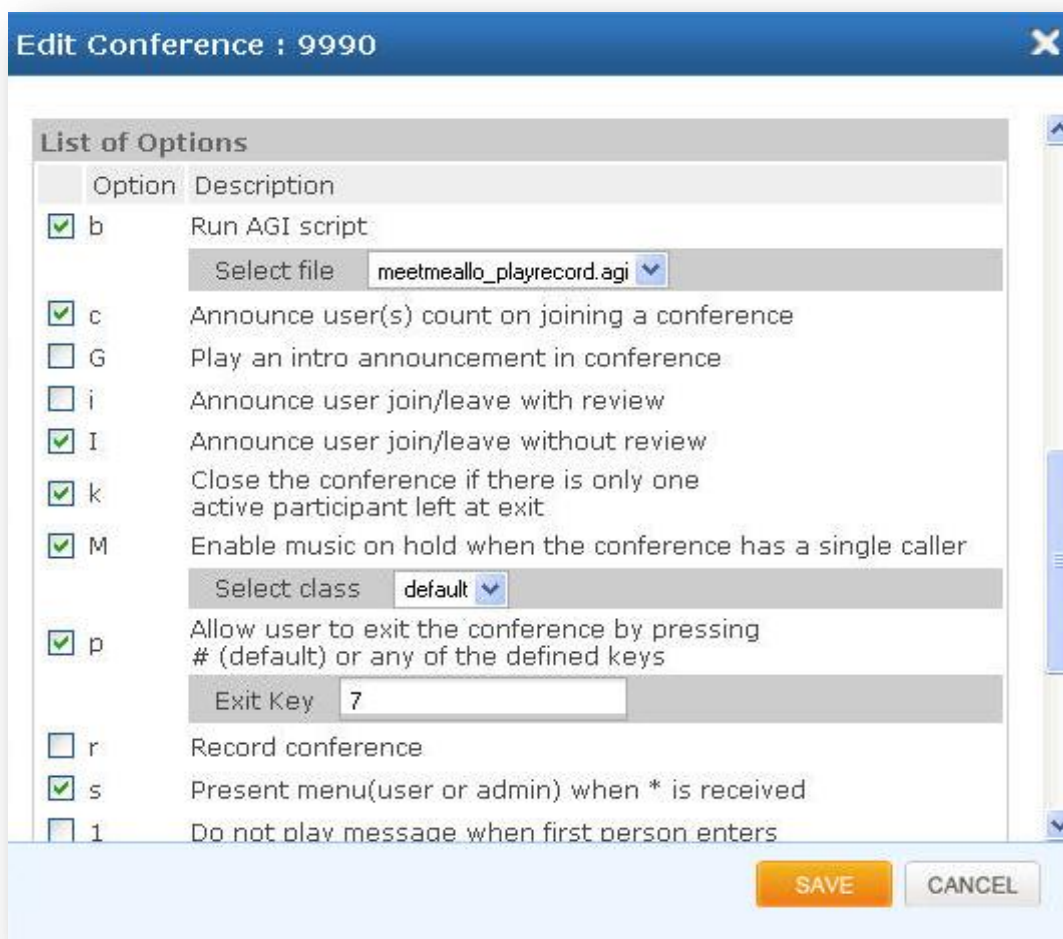


Figure 17: Edit Conference

Option	Description
b	Run AGI Script
c	Announce user(s) count on joining a conference.
C	Continue in dialplan when kicked out of conference
G	Play an intro announcement in conference.
i	Announce user join/leave with review
l	Announce user join/leave without review
k	Close the conference if there is only one active participant left at exist.
M	Enable music on hold when the conference has a single caller.
P	Allow user to exit the conference by pressing # (default) or any of the defined keys.
r	Recorded Conference
s	Present menu (user or admin) when* is received
X	Allow user to exist the conference by entering a value single digit extension.
1	Do not play message when first person enters
L	Limit the conference to x seconds. Play a warning when y seconds are left. Repeat the warning every z seconds.
na	Invite user by outbound call
na	Play the last recorded file

8.2 Outbound Dial

Navigate through Outbound Dial. This is where you can configure the Outbound Dialing context for inviting users via out-bound calls. The details to be filled are given as



Figure 18: Outbound Dialing Configuration

Context	Enter the Outbound Dialing context name.
Conference Name	Enter the name of the conference which will be displayed in the caller name for SIP users for incoming call.

9. Conference Admin User

Login as the default username/password provided in the email invitation.

9.1 Conference Settings

This chapter provides detailed information to configure conference users, user type, pin numbers etc. Here some options are read only.



No.	Usertype	Internal/External Ext. No.	Options
1	Conference ID: 9990		
	Internal	2001	
	External	4001	
2	Conference ID: 5551 (New)		
	Internal	2005	
	External	4005	
3	Conference ID: 6662 (New)		
	Internal	2011	

Figure 19: Conference Settings



Click Edit button, you will be navigated to Edit Manage Conference screen page. In this page you can edit the date, time and participants etc.

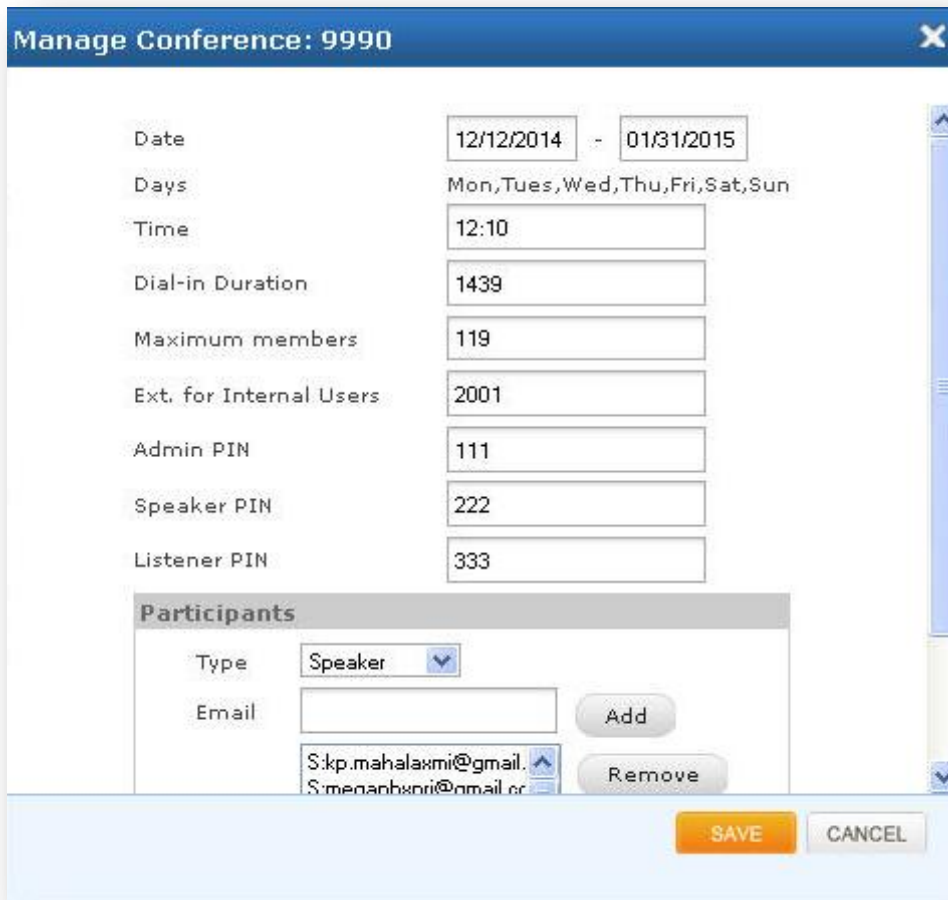


Figure 20: Manage Conference

Date	Specifies the date when the conference is Scheduled. e.g.: 05/2/2015. (Read only)
Days	Repeat status on week days (Read only)
Time	Start time of the conference (Read only)
Dial-in Duration	Duration from the starting time up to what time users are allowed to join.(Read only)
Maximum Members	Maximum number of users allowed joining in the conference. (Read only)
Conf. Extension No	Number of dial for joining in the conference for internal/external users. (Read only)
Admin Pin	Specifies the PIN for the admin user to join the conference, e.g.: 555. Admin is the one who can speak, listen, invite,

	kick users in the conference.
Speaker Pin	It indicates PIN number for the user, who can only speak and listen.
Listener Pin	PIN number for the user, who can only listen but can't speak.
Participants	
Type	Administrator/speaker/listener. When adding users in the conference, you can select what permission you have.
Email	Enter the email id of the end-user.

Schedule conference is the term we used to fix the conference at an exact time for particular people with corresponding access like admin, speaker and listener.

9.2 Live Conferences

Monitor conferences happening now and add users dynamically into the conference.



Figure 21: Live Conferences

Conference ID	It specifies the unique conference ID. E.g. 1234
Total Members	It indicates the number of participants.
Duration	It specifies the length of the conference.
Options	Options for volume control/mute/unmute/kick





Click Edit button, you will be navigated to Edit Manage Conference screen page. In this page you can invite the user with various options.



Figure 22: Manage Conference

You can invite other users to the same conference room by using user id. User can change the volume settings for Mick and speaker.

Options	Description
	Kick- eject user out of the conference.
	Mute/Unmute

9.3 Recordings

Recorded Conferences —You can view / play the recorded conferences here.



Figure 23: Conference Recordings

Conference ID	Unique conference id.
Time	Time the files are created.
File Size	It specifies the size of the recording.
Options	Click play, the file on the browser.

Thank you for choosing



Adarsh Eco Place, #176, Ground Floor, EPIP Industrial Area, Kundalahalli
KR Puram Hobali, Whitefield, Bangalore - 560066.

Email: globalsales@cem-solutions.net
indiasales@cem-solutions.net

Phone: +91 80 67080808