Grandstream Networks, Inc.

UCM62xx/UCM6510 Series

GS Wave WebRTC Video Calling & Conferencing Guide

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INTRODUCTION

The UCM62xx and UCM65xx support HTTP & WebSocket for web browser to register to the UCM and establish calls and participate in web video conferences with other endpoints in real time via WebRTC. With the UCM you can easily create, schedule, manage, and join video conference calls, from your desktop or laptop computer.

UCM Video conferencing uses WebRTC technology, so all the participants don't have to download and install any additional software or plugins.

This document introduces the user portal features and offers step by step instructions to use them.

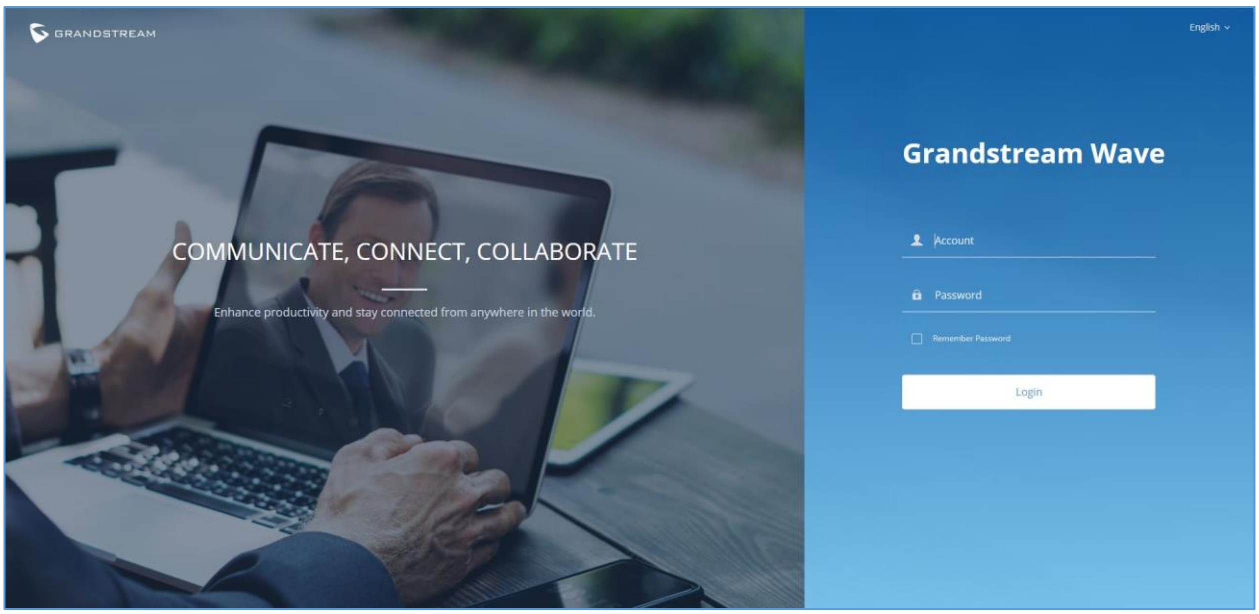


Figure 1: Grandstream Wave

⚠ **Notes:**

- Video conferencing can be resource-intensive and may cause performance issues with the UCM when used.
- To ensure the best experience, please use Google Chrome (v67 or higher) or Mozilla Firefox (v60).
- The same IP address cannot log into both the admin/user portal and the GS Wave WebRTC portal at the same time.

WEBRTC CONFIGURATION

Web audio and video calls and conferencing can now be achieved through the UCM's new WebRTC page.

UCM Video Conferencing must be enabled by the administrator for the concerned extensions under the extensions level by following below steps:

1) Navigate to **Value → Added Features → WebRTC** and enable WebRTC support.

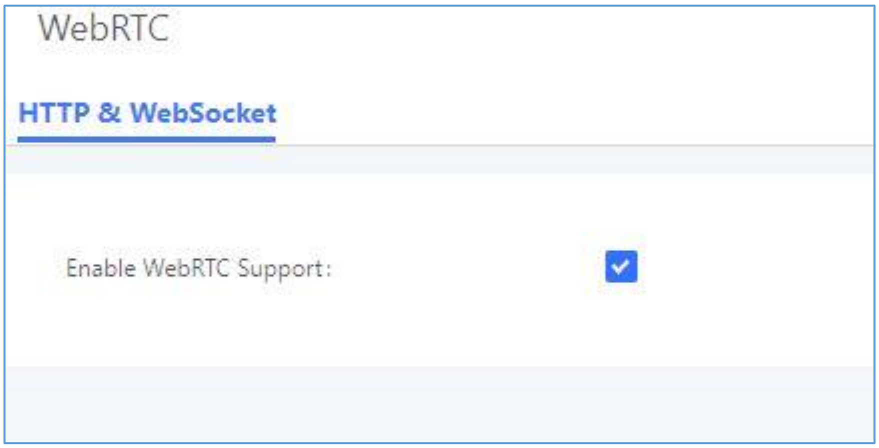


Figure 2: Enable WebRTC

2) Select the extensions that would use WebRTC and enable WebRTC support on them under Features section.

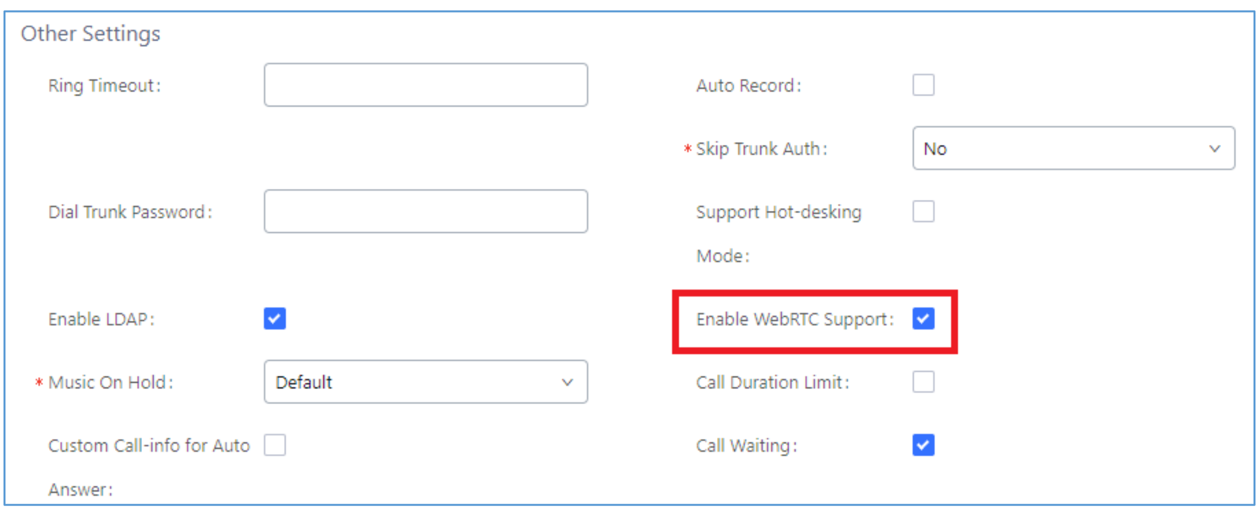


Figure 3: WebRTC Support for Extension

VIDEO CONFERENCE CONFIGURATION

The video conference configurations can be accessed under **Web GUI→Call Features→Video Conference**. In this page, users could enable, set the Basic setting, create, edit, view, manage, delete conference rooms and edit the Conference Schedule.

Basic Settings

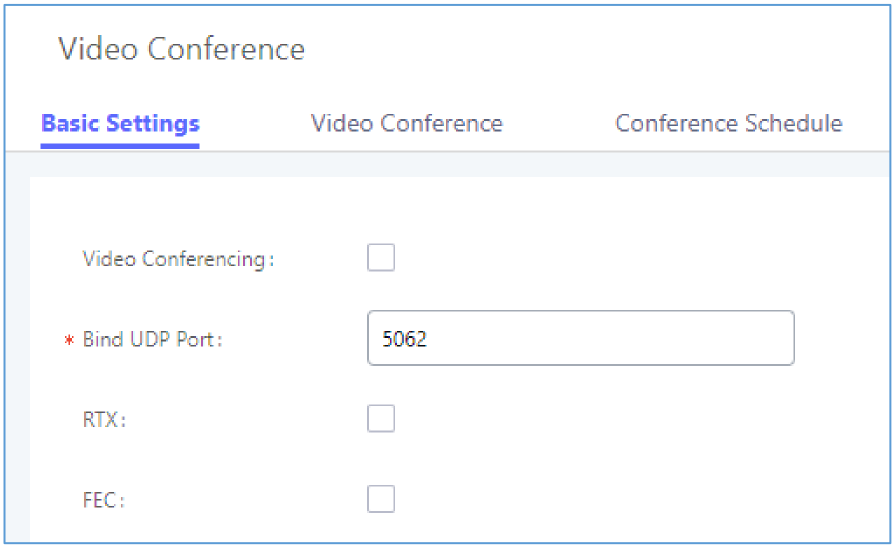


Figure 4: Video Conference Basic settings

Table 1: Video Conference Basic Settings

Basic Settings	
Video Conferencing	This option should be enabled to activate the Video Conference feature.
Bind UDP Port	Configure the UDP port number for MCM. The standard UDP port for MCM is 5062.
RTX	If enabled, the RTX Packet Loss Retransmission will be activated. The default setting is "No".
FEC	If enabled, the Forward Error Correction (FEC) will be activated. The default setting is "No".

Video Conference room Configurations

Click on the Video Conference tab and create a new video conference room. In this tab, you can:

- Click on "Create New Conference Room" to add a new conference room.

- Click on to edit the conference room.
- Click on to delete the conference room.

Table 2: Video Conference Room Configuration Parameters

Extension	Configure the conference number for the users to dial into the conference. **Note:** Up to 64 characters.
Password	When configured, the users who would like to join the conference call must enter this password before accessing the conference room. **Notes:** • Only digits are allowed. • The password must be at least 4 characters. All repetitive and sequential digits (e.g., 0000, 1111, 1234 and 2345) or common digits (e.g., 111222 and 321321) are not allowed.

When configured, the Conference Room number is the number to dial to join the conference as shown in screenshot below:

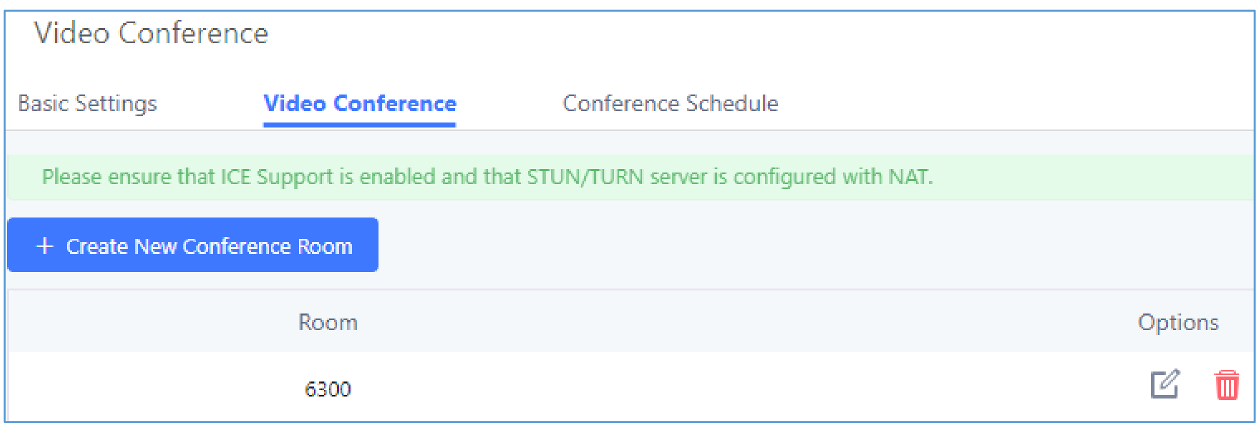


Figure 5: Created Conference Room

Schedule a Conference

Conference Schedule can be found under UCM6510 **Web GUI → Call Features→Video Conference → Conference Schedule**. Users can create, edit, view and delete a Conference Schedule.

- Click on “Schedule New Conference” to add a new Conference Schedule.
- Click on the scheduled conference to edit or delete the event.

Table 3 : Video Conference Schedule Parameters

Schedule Options	
Conference Subject	Configure the name of the scheduled conference. Letters, digits, _ and - are allowed.
Conference Room	Select a conference room for this scheduled conference.
Conference Password	Configure conference room password. Please note that if “Public Mode” is enabled, this option is automatically disabled.
Kick Time(m)	Configure the time before the scheduled conference. When this time is reached, a warning prompt will be played, and all attendees currently in the scheduled conference room will be kicked after 5 mins. The conference room will be locked until the scheduled conference begins. Default value is 10 min.
Schedule Time	Configure the beginning date and duration of scheduled conference. **Note:** Please pay attention to avoid time conflict on schedules in the same conference room.
Duration	Configure the time duration of the scheduled conference.
Period	Configure the period of scheduled conference.
Host	Set the admin of this scheduled conference from the following list of members.
Members	Select available extensions from the list to attend scheduled conference.
Special Extension	Add extensions that are not in the list (both local and remote list). If the user wishes to add the special extension, please match the pattern on the outbound route.
Shareable Link	Assign the video conference a public IP address and port to allow anyone with the configured link to participate in the video conference.
Description	Set a description of scheduled conference.

Once created, the **Web GUI** will display scheduled conference in Conference Schedule. Please see figure below:

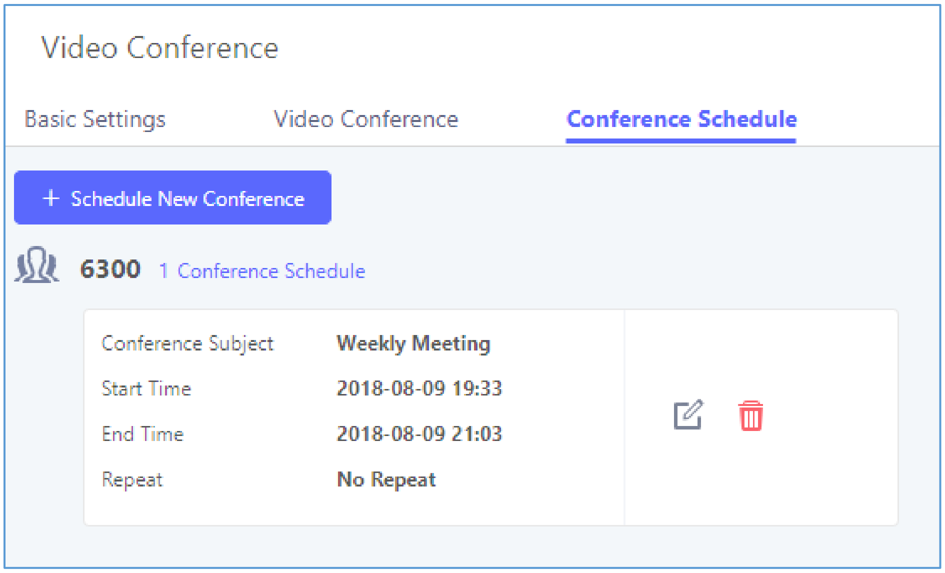


Figure 6: Video Conference Schedule

Once the conference room is scheduled, at the kick time, all users will be removed from conference room and no extension can join the conference room anymore. At the scheduled conference time, UCM6510 will send INVITE to the extensions that have been selected for conference.

Upon scheduling the conference, invites will be sent out to the host and selected participants. These invitations will include the conference details and a link to the conference. Upon clicking the link, participants will be prompted to enter their GS Wave portal passwords to log in and join the conference.

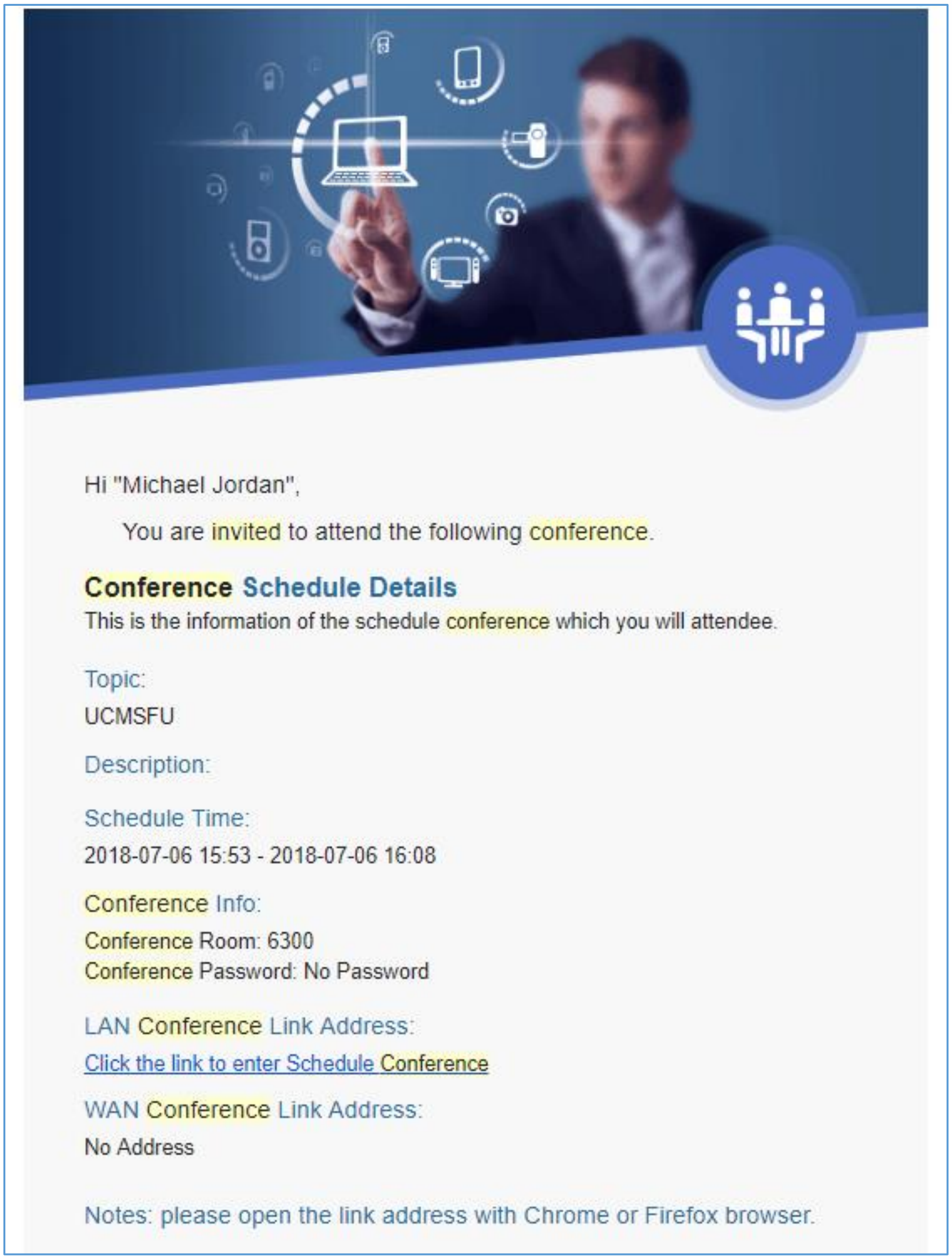


Figure 7: Invitation Link Schedule

LOGIN TO GS WAVE PORTAL

After Enabling WebRTC and creating Conference Rooms, users will be able now to establish WebRTC Calls, and participate/host conferences.

The UCM offers the possibility to login to an extension via Grandstream Wave Portal, where it offers a sleek interface to host conferences; manage contacts and share presentation.

Access the page by adding "/gswave" after the UCM's server address and port.
(e.g. https://my.ucm.com:8089/gswave).

Figure 8: GS Wave Portal

Enter an extension number and its SIP password. Once logged in successfully, the following page will appear:

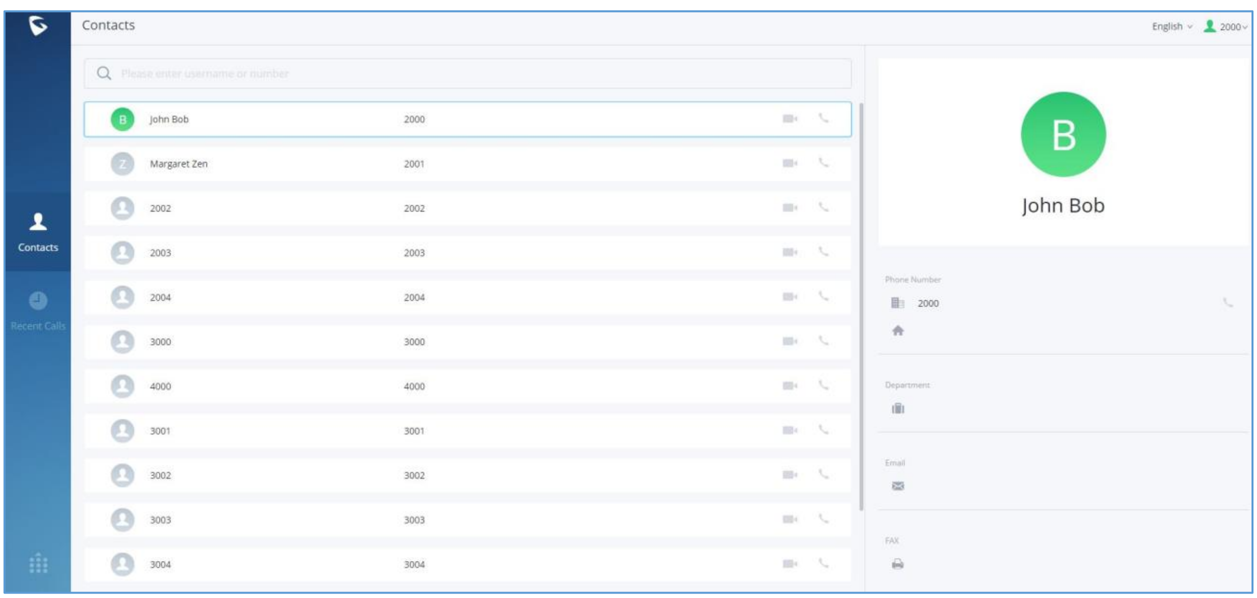


Figure 9: Contacts Page

WEBRTC FEATURES

Initiate a Call

From here on, users can initiate an audio or video call to individual extensions and conference rooms. If starting a call for the first time on a browser, users may be asked to allow the web page to use the device's mic and/or webcam. Users may be required to drop and re-establish the call after allowing webcam/microphone access. Users can initiate a call either by selecting a contact or entering the destination number.

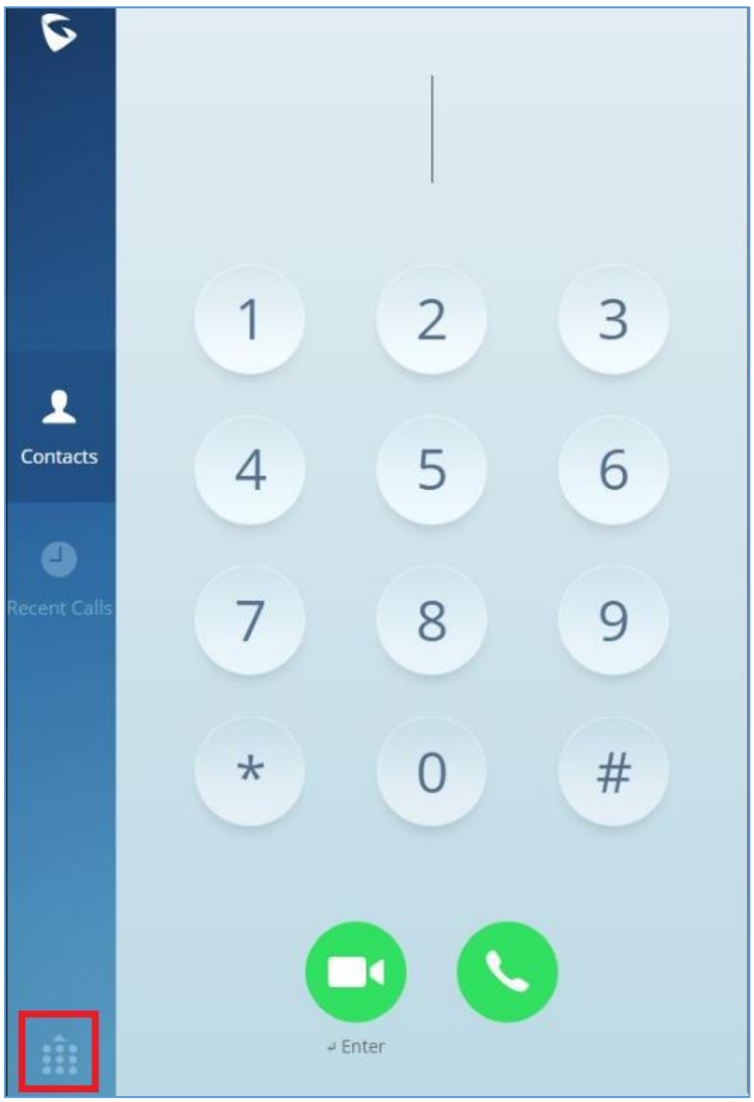


Figure 10: Initiating a Call

Once the call is established, users can mute themselves, enable and disable their video feed, screen share (Video calls only), and transfer the current call.

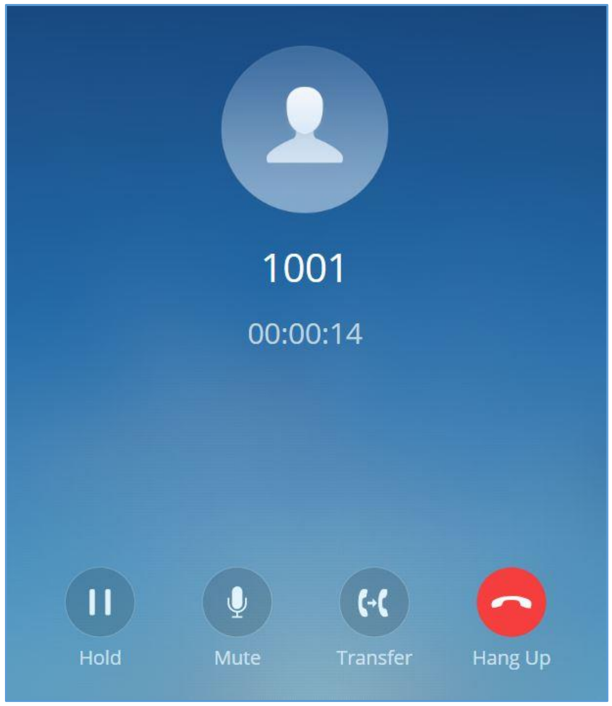


Figure 11: Audio call screen

Figure 12: Video Call Screen

Transfer

The call can be transferred using the **Transfer** button to either custom numbers or to already existing extensions. In order to be able to use transfer feature, make sure to set the following:

Access Web UI as admin → Call Features → Feature Codes and set “Blind Transfer” and “Attended Transfer” to “Allow Both” as shown in figure below.

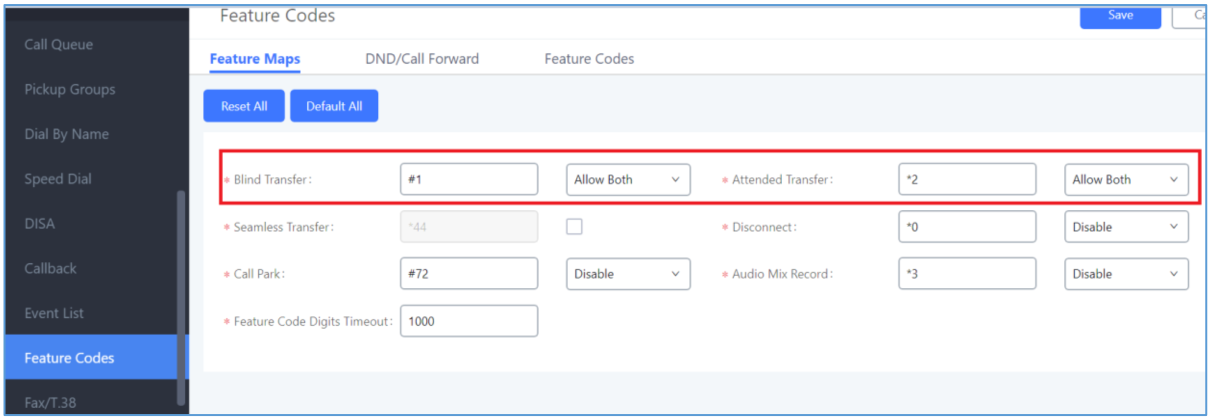
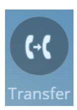


Figure 13: Enable Transfer

Blind Transfer

1. During a call, press  button
2. Enter destination number (extension or custom number).
3. Press  button to complete blind transfer.

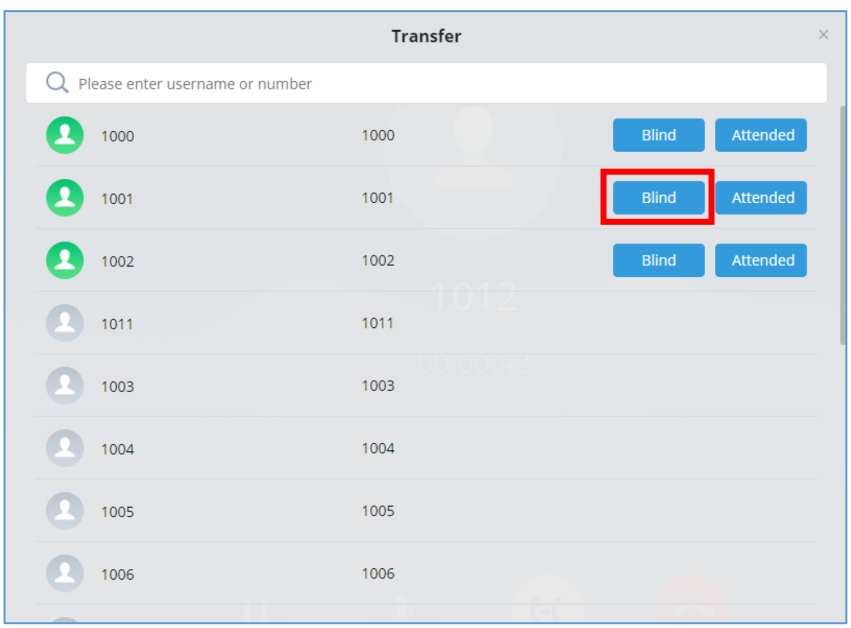
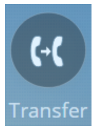


Figure 14 : Transfer Screen – Blind Transfer

Attended Transfer

1. During a call, press 

button.
2. Enter destination number (extension or custom number)
3. Press 

button to initiate attended transfer.
4. Press hang up button to complete the transfer.

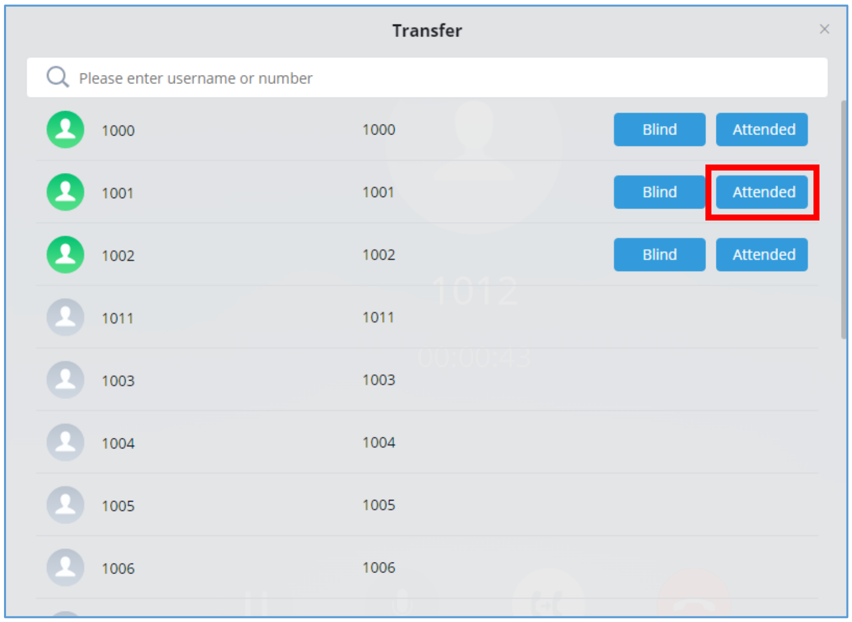


Figure 15 : Transfer Screen – Attended Transfer

Screen Sharing

Screen sharing allows users to share their whole screen or a specific browser tab to all participants:

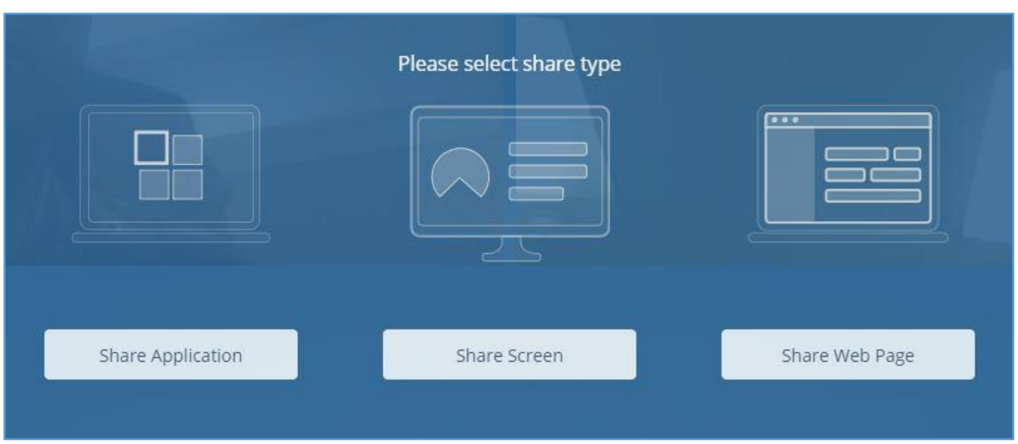


Figure 16: Screen Share Type

Screen sharing requires the IPVT Screen Capturing browser extension/add-on to work properly. If the browser does not have it, a prompt will appear asking to install or allow it. Users may need to disable their ad-blockers to have the prompts appear.

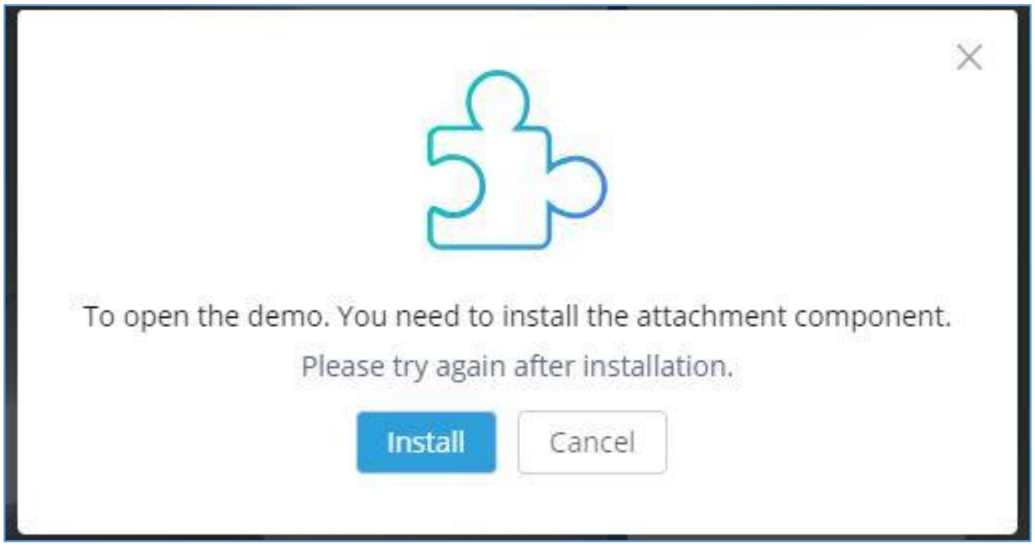


Figure 17: Plugin Setup

GXV and GVC devices will need to enable presentation to have the screen share appear.

Figure 18: Enable Presentation on GXV32xx

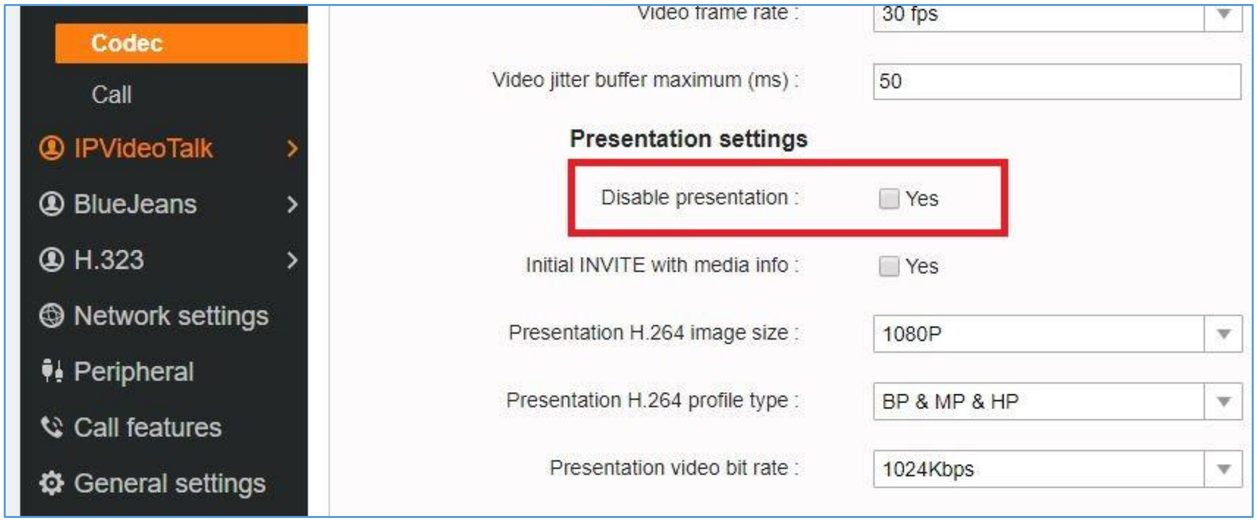


Figure 19: Enable Presentation on GVC32xx

VIDEO CONFERENCE FEATURES

Join a Video Conference Room

Users can join a video conference room by dialing the room number. Once this is established, users can mute themselves, enable and disable their video feed, screen share, invite other people to the conference, and change the video layout. Currently, only Equal (grid) and Focus video layouts are available.

Figure 20: Video Conference screen

Host Privileges

The host of a conference has the following privileges:

i. Lock and unlock conferences to control access to it.

ii. Mute and unmute conference participants

iii. Transfer host privileges to one of the participants.

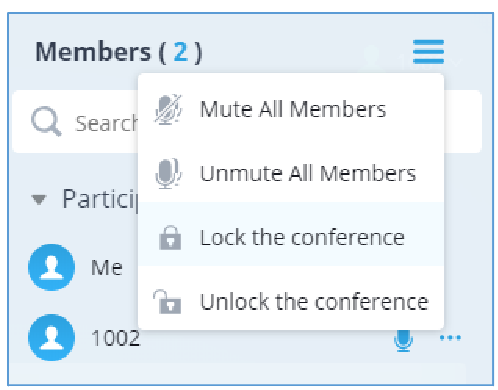


Figure 21: Host Privileges