Wave Desktop – User Guide

INTRODUCTION

Overview

Wave desktop is a client application for the UCM63xx series IP PBX users to use a desktop application to participate in video/audio conferences and make calls via WebRTC. With Wave desktop client, users can easily create, schedule, manage, and join video conference calls, share presentation, chat during conference calls, register UCM extension and make point-to-point calls. Wave desktop helps enterprise users to join meetings and communicate efficiently. It is an ideal product for enterprises looking for tools for users to communicate and work productively.

Feature Highlights

- Supported on Windows 10+ / Mac OS 10+ operating system.

- Native integration with UCM including contacts and ability to display SIP users' online status

- Supports LDAP to access contacts in the UCM LDAP server.

- Supports call display, voicemail, and call encryption.

- Supports call history.

- High quality point-to-point audio and video calling.

- Full integration with Grandstream UCM6300 IP PBX, including creation of QR code for automatic login, call transfer, call recording from server etc.

- Supports Opus and G.722 for HD audio. Jitter resilience up to 50% audio packet loss and 20% video packet loss.

- Supports H.264.

- Supports joining meeting via link without logging in.

- Supports schedule meeting and meeting now at anywhere anytime

- Built-in NAT traversal including automatic NAT discovery and TURN/ICE.

- Support basic chat functions, including single chat and group chat, sending files and emoticons, starting audio conferences in a group chat, simultaneous group chats and meeting chats.

- Integrated UCM user portal entry to access personal data, follow me settings, SCA, wakeup calls etc.

Specifications

Specifications and limitations of WebRTC change from one model to another, please find below a table showing the specifications for the features on each model.

UCM630x series	Video feeds	Screen Share Feed	Concurrent user registration	Participant limit (Audio Conference)	Participant limit (Video Conference)
UCM6301	4 or 9	1	500	75	20
UCM6302	4 or 9	1	1000	150	30
UCM6304	4 or 9	1	2000	200	60

UCM630x series	Video feeds	Screen Share Feed	Concurrent user registration	Participant limit (Audio Conference)	Participant limit (Video Conference)
UCM6308	4 or 9	1	3000	300	80

Table 1: Model Specifications for Wave Desktop

Below are the rest of technical specifications for all the models:

Protocols/Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, DNS (A record, SRV, NAPTR), STUN/TURN/ICE, SIMPLE, LDAP, TLS, SRTP, IPv6
Voice Codecs and Capabilities	Opus, G.711 A-law/U-law, G.722, G722.1 G722.1C, G.723.1 5.3K/6.3K, G.726-32, G.729A/B, iLBC, GSM, NetEQ FEC 2.0, NACK Full-duplex speaker, AEC, AGC, Noise Reduction, PLC, Adaptive JIB
DTMF	In-audio, RFC2833, SIP INFO
Video Codecs and Capabilities	H.264, H.263, H.263+, VP8 1080P HD video supports displaying multiple videos, screen sharing, camera on/off, GS-Fec
Telephony Features	Call hold/unhold, mute/unmute, call transfer, audio meeting room, call history, scheduling meeting, voicemail, call recording, etc. User portal entries allow access to personal data, wakeup call settings, SCA, follow me settings, call queue, CDR, CRM user settings, etc.
UCM Applications	Supports UCM feature codes (transfer, call park, recording, meeting control options, etc.)
QoS	Layer 3 QoS (ToS, DiffServ, MPLS)
Security	SIP over TLS, SRTP (128-bit and 256-bit), HTTPS
Multi-language Support	English, Simplified Chinese, French, Spanish (Latin America), Spanish (Spain), Italian, Greek, Arabic, Russian, German, Polish, Portuguese and Vietnamese.
Login	Supports login with SIP extension and password. Supports joining meetings via link without logging in.
Upgrade	Wave Web client is built-in with UCM and upgrades via UCM.

Table 2: Wave Desktop Specifications

Please visit our website for more Wave desktop information and product documentations: http://www.grandstream.com

BASIC OPERATION

System Requirements

- Operating system: Windows 10+ / Mac OS 10+.

- Supporting device: Support almost all operating systems in Windows 10+ / Mac OS 10+ desktop computers and laptops.

- Web environment: stand by Network connection above 3 Mbps (recommended), UCM needs to be connected to the network.

- Audio and video equipment: to make a call, you need a speaker and microphone, webcam, or high-definition webcam.

Download and Install the Client

The Wave client can be downloaded on the Grandstream official website:

https://fw.gdms.cloud/wave/download/

After the download is complete, you can install it according to the instructions on the interface.

Upgraded Version

On the main page before or after login, click the upper right corner, and then click the menu item "About". If there is a newer firmware version, you can click the "Upgrade Firmware" button to upgrade.
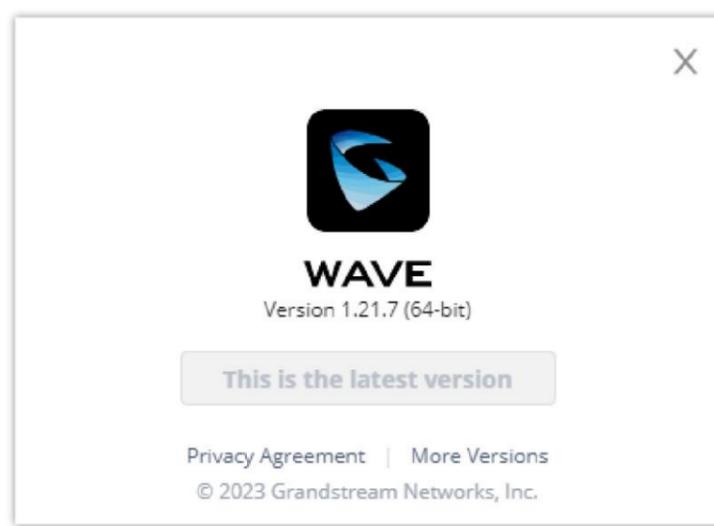
Wave About Interface

LOGGING IN TO WAVE DESKTOP

With UCM SIP extension number and user portal password, users could log in the Wave desktop portal. After logging in successfully, users can host meeting, schedule meeting, manage contacts, make calls, transfer calls, chat during meeting etc.

To start using Wave Desktop Application:

Login Using Credentials

1. Click on to ⬛ open Wave Desktop application. The following login page will be displayed.
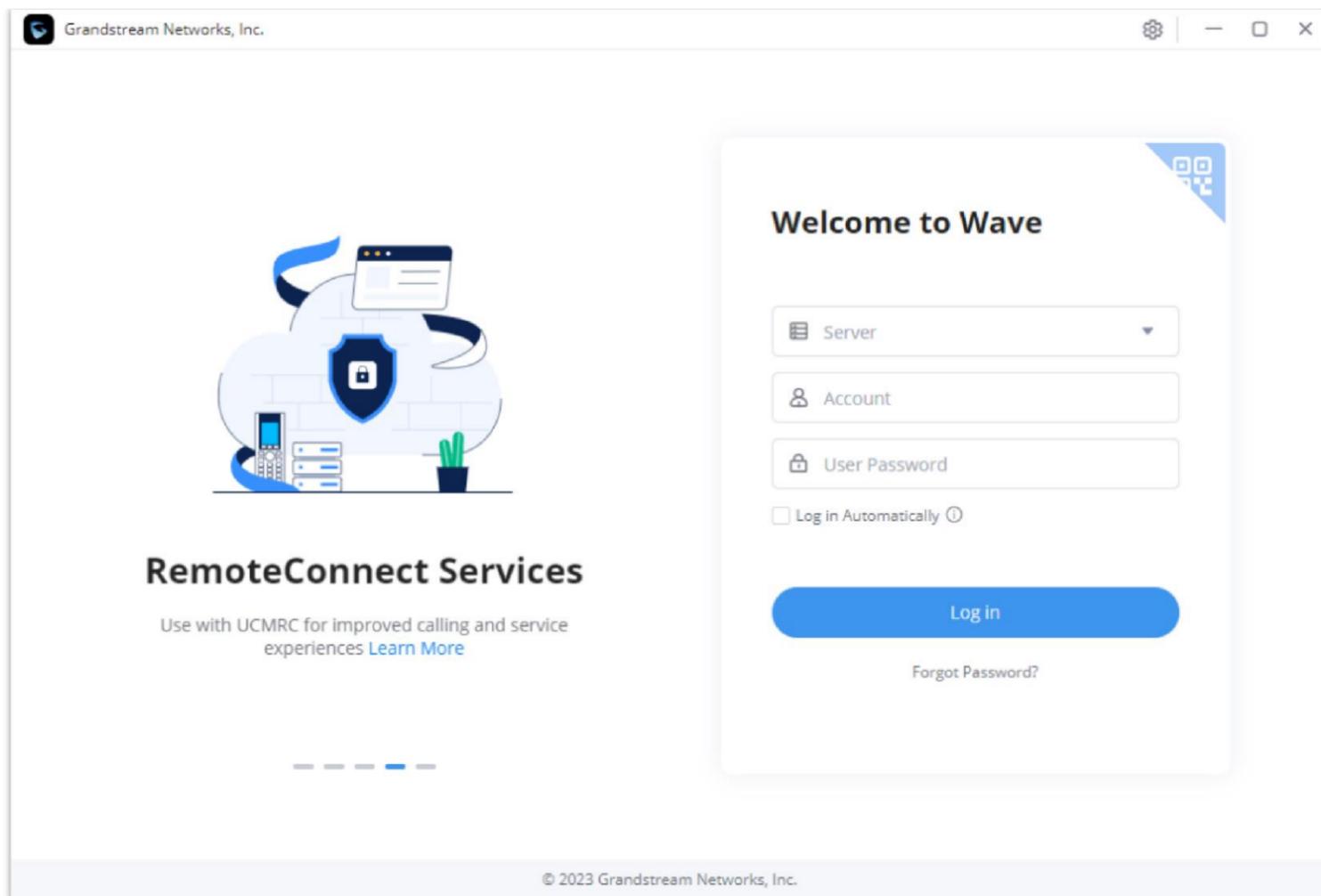
Wave Desktop Portal

2. Enter an extension number and its user portal password in the Wave desktop login page. Make sure to set the correct server address.

3. Click on the "**Log In Automatically**" option and the application will store the username and password. The user can auto-log in the Wave application when clicking the application icon.
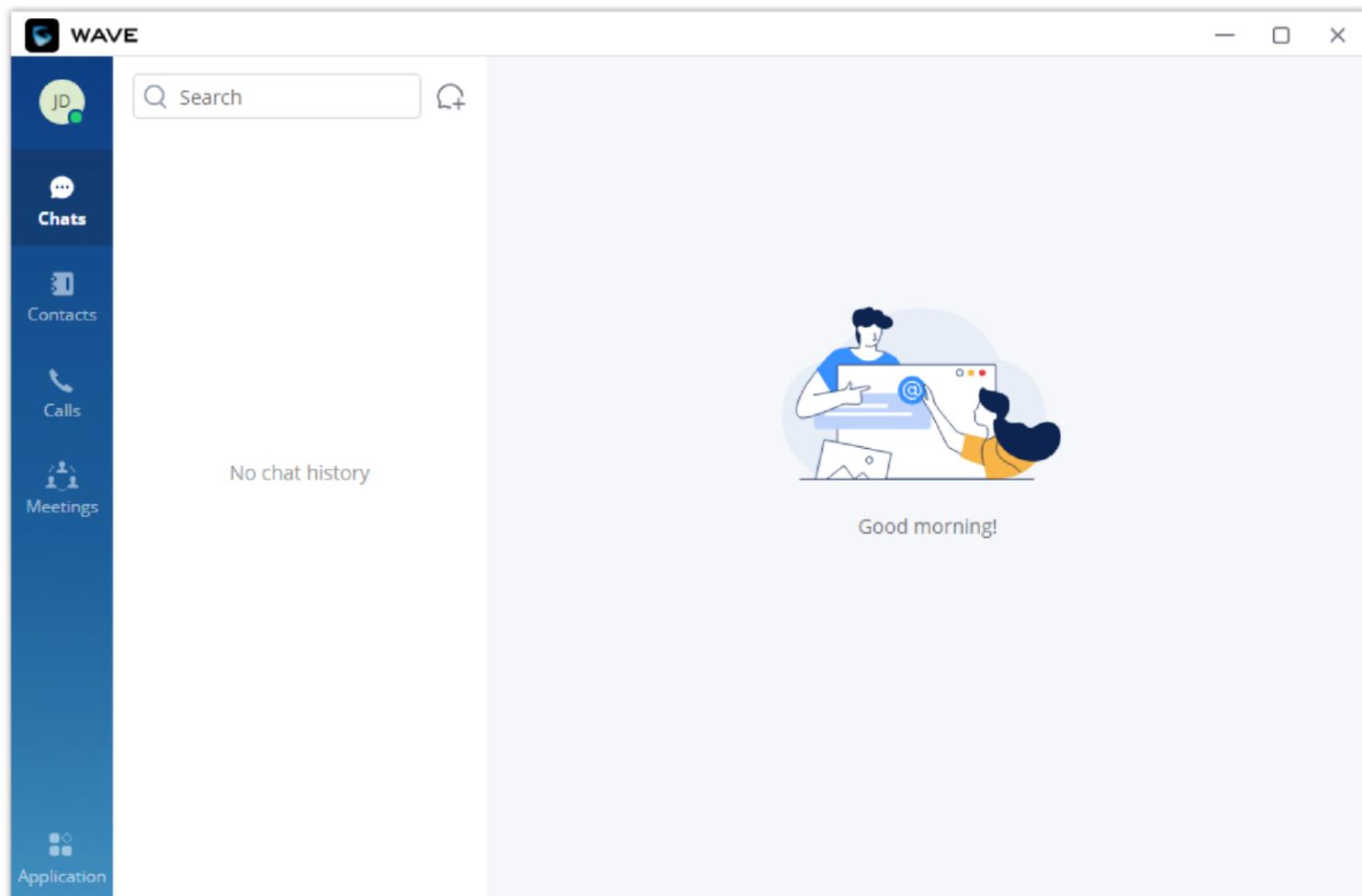
Wave Desktop Default Page after Login

Log In by Scanning QR Code

This feature allows you to login quickly to Wave Desktop client if you are already logged into Wave on your smartphone. To login using this method, please follow the steps below:

Step 1: On Wave Desktop, click on the top right corner highlighted in blue to change the login method.
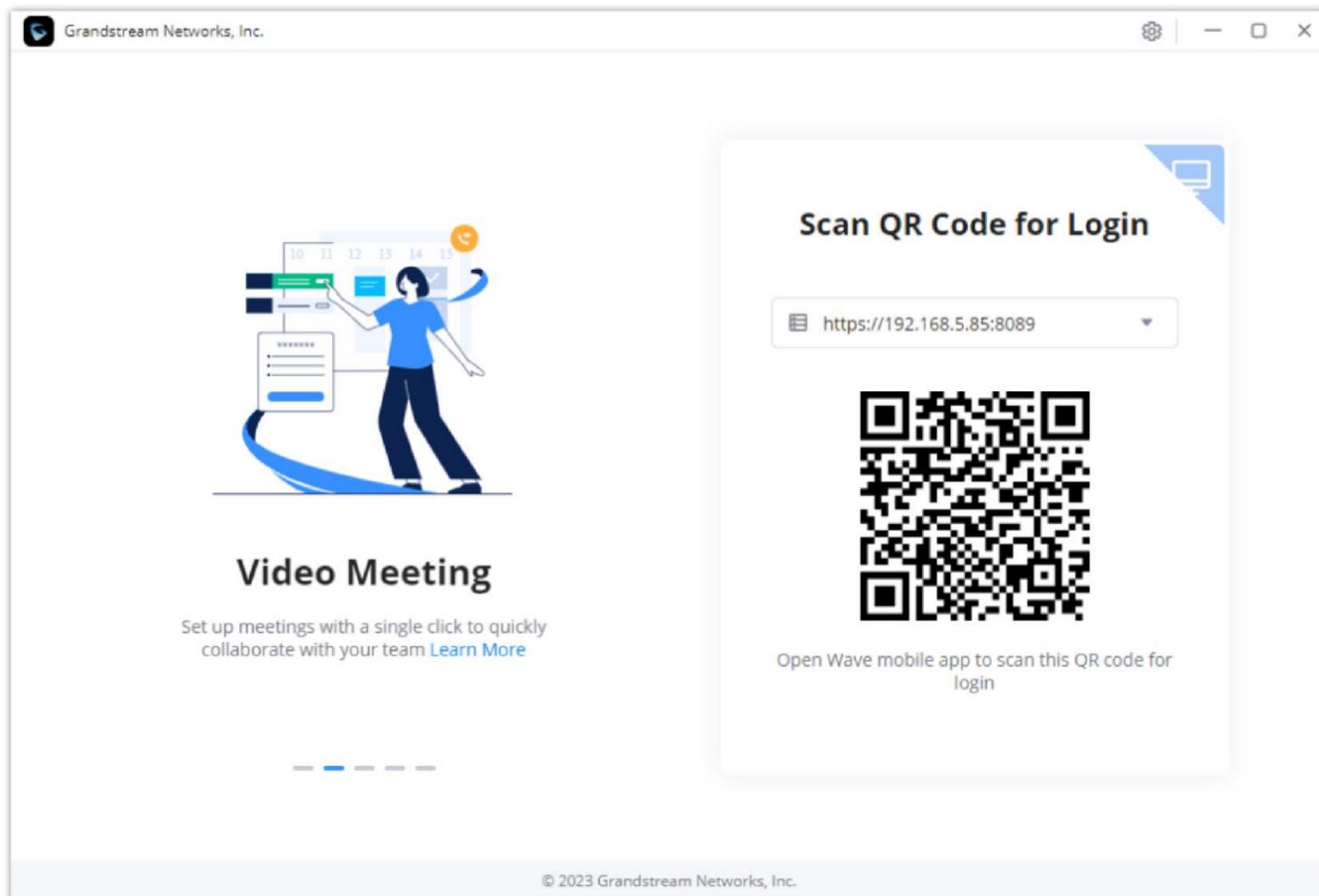
Wave Desktop QR Login

Step 2: Enter the address of the UCM on which your extension will be registered.

Step 3: On Wave mobile application, click on the plus icon on the top right corner, and select "Scan".
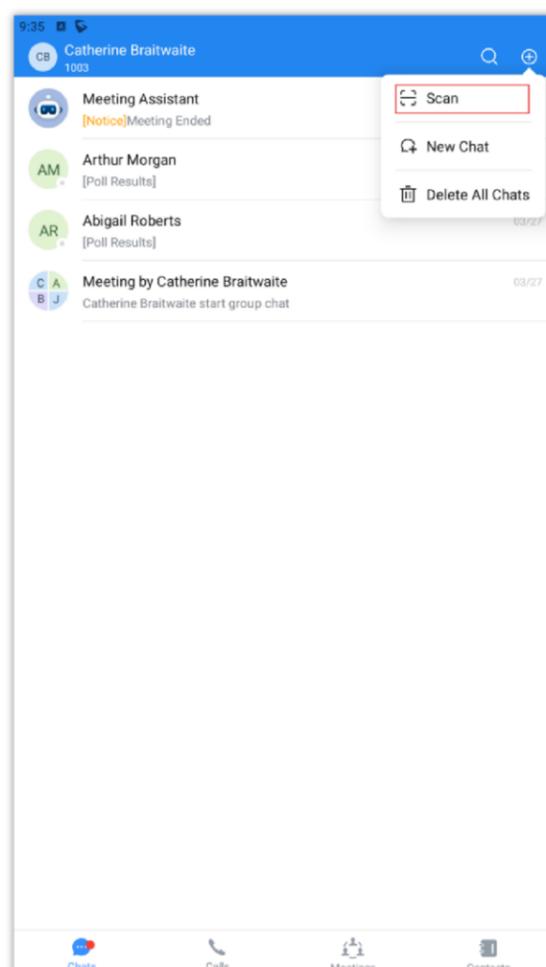
Wave Mobile – Scan QR Code

Once the QR is scanned, press "Login"
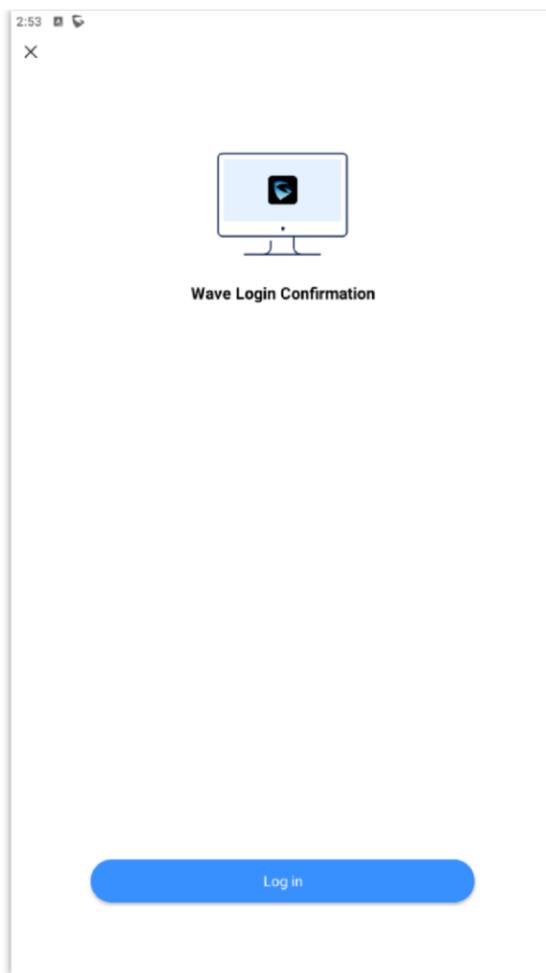
Wave Mobile – Approve Login

Wave Password Recovery

Users can reset wave login password by following the below steps:

1. Click on Forgot Password and the below window will be displayed, then enter the username

Reset Password – Username

2. After clicking on Send Email a verification code will be given
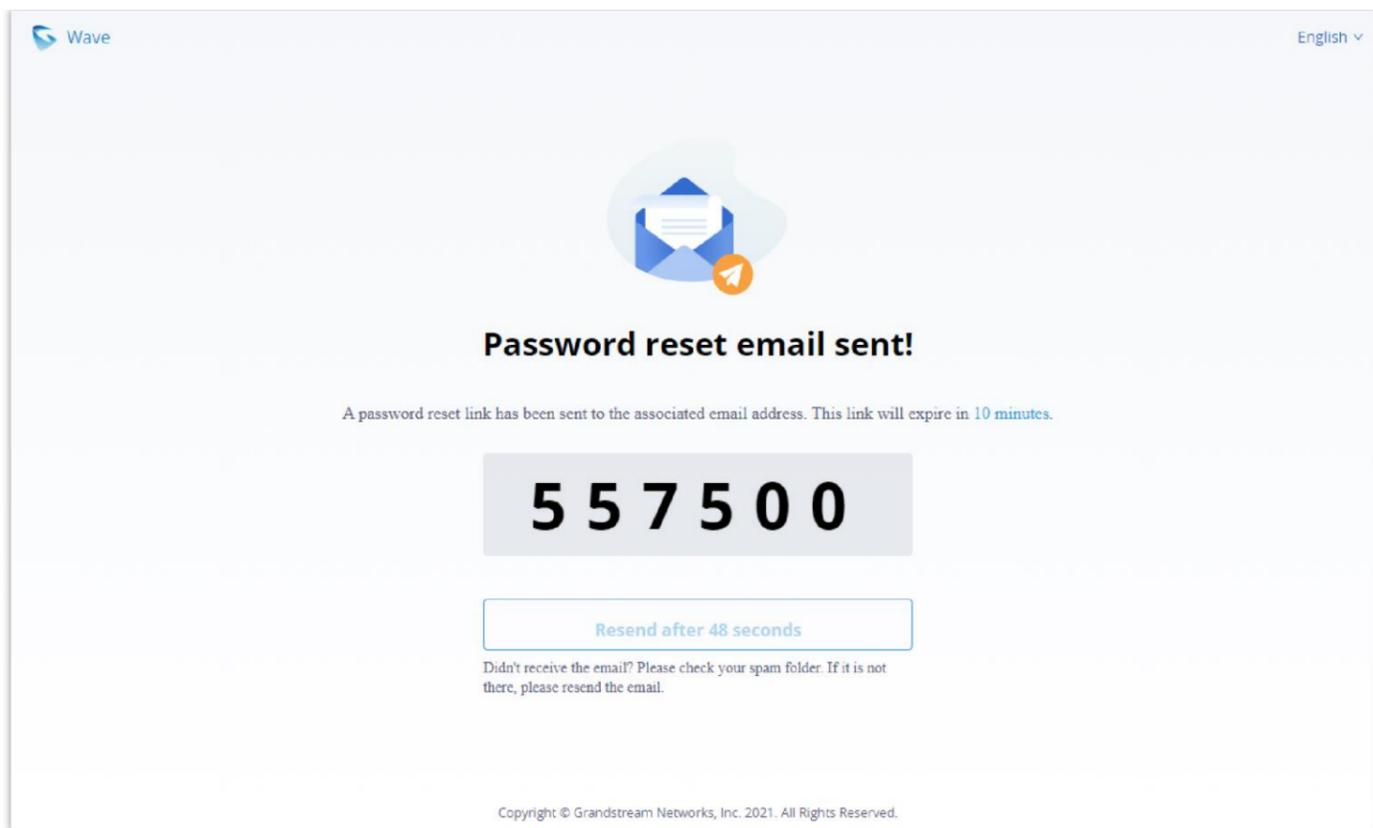
Reset Password – Verification Password

3. And an email will be sent to the email address configured under the extension
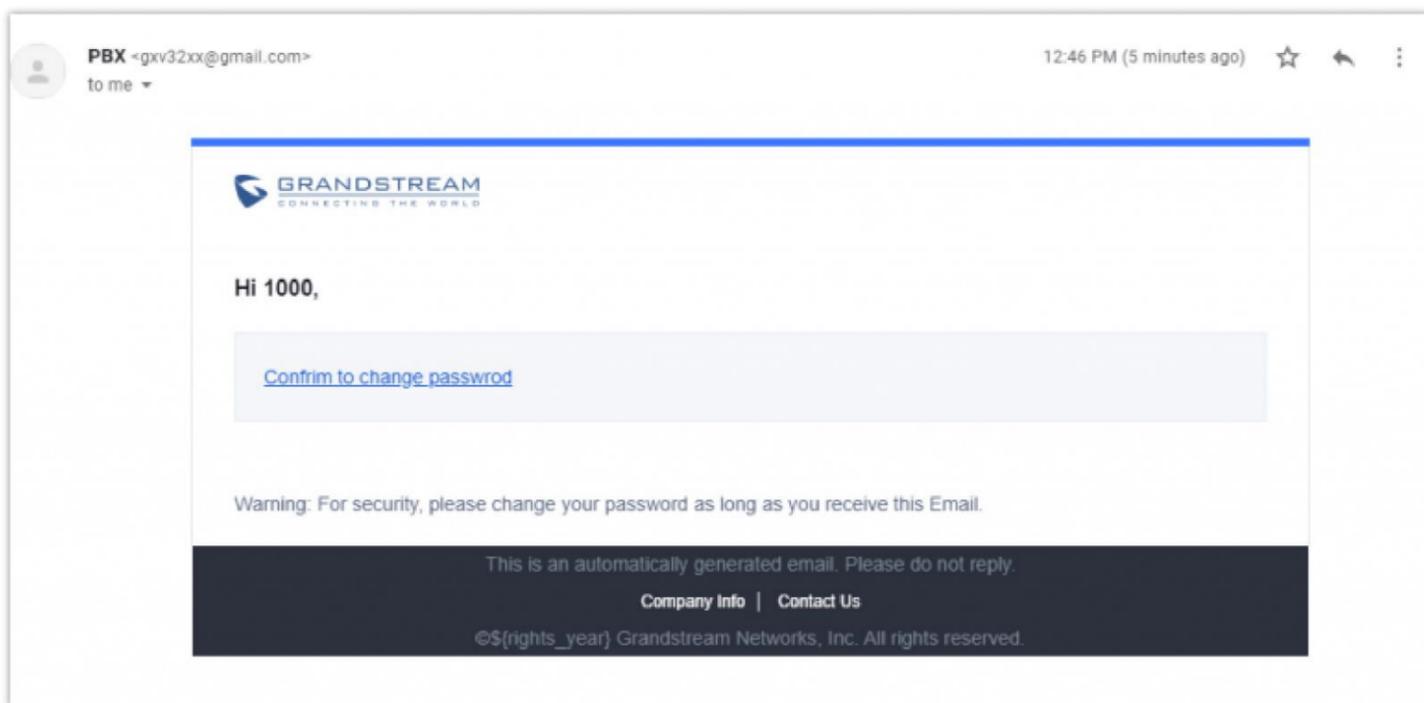
Reset Password – Email

4. On the received email, click on the link to confirm to change password and you will be redirected to the below page, where you will need to enter a new password, re-enter it and the provided verification code, as shown below:
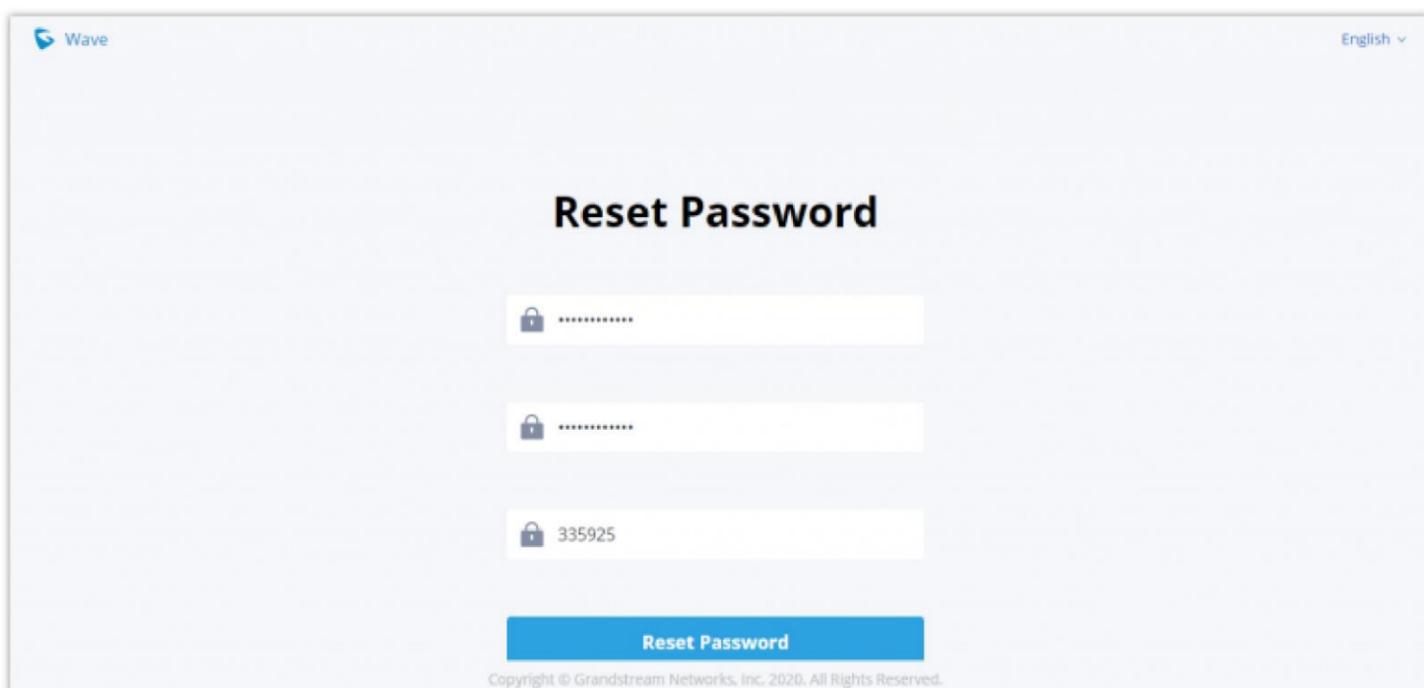
Reset Password

5. And you will be jumped to the login page after the password is reset correctly.

Custom Status

Wave users can customize the status in the application. It is divided into account status and working status, and it is displayed in the contacts book and chat module.

- **Account Status:**

The user can click the user icon to enter the configuration interface, then click the status below the account at the top to customize the status of the account, as the screenshot shows below:
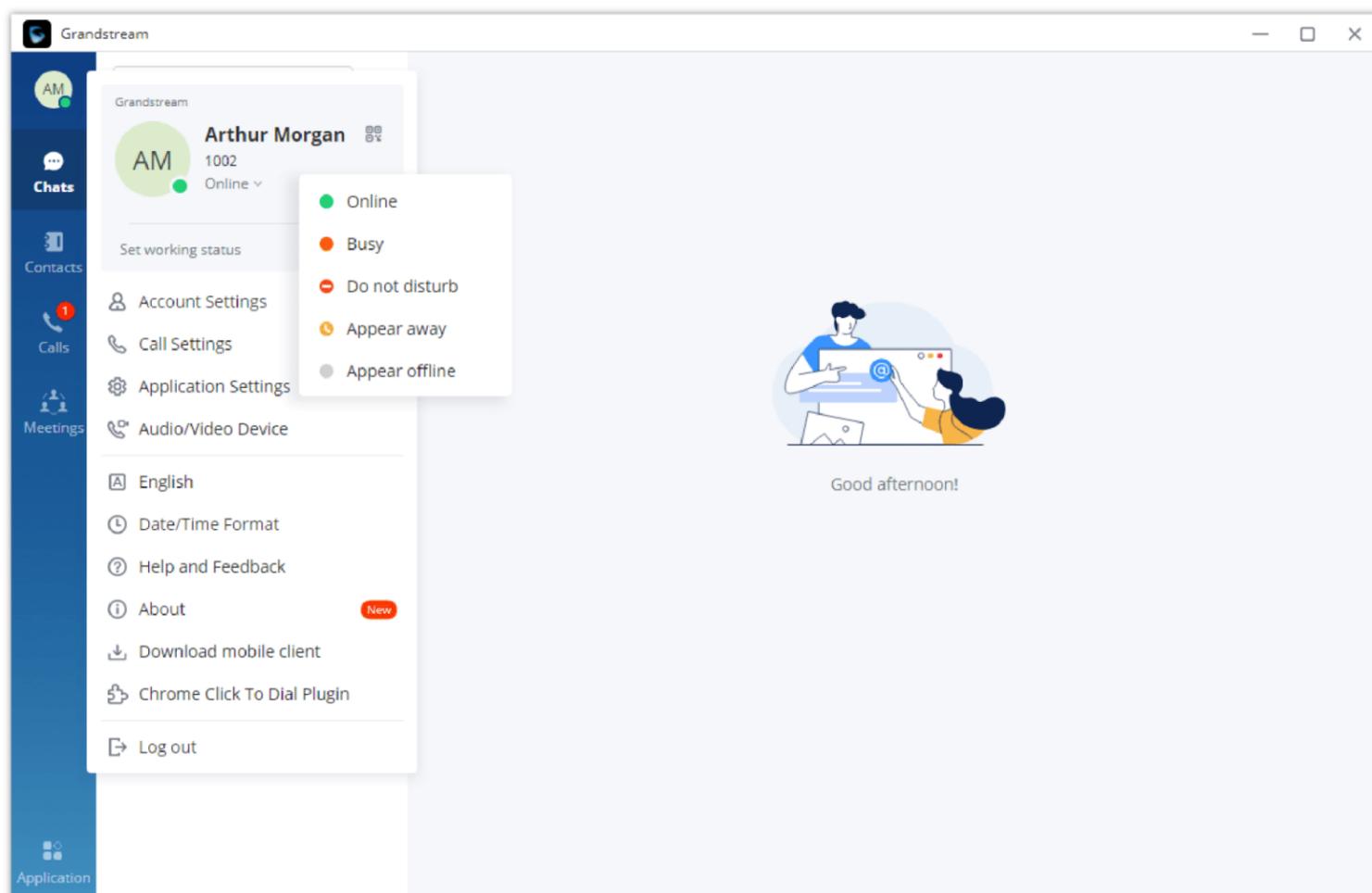
Account Status

Online: This is the default account status. The new calls and messages will prompt users.

Busy: The user is busy now, and the user can send/receive new calls and messages normally.

Do not disturb: The new incoming calls and messages will be prompted without any sounds, and there is no pushing notification. The new incoming calls will be ignored, and the new missed call history will be generated.

Offline: The account status will be displayed as offline, but the user still can send/receive calls and messages normally.

Away: The account status will be displayed as away, but the user still can send/receive calls and messages normally.

- **Working Status**

The user can click the status bar below the user icon and click "Set Working Status" to select the following working status: Meeting in progress, On a business trip, Working remotely, Sick leave, On leave, None and Custom.

After setting the working status, it will be displayed in the contacts book and chat module.
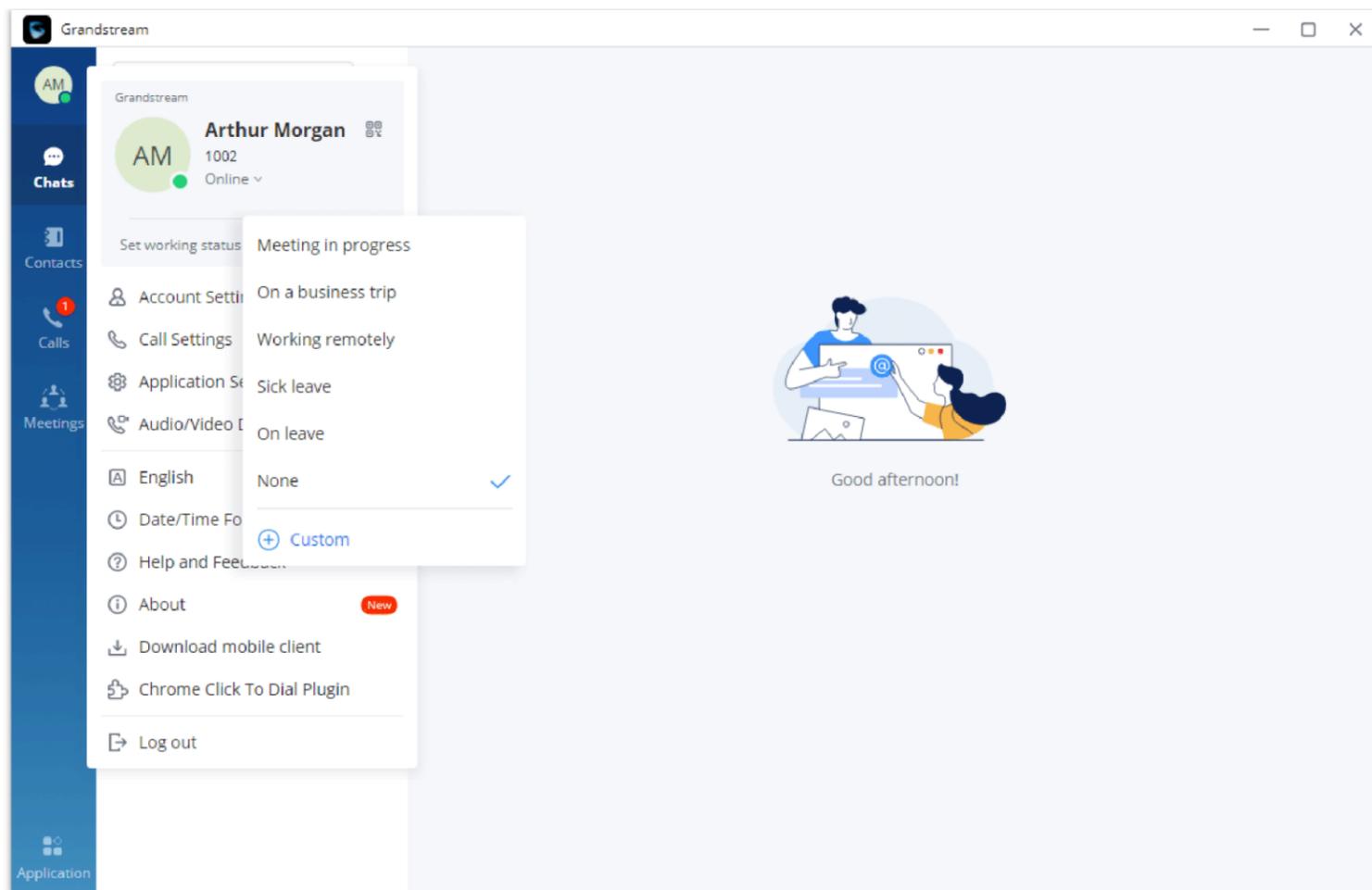
Working Status

The custom working status allows users to enter up to 64 characters and the emoji are not allowed.

Custom Avatar

Users can customize the profile avatar and the custom avatar will be displayed in the contacts book, chat interface and meeting interface.

- **Step 1**: Click on the account icon on the left upper corner, and click "Change profile picture", users can modify the avatar as the screenshot shows below.

- **Step 2**: Click on "Select images" to open the local file selection window, users can select the images from local files.

- **Step 3**: Select an image and click "OK" to upload the custom avatar to the application.
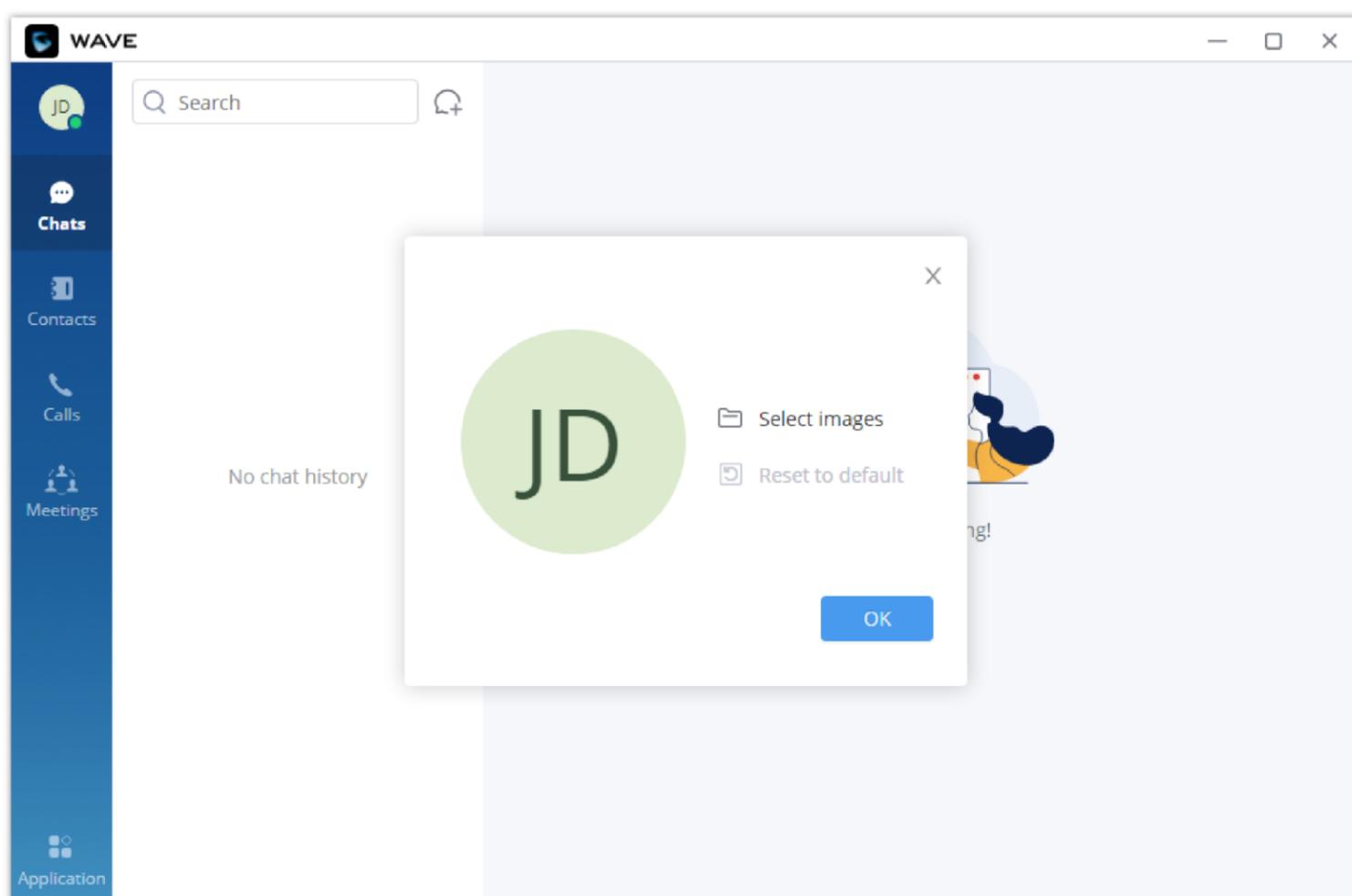
Custom Avatar

Users can click "Reset to default" option to restore the avatar to the original avatar.

MAKING CALLS

Users can use Wave desktop for point-to-point audio and video calls.

Initiating a Call from Keypad

1. After logging in Wave desktop, click on the "Calls" tab on the bottom left of the page to bring up keypad.
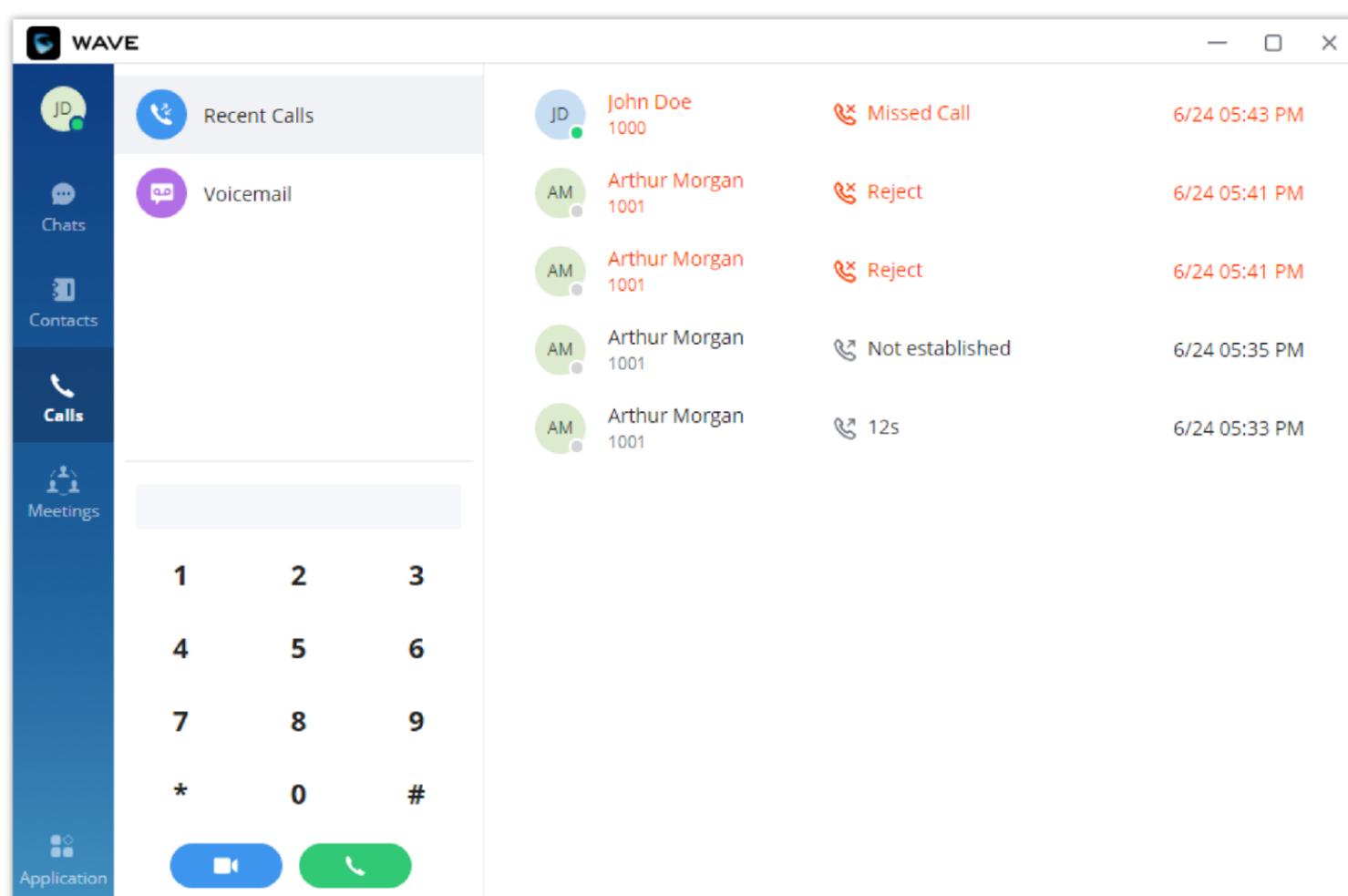

Initiating a Call from Keypad

2. Enter the number to dial.

3. Click on for video call or click on for audio call. Or press enter to start an audio call.

Contacts

There are two repertoires in Wave, **Enterprise Contacts** and **Personal Contacts**. This helps the user to keep his/her contacts organized and he/she can easily find the information of a certain contact.

Users can search for a specific contact or a specific number to dial under Contact Tab.
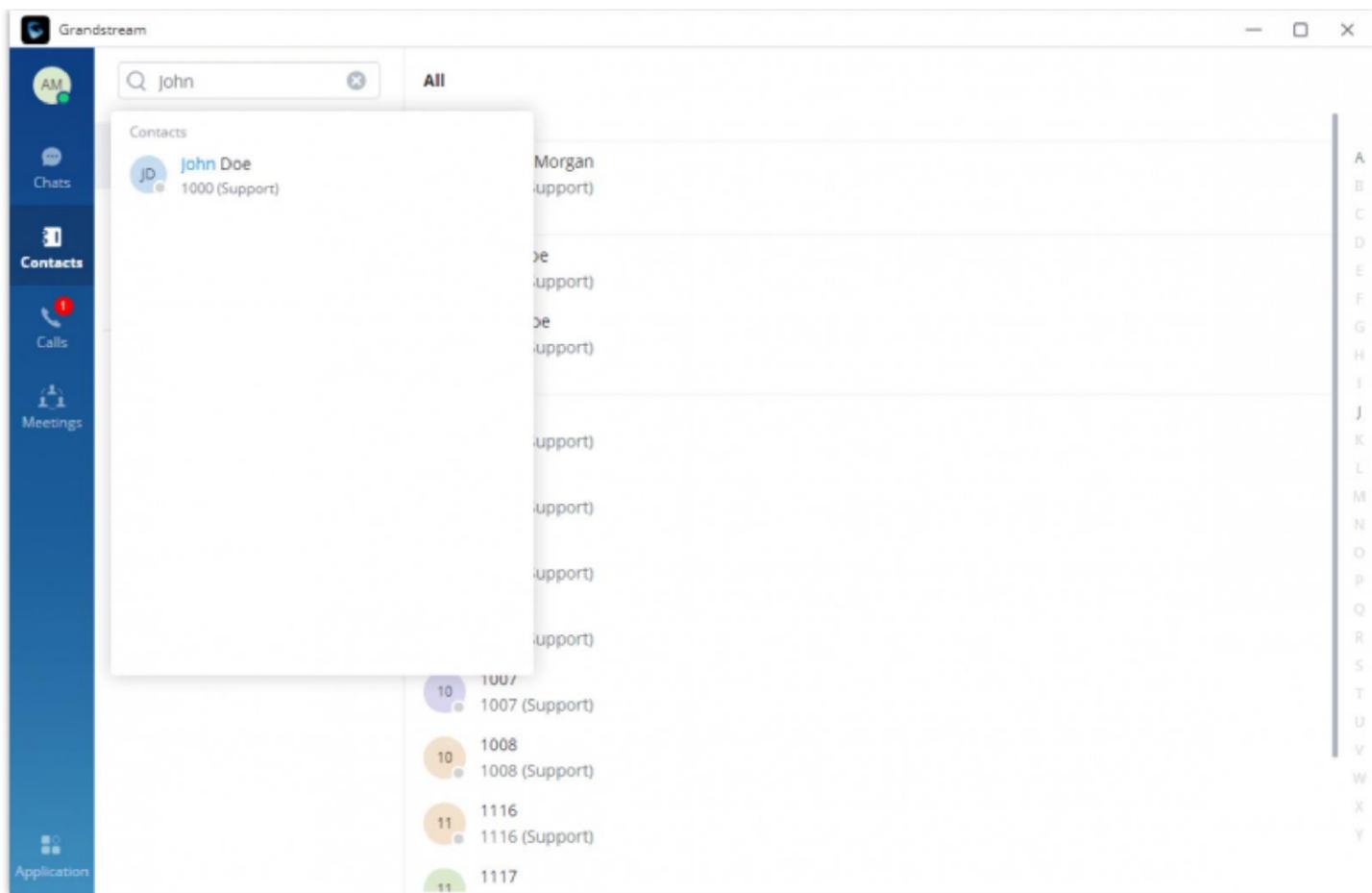
Contact search

The user can also use T9 contact search by entering the numbers which map to the dial pad letters existing in the contact name as the example below shows.
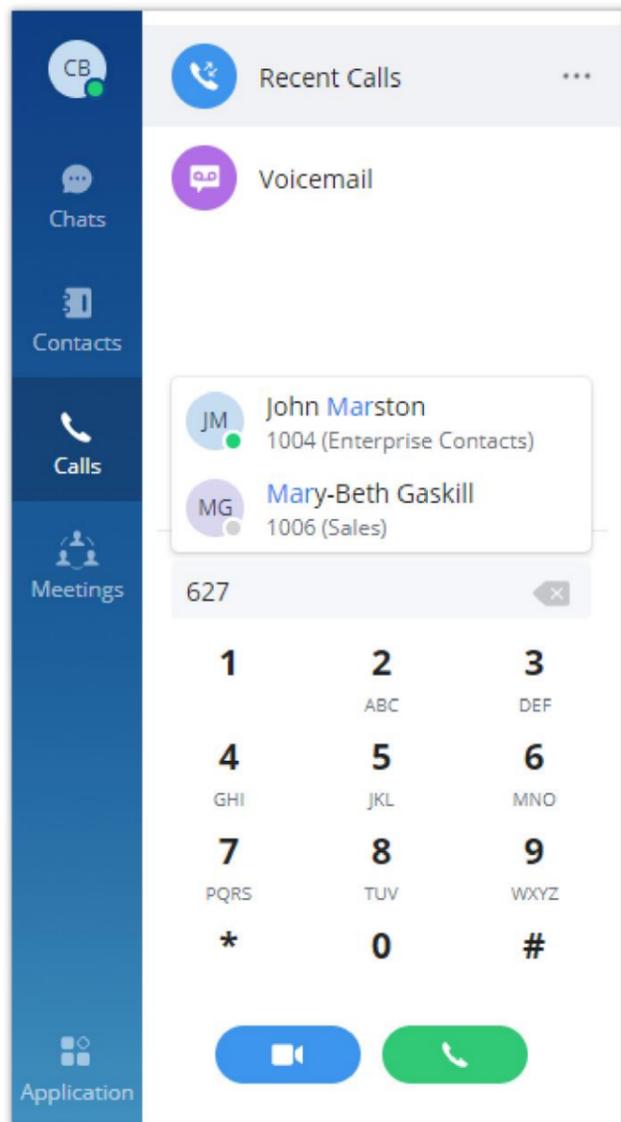

1. In the search bar, enter the number or username to search.

2. Click on the search result. The details of this contact will show on the right.

3. For the search result, clicking on ■ to make video call and clicking on 📞 to make audio call.

4. Also, by hovering the cursor on the contact, you can add it to your favorite contact tab as shown below
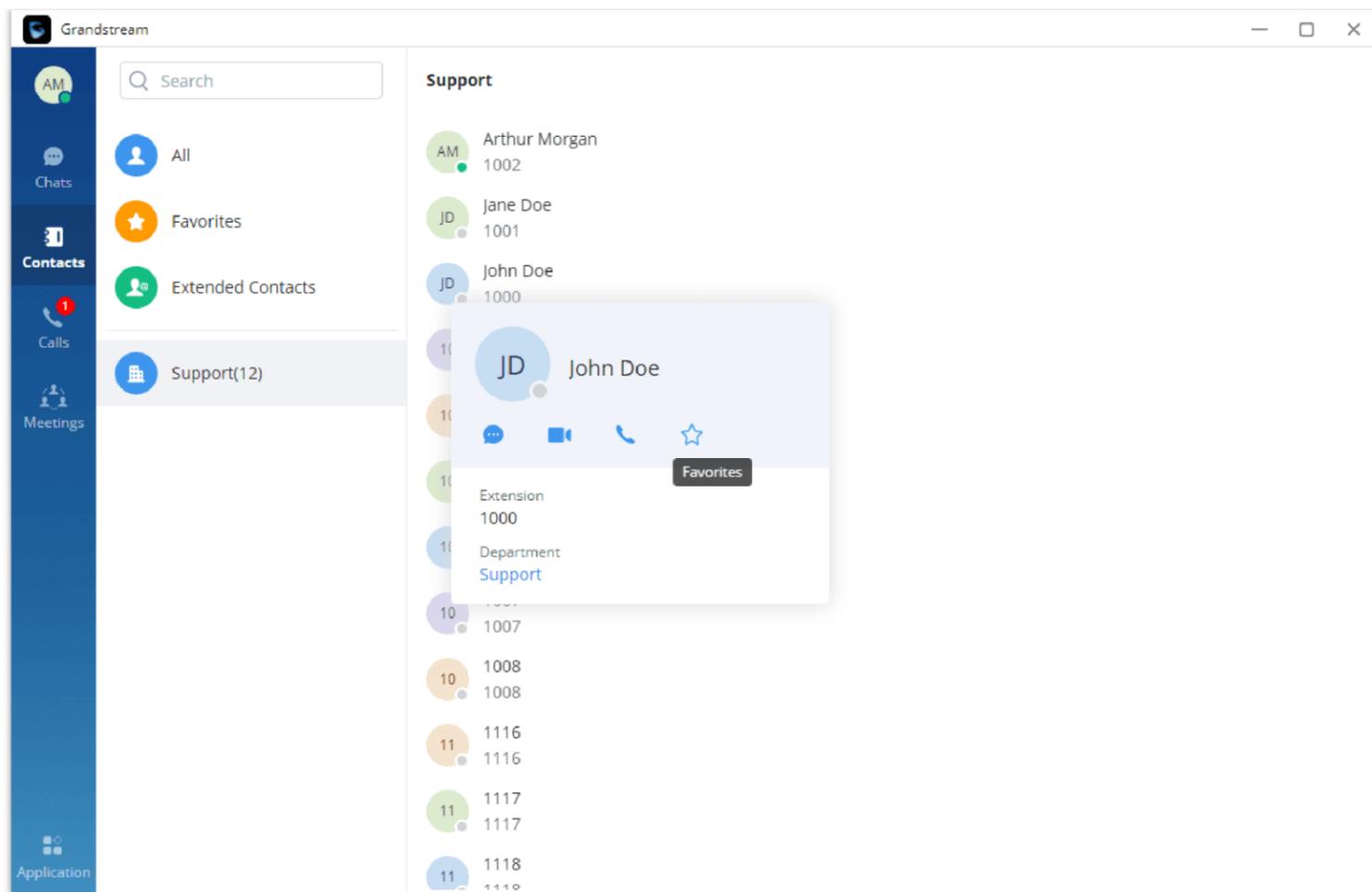
Favorite Contacts

Note

- The contacts displayed in Wave desktop portal contains all UCM extensions, meeting room extensions and LDAP contacts.

- The user will be able to see the contacts based on the privileges that have been configured on the UCM. For example, if the UCM administrator configures that a contact group can only view the contacts of their own group, then they will only be able to see the contacts of the group.

Personal Contacts allow the user to add their own contacts to Wave to initiate calls to those specific contacts.
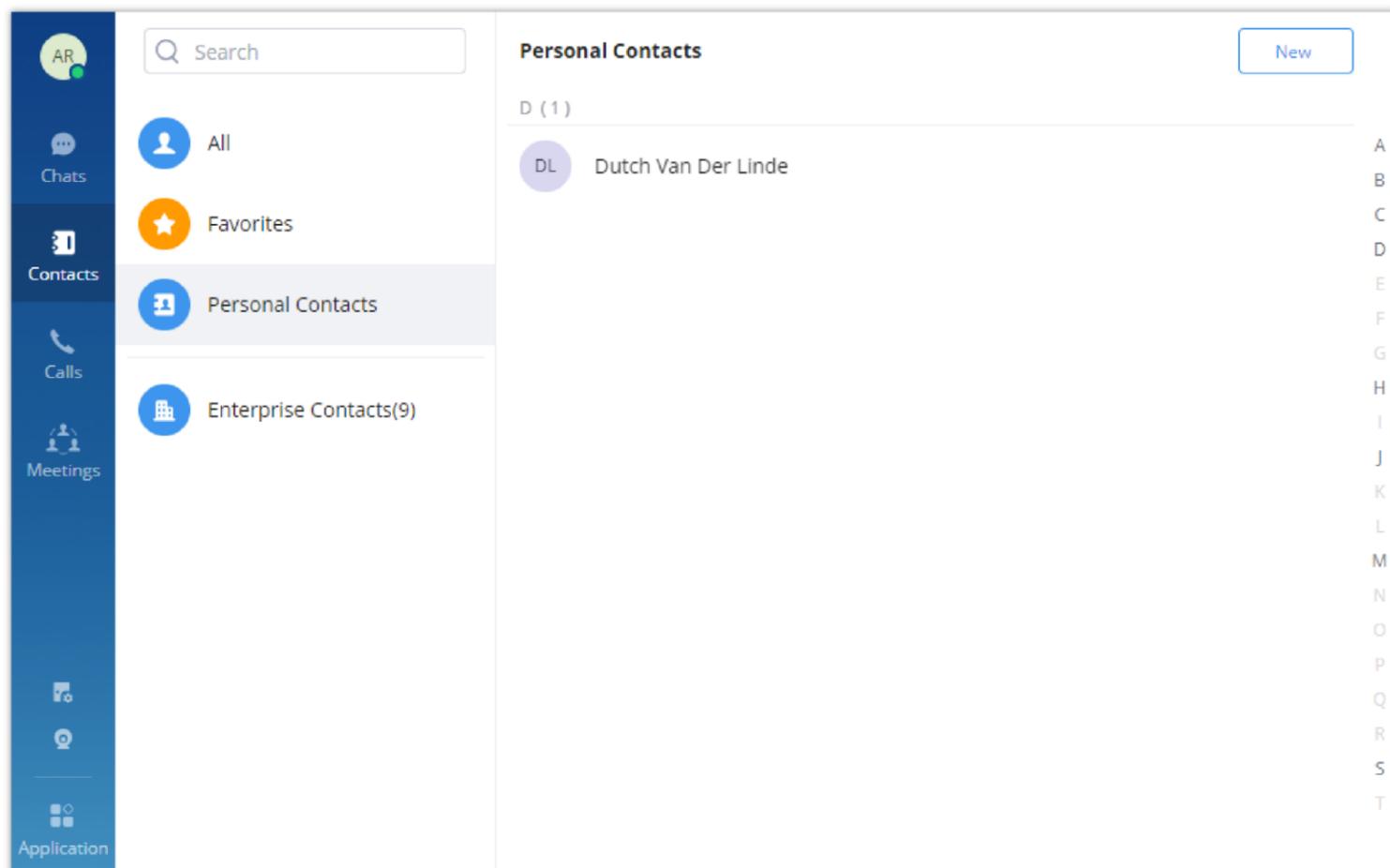
Personal Contacts

Click-to-Dial Chrome Plug-in

Click-to-Dial Chrome plug-in is another way to quickly initiate calls from your Chromium-based web browser (Google Chrome, Microsoft Edge, and Opera). To install this plug-in in your browser, please follow the steps below

Step 1: Click on your profile picture in Wave Desktop then select "Chrome Click to Dial Plug-in".
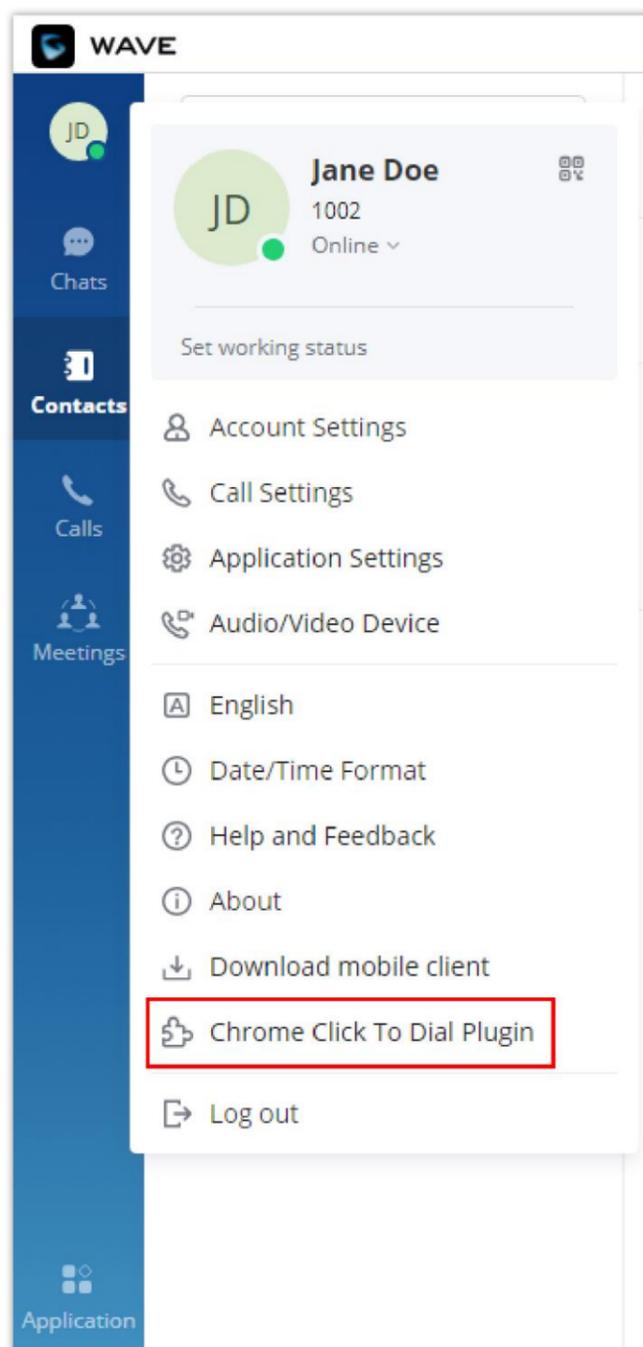
Chrome Click to Dial Plug-in

Step 2: A window will pop up showing the plug-in, if you are using Microsoft Edge or Opera, you might have a prompt that will ask if you want to allow installing plug-ins from Chrome Web Store. Please go ahead and click allow. Then click [Add to Chrome]
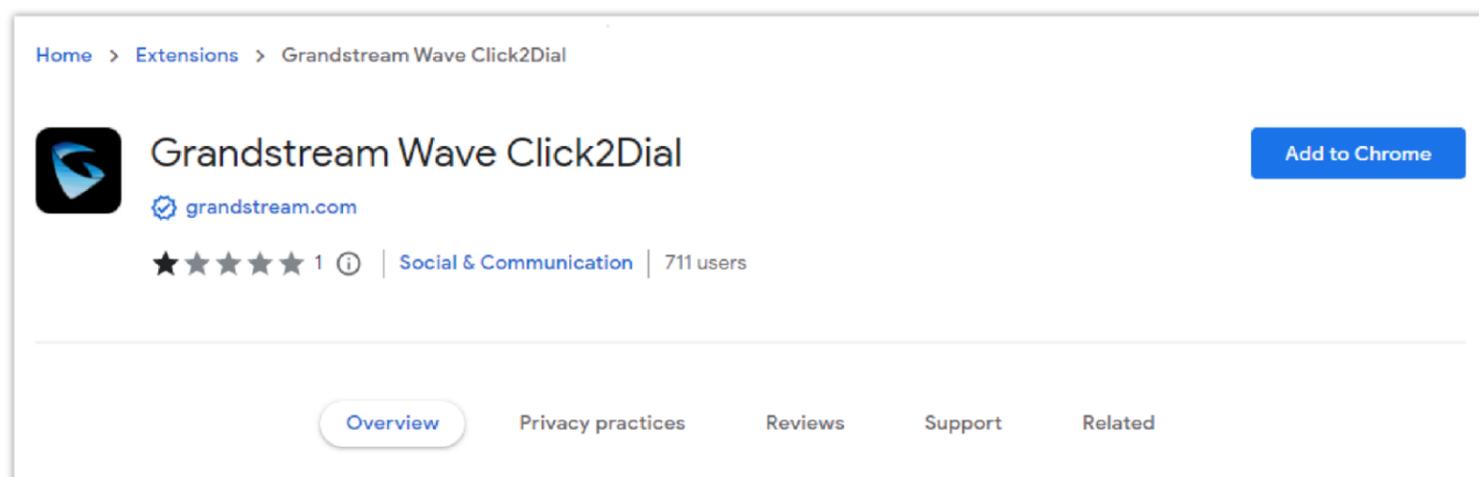
Wave Click to Dial Chrome Add-in

Now that the plug-in has been installed, it will be detecting the numbers on the web page and by right-clicking on the number you can quickly have it dialed in Wave, please see the figures below.
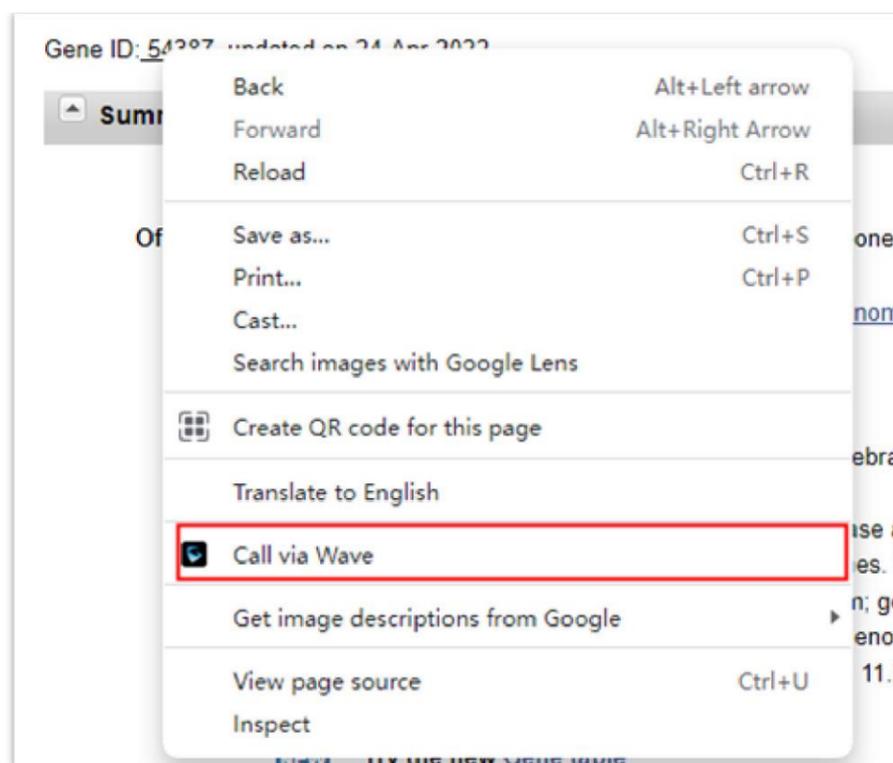
Click-to-Call via Wave
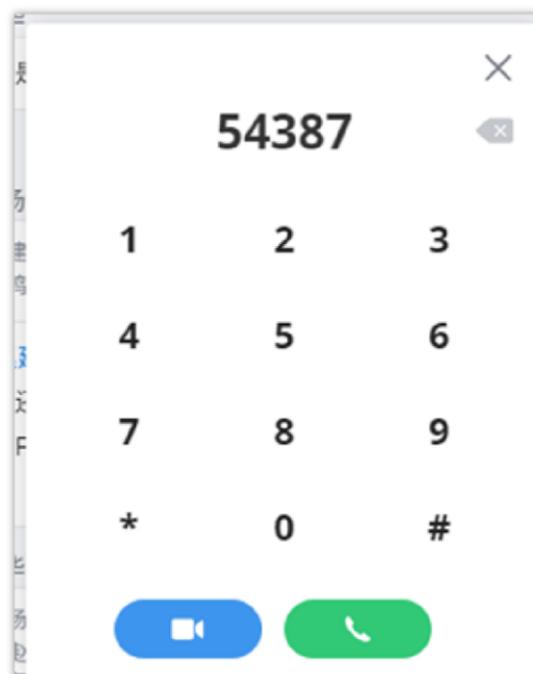
Wave Click-to-Call Number

Note

Please note that Click-to-Dial Wave plug-in will only take into consideration numbers that consist of 5 digits or more.

ANSWERING CALLS

If the user has logged in Wave desktop, when there is an incoming call, the desktop will prompt an incoming call notification on the right bottom corner. Clicking on the notification will bring up Wave desktop page.
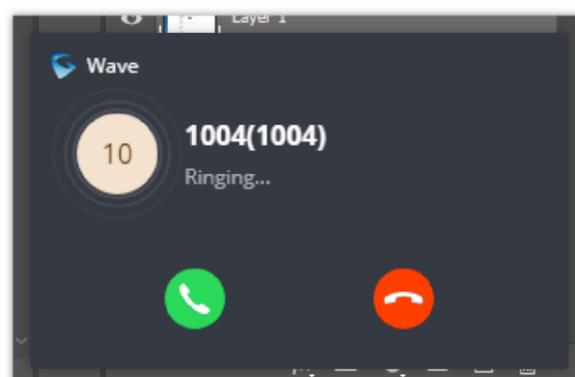

Incoming Call Notification on the Desktop

- If it is an audio call, the user can select to answer the call, or select to hang up.

- If it is a video call, the user can select to answer with video, select to answer with audio only, or select to hang up.

DURING A CALL

Once the call is established, a new windows will on which you will have the call controls, as well as the video feed if it's a video call. The users can use the call controls to mute/unmute themselves, enable and disable their video feed, screen share (video calls only), hold/unhold the call, and transfer the current call.
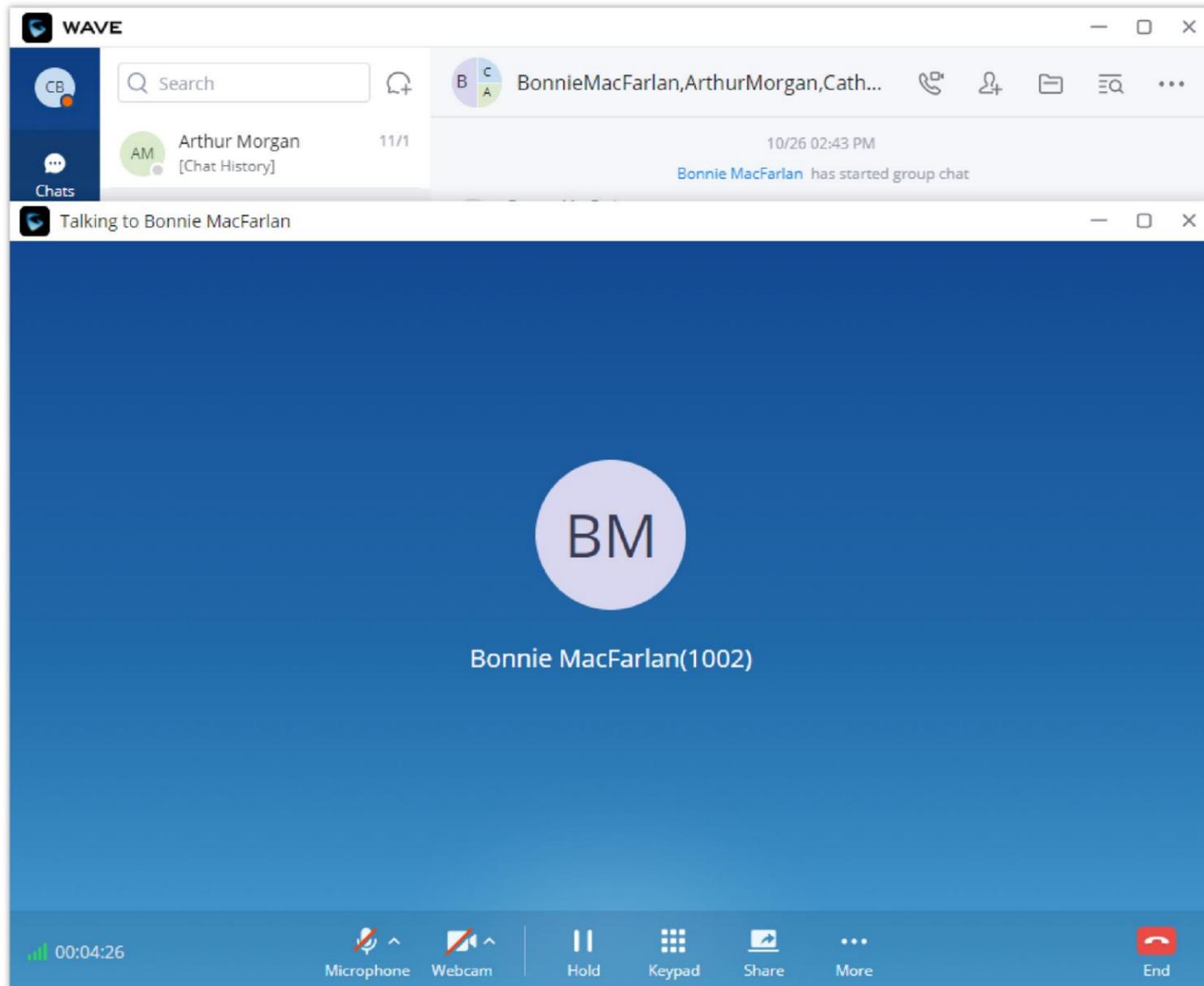
One-to-One Call
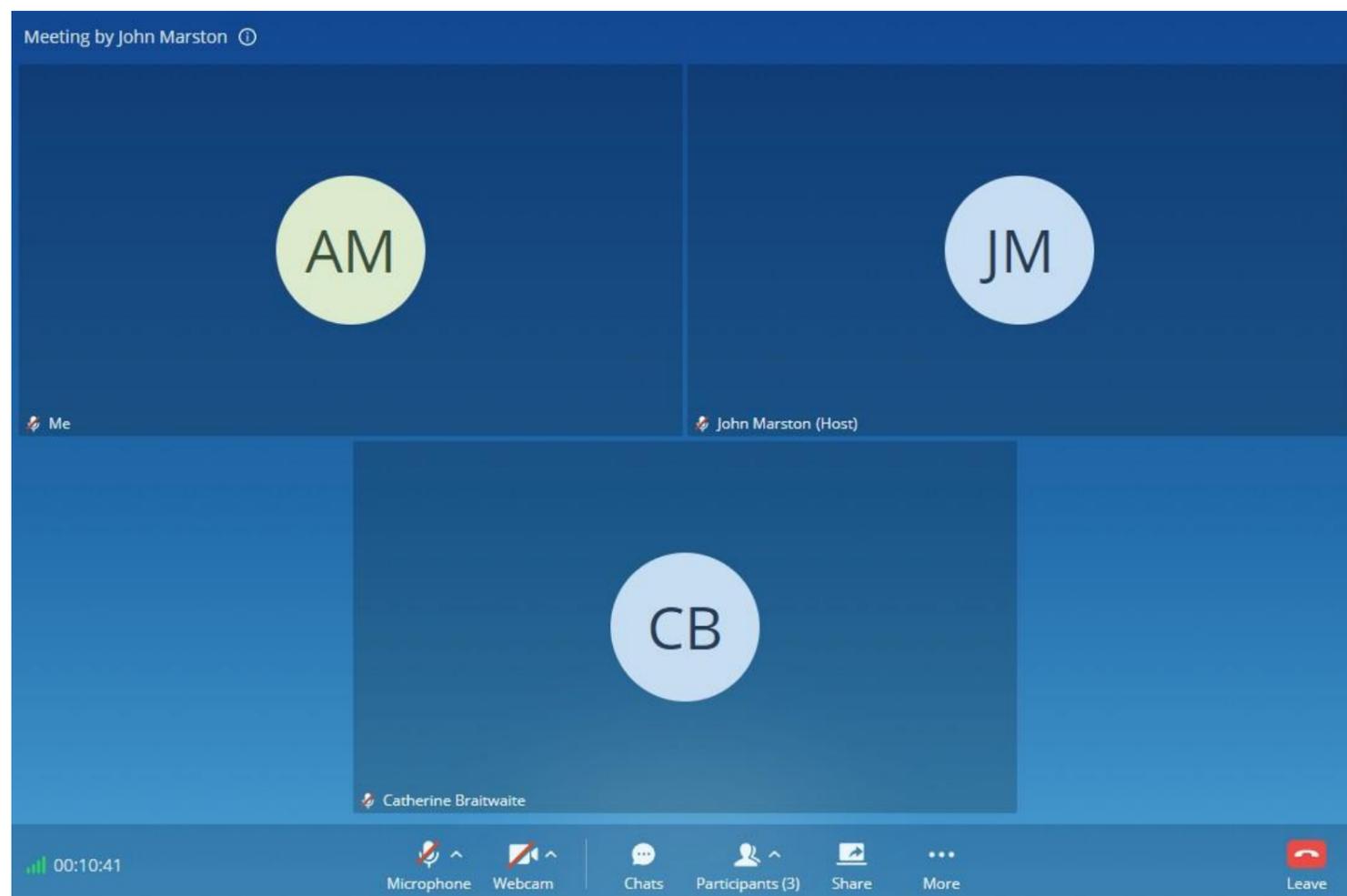
Meeting Call

- ○ 📶 : View current network connection status including audio and video packet loss.

- ○ 📞 : End call.

- ○ ▯ ：Mute/unmute. Users can click "**More**" button to enter the alternative ringing speaker settings interface.

- ○ ◪ ：Video on/off. Users can click "**More**" button to enter the virtual background settings interface.

- ○ ⬀ ：Share screen, whiteboard or pdf file

- ○ •••：Click to open more functions such as transfer.

- ○ ▮▮ ：After clicking on for more functions, click on this icon to hold the call.

- ○ ⟮→⟮ ：After clicking on ••• for more functions, click on this icon to transfer the call.

- ○ ▦ Click on this icon to enter DTMF.

- ○ ◪ After clicking on ••• for more functions, click the button to transfer both parties' calls to the conference room for the call, so that more people can be added to the conference.

During a video call or screen-sharing, when the user minimizes the call screen, a small window with the toolbar will appear on the top right corner of the screen showing a small video of the camera feed or the screen-sharing.

Minimized Call Window

## Hold/unhold

1. During call, click on Hold ▮▮ to put the current call on hold.

2. To resume the call, click on ▮▮ .
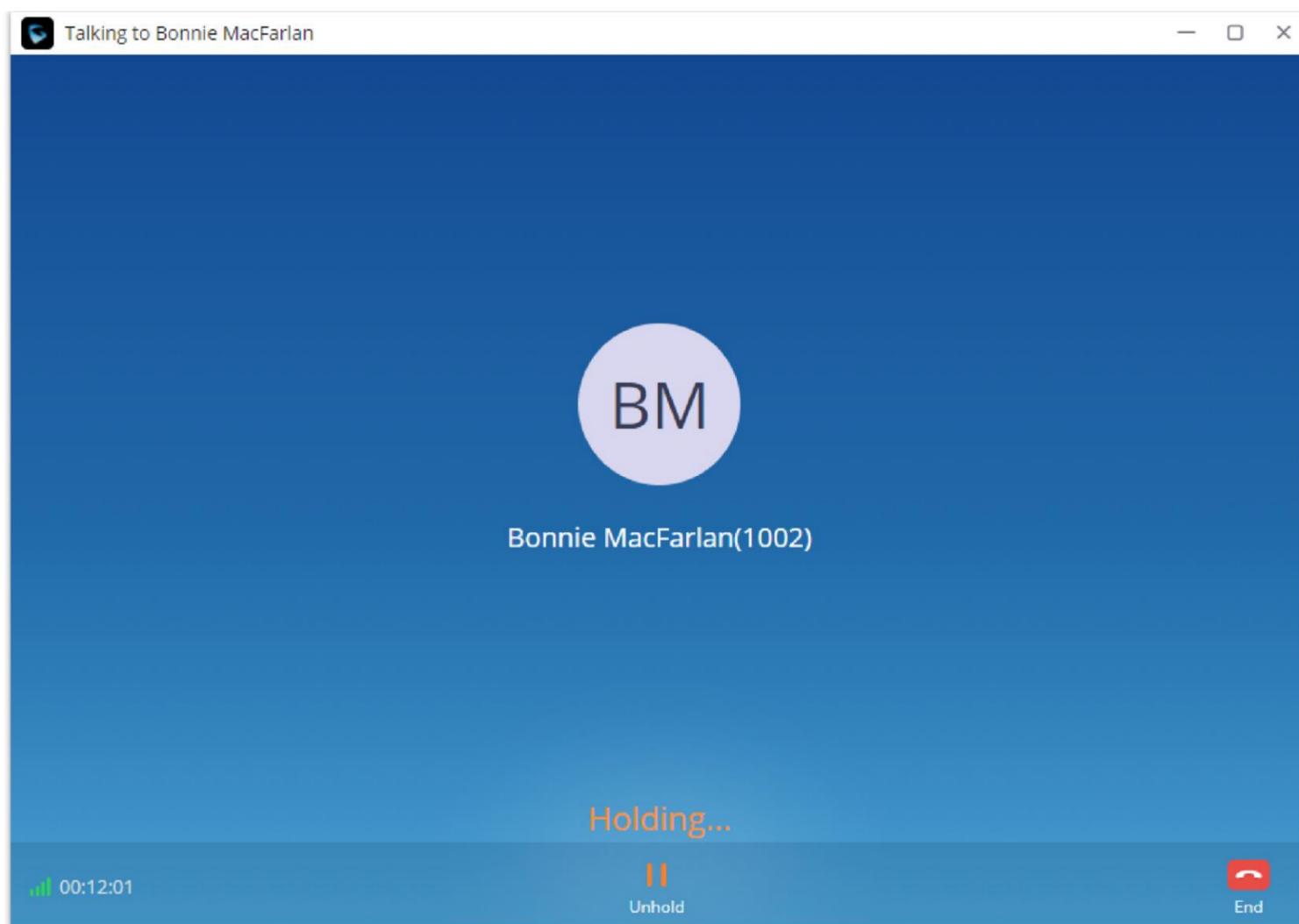
Call On Hold

Mute/unmute

1. During call, click on ![mute icon] to mute the call. The user will not be heard by other parties anymore.

2. To unmute the call, click on ![unmute icon] . The user can now be heard by the other parties.
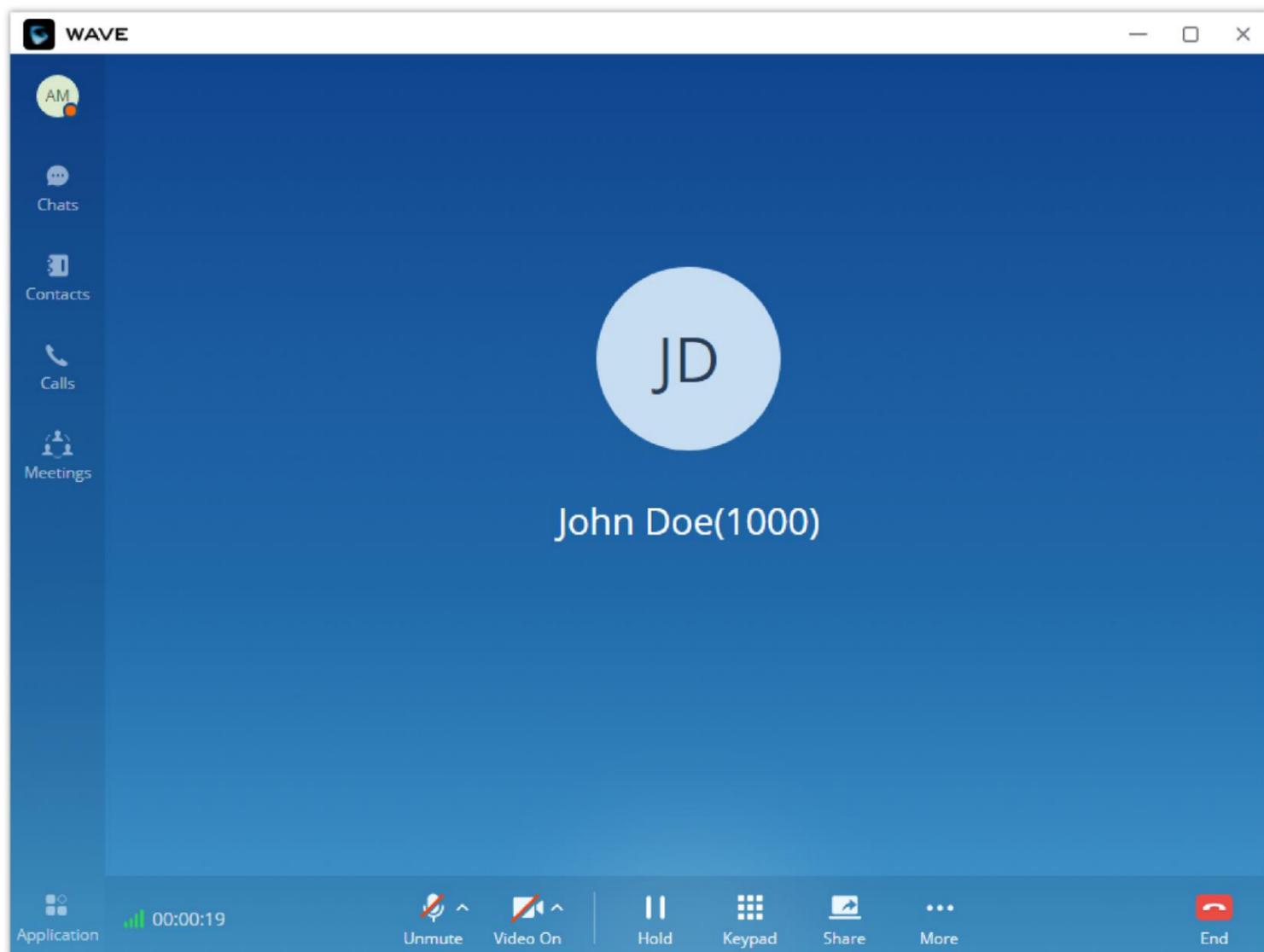
Mute during a Call

DTMF

1. During the call, press the more button to open the menu page, and click the DTMF ⊞ button and a soft keyboard will be opened, as shown in the figure below.
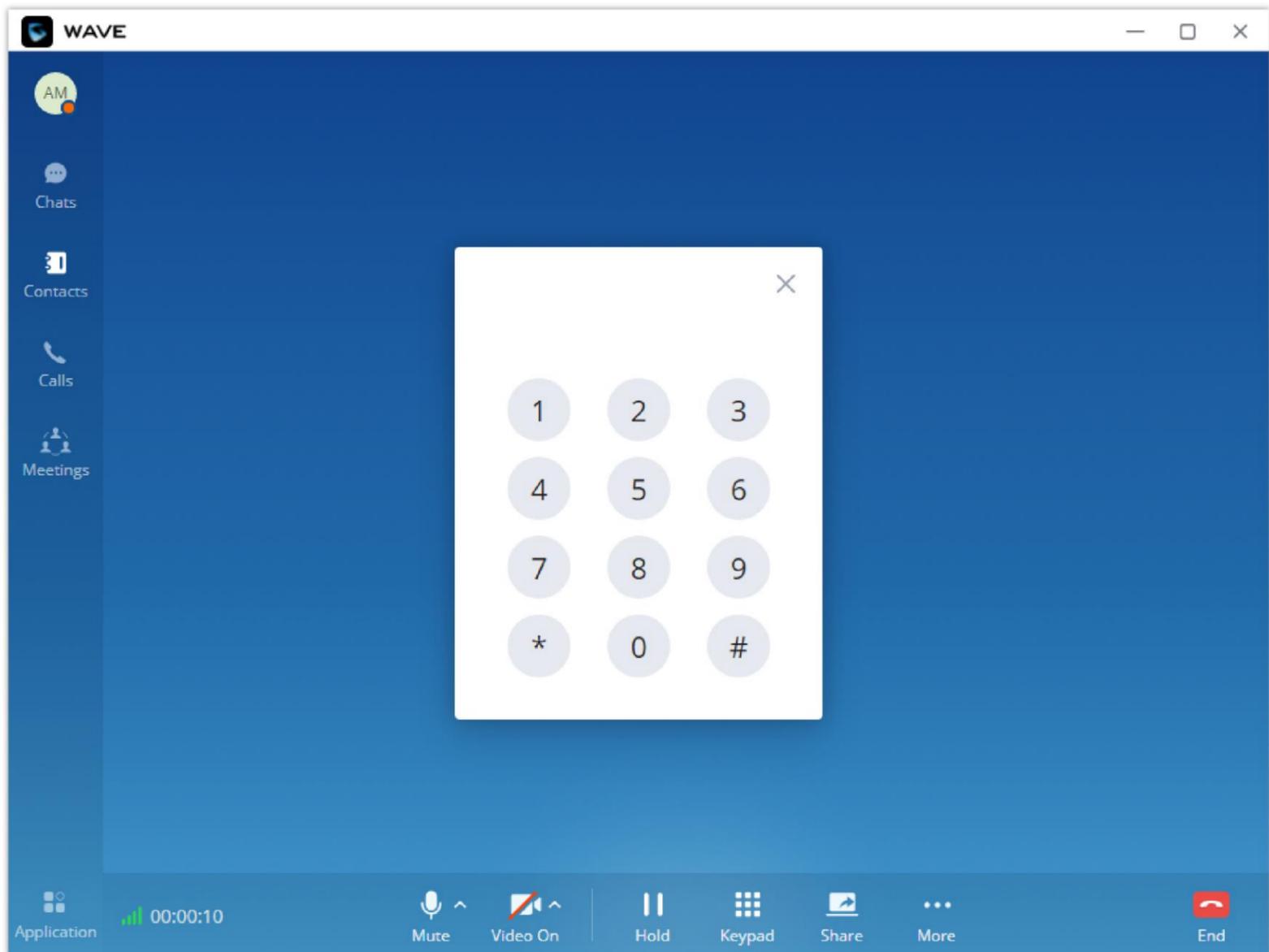

Open the DTMF Keyboard Interface during a Call

2. Click on the numbers that needs to be entered.

Record Point-to-Point Call

Users can start the audio recording function during the point-to-point call. Users can click the More button➔Recording ◉ button to record the current call. Please see the screenshot below:
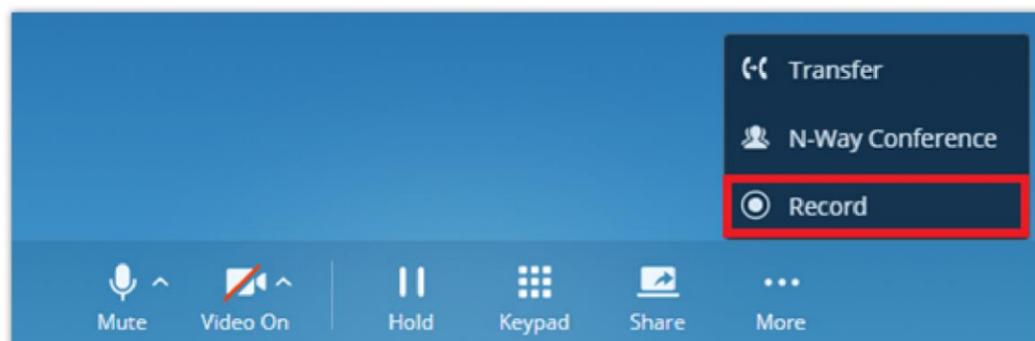
Record a call

When the call is ended, users can click ⑪ button on the call history interface following the specific call log to listen to the call recording, and download/delete the recording files. Please see the screenshot below:
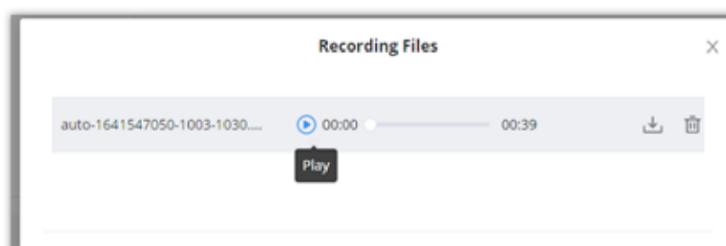
Transfer to Meeting Room

1. During the call, the user can click "**…**" button to open the menu and click the "**N-way Conference**" ![icon] to transfer the current call to the random video meeting room. As the figure shows below:

2. When the call has been transferred to the video meeting room, the operator will become the meeting host.
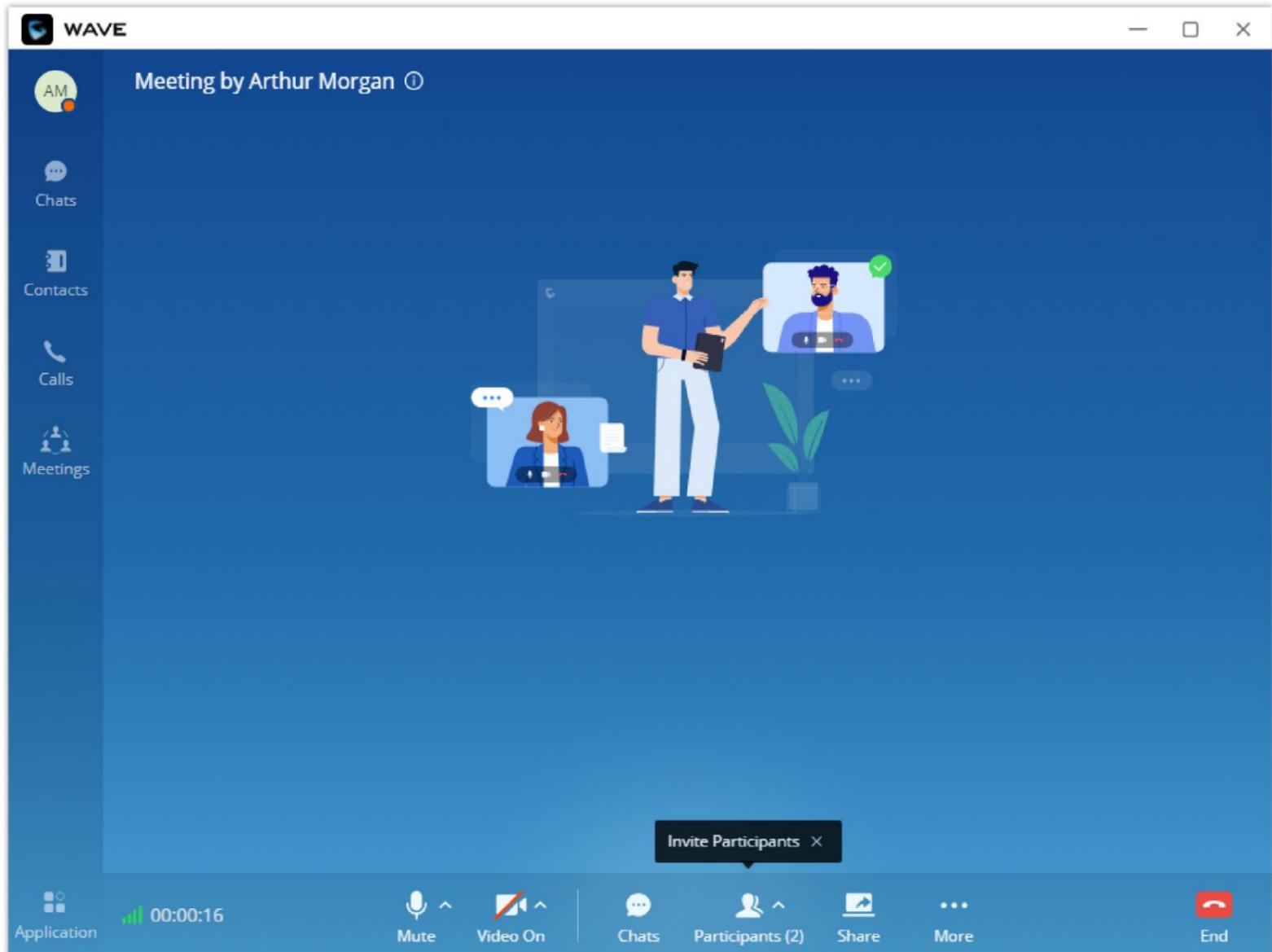
Transfer to Video Meeting Room

Call Flip Function

Let's say you initiated a call on your GS Wave softphone app, but when you arrived to your office, you wanted to continue the call on your Grandstream desk phone or on Wave Web client. Call flip function allows to do that seamlessly. Without any interruption, you can switch between calls from device to another without having to hang up the call. Also, the callee won't notice that you have switched devices. In order to be able to use the call flip function, make sure that both devices have the same account configured on them.

On the device you want to switch to, a green bar will appear notifying you that there is already a call ongoing on a different device. In our example, if you open Wave Web App you'll see the green bar on top side of the screen and if you wish to continue that call on the Wave Web app, click on ![Switch]
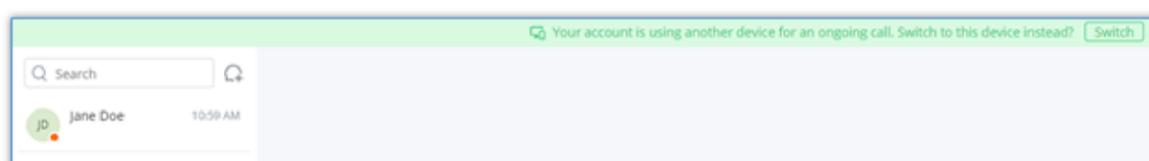
The Call Ongoing on a Different Device

After you click on "Switch" this prompt will appear:
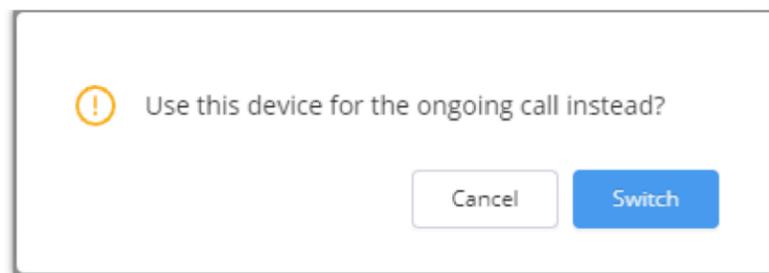
Confirm Your Choice

Confirm your choice by clicking on Switch

The call will be switched to the Wave Web App without any interruption.

MULTIPLE LINES

It supports two-line calls at the same time. The user can quickly switch between lines in the lower left corner. The user can click button 🟢 to answer the call and click button 🔴 to hang up the call.
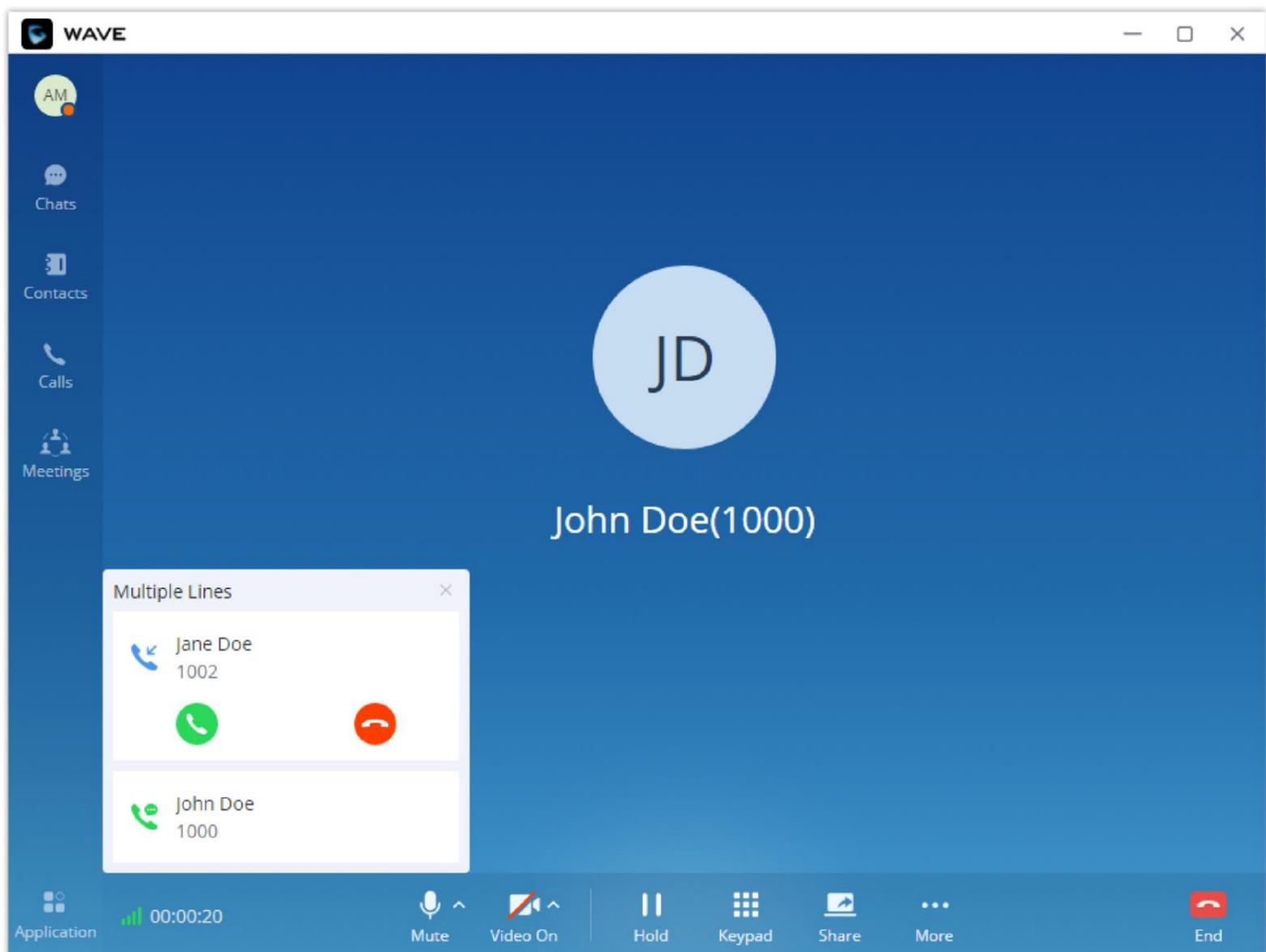
Multiple Lines

MISSED CALLS

If there is a missed call, there is a notification on the lower right corner of the desktop, as the screenshot shows below:
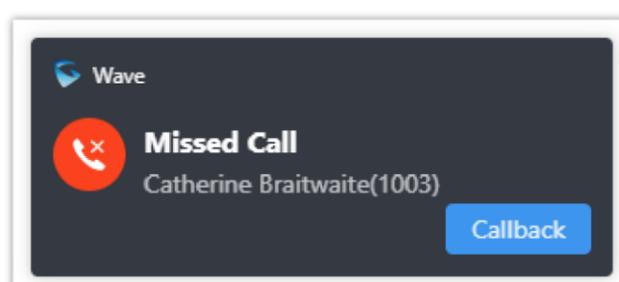
Missed Call Notification

The user can quickly call the extension back by clicking on Callback
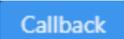
Users can check missed calls under **Calls** Tab.
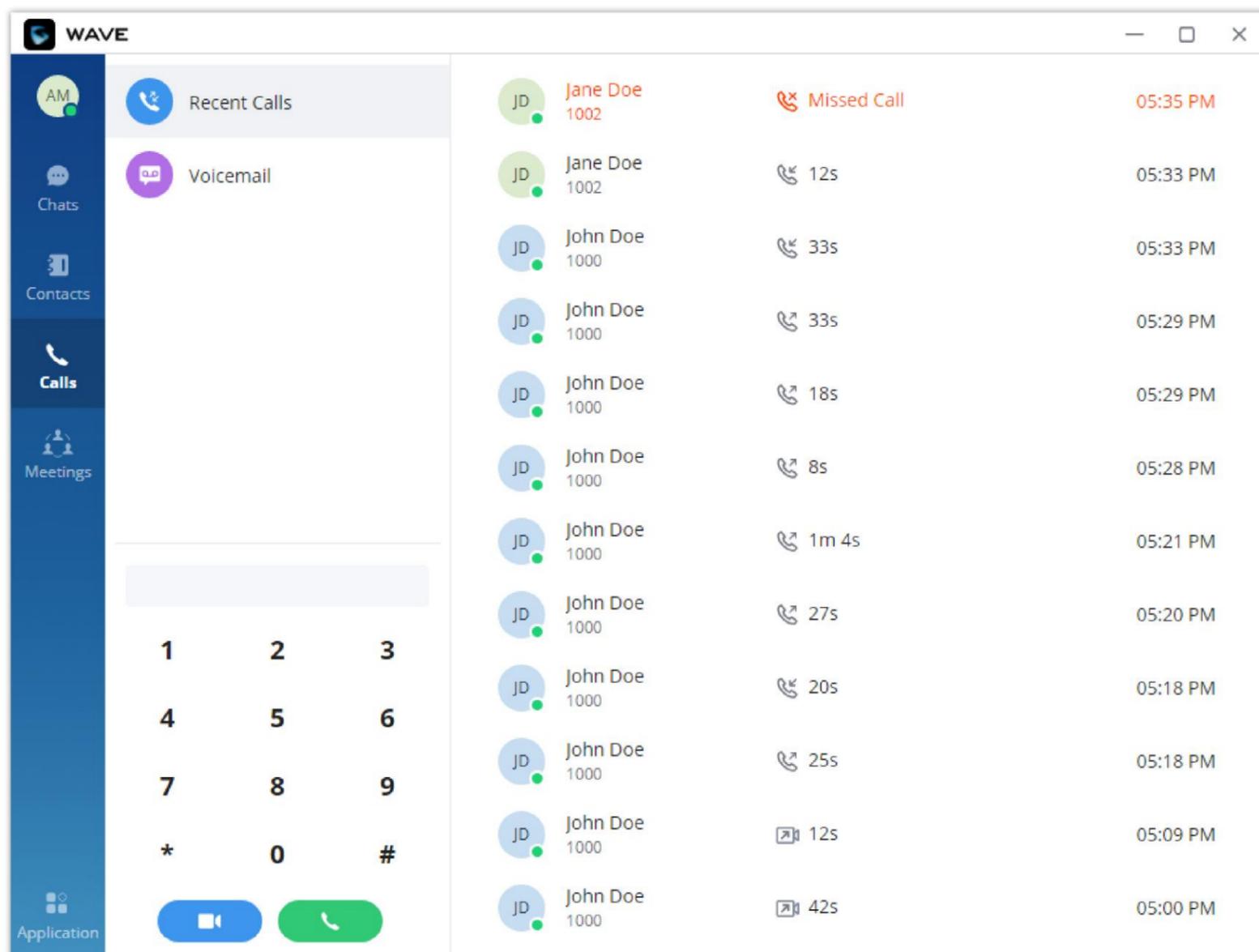
Recent Calls

CALL TRANSFER

Wave desktop users can transfer current call to another party via blind transfer or attended transfer.

Blind Transfer

1. User A is using Wave desktop. Establish call between User A and User B.

2. On User A Wave desktop call screen, click on ••• icon and select transfer ⟨·⟨

3. Enter User C's number as the number to transfer the call to. The number will be listed in the search result.

4. Click on "Blind" to perform blind transfer.

5. User C rings. User A hangs up automatically. When User C answers, the call between User B and User C will be established.
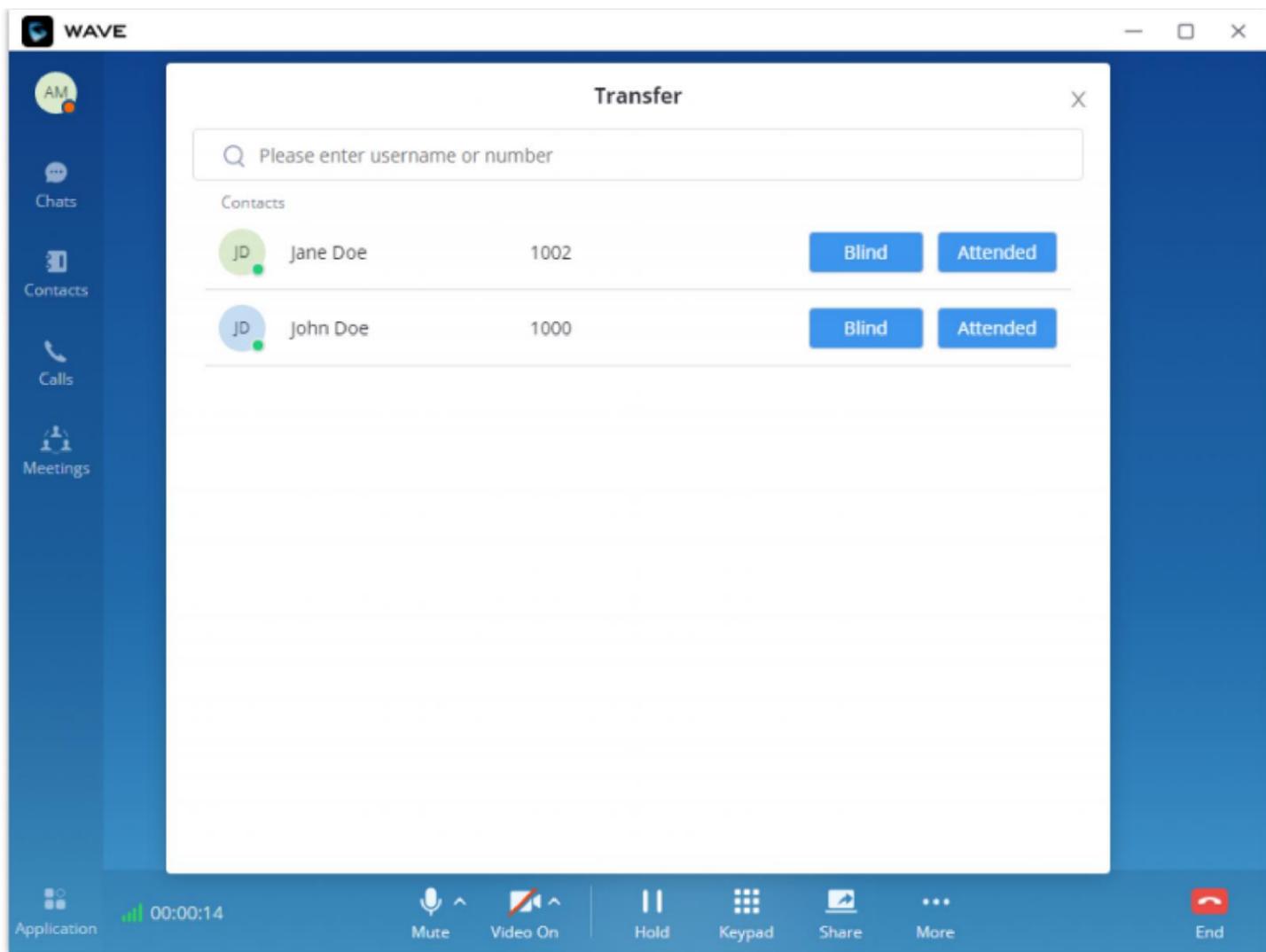
Blind Transfer

Attended Transfer

Step 1: There is a call which is in progress between extension John and Arthur.

Step 2: Arthur clicks on [(Transfer] button then select the contact to which he wants to initiate the transfer to.
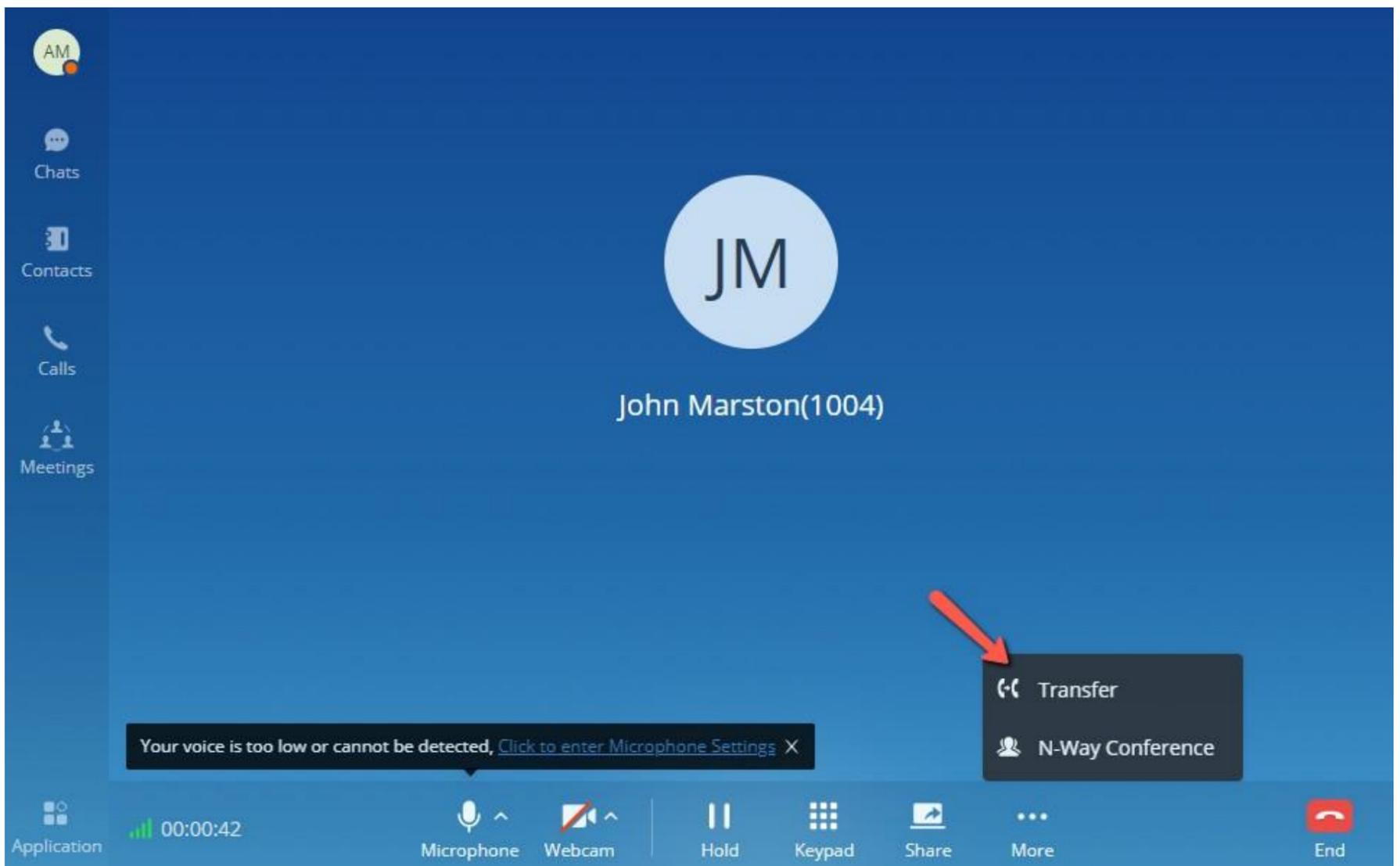
Transfer Call

**Step 3:** Arthur selects to start an attended transfer to Catherine.
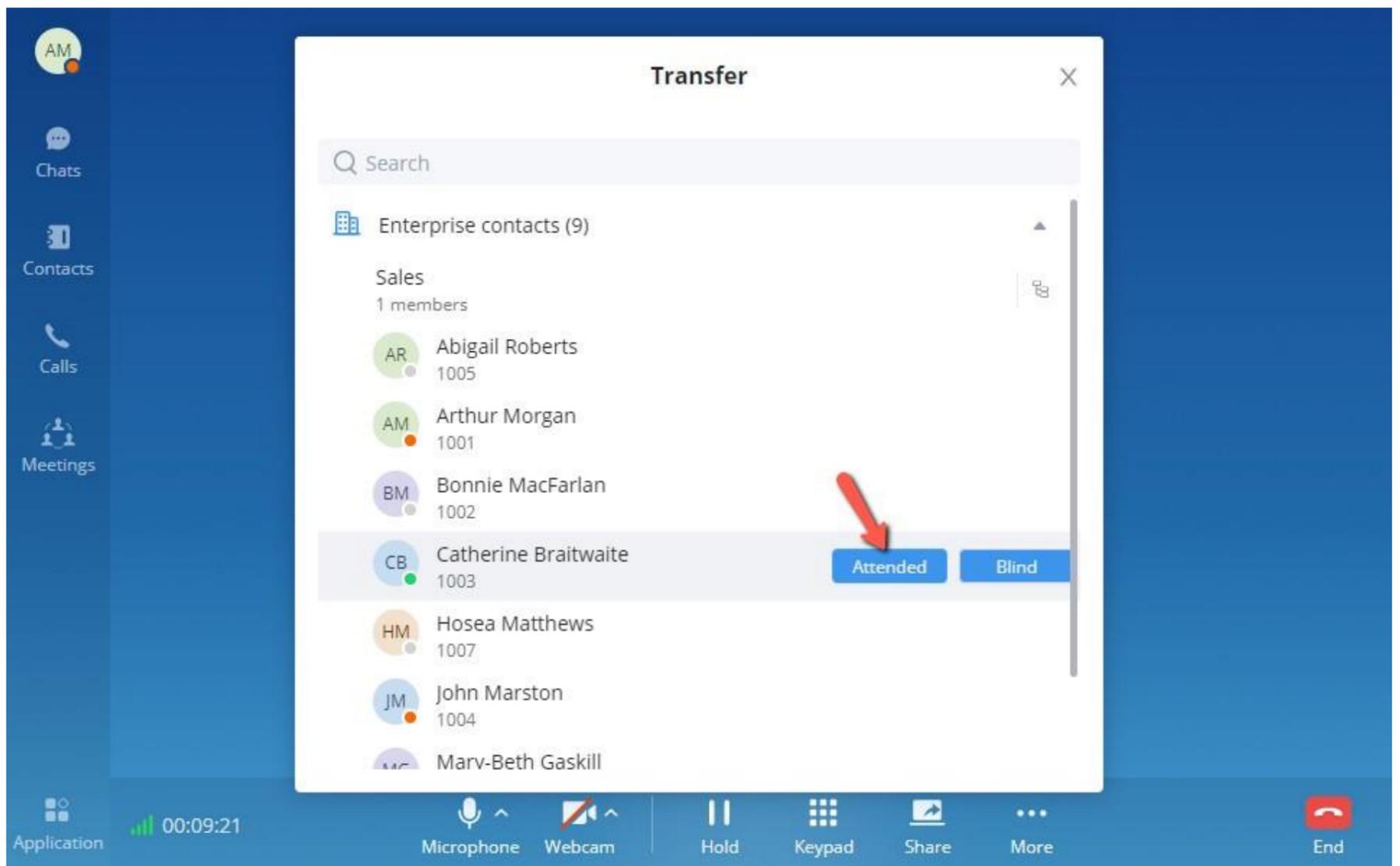
Figure 104: Attended Transfer

Step 4: Once the attended transfer has been initiated, the call between John and Arthur will be put on hold, and Catherine's extension will start ringing. John will be hearing the On-Hold music.

- **Transfer Now:** The call between Arthur and John will hang up and the transfer will be performed, regardless if Catherine answered or not.

- **Cancel Transfer:** The call between Arthur and Catherine will hang up, and the call between Arthur and John will be resumed.
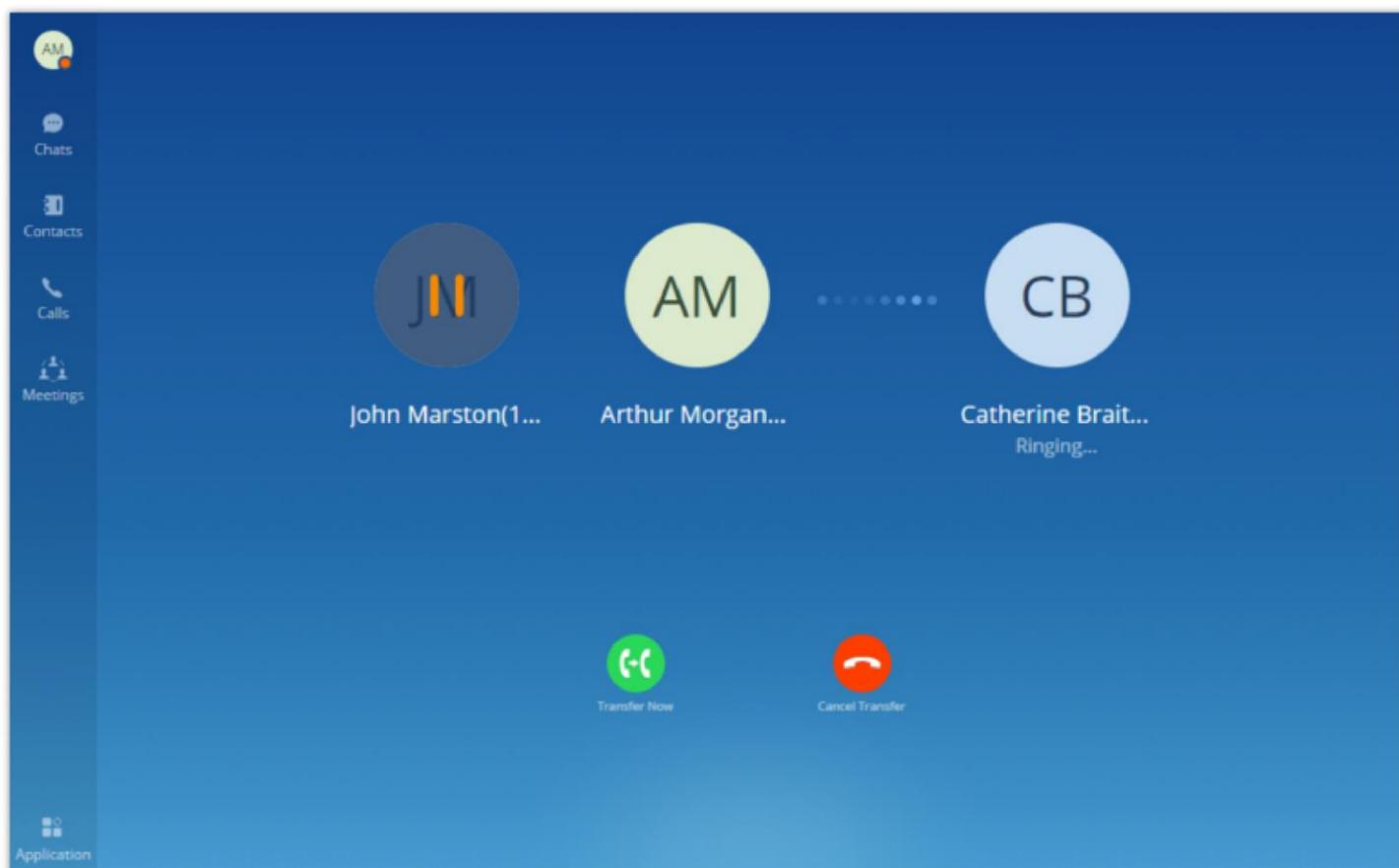

Attended Call Transfer

CHAT

Wave desktop allows users to conduct a peer-to-peer chat or a group chat. After logging in Wave desktop, click on "Chat" on the left panel to open the chat page.

If you want to use the cloud IM system, go to the Grandstream official website to learn about the CloudIM package.

Start a single chat

Method 1: After clicking on the "Chat", user need to click on ⌇ button, then select the other party he/she wants to chat with and click OK to enter the single chat interface.
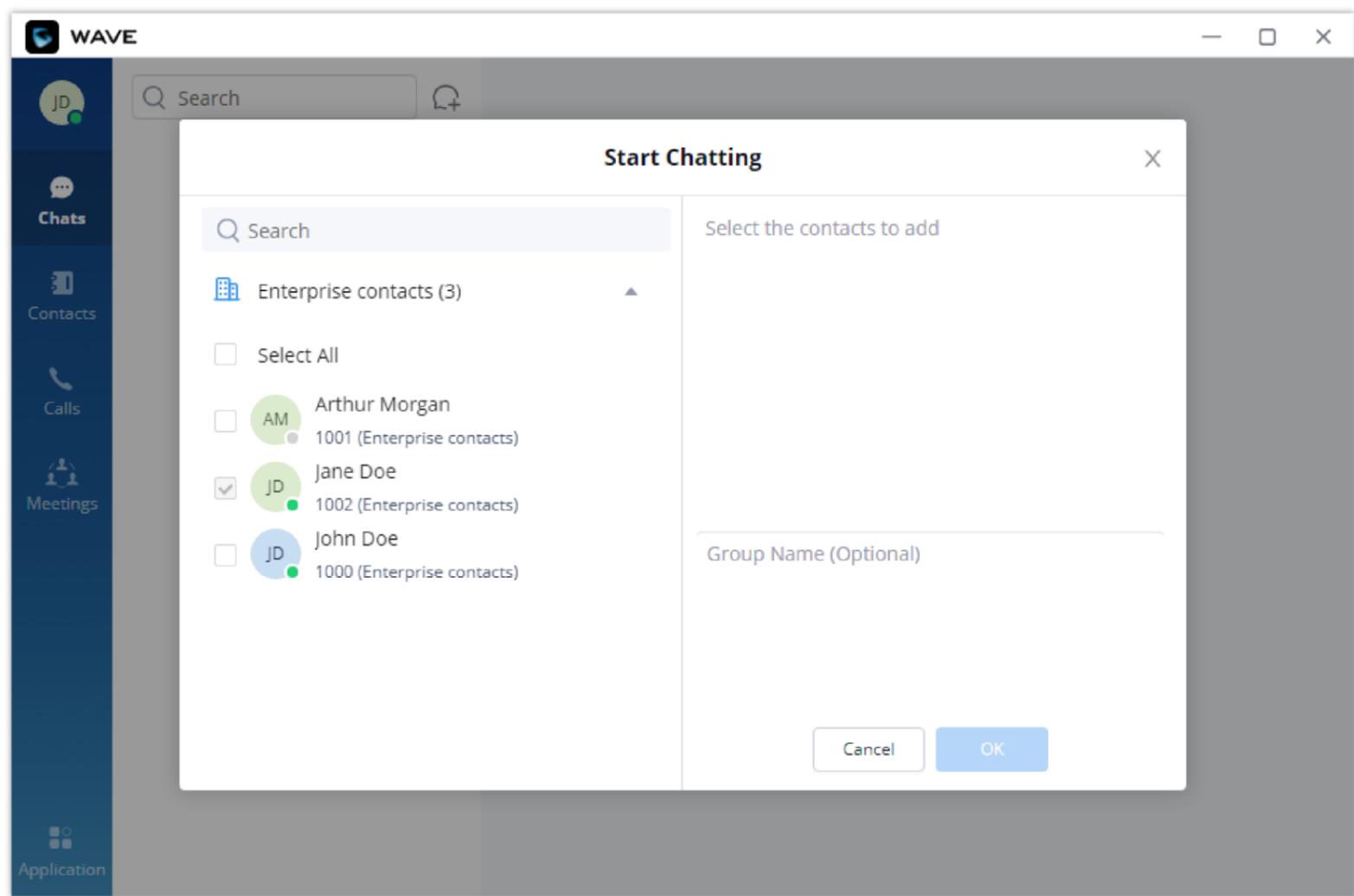
Adding Chat Interface

Method 2: User can click on "Contact" tab, find the contact he/she wants to chat with, and click ⬤ button, the user will be redirected to the chat section.

Method 3: User can click on "Calls" tab, find the contact he/she wants to chat with, and click ⬤ button to initiate the chat.

Method 4: User can click on "Keypad" tab, find the contact he/she wants to chat with among the calls log, and click ⬤ button to initiate the chat.

End to End Encrypted Chat

Wave supports end to end encryption which encrypts the messages from the terminal which is sending the message and decrypt the message once it reaches the recipient's terminal. This protects the confidentiality of the messages exchanged; this includes all the types of messages, text messages, images, documents, and files. Waves uses advanced asymmetric encryption technology to ensure that nobody, other than the two parties, can read the messages.

> **Important Note**
>
> Please note that end to end encryption feature is only available on the paid plans. For more information please refer to: https://ucmrc.gdms.cloud/plans

> **Important Note**
>
> Please note that end to end encryption is not supported on group chat and audio/video calls.

Wave point to point chat is by default not encrypted, but if the user wants to start an end to end encrypted chat, then please follow the steps below.

Navigate to **Contacts**, then select the hover the mouse cursor over the profile picture of the contact, after than click on ⬤ and on the menu, click on **E2EE Chat**.
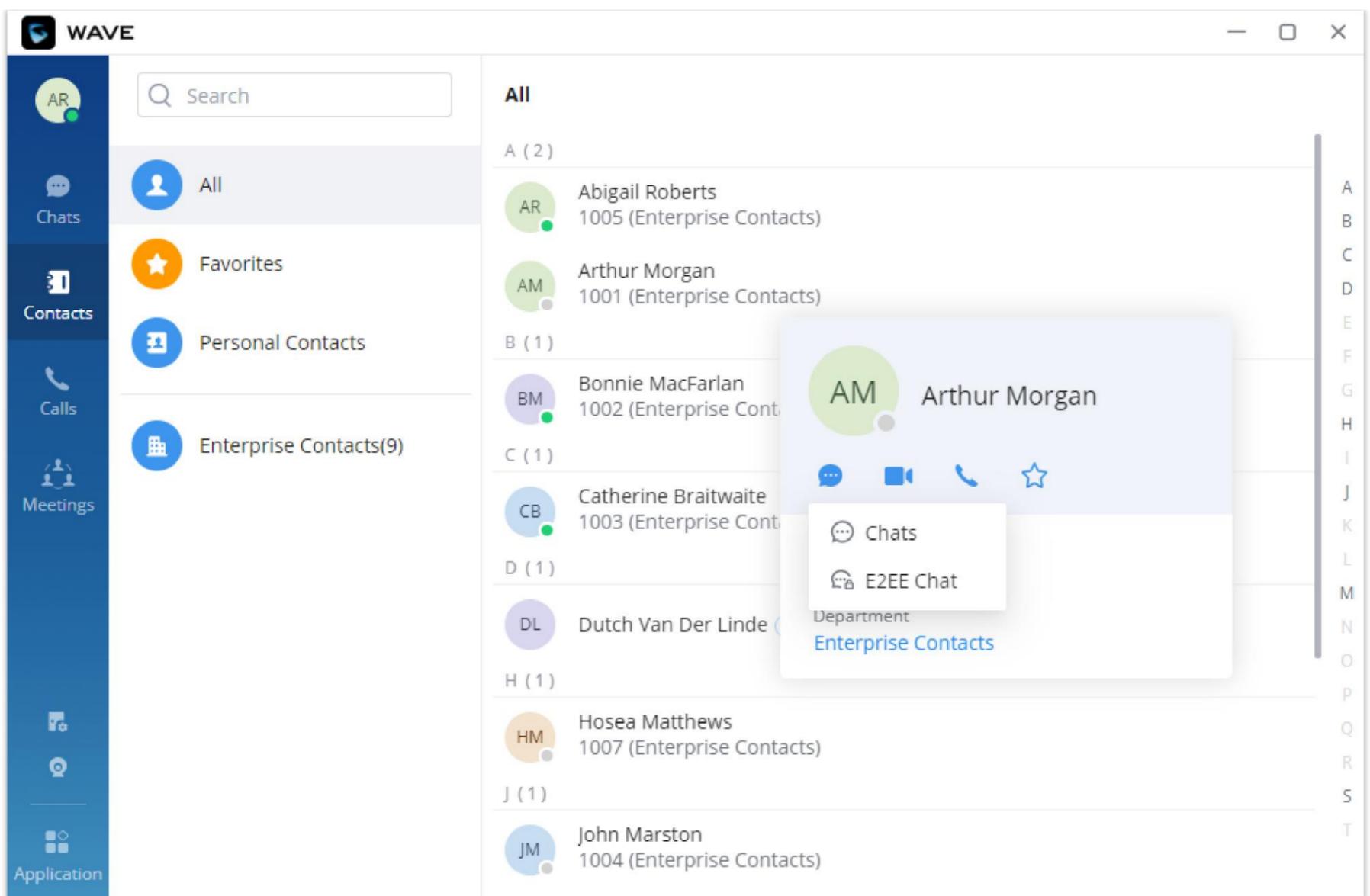
End to End Encryption Chat

Start a group chat

Method 1: After clicking on the "Chat", user need to click on ⊕ Button, then select multiple contacts he/she wants to chat with, enter the group name, and click OK to enter the group chat interface.

Method 2: In the single chat window, user need to click on ⋯ , then on ⊕ to invite more contacts to form a group chat.

> **Note**
>
> Up to 500 users can be selected when creating a group chat.

Send messages

In the chat interface, sending text, emoticons, files/pictures are supported.
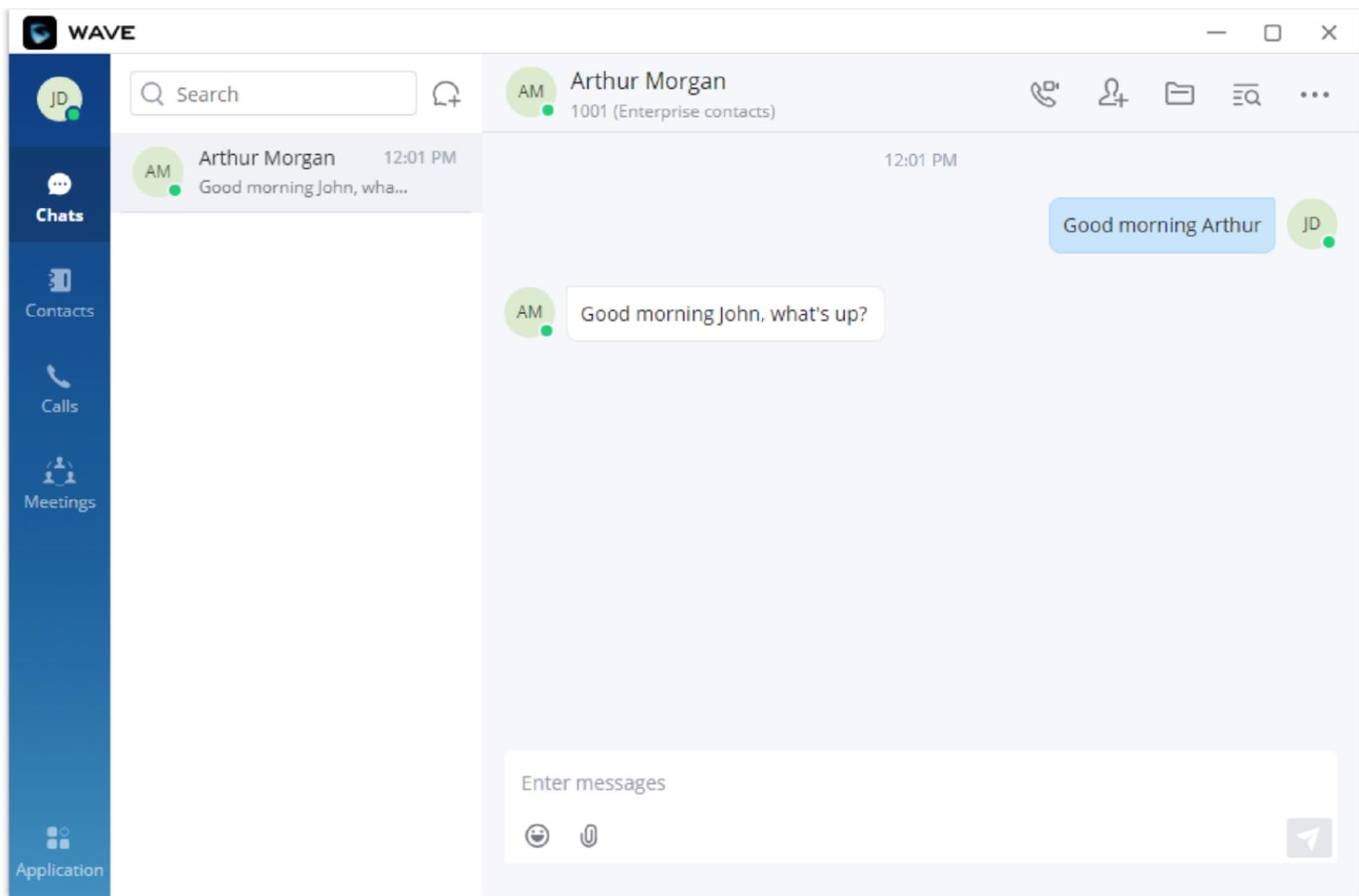
Chat Interface

While typing a message in the chat box, Wave will underline any misspelled words

Misspelled words detection

By right-clicking on the misspelled words, a list of similar words will pop up to help the user choose which word they wanted to type.
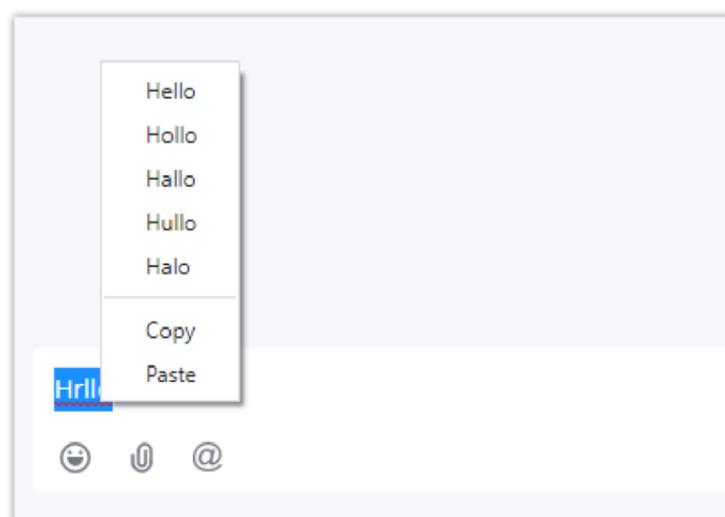
Dictionary suggestions

Notes

- Text: Support sending any characters within 5000 characters.

- For new line, press Shift + Enter to wrap.

- For emoticon, click on 😊 , it supports selecting one or more emoticons to send.

- For file/picture, click on 📄 , or drag a file to this window, you can select a file/picture to send from the local computer, and the file size is limited to 50M.

- For call, if it is a single chat interface, click on 📞 to call the other party, select 🎤 Audio call button to call the other party in audio. If it is a group chat page, click on the same button to initiate a group conference call, all group members will be called by default, and group chat messages will be brought into the chat box in the conference call.

- For video call, only the single chat interface can initiate a video call; click on ■ , select ▭ Video call button to initiate a video call the other party.

- @Everyone/someone: Only supported in group chats. Enter @ in the input box or click on "@" button to send messages from @all or someone, and the other party will remind you of @Message.

- **Send Excel Content:** Copy the contents in the Excel file and paste the contents to the chat window. The user can select to paste the contents in text (Paste text) or image (Paste image), and then send out the contents.

When a message fails to send, a red exclamation mark will appear right next to it as shown in the screenshot below:
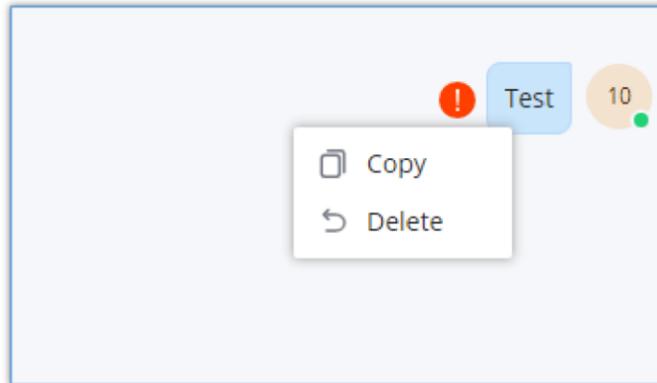
Message Failed to Send

You can click on the exclamation mark to try to send it. Or, you can delete it by right-clicking on it and choose "Delete".

Send Files

With Wave Desktop app you can send a file to a contact or a group of contacts. To do that, click on under the chat box, then select the file you want to send.

In case a file fails to upload, you will get an exclamation mark that indicates that the file has not been sent.
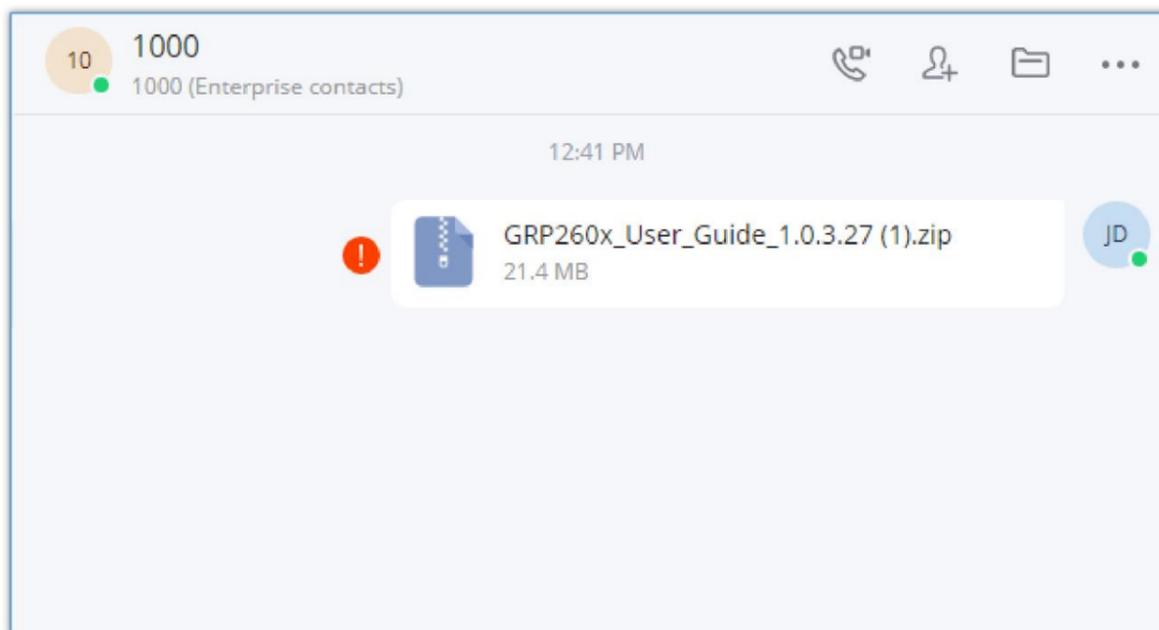
File Failed to Send

The user can also send the link to a file stored on Google Drive. To do that, the user must install Google Drive integration module from the App Store menu in Wave Desktop. After the integration has been installed, the user needs to login to her/his account. After that the user will be able to send Google Drive files in form of links, please refer to the screenshot below.
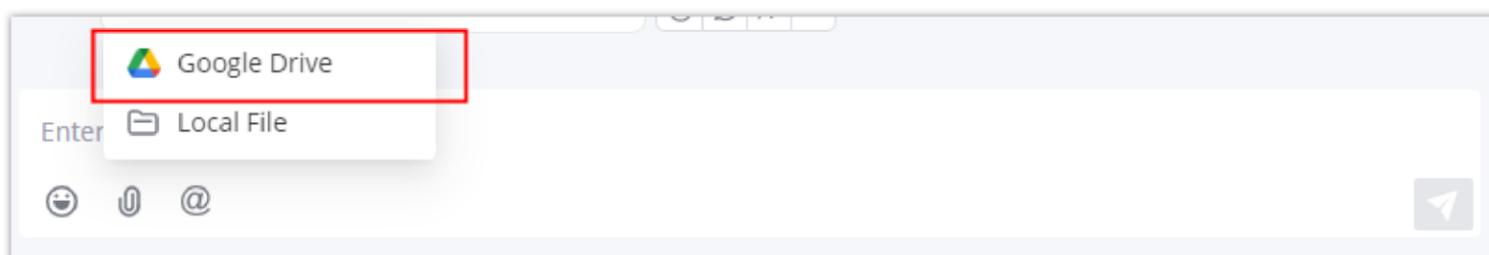
Send a Google Drive file

In case the user sent an image in point-to-point chat or in a group chat, the users can directly see the images and will be also able to rotate, share or download the image.
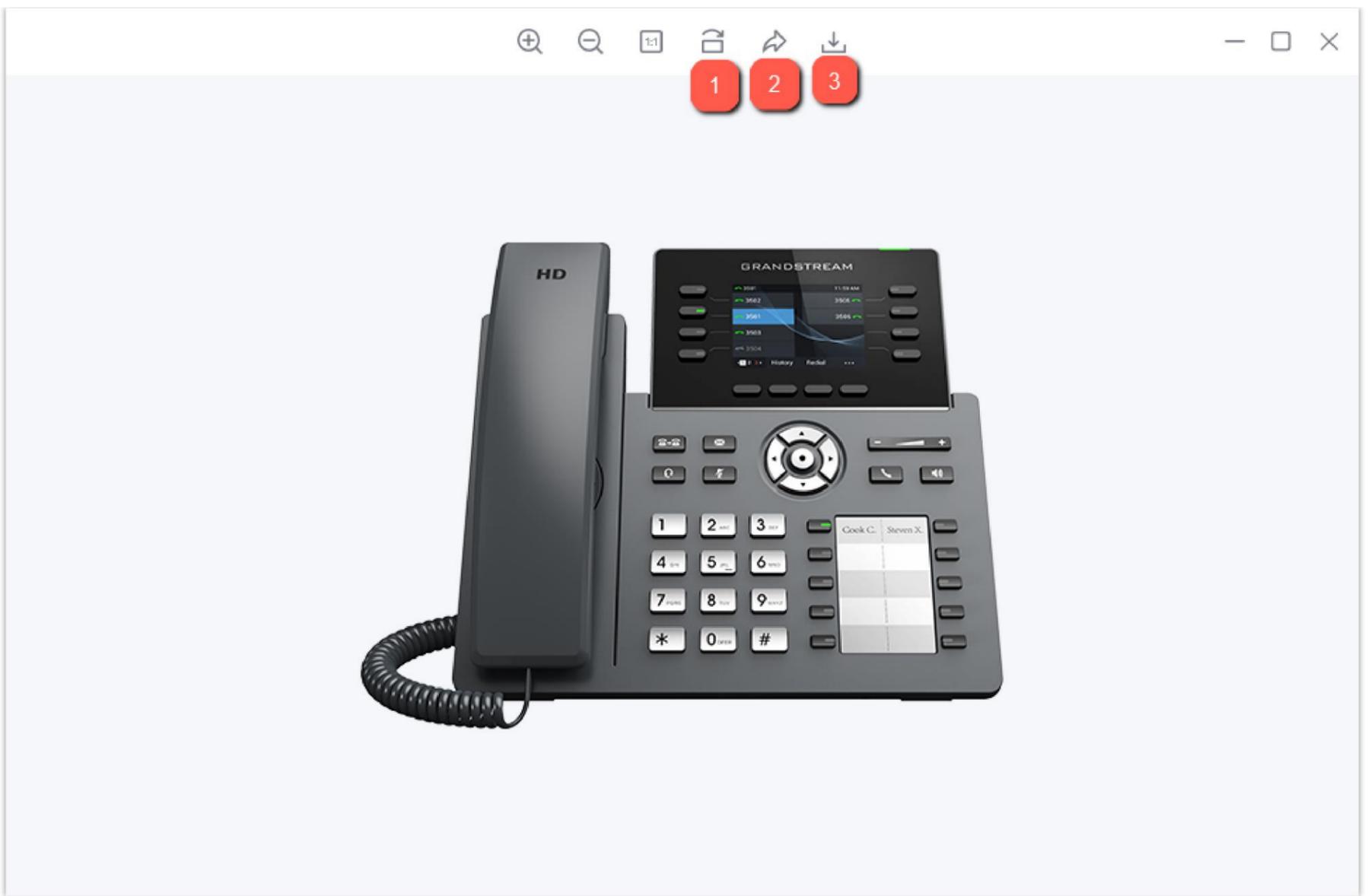
Image Gallery on Wave

- **1:** Rotate the image clockwise.

- **2:** Share the image to another chat.

- **3:** Download the image.

File List

All the files that have been exchanged in a point-to-point chat or a group chat can be viewed in one list.

To access this list, the user needs to click on the folder icon 🗀 in the top right-hand corner of the screen of the chat, then the list will appear as shown in the image below:
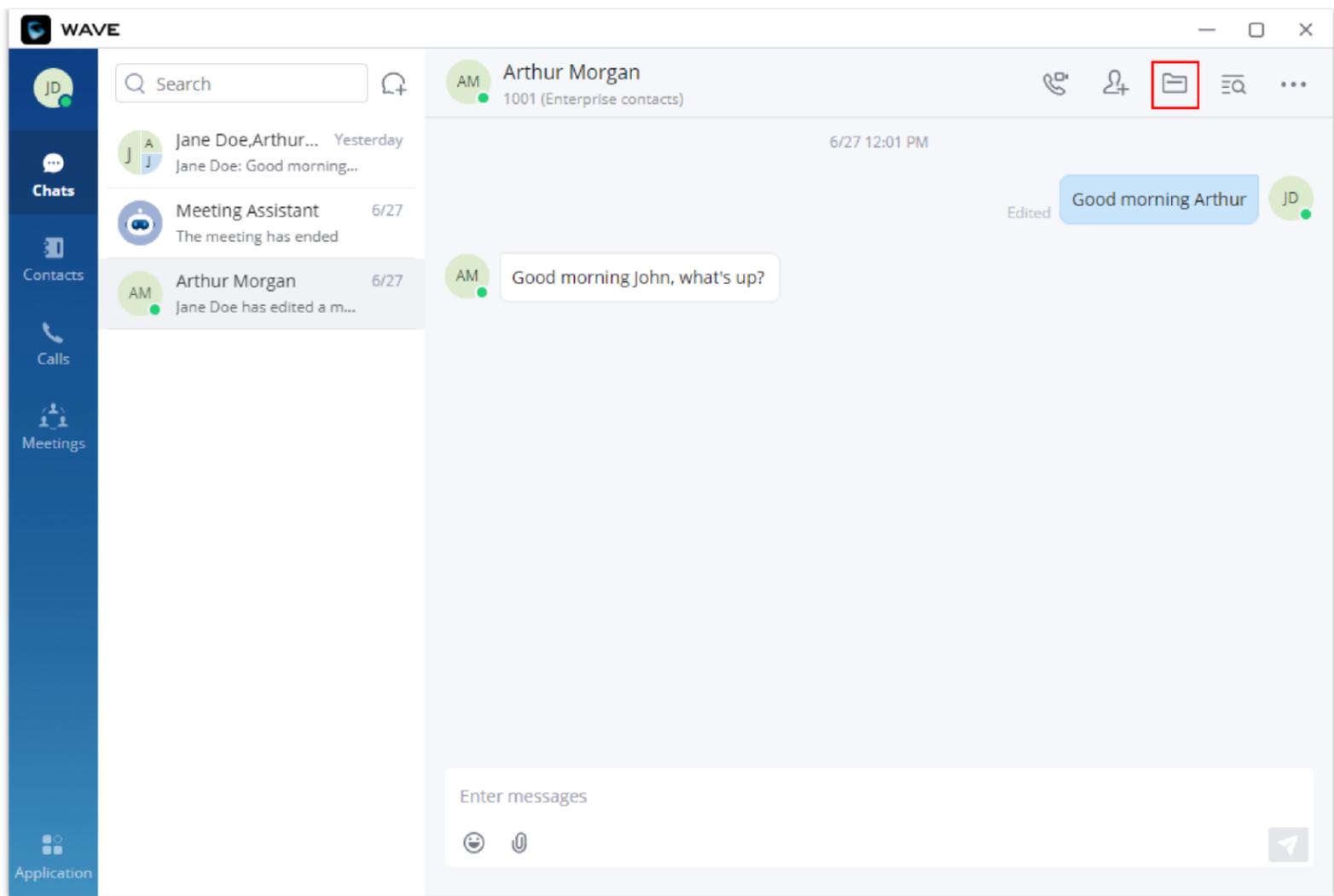
Chat Interface – File

The files list will be displayed, and "Search" bar is available to quickly find the needed file.
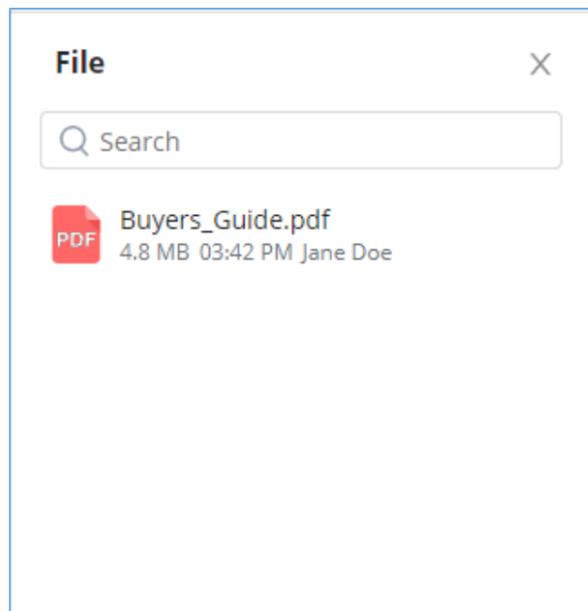
Files List

Users can forward/download or open the files as shown in the screenshot below:
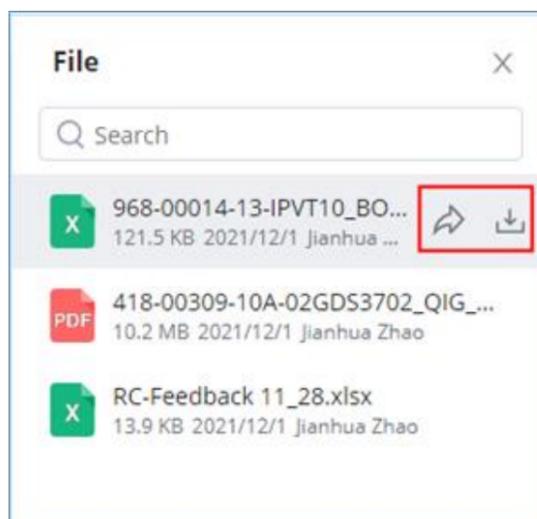
Download/Forward a File

Audio Message

The users can receive voice messages from other users. Upon receiving a voice message, it will be shown on the chat window and can played by clicking on the play button. Please see the screenshot below:
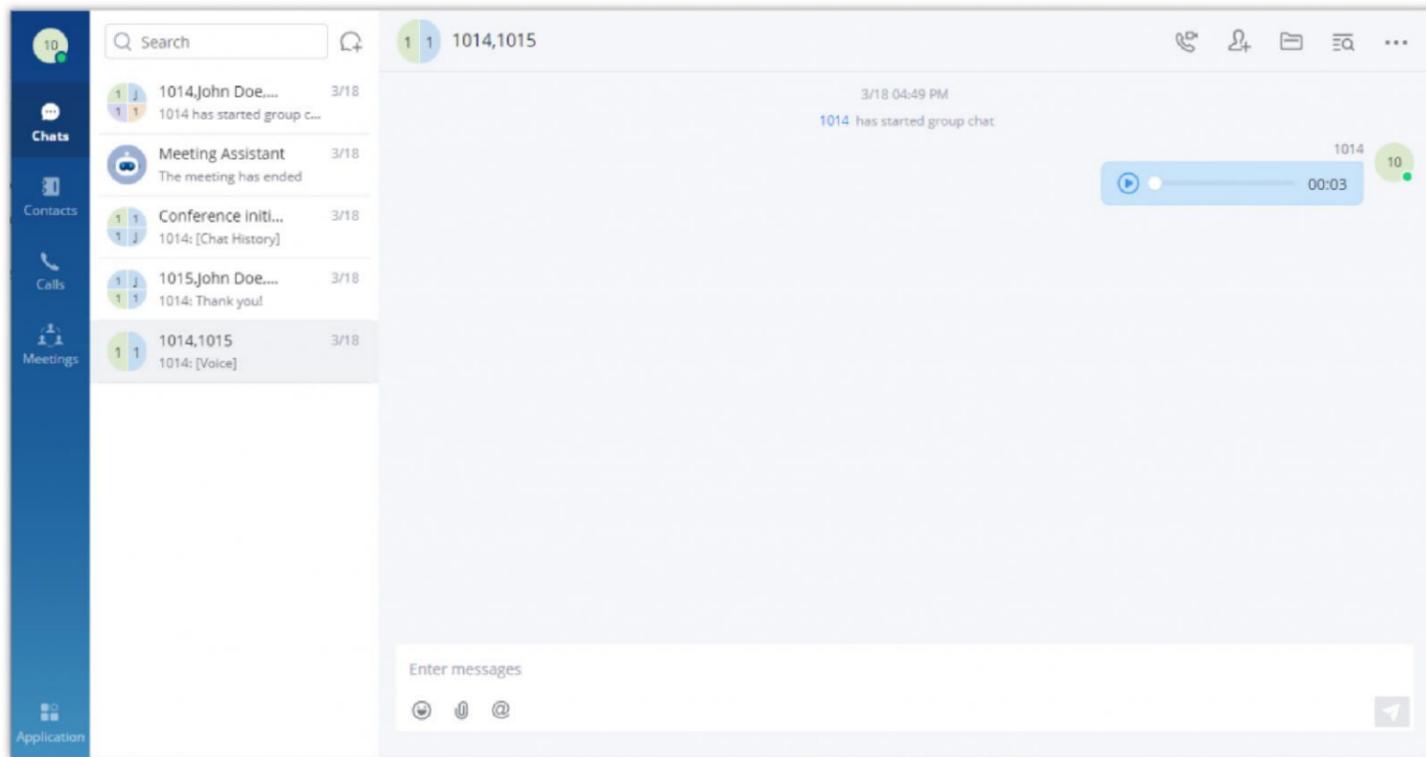
Audio Message

Note

Voice messages can only be sent from Wave Mobile app.

Copy Message

In the chat interface, select a message, with right-click select "Copy" to copy the content of the message. Currently files and pictures do not support copying.
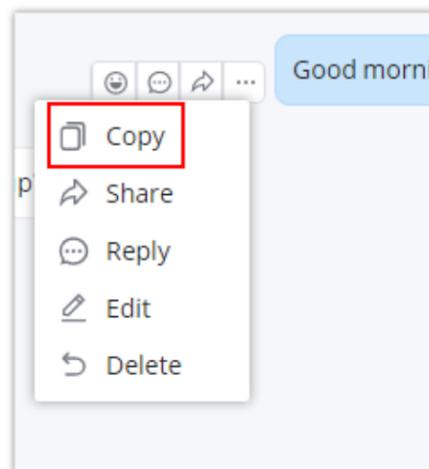
Copy Message

Forward Message

Wave users can forward one or multiple messages using **Share** option to one or multiple recipients. These recipients can either be a single chat or a group chat.

Step 1: In the chat interface, select a message, with right-click select "Share".

Step 2: The user can select the contacts/groups and forward the message to the contacts/groups. It supports to forward the message to multiple contacts/groups.
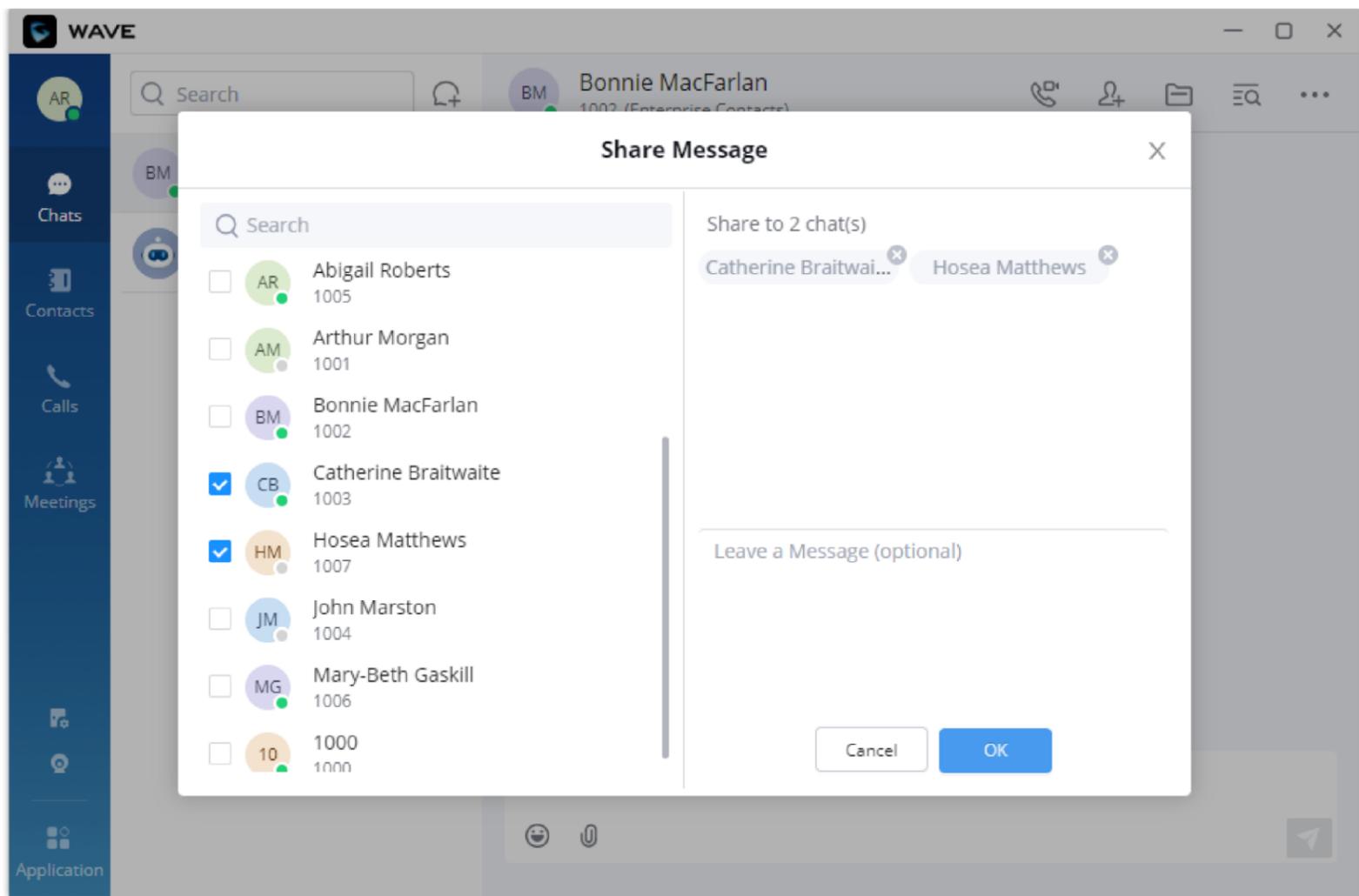
Forward message

Step 3: (Optional) Write a message and click the "OK" button to forward the content of this message to the selected person or group.

To send multiple messages, please click on **More** then click select the messages that you want to forward.
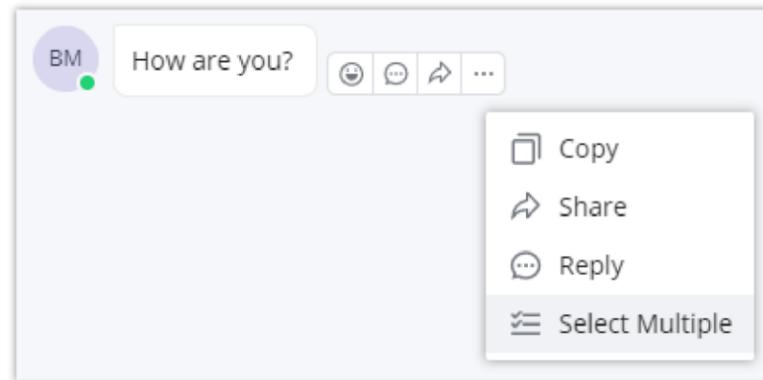

Select Multiple Messages
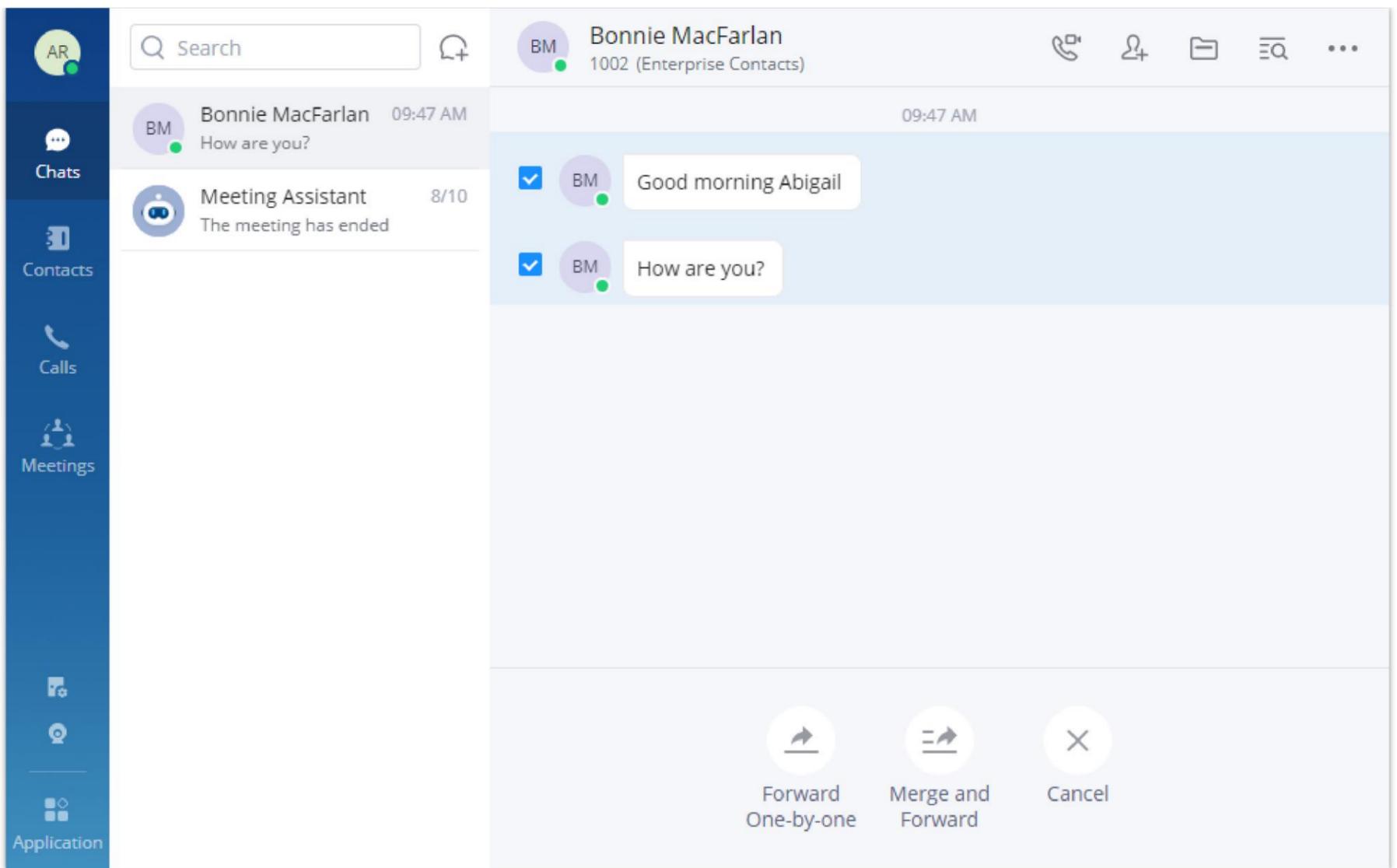
Forward Multiple Messages

Use **Forward One-by-One** if you want the messages to be forwarded separately.

Use **Merge and Forward** to have the messages forwarded in one message.

View Unread Messages

In the "Chat" tab, users can view the latest unread messages. Tap to enter the chat interface to view new messages.
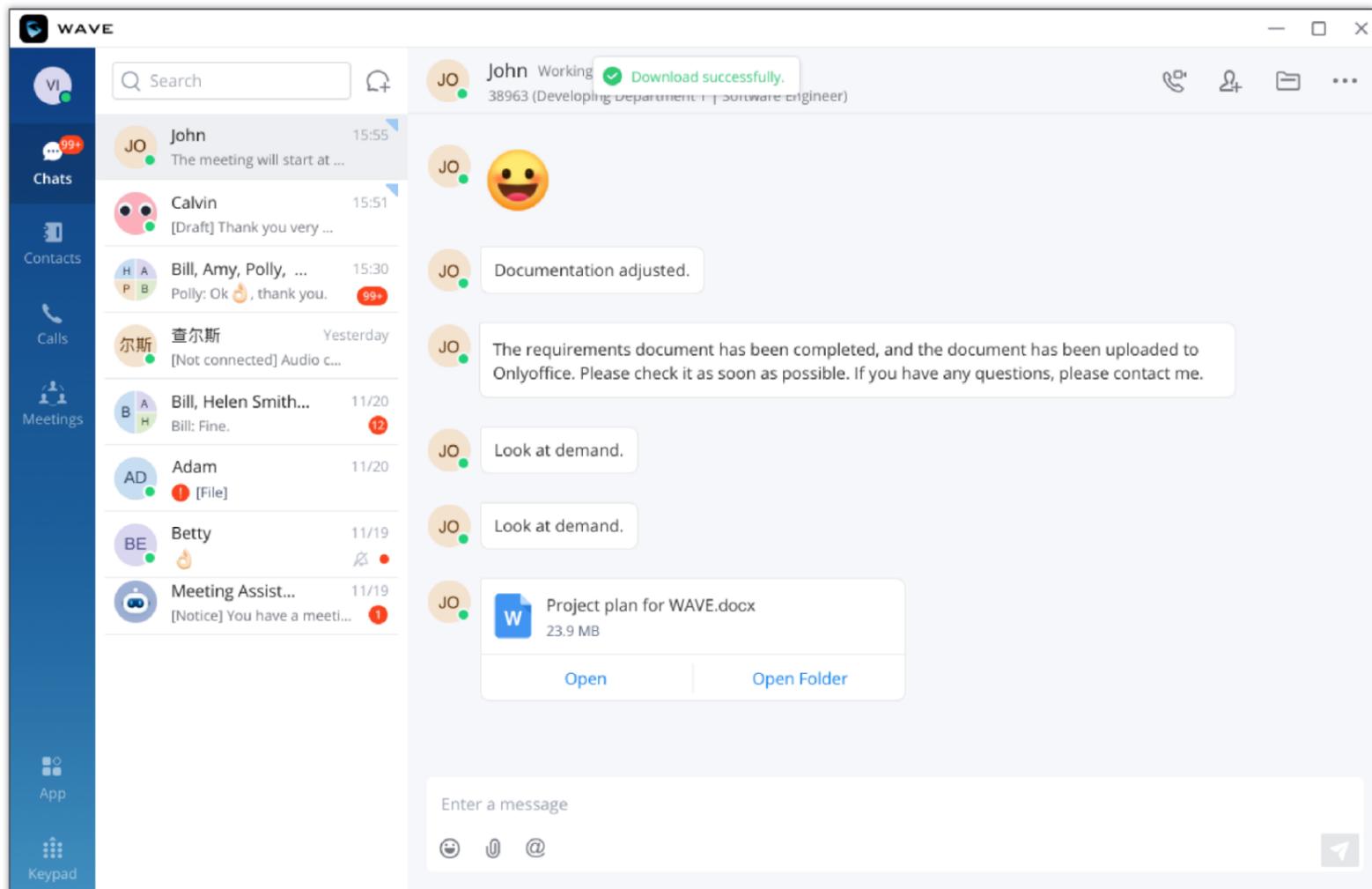
Unread Messages

In addition, by clicking on the chat box of a person or a group, users can view the history of chatting.

When a message is sent, Wave will indicate to the sender that the message has been successfully delivered to the contact. This is indicated by a small check mark right next to the latest message sent
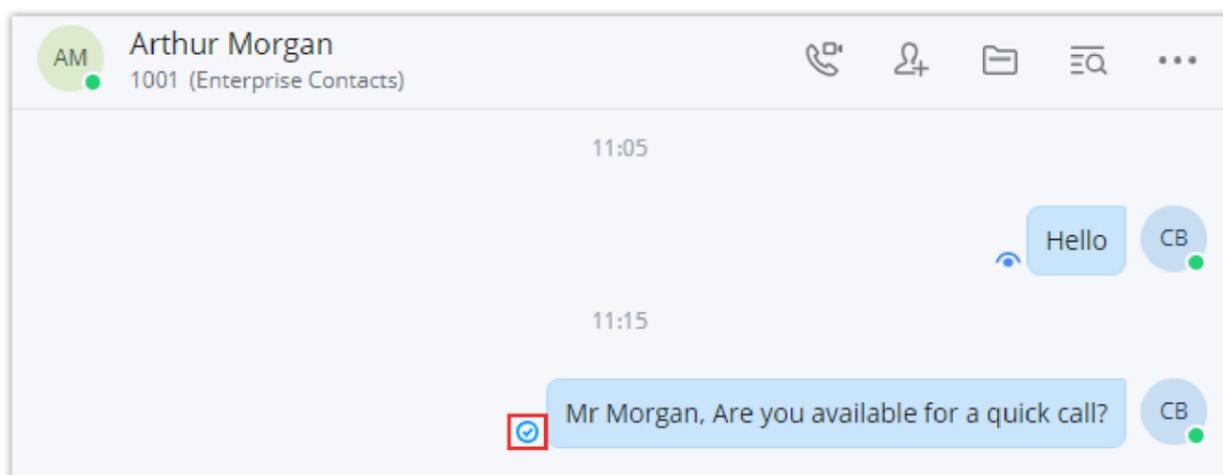
Message Delivered

Once a user has opened an unread message, Wave will indicate to the sender that the message has been read by showing a small eye icon next to the latest message seen.
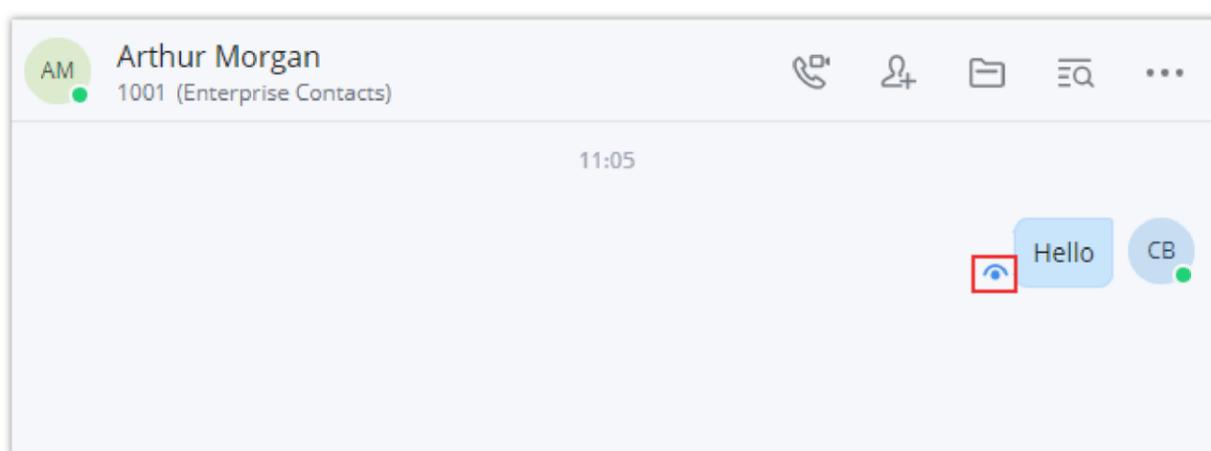

Wave Message Seen

Quote to Reply Message

Step 1: In the chat interface, the user can select a message, right-click it and click "Reply" option or click the button • next to the message.

Step 2: The user can reply to the message in the message box.
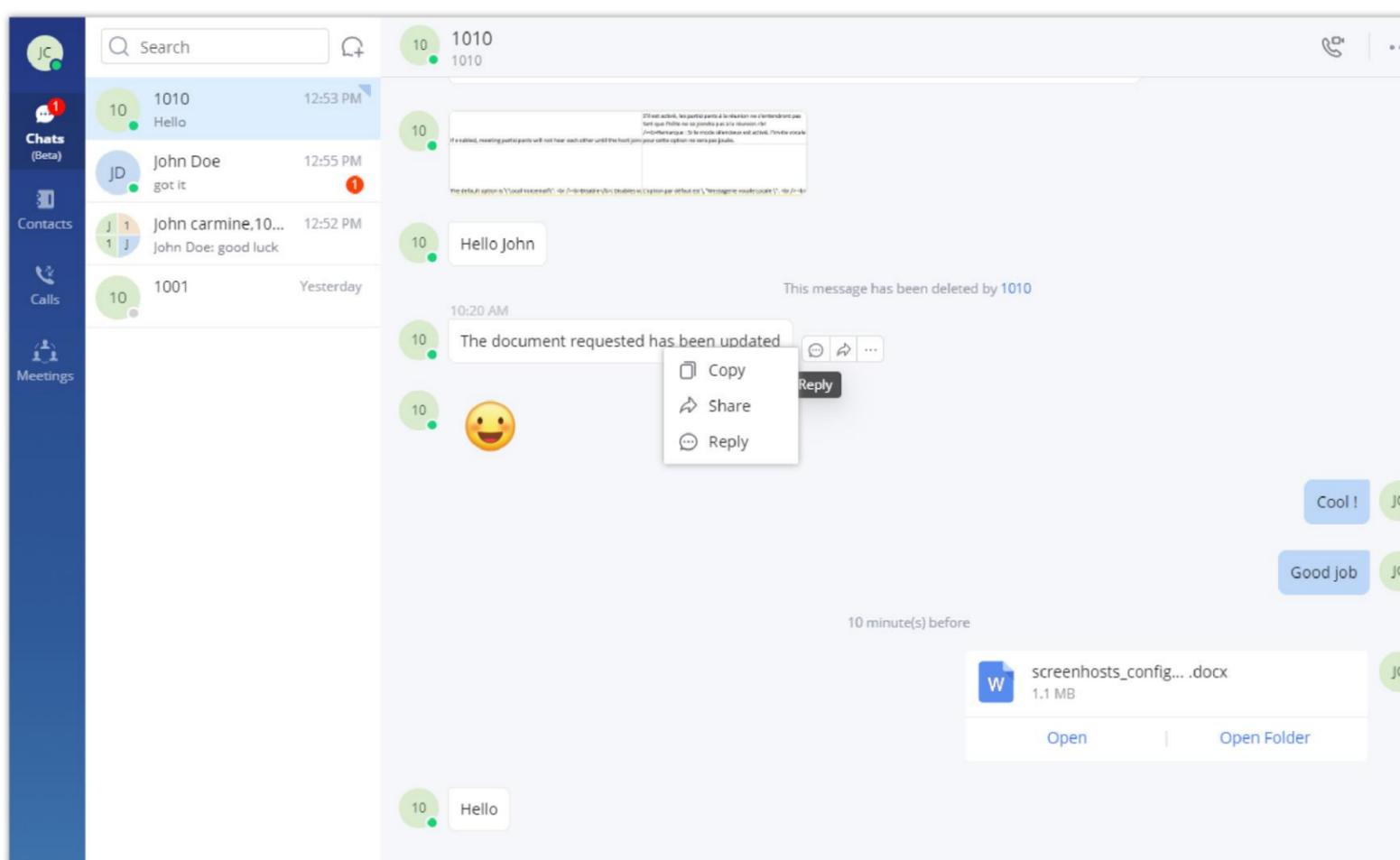
Quote to Reply Message

Reply with Emoji

- In the chat interface, users can reply to the sent/received messages in the single/group chat, files, and images with emojis.

- Click on ⊙ option and select a specific emoji. The replied emoji and the emoji amount will be displayed under the corresponding message, as the screenshot shows below.

- For the same message, each member can only reply with 1 single emoji. If the member replies to the message with another emoji again, the previous replied emoji will be replaced.

- If the member clicks the same emoji as the replied emoji again, the replied emoji will be canceled.

- If the user moves the mouse over the emoji, the user can view the member who replies to the message with the emoji.
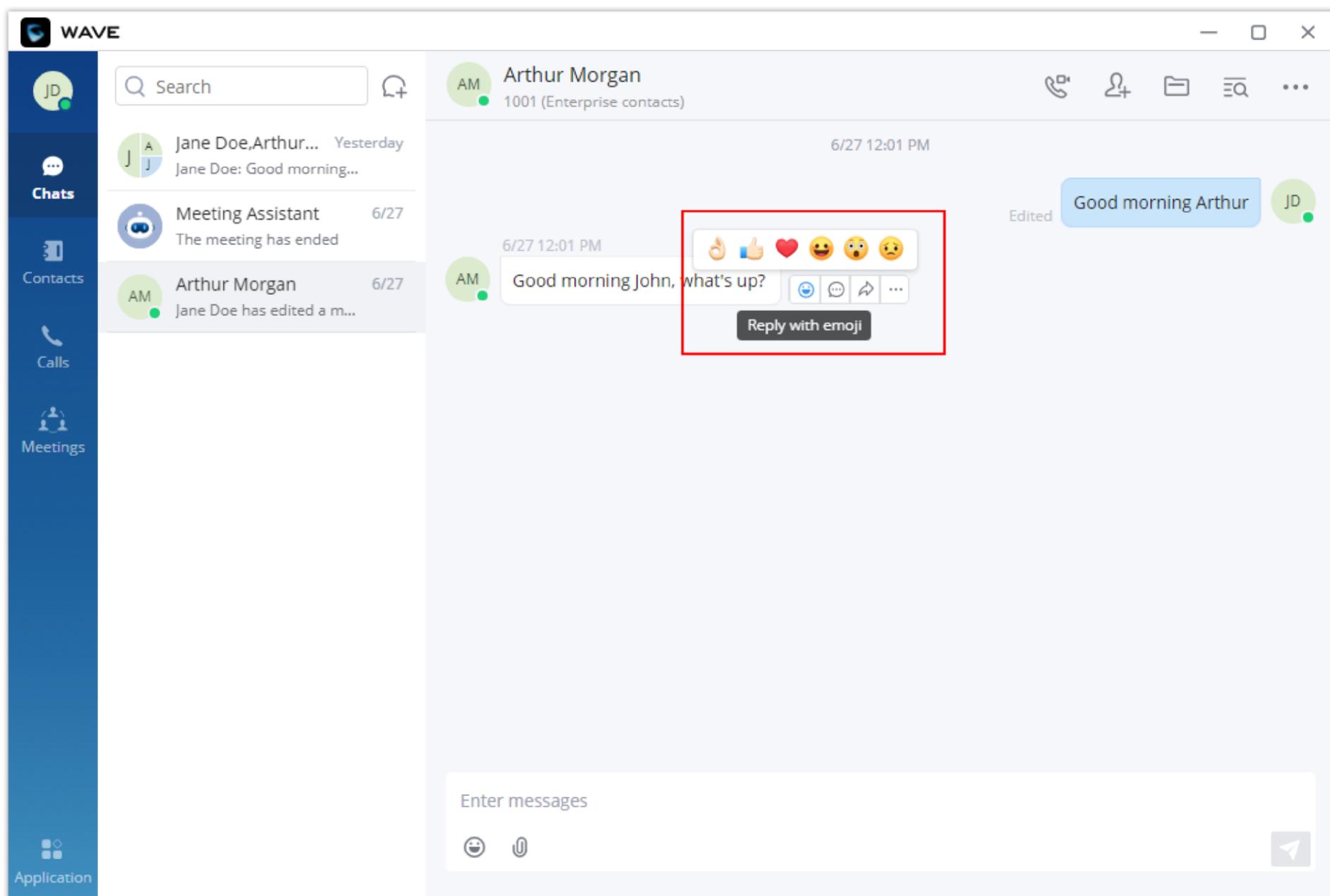

Reply with Emoji
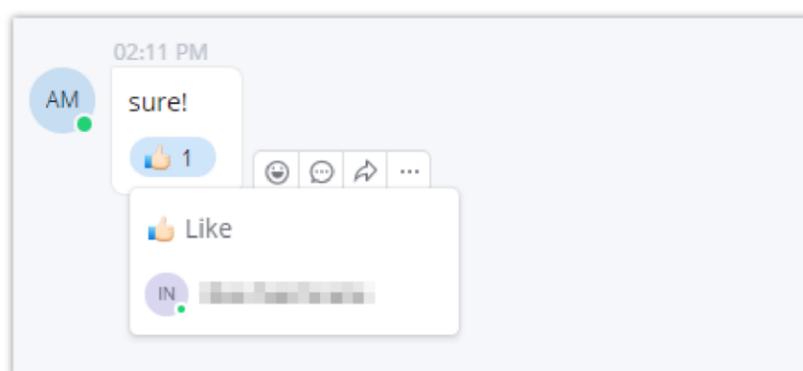
View Emoji Details

Reply Quickly With an Emoji Shortcut

Emojis will be displayed in the chat box for preview after you type their respective shortcuts, e.g: if you type [Smile] in the chat box, the emoji 🙂 will be shown.
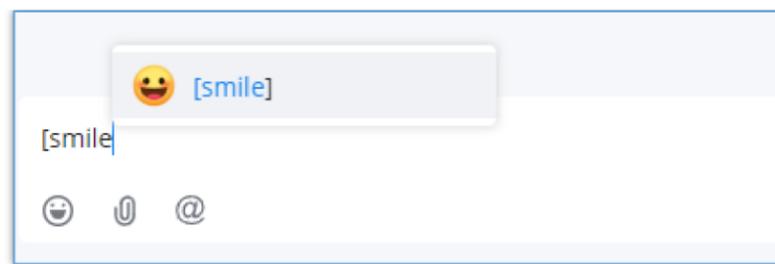
Emoji Quick Reply

Receive New Messages

When the user receives a new message, the Wave icon in the task bar will flash, and the title bar will change color to remind the user. The user can click the icon to view the new messages.

In the "Chat" tab, the user can view the new unread messages.

If there are any new message has "@" the user in the single chat or group chat, there will be a popup prompt in the lower left corner of the desktop, as the screenshot shows below:
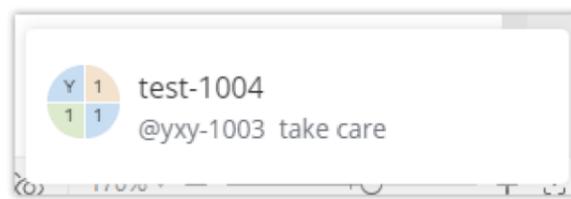

New Message Notification

Edit the sent text

In the chat interface, users can edit the sent text and resend the edited message.

Step 1: In the chat interface, the user can select a sent text message, and right-click to edit the message.

Step 2: Re-edit the contents in the input box.

Edit the Sent Text

Note
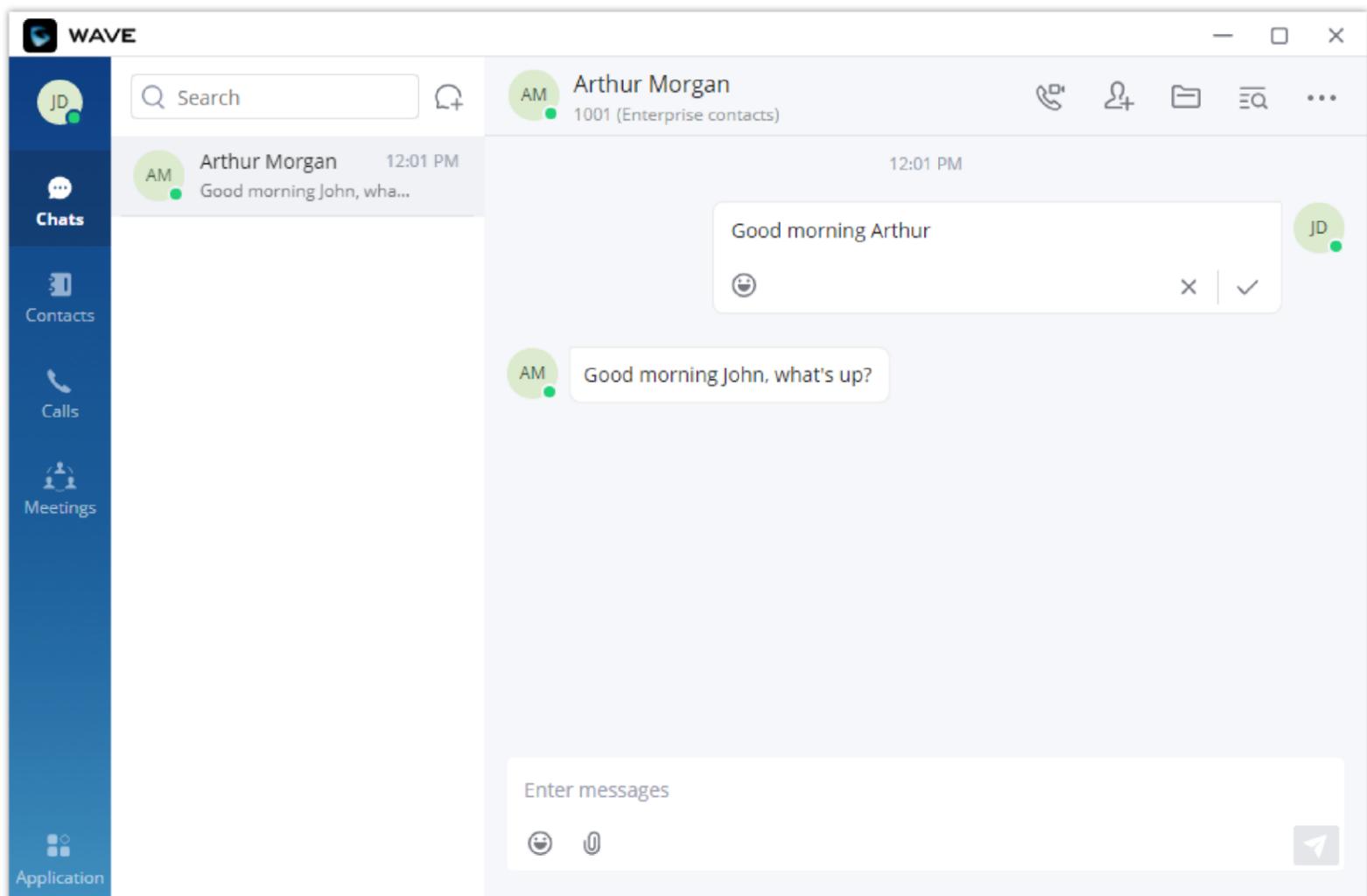
1. Images, videos, and files are not supported to be edited. The re-edited contents can only be added with text and emojis.

2. The re-edited contents are limited to 5000 characters

Delete Message

Step 1: In the chat interface, the user can select a message and right click it then click "Delete" button to delete the message.

Step 2: After deleting the message, the remote party will delete the message synchronously.

Step 3: The deleted text can be re-edited by the user.

Note: After deleting the message, it will be deleted permanently, and the message cannot be recovered.
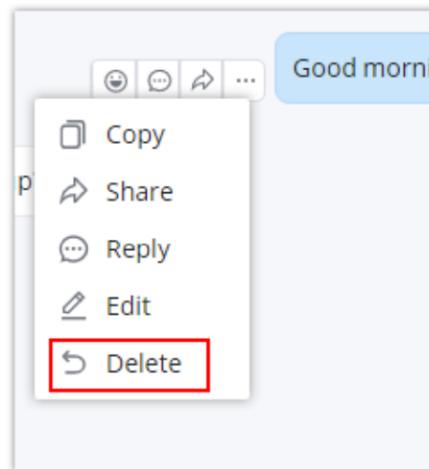

Delete Message

When a message is sent, Wave will indicate to the sender that the message has been successfully delivered to the contact. This is indicated by a small check mark right next to the latest message sent
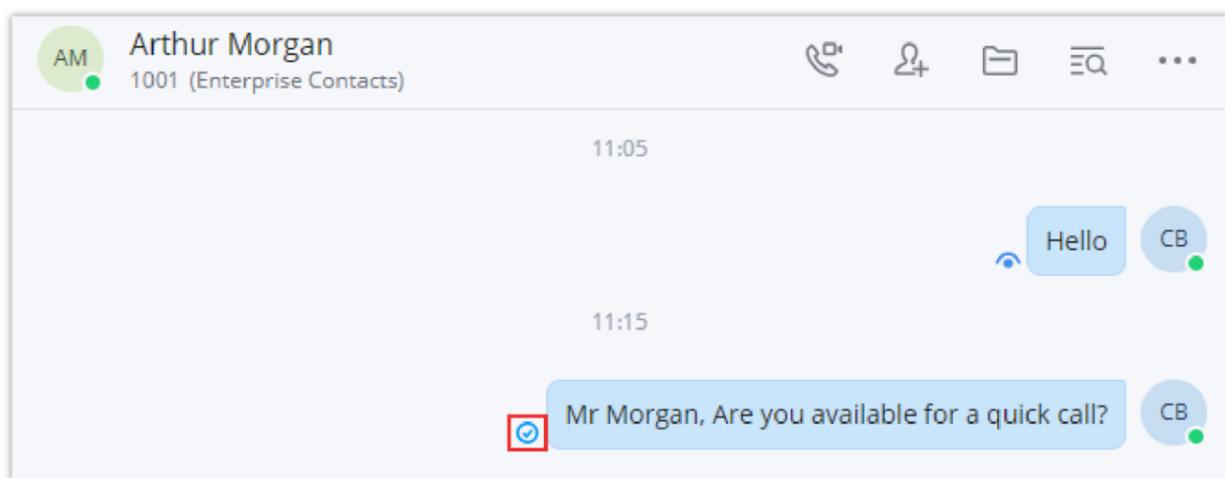
Message Delivered

Once a user has opened an unread message, Wave will indicate to the sender that the message has been read by showing a small eye icon next to the latest message seen.
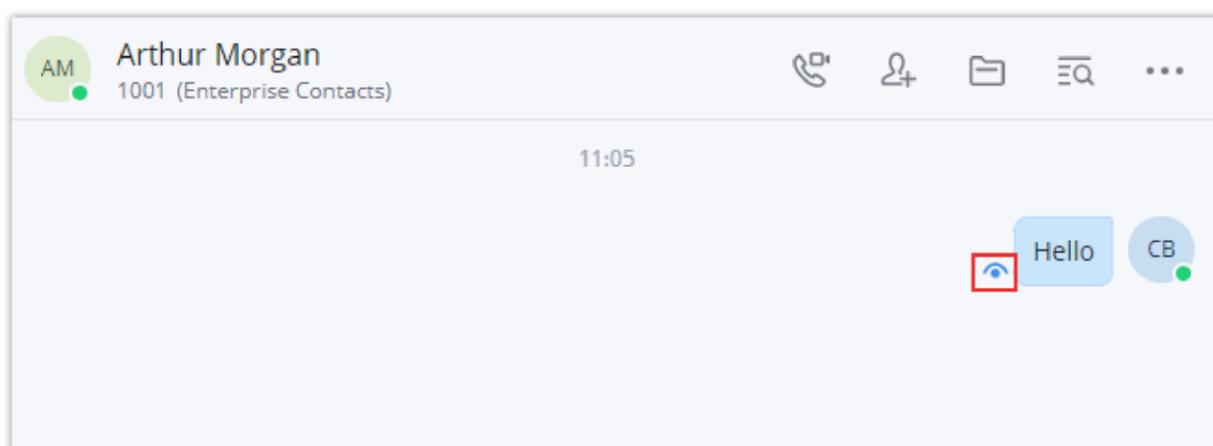
Wave Message Seen

Create Poll/Survey

In the chat window in Wave, the users can create polls, in which they ask the recipient(s) to pick one option. Polls and surveys can be created in individual chats as well as group chats.

To create a poll, please follow the steps below:

1. Navigate to the chat window in which you want to start a poll, then click on poll icon 📊 .
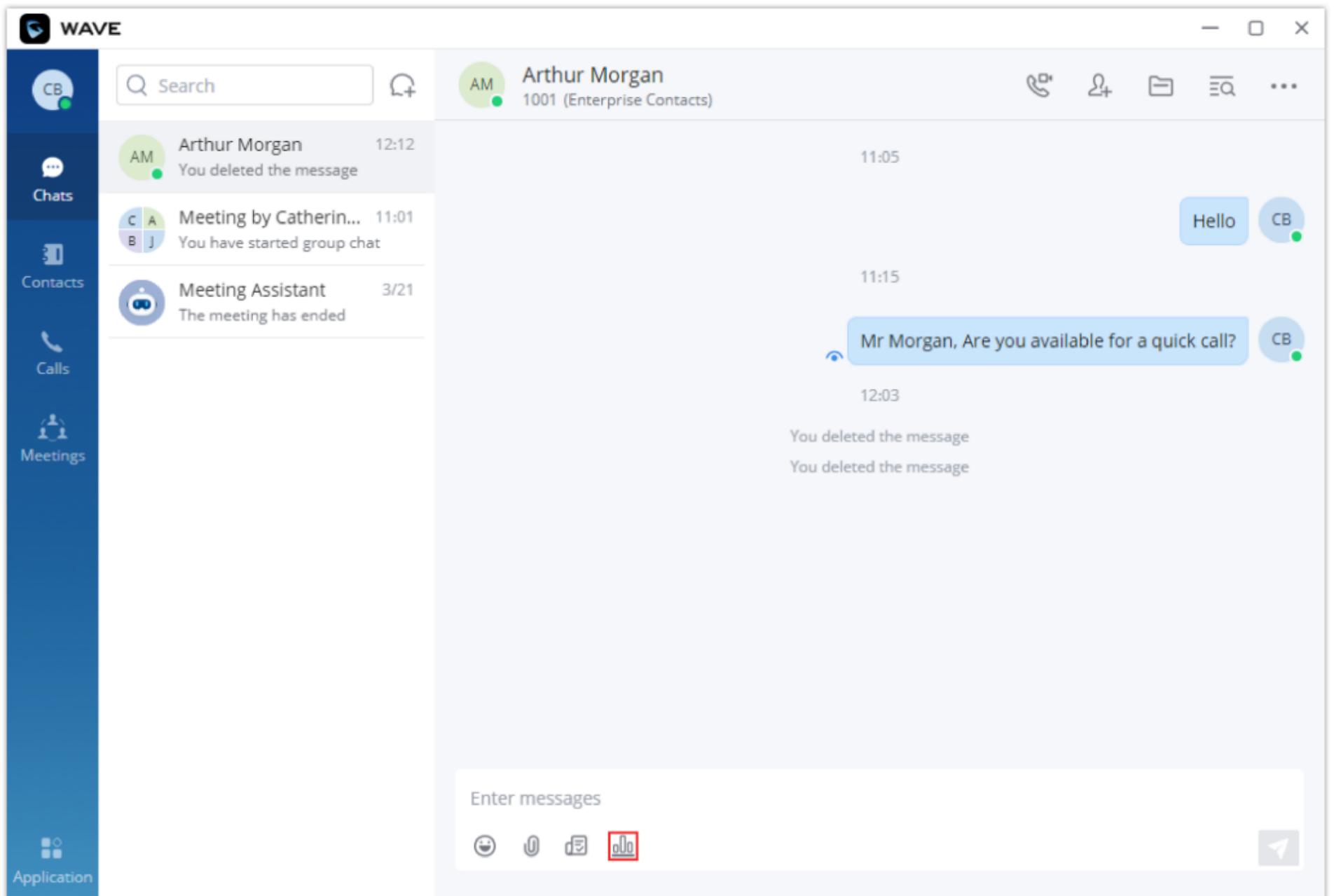
Create a Poll

2. Enter the information regarding the poll, as shown in the figure below.

3. Click "Save" to save the poll as a draft. The recipient will not be able to see the poll.

If the poll is ready to be sent, then click "Save and Publish". Then the poll will be displayed just like the figure below illustrates.
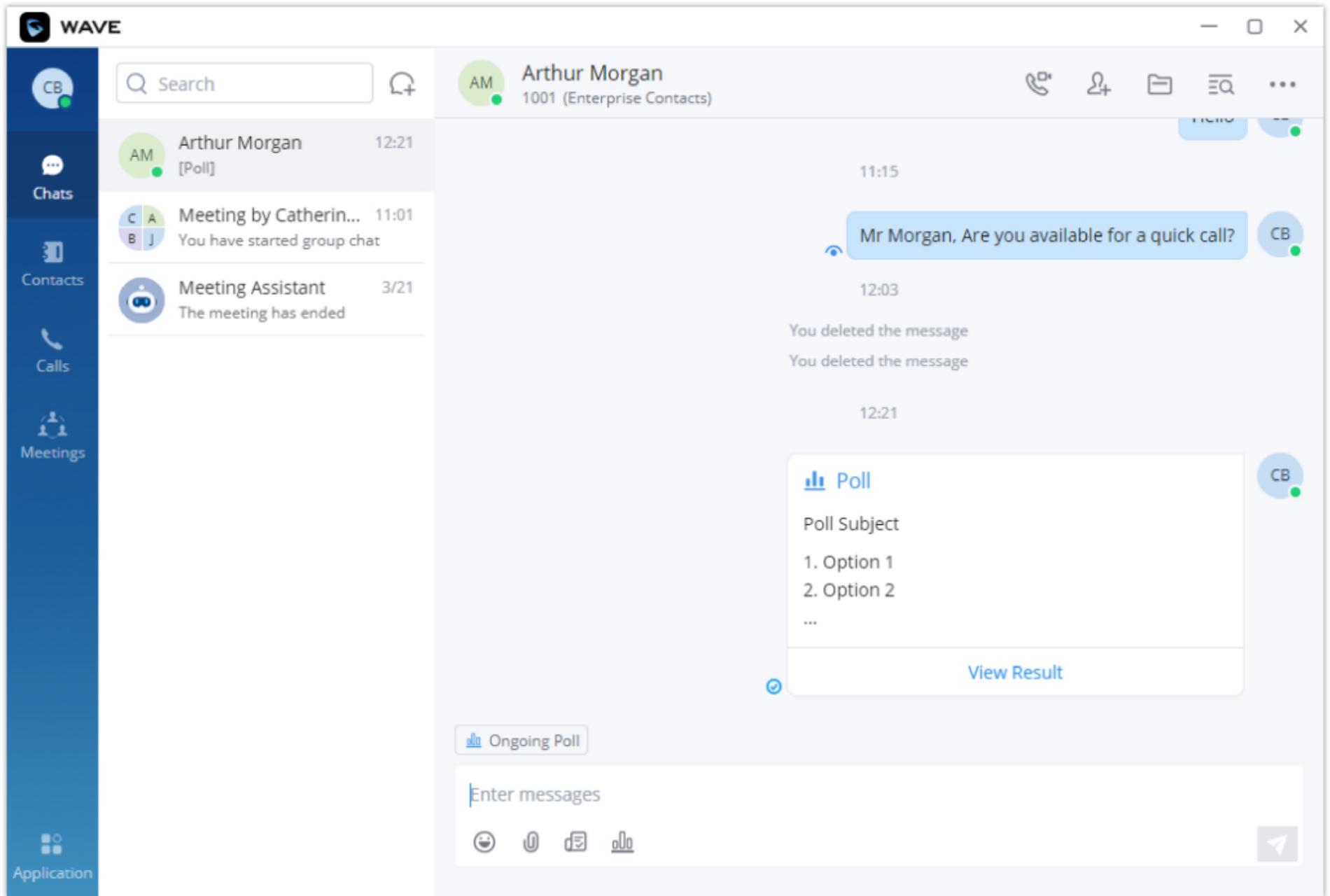
Wave Poll Published

Please note that while the poll is ongoing, you can send it to multiple Wave users to cast their votes on the poll. To do that, please navigate to the chat window in which you want to send the poll, then click on the poll icon   . From the list of the polls, select the poll you want to send.
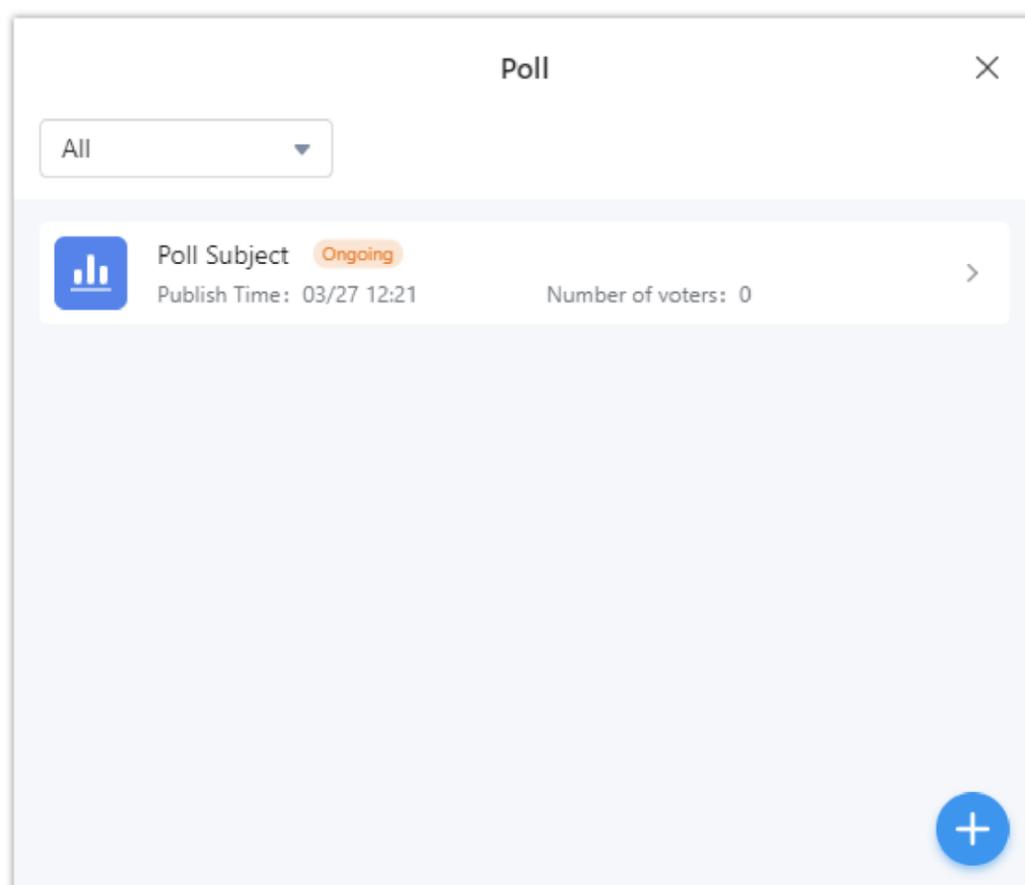
Polls List

Click on the three dots to show more options, then click on "Send".
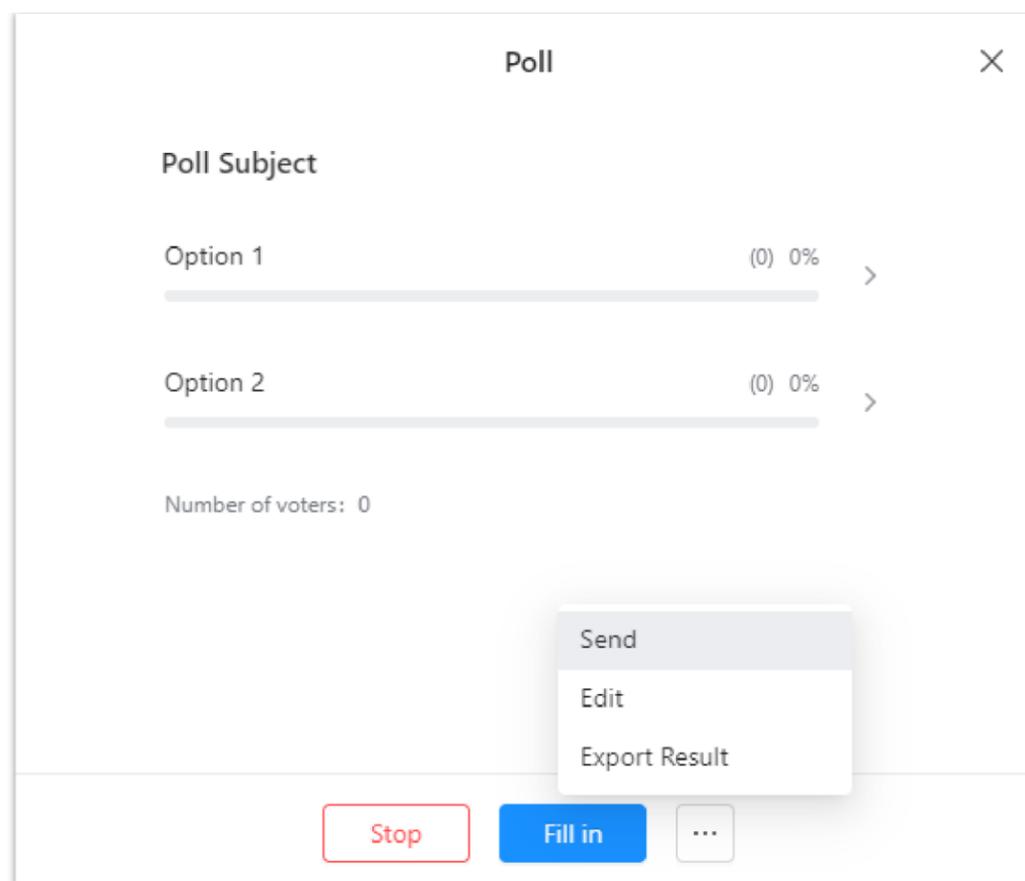
Send a Poll

- **Poll Subject:** You can enter up to 256 characters.

- **Option:** There must be at least 2 options and up to 20 options. The input limit for each option is up to 265 characters.

- Users can preview the newly created polls.

- Users can publish the the poll to one or multiple point-to-point chats or group chats.

- While the poll is ongoing, the results will be displayed in real-time.

Once a poll has ended, the user can choose to publish it again, delete it, share the results with other chat parties, or export the results to a .xlsx file.

Wave supports creating surveys which allow the user to make a list of questions and send them to other users either in individual chats or in group chats.

To create a survey, please follow the steps below:

1. On the chat window, click on survey icon   🖻 .

2. Then fill in the survey's information accordingly.

Add Survey

3. Specify the type of the answer that the user will provide.

– **Single Selection**: Enter the choices that users can choose from. The users will be able to pick only one option.

– **Multiple Selection:** Enter the choices that users can choose from. The users will be able able to pick multiple answers to the question.

– **Text:** The user will be able to provide the answer in the form of a text.

– **Yes/No:** The users will get the option to answer either Yes or No to the question.

Once the survey is ready to be published, the user can click on "Save and Publish" to send the survey. Just like polls, the surveys can be sent to other user to fill in.

Survey management includes: Add Survey, Publish Survey, Edit Survey, Delete Survey, View Survey Results, Share Survey Results, and Export Survey Results.

For a survey which is in progress, the user can end the survey or send the survey to others or other chat groups. For the ended survey, the user can re-publish the survey (the previous votes will be reserved, and the survey will be reopened for voting) or re-create the survey (the original survey options will be reserved, but the previous votes will not be reserved).

Notes

- **Survey Subject:** Up to 256 characters.

- **Description:** Enter a description for the survey. The user can enter up to 1000 characters.

- **Questions:** There must be at least 1 question and up to 20 questions.

- **Question Content:** Up to 500 characters.

- **Options:** There must be at least 2 options and up to 20 options. The input limit for each option is up to 256 characters.

- The option "Allow Participants to Share Survey" is disabled by default. If you wish to allow the users to share the link of the survey to other user, please enable this option. The system will generate a link for this survey. Anyone with the link can take part in the survey.

- Users can preview newly created surveys.

- The user can publish surveys to one or multiple point-to-point chats or group chats.

- While the survey is ongoing, the user can edit the survey or export the results in an .xlsx file.

The user can view all the polls and surveys shared by navigating to "Application" tab, then clicking on Poll/Survey as the screenshot below indicates.
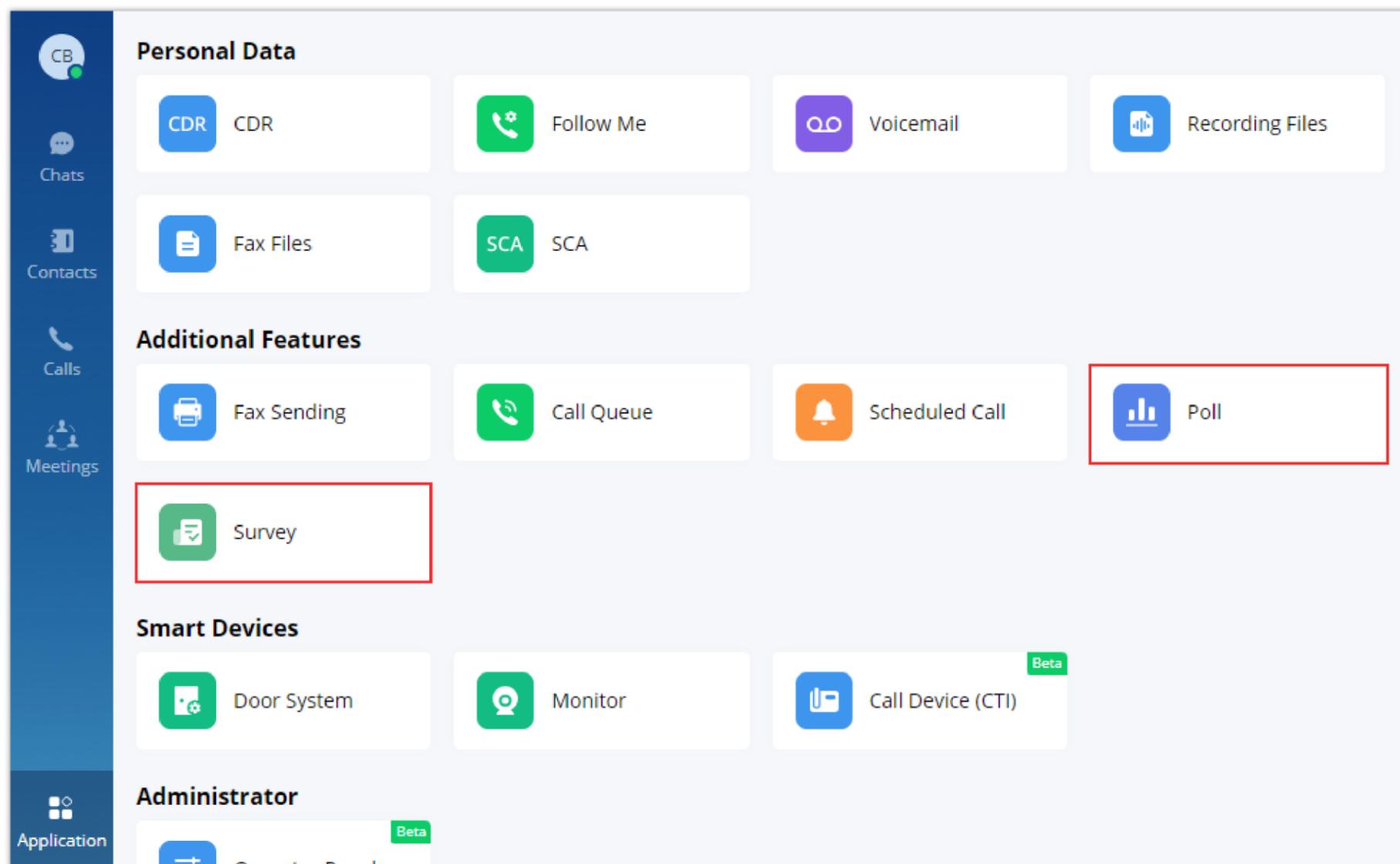
Application – Poll and Survey

Keyword Search

Grandstream Wave allows searching for a specific keyword within a conversation so you can exactly recall the context and the information relayed by your team members. This can be used in group chat as well as point-to-point conversations. To search for a specific word, navigate to the discussion you wish to search. Then on the top right corner of the window, click the search button ⊡ . After that type the keyword you wish to search, then press enter. If there are any results, they will be displayed similarly to this example below.
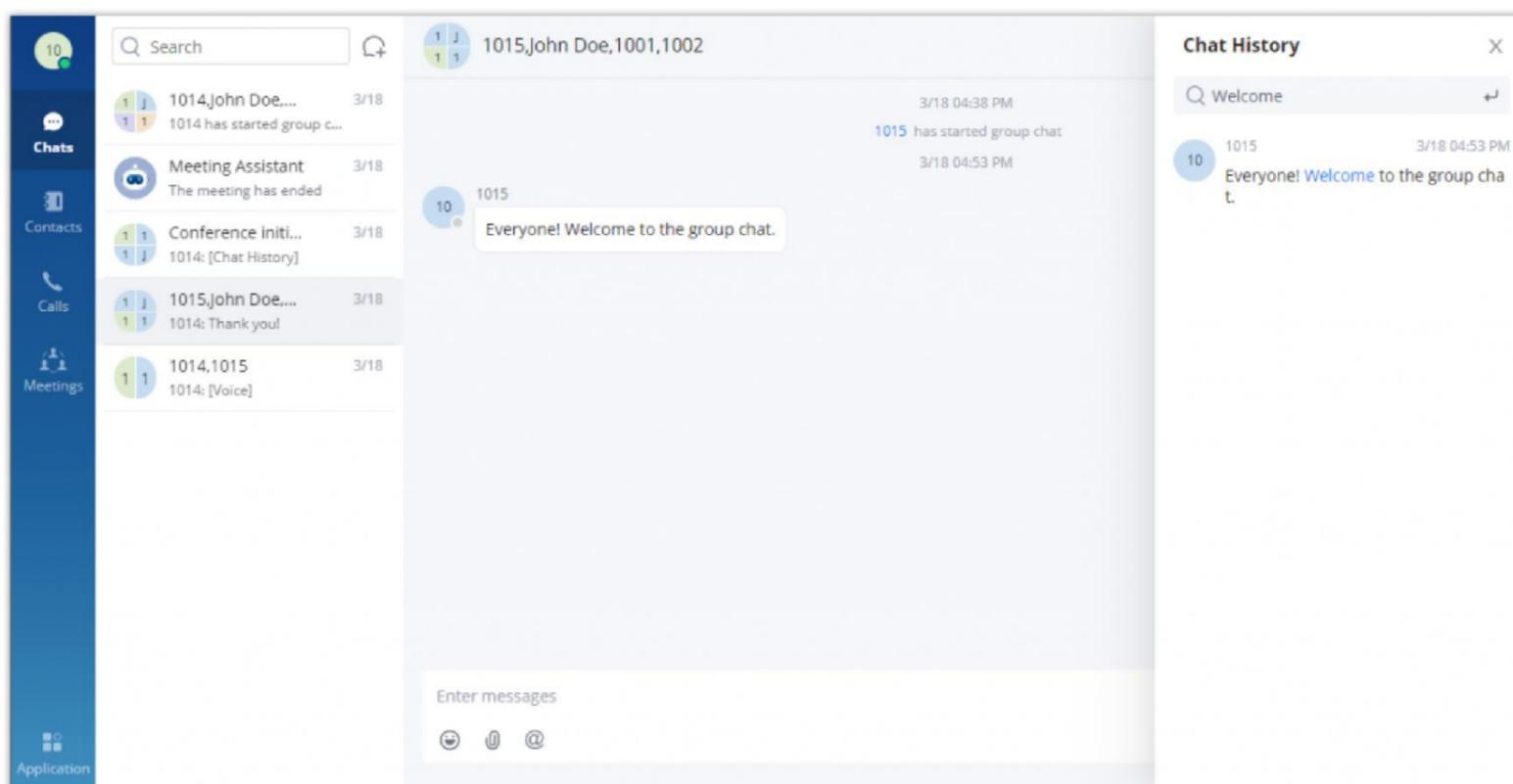

Chat Keyword Search

Pin Chat to the Top

In the chat list, the user can select a point-to-point chat or group chat and set the chat box to the top of the chat list. When the chat box has been set to the top of the chat list, the user can quickly find the chat box and reply to the message.

The user can also click the chat box and unpin the chat box.
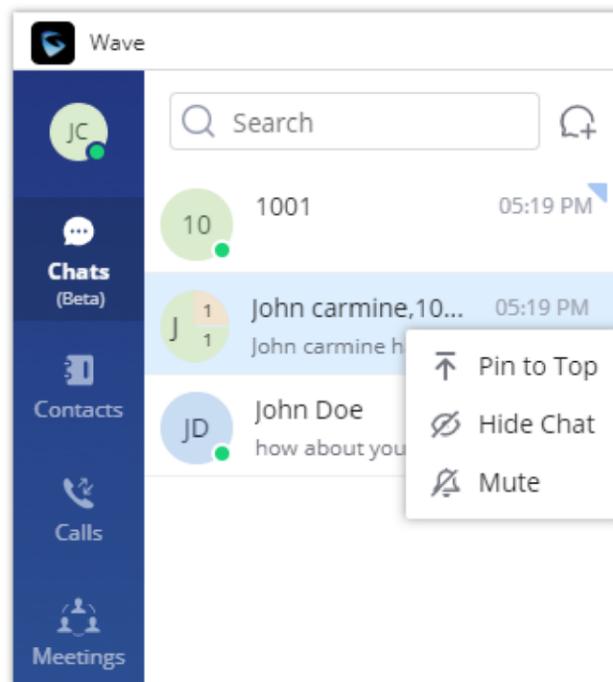
Stick to Top

Hide Chat Box

In the chat list, the user can select a point-to-point chat or group chat and click on Hide Chat. Then, the chat box will be hidden in the chat list.
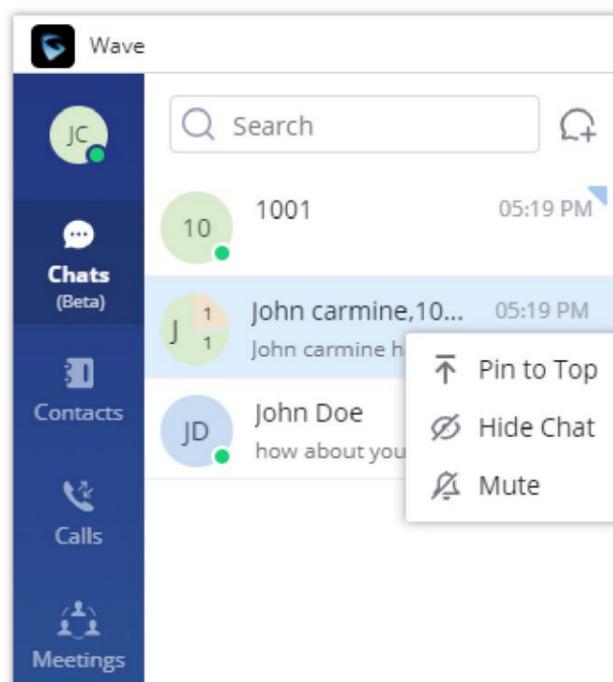
Hide Chat Box

Note

The chat history will not be deleted after hiding the chat box. When the user receives a message from this chat box in the future, the user can also view the chat history.

Mute Chat

If the user needs to mute the new message notification of a chat, they can select a point-to-point chat or group chat in the chat list and set it to "Mute".

If the user wants to resume notification of new messages for the chat, the user can select the current chat box and cancel the DND setting by clicking on "Enable Message Reminder".
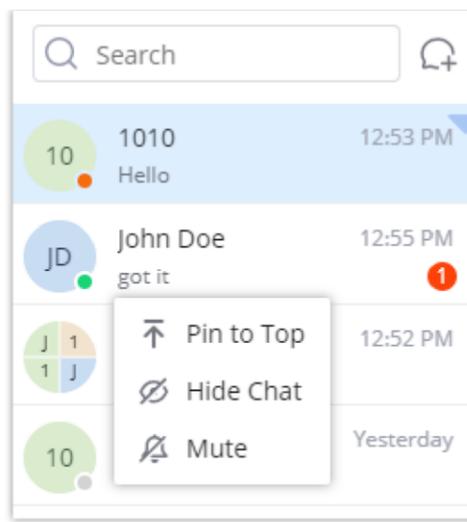
Mute Chat

Group Management

Change Group Name

Both the group owner and group members can change the group name. To do so, kindly follow below steps.

Step 1: On the chat page, open the group chat page and click on the upper right corner to view group information.
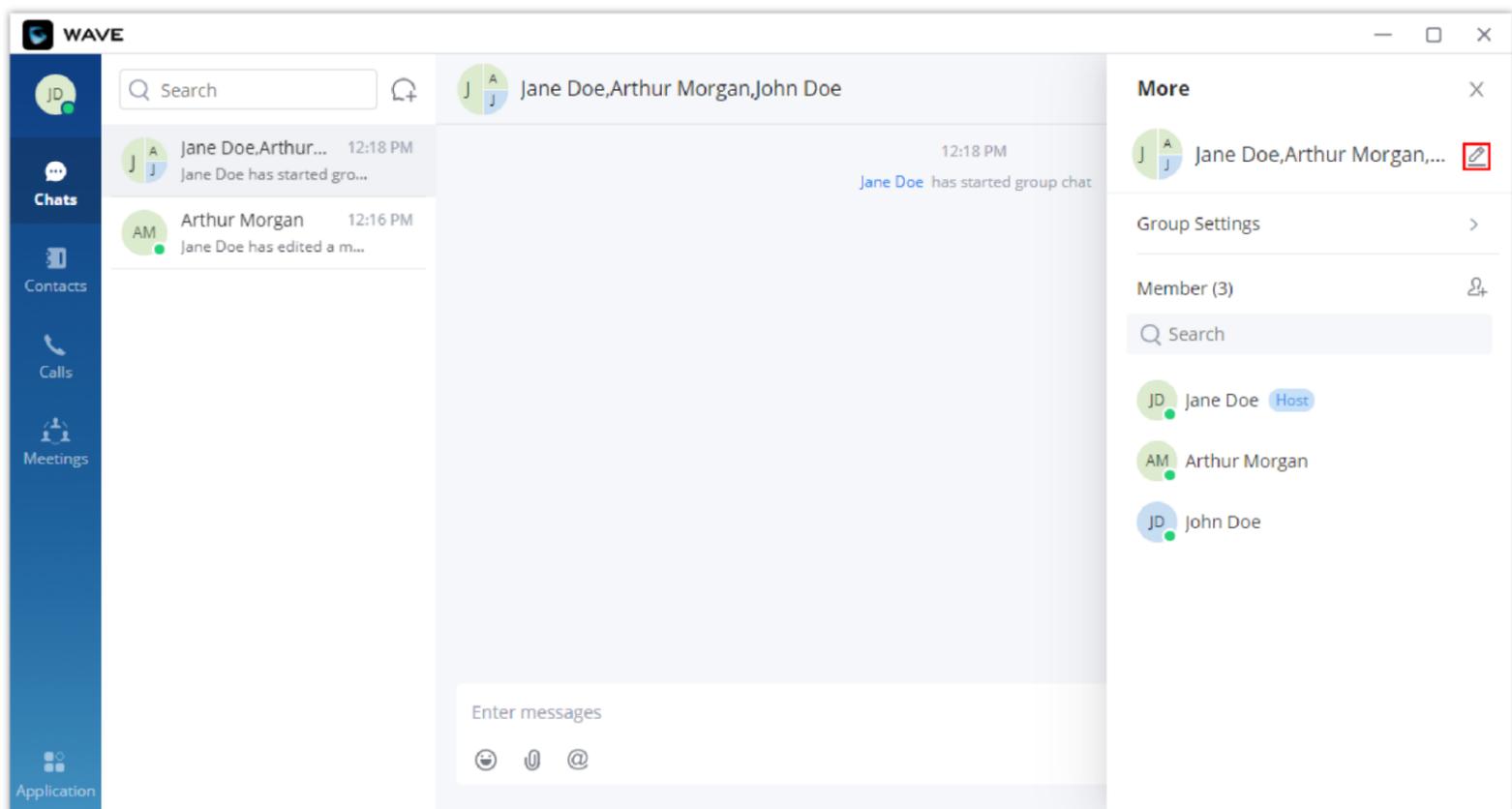
Change Group Name

Step 2: By clicking on ✎ , users can modify the group name. The group name supports a maximum of 80 characters.

Step 3: After the modification is completed, click anywhere to save successfully.

Or You can directly click on the chat group name to edit it quickly, as shown in the screenshot down below:
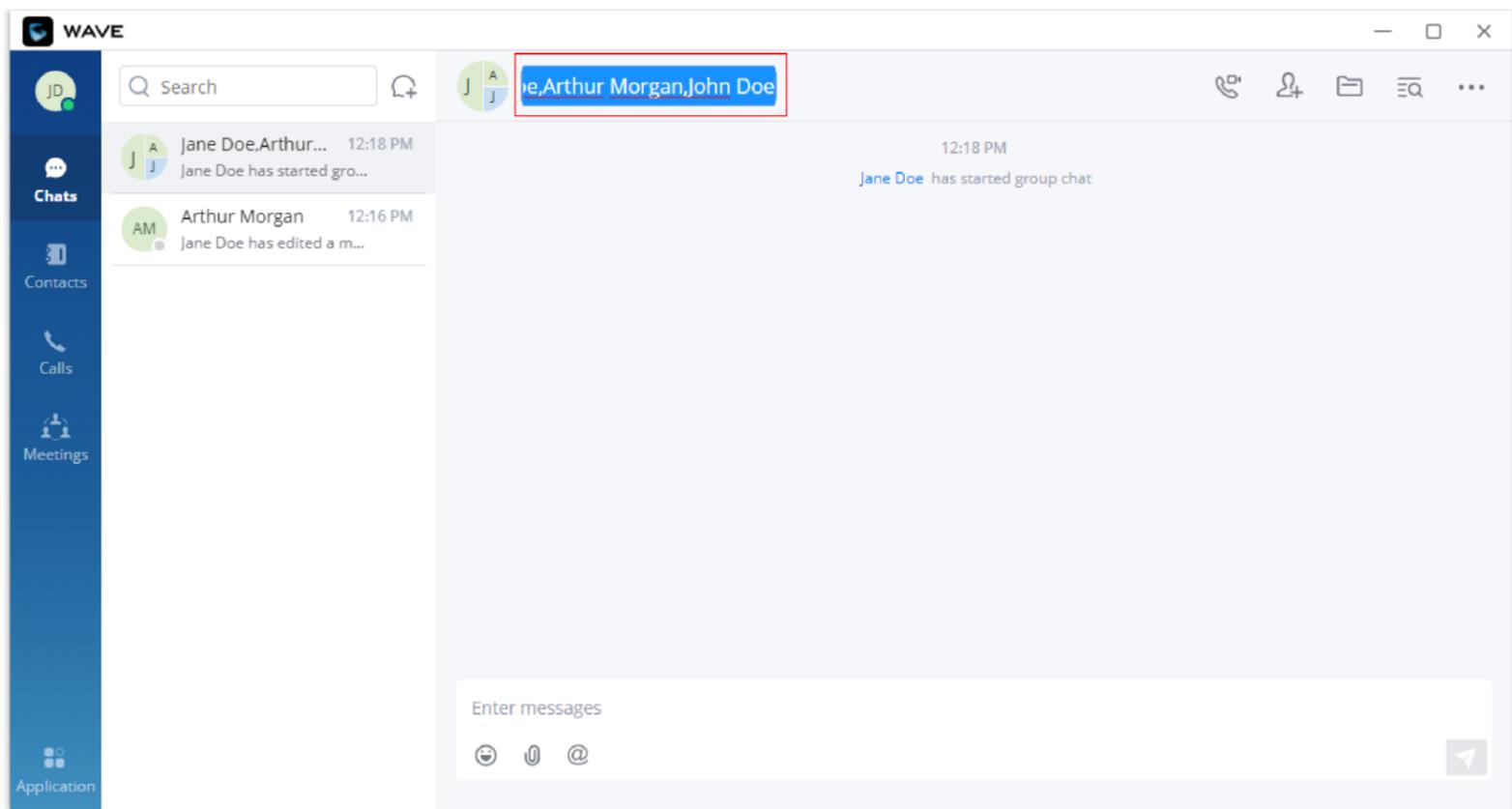
Quickly Change the Group Name

View Group Members

Both the group owner and group members can view the group members.

Step 1: On the chat page, open the group chat page and click on the three dots ••• in the upper right corner to view group members.
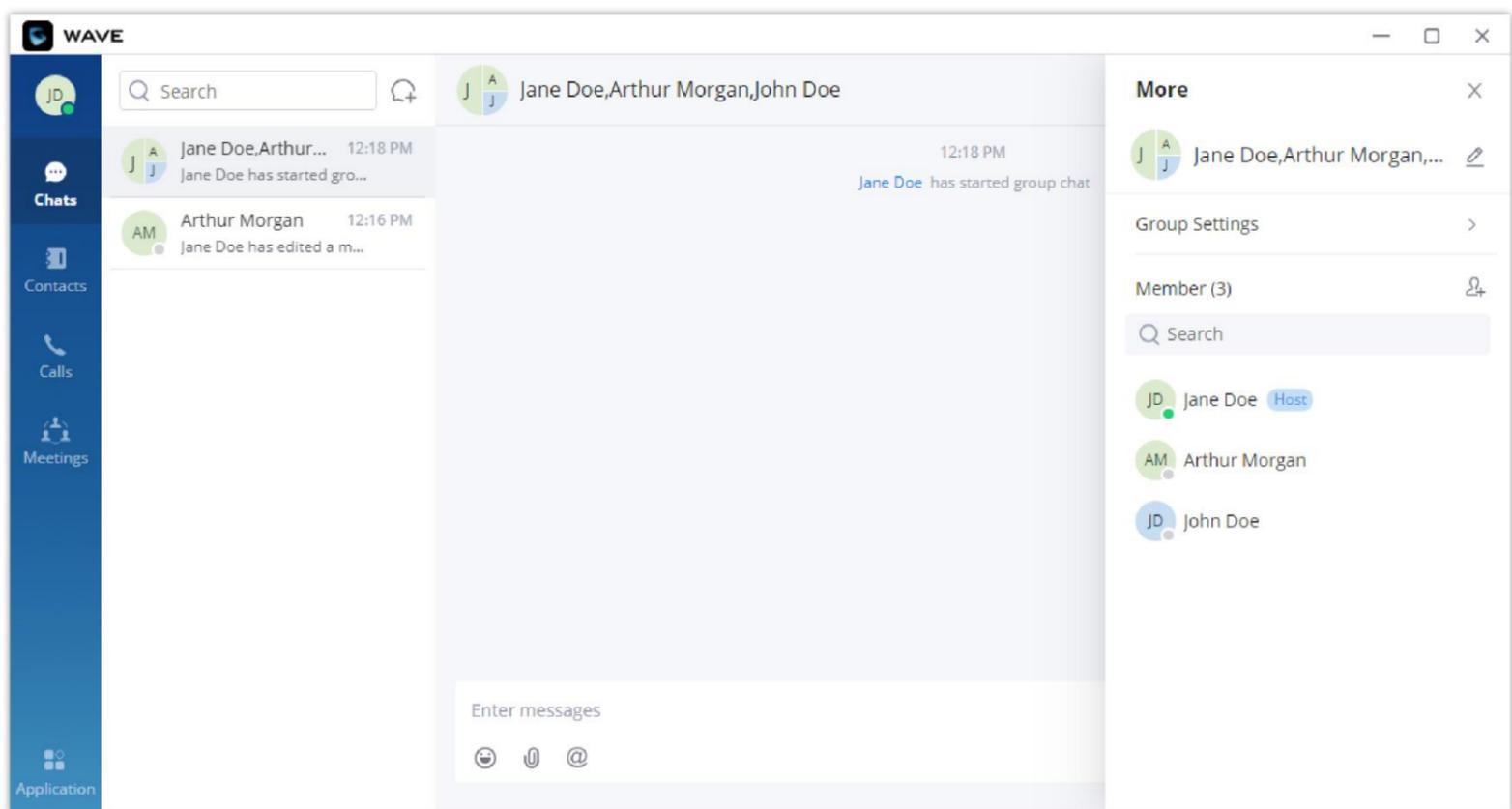
View Group Members

Step 2: Click on the avatar of the group member to view the detailed information of the member, send messages, and make calls.
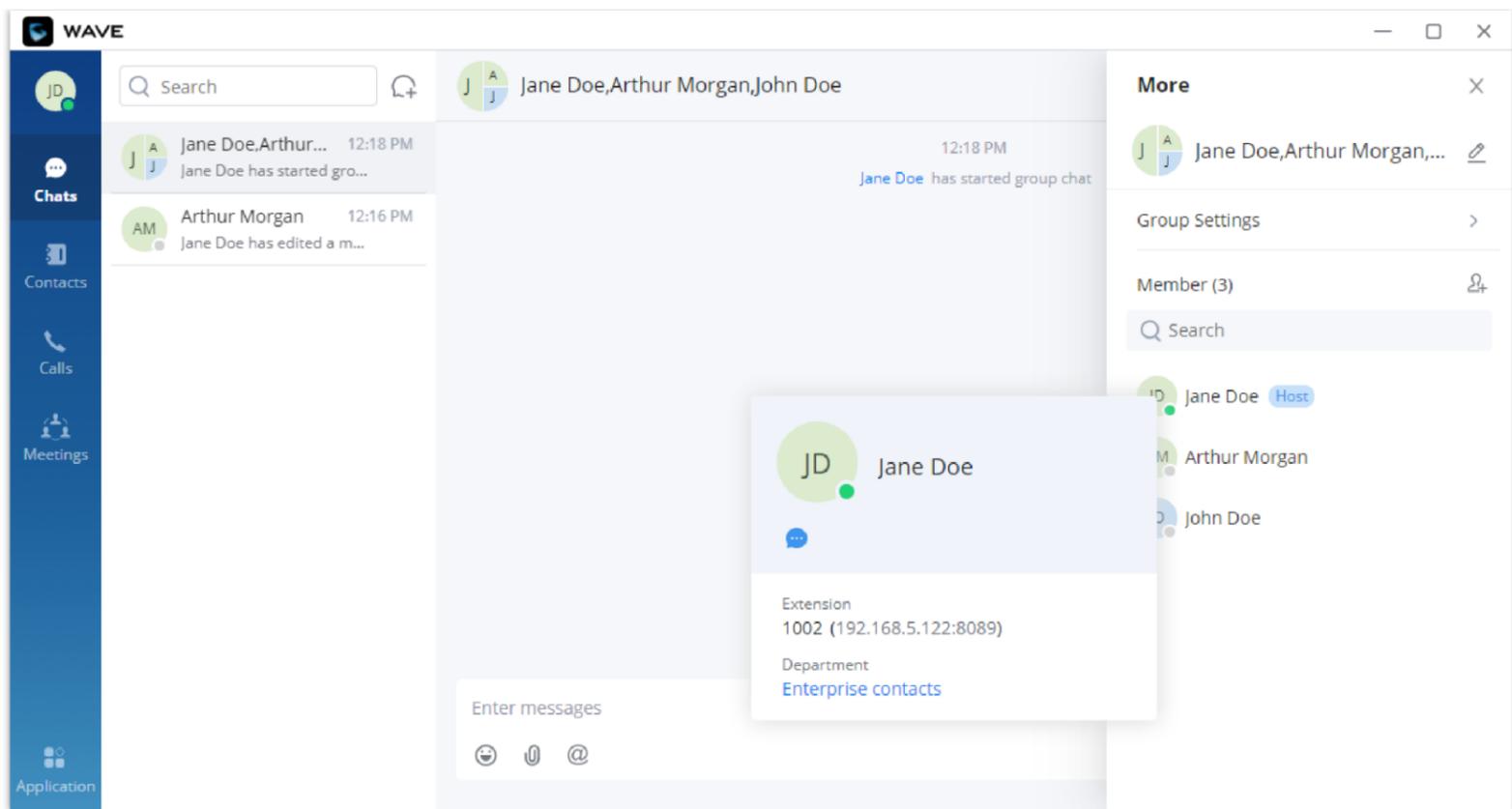
Group Member Business Card Interface

Add Group Members

Both group owners and group members can add group members.

Step 1: On the chat page, open the group chat page and click on the upper right corner, then click on ⌁ to enter the contact selection page.
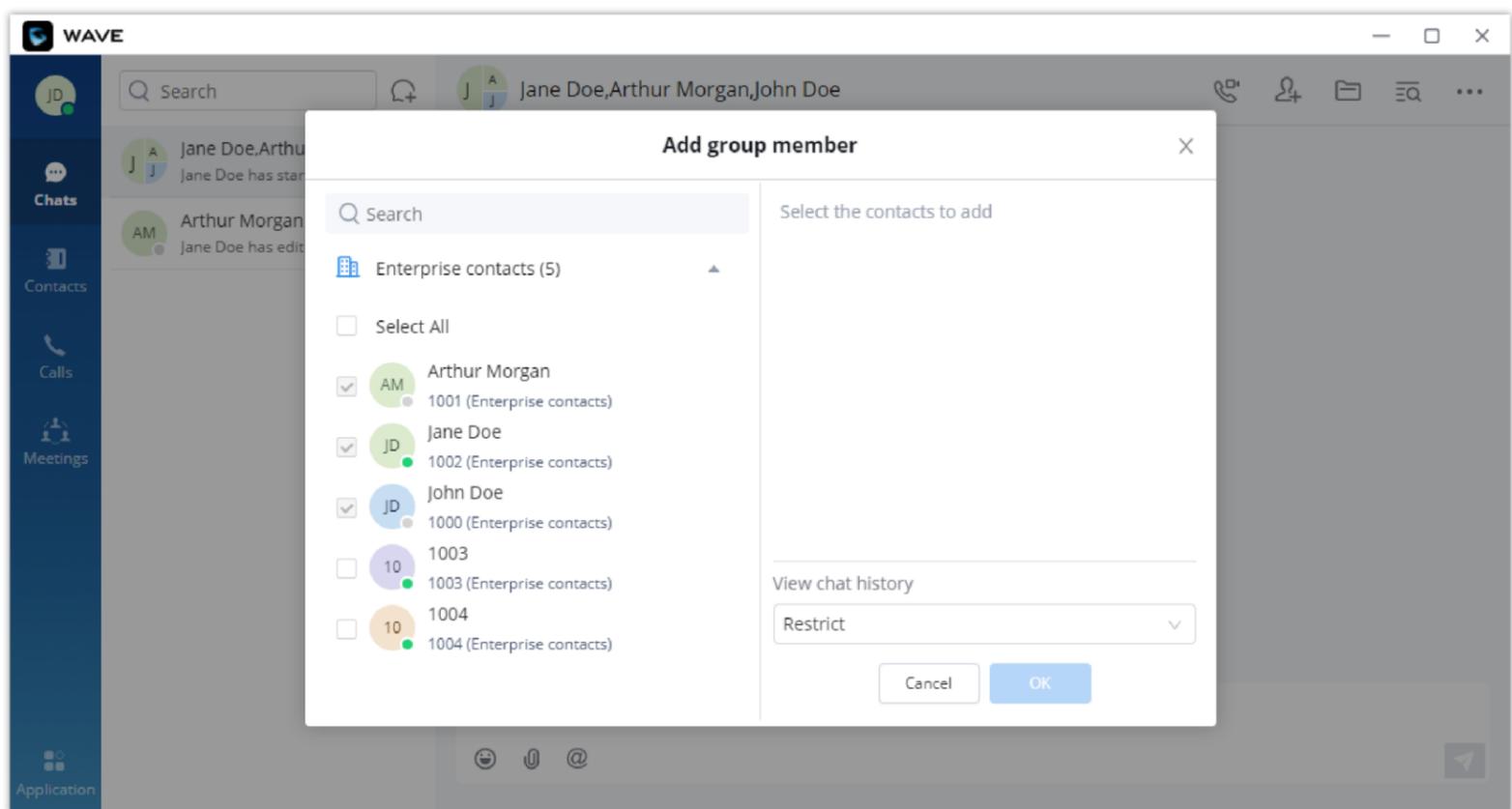
Add Group Member Interface

Step 2: Select the contact you want to add or search for a contact by name and select it.

Step 3: Click the "OK" button to immediately add the selected contact to the group chat.

Notes

1. The newly joined members in the group chat cannot view the group chat history by default (Only the group owner can set the chat history that the group members can view: No, All, 1 Day, 7 Days).

2. The maximum group membership is 200 people.

- **Prevent or allow participants to invite other users:**

The chat group creator can allow or prohibit the participants from adding other members. To do that, please navigate to "Group Settings" icon ••• then choose to toggle on or off the option " Allow Group Members to Invite".
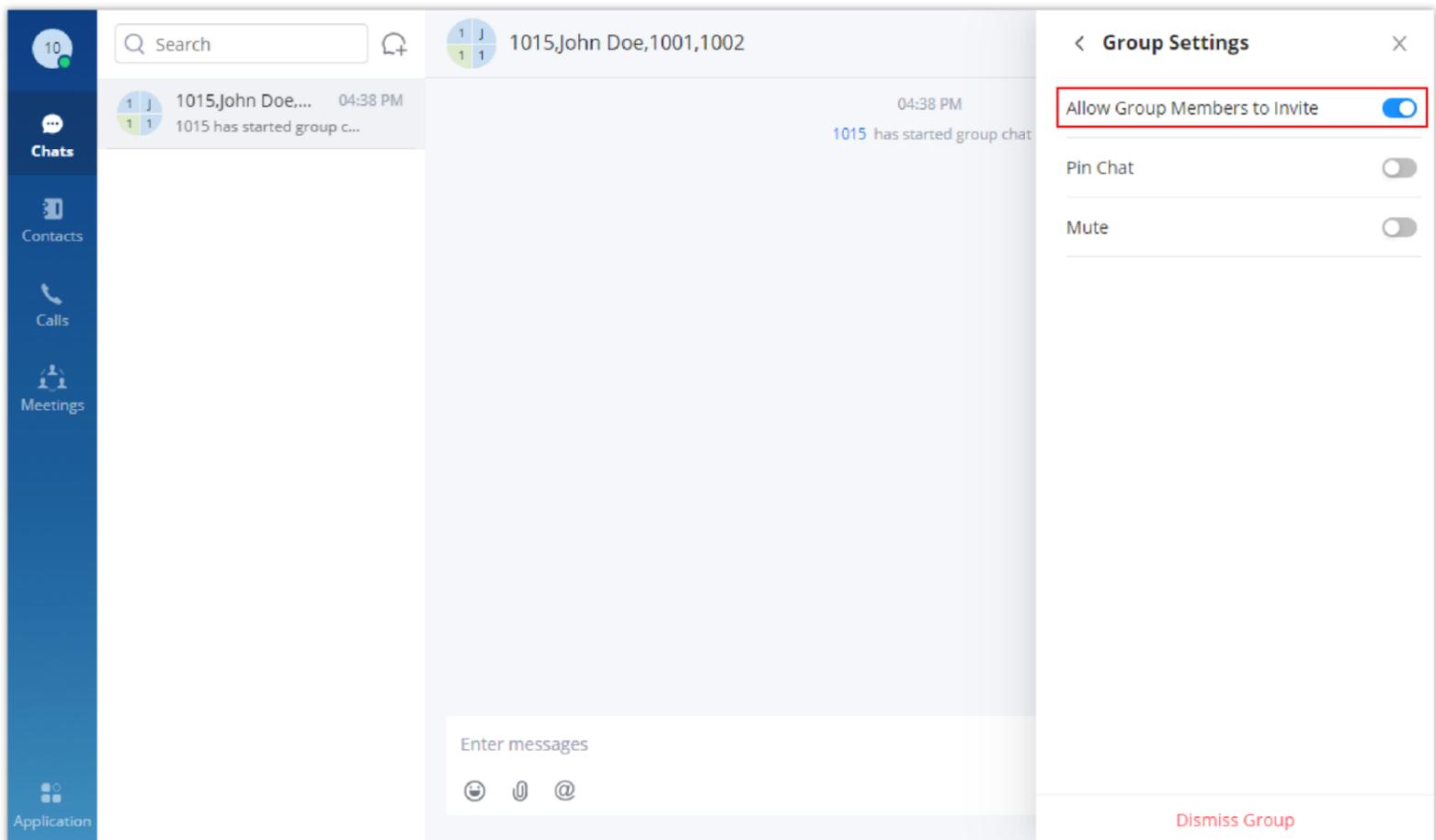
Allow Group Members to Invite Other Participants

Delete Group Members

Only the owner can delete group members.

Step 1: On the chat page, open the group chat page and click on the upper right corner, and hover over the profile picture of the member you want to delete.
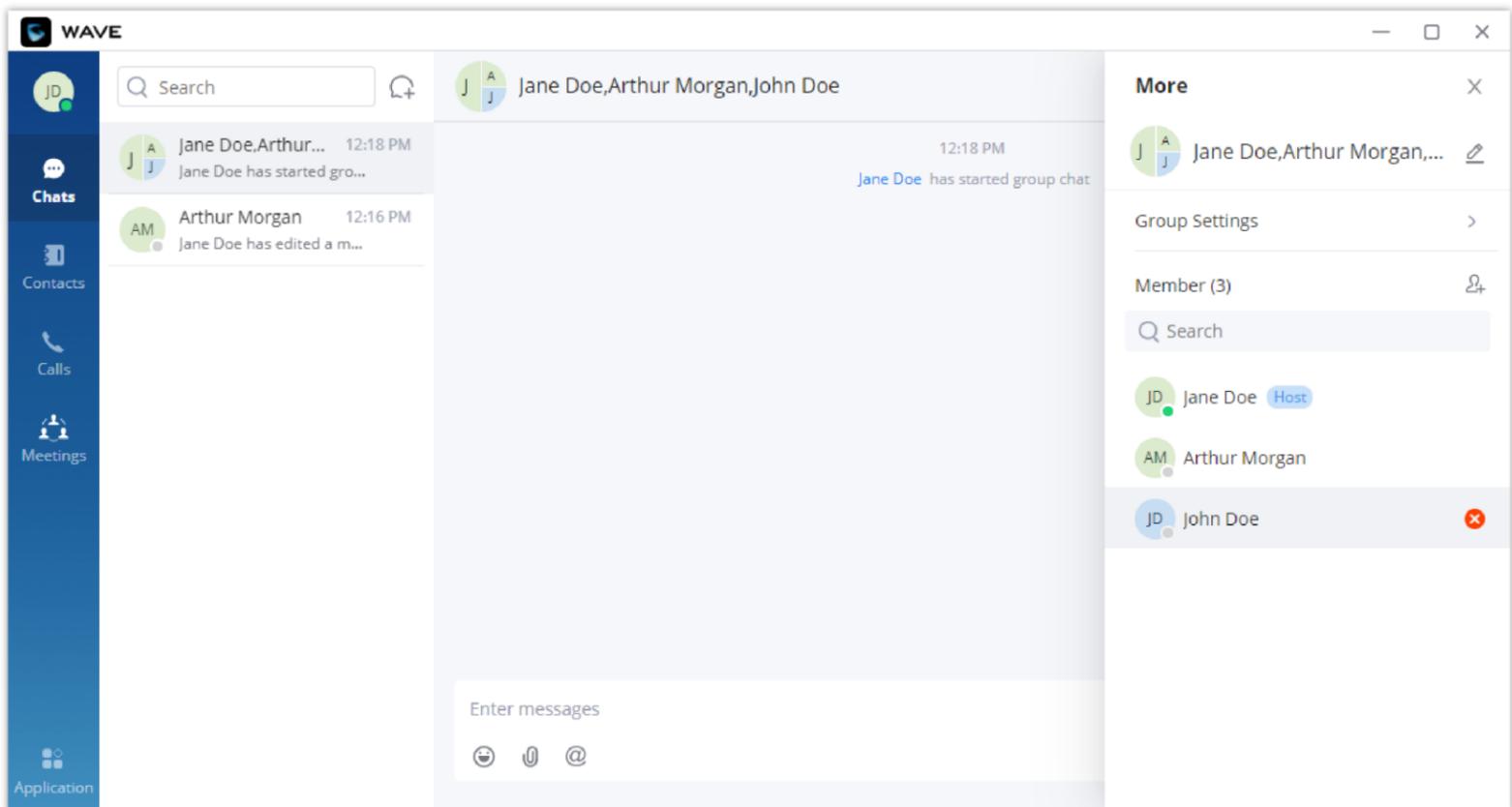
Delete Group Members Interface

Step 2: Click on button ⊗ next to the member to delete them from the group.

Step 3: After confirming the deletion, this group member exits the group chat and can no longer view the group chat messages.

Note

After deletion, only the deleted member will be notified, not everyone.

Start a Group Meeting

The user can quickly start a meeting with all the members of an existing chat group, please see the figure below.
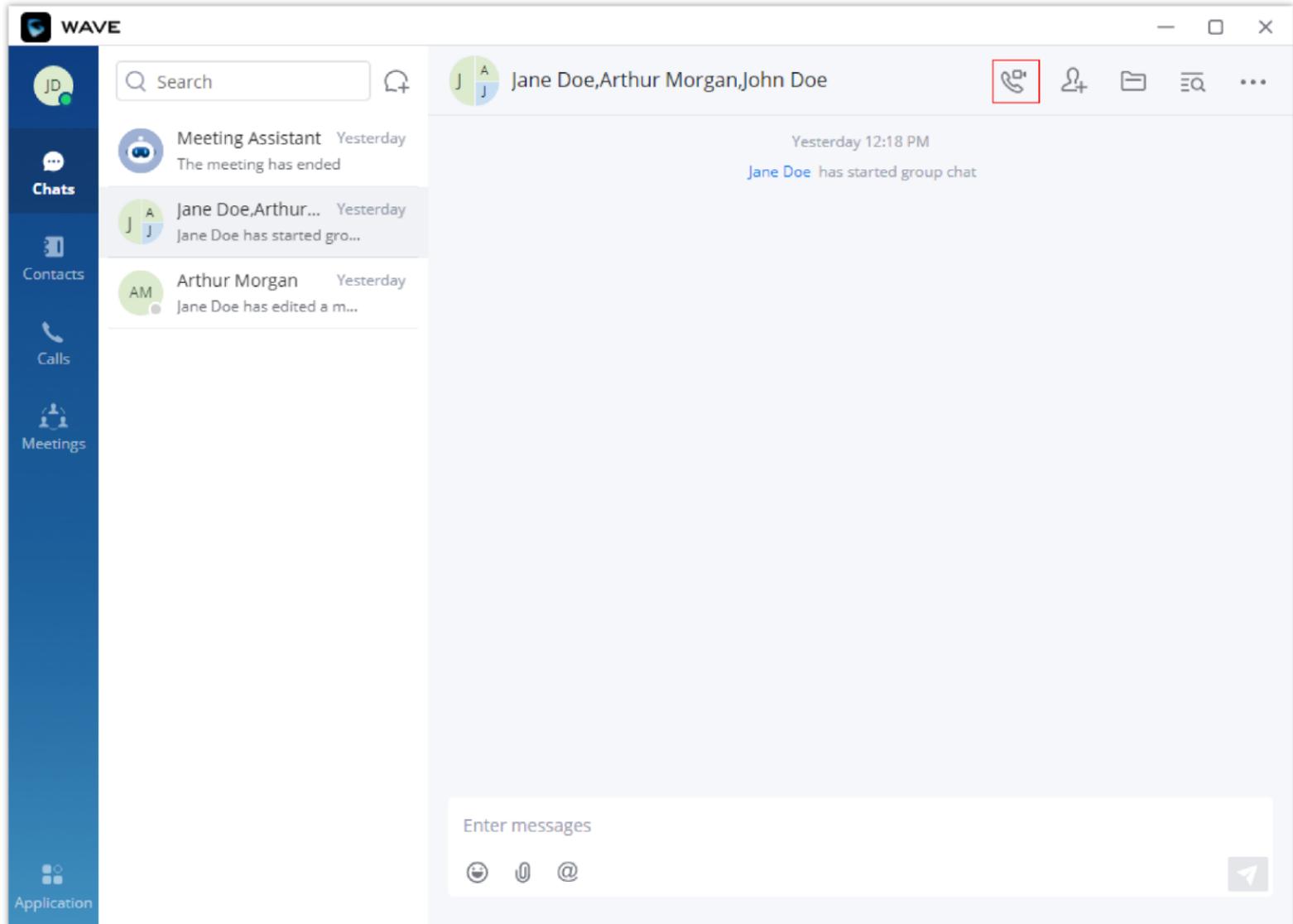
Start a Meeting from a Chat Group

The chat history will be carried over to the meeting's chat, as the figure below shows. But any chat that has been exchanged during the meeting won't be synchronized to the chat group.
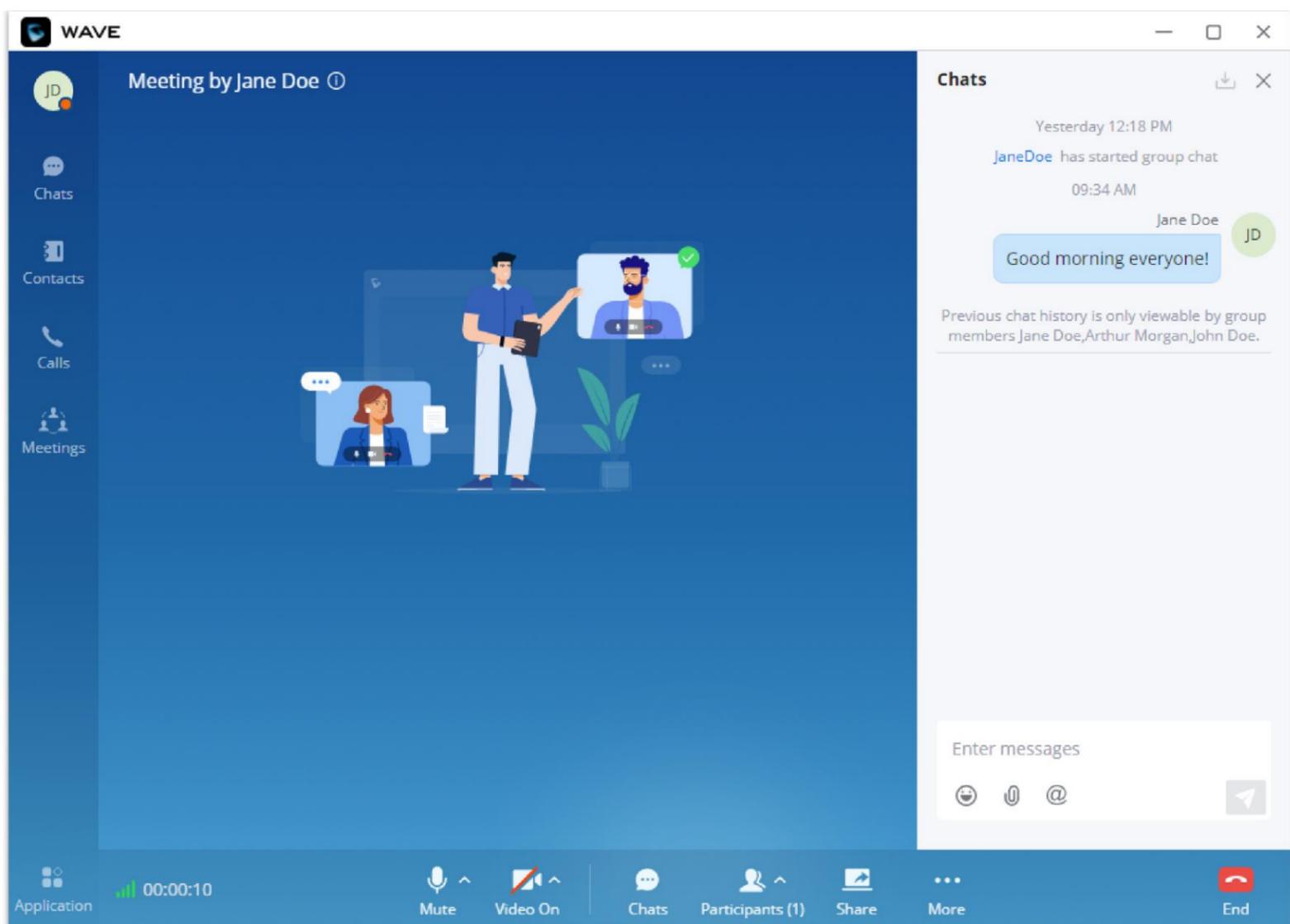
Meeting Initiated from a Chat Group

Note

Please note that chats which have been exchanged during the meeting can be downloaded in "Meetings" tab. Also, please note that this chatlog won't contain the chats exchanged prior to the meetings.

Exit Group

Only group members can leave the group.

Step 1: On the chat page, open the group chat page and click on the upper right corner, then click "Leave Group Chat" at the bottom.

Step 2: After confirming to log out, you will no longer accept new messages from this group and cannot view the group history messages.

Note

After logging out, only the group owner will be notified, not everyone.

Dismiss Group

Only the group owner can dismiss the group.

Step 1: In the chat interface, the user can open group chat interface and click the button on the right upper corner ··· , then click "Group Settings" option at the bottom of the interface to dismiss the group.

Step 2: After dismissing the group, all members of the group will be removed, and the group chat history cannot be viewed.
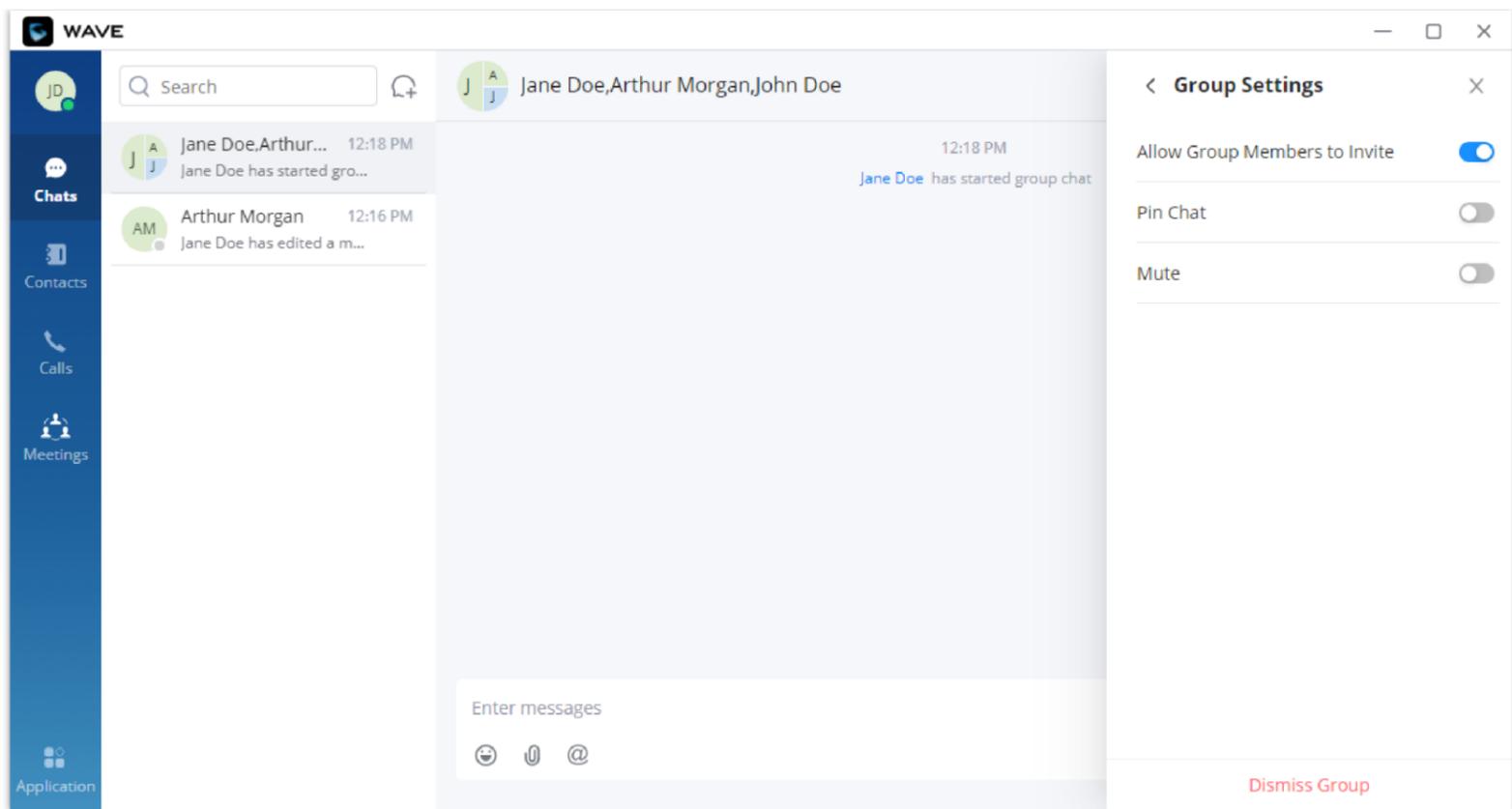
Dismiss Group

Contact Local Time

When opening the chat box of a specific contact, Wave will show the contacts local time. This helps with knowing what time it is for a contact when the contact is located in a different time zone. This saves the user time of converting between time zones.
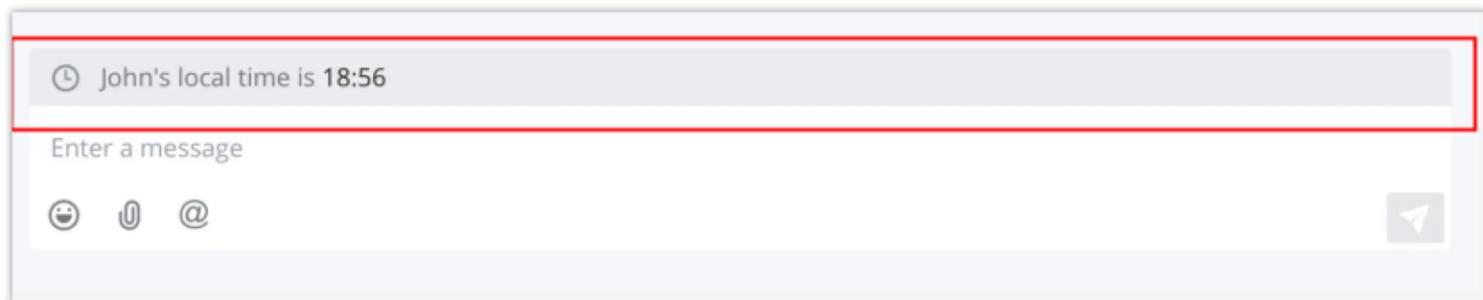
Contact Local Time

MEETING LIST

Users can join an audio or video meeting on UCM by dialing the room number. After logging in Wave desktop, click on "Meetings" on the left panel to open meeting page.

Users can view all meeting history in Wave application, and it will show the actual duration of the previous meetings, as well as the participants list of the previous meetings.

Users can create meeting to start now by selecting [Meet Now] , or schedule meeting by clicking on [Schedule] on the top of this page.
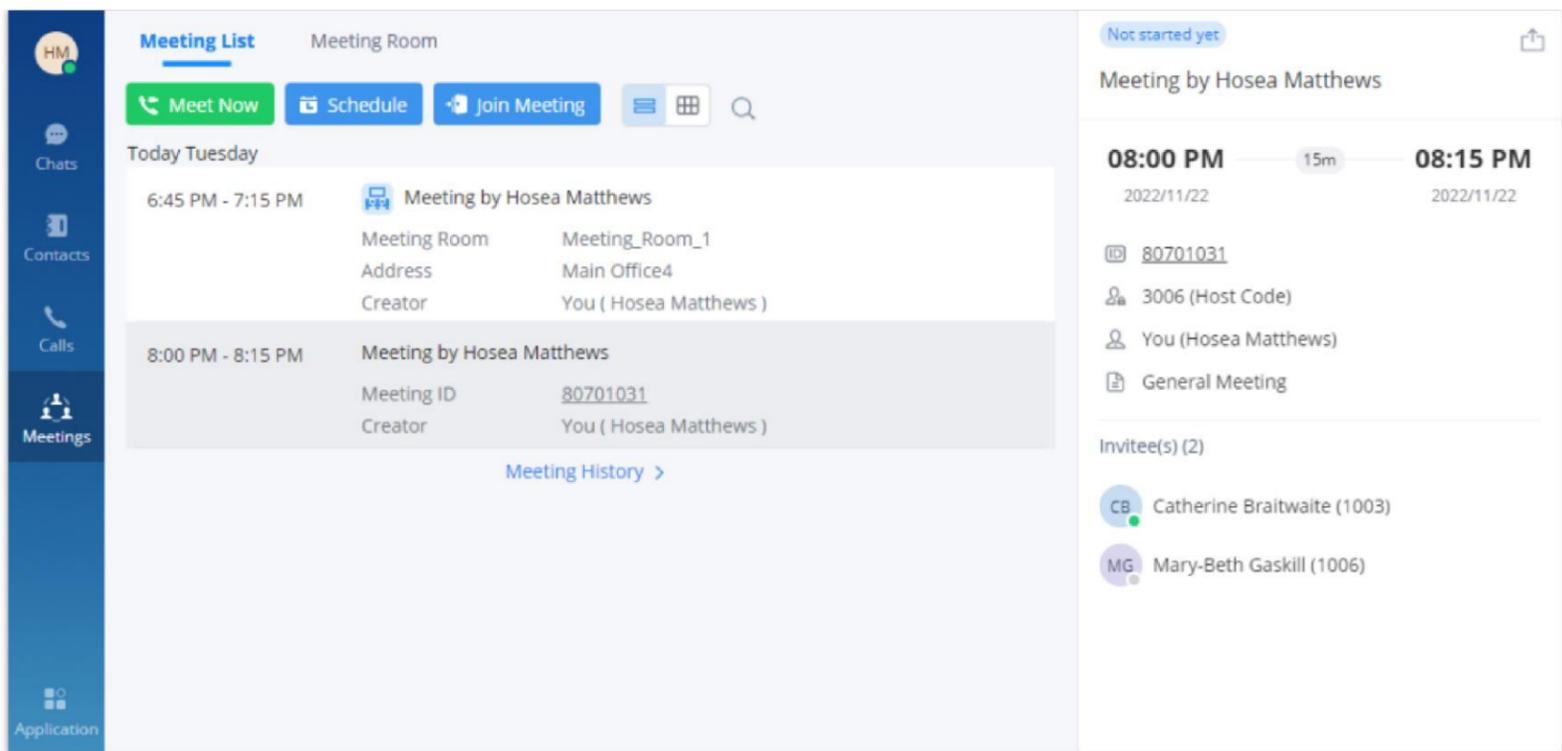
Wave Meetings Desktop Page

Once the meeting has been scheduled, the user can view the details related to the meeting in the side bar. The details which are displayed are:

- **The status of the meeting:** This shows if the meeting has started or not yet.

Users can view scheduled Meetings by selecting "Daily", "Weekly", "Monthly" and defining the date range. Click on ⌕ to search meeting by meeting subject, creator, meeting room number.

Search
Meeting

Meet Now

On the top of meeting page, click on 📞 **Meet Now** .

Meet Now Interface

Step 1: The user needs to enter a meeting subject.

Step 2: The user needs to enter the invitee's number or email address or click the "**Add**" button to invite the participants from the contacts or group.

Step 3: The user can click "**Meet Now**" button to start an instant video meeting immediately and invite participants to join the meeting.

Note

After creating the instant meeting, the video meeting number is a random meeting number. If the user wants to use the public meeting room, the user can access to the public meeting room list and join the public meeting room.

Multimedia Meeting

Users can click "**Video on**" or "**Video off**" option during the conference to switch between video/audio conference. Below is the picture showing the call interface after joining video conference room.
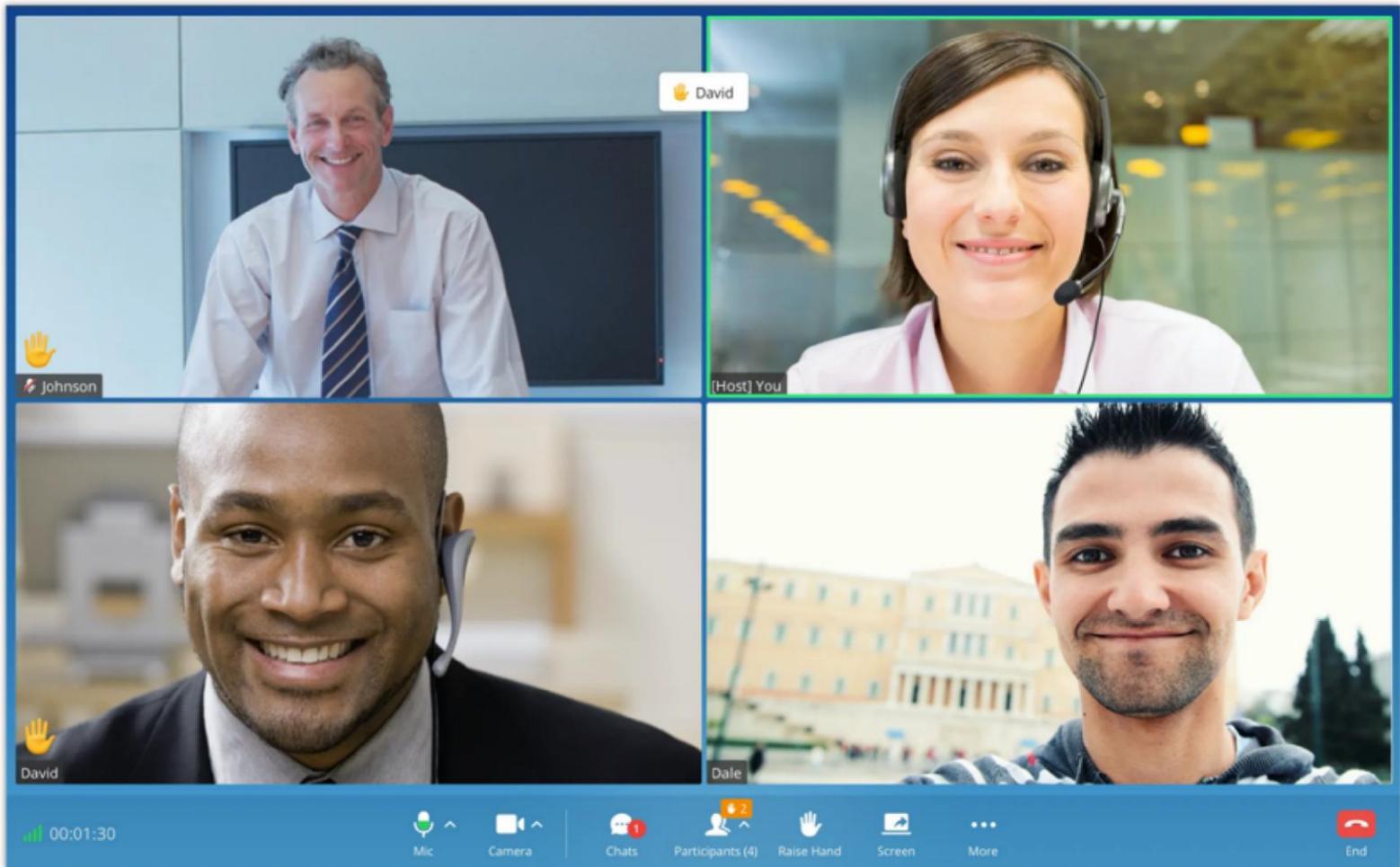
Video Conference Screen

Below are the available meeting control options:

- ▥ : View network condition status such as packet loss for video and audio.

- ▣ : Invite participants. If the UCM admin has enabled "Allow User Invite" for the meeting room, any participant in the meeting can invite other participants. Otherwise, only the moderator can invite other participants.

- ▣ : Mute/unmute. Users can click the "**More**" button to enter the alternative ringing speaker settings interface. When a participant is muted, either by his/her own self or by the host. The participant can activate the microphone by pressing and holding the space bar. The microphone will be activated in as long as the participant is holding the space bar and the will be disabled once the participant let go of the space bar.

- ▣ : Video on/off. Click to enable/disable the local video feed. Users can click the "**More**" button to enter the virtual background settings interface.

- ▣ : Screen sharing. Click to start screen sharing. Only one participant can share screen at a time. If a participant already shares the screen, this icon will be grey and other participants cannot click on this icon to share.

- ••• : More options. The user can click this button to open the DTMF soft keyboard and display the chat bubble function.

- ☎ : End call.

- ▣ : View participant list. Click to open the participant list. The user can view participants' mute/unmute status, search for a participant, modify display name, chat with participants, etc.

- o 💬: Chat. Click to open the chat window and enter chat text.

- o ✋ : Raise hand to request to talk.

To become meeting host:

- o **Host Meeting:** If there is no meeting host in the meeting, the user can click "More" button ••• and select "Host Meeting" option to become the meeting host.

- o Manage participants:

Click on icon 👥 on the right-side menu to open participant list. The moderator can mute/unmute participants, turn on / off video for participants, transfer moderator to another participant, remove participant from meeting and etc. The moderator can also mute all participants and lock the meeting room (no one can join the meeting room).
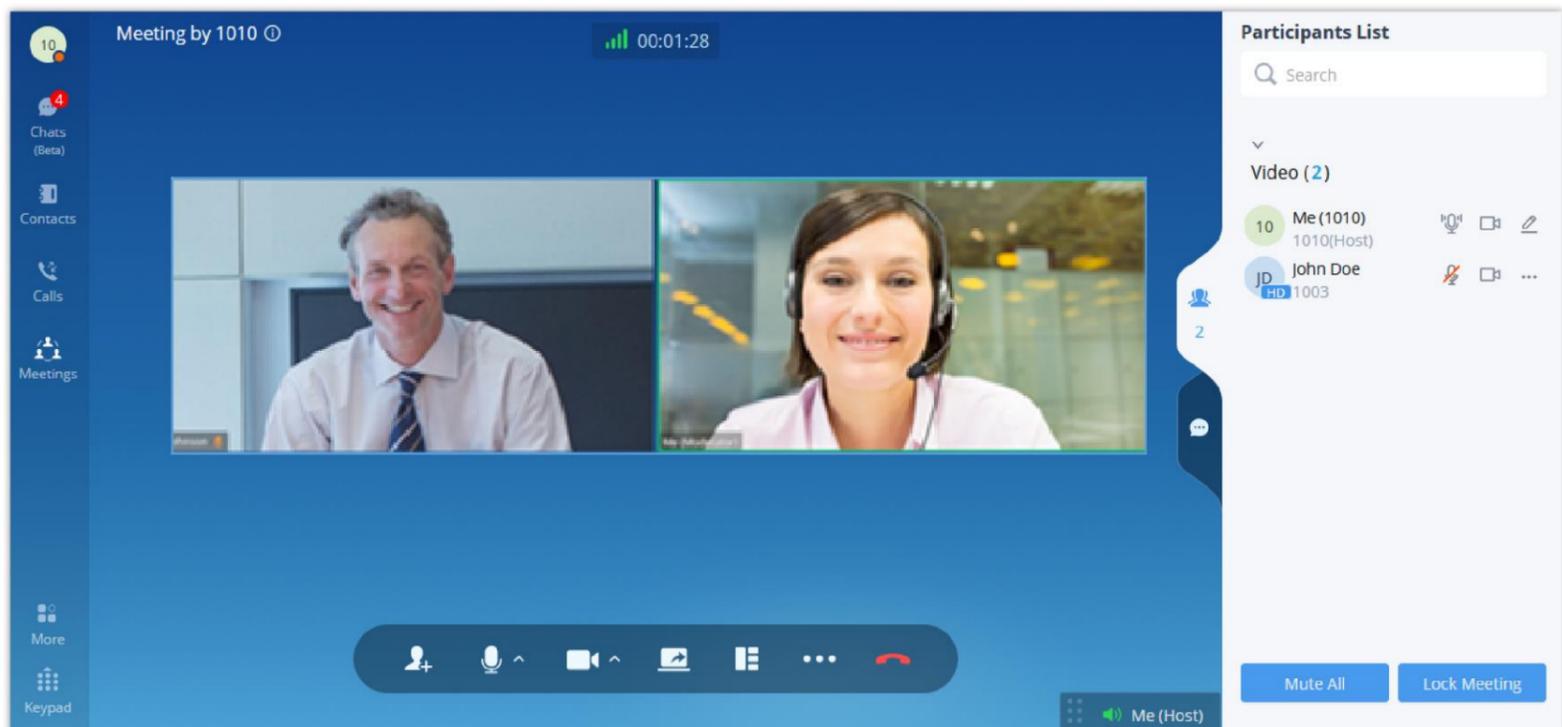
Managing Participants in Video Conference

Screen Sharing

During point-to-point video calls or video conferences, users can share screen to present to all the other participants.

After the users click on the icon 🖼️ , a prompt will appear with three sharing options. Select "Share Screen".
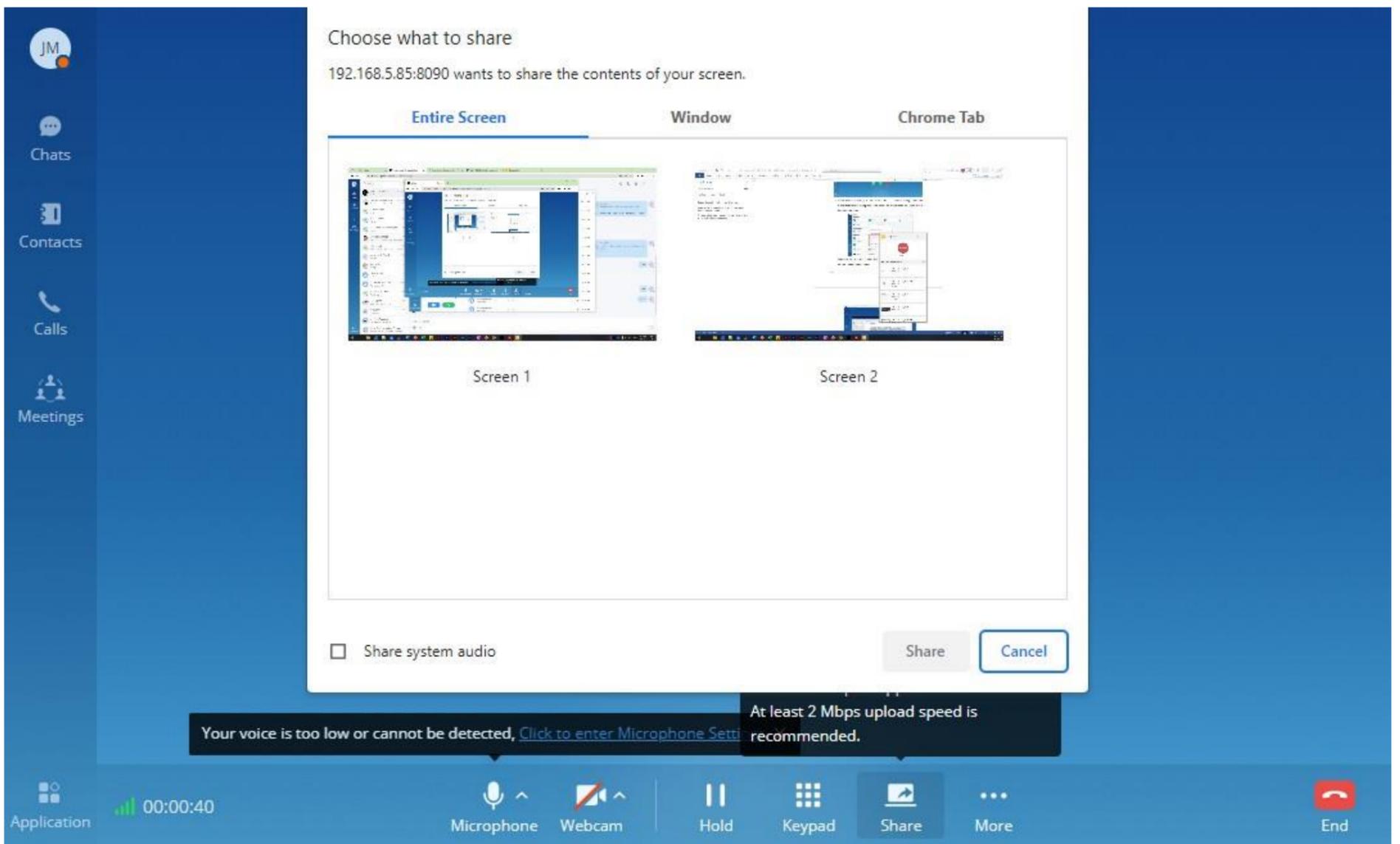
Share Screen

Only one user can share a screen at a time.

During screen sharing, the users can double click on the sharing screen or video screen to enlarge the display area to full screen.
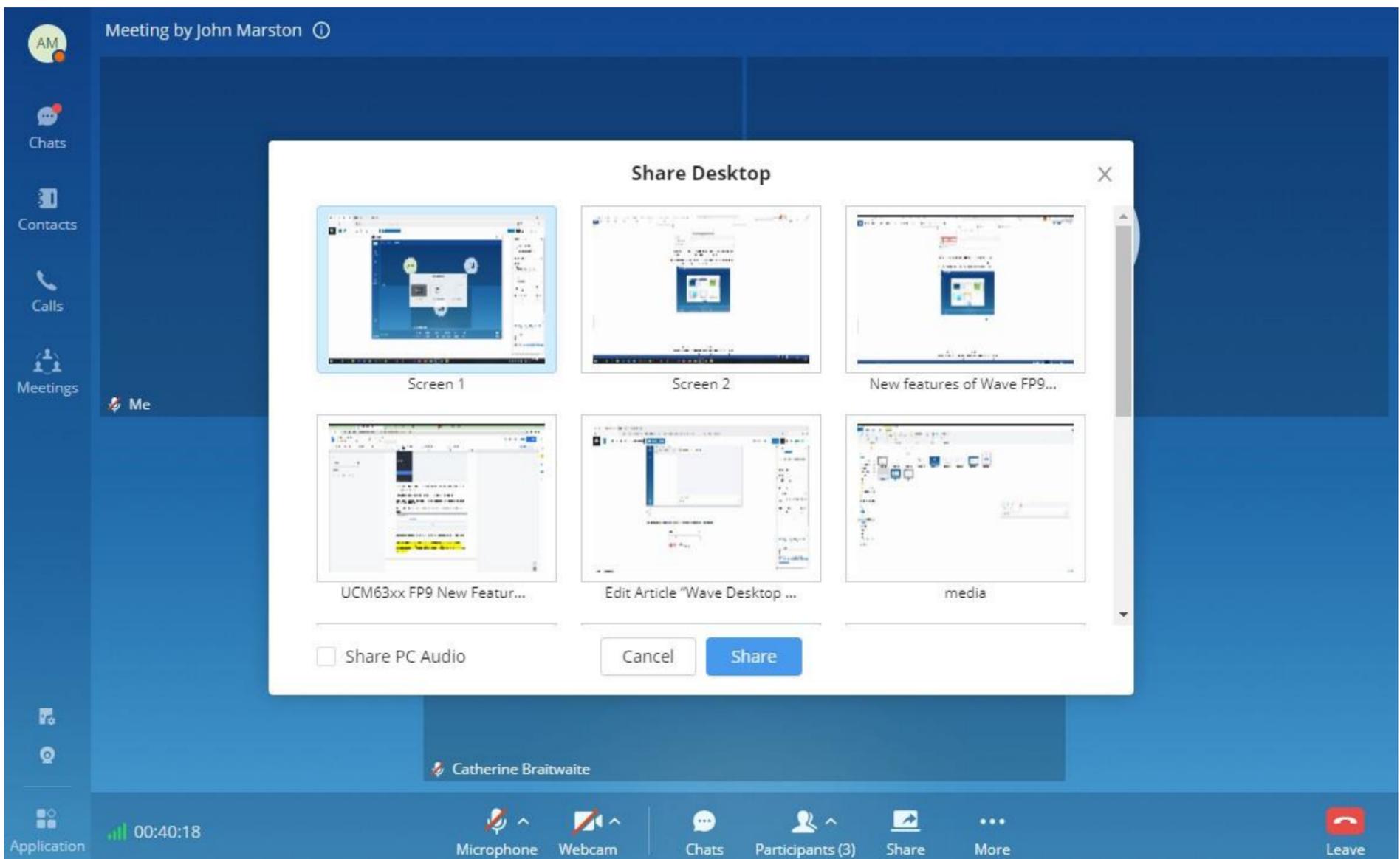
Screen Sharing with Video on

The user can choose to enable sharing the PC audio alongside the screen-sharing, any audio that is played in the PC will be heard by all the participants.

During screen sharing, the users can double click on the sharing screen or video screen to enlarge the display area to full screen.
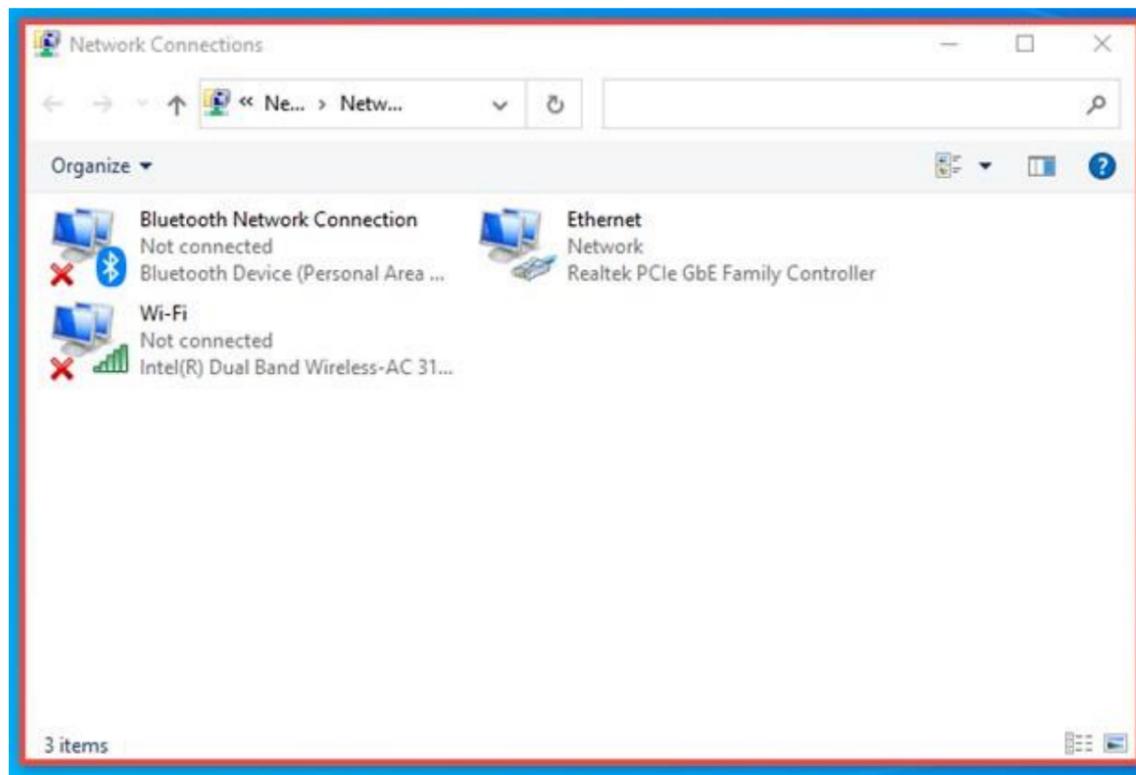
Window Sharing Ongoing
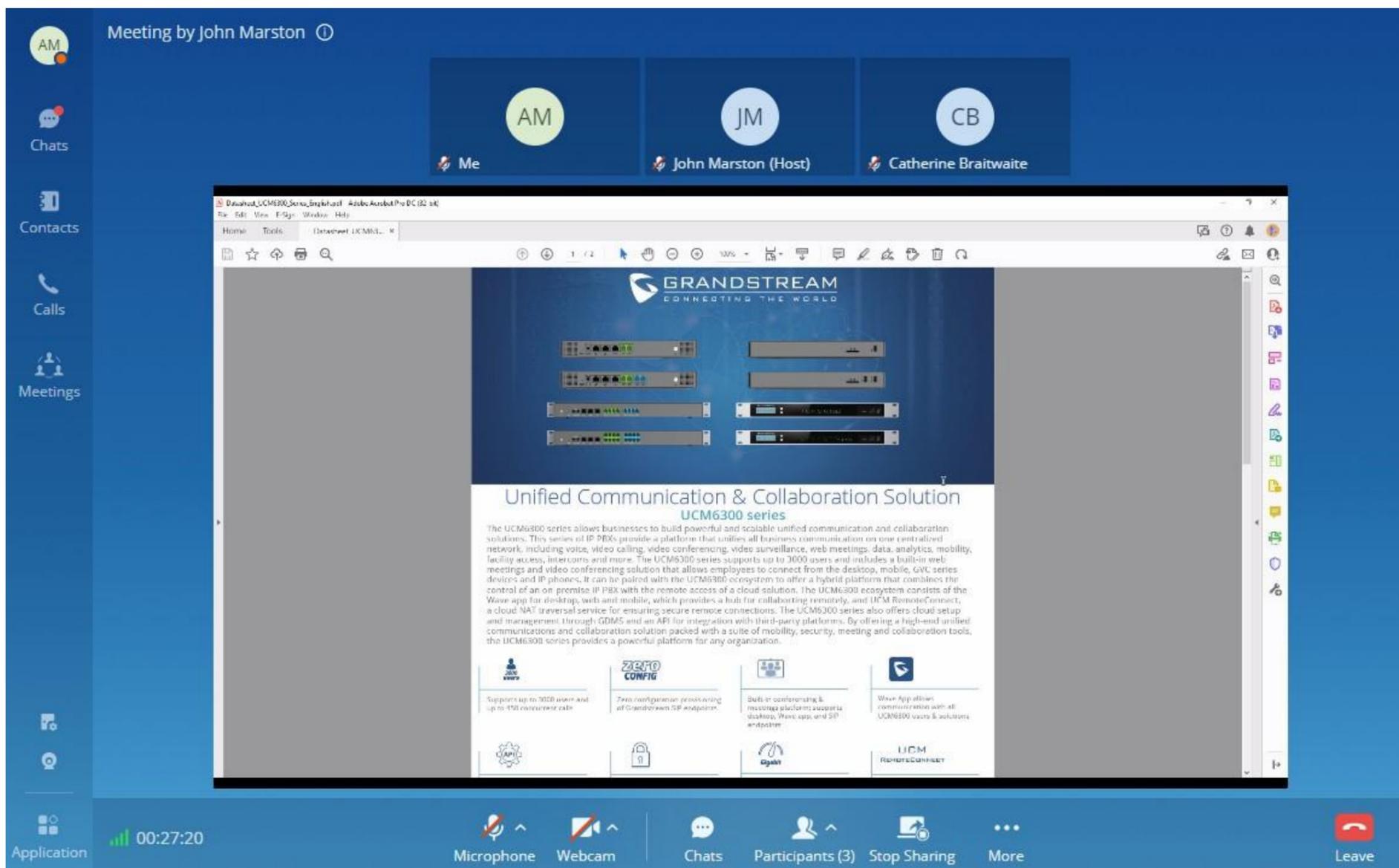
Screen Sharing Layout

The user can use the sketching tools to draw annotations on the screen.

Using Wave point-to-point call or meeting allows switching seamlessly between the source of the screen-sharing. This can be performed without ending the screen-sharing. Please refer to the screenshot below to know exactly how it can be performed.
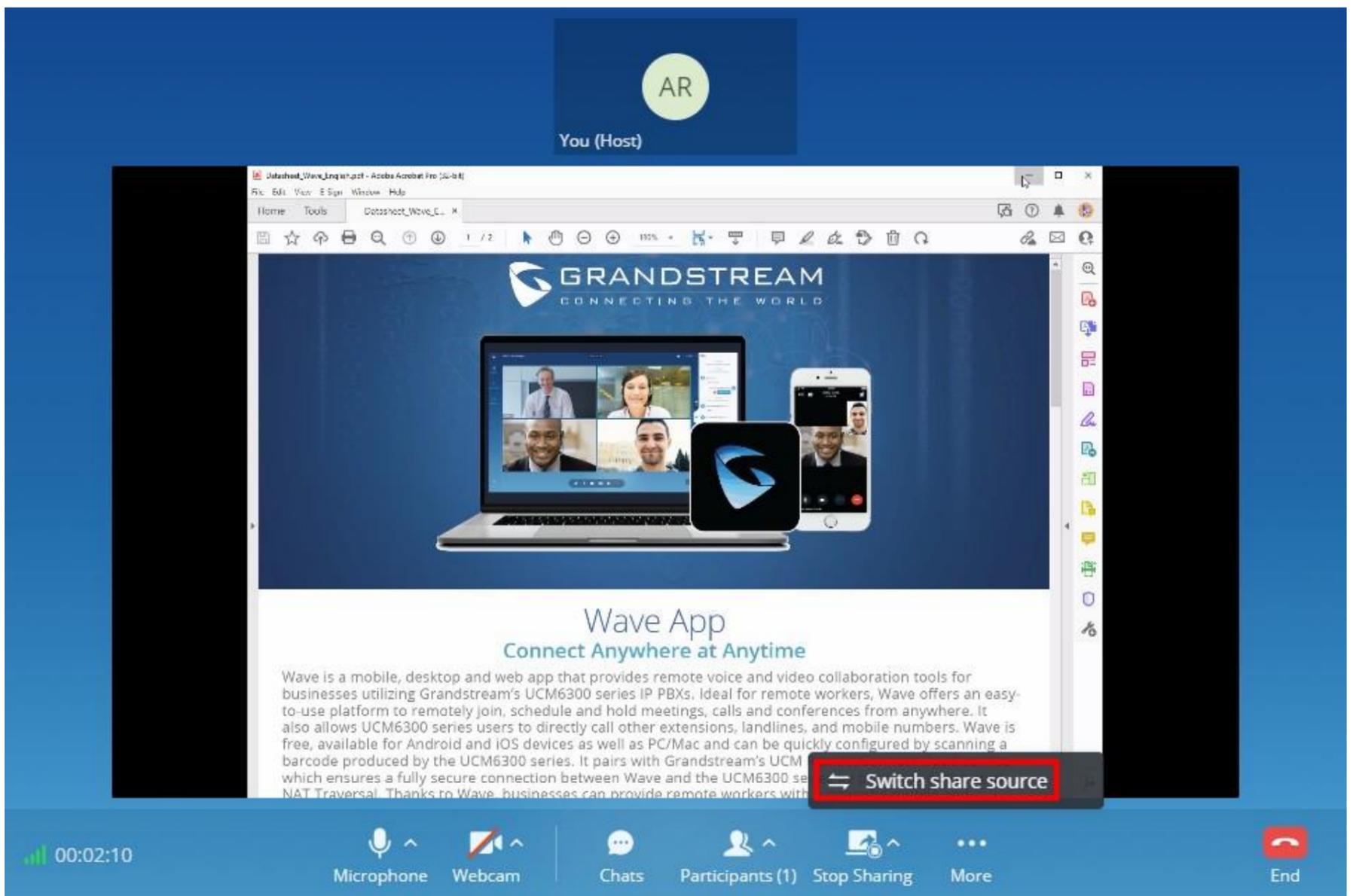
Switch Share Source

Then choose the new source that you want to share with the other users.

Raise Your Hand

During the meeting, the participants can request to speak by raising the hand. All the other participants will be able to see who has risen their hand. This makes meetings with many participants a lot easier to manage for the host.

To raise your hand, please click on . The participants who have risen their hands will be displayed as the screenshot below shows.
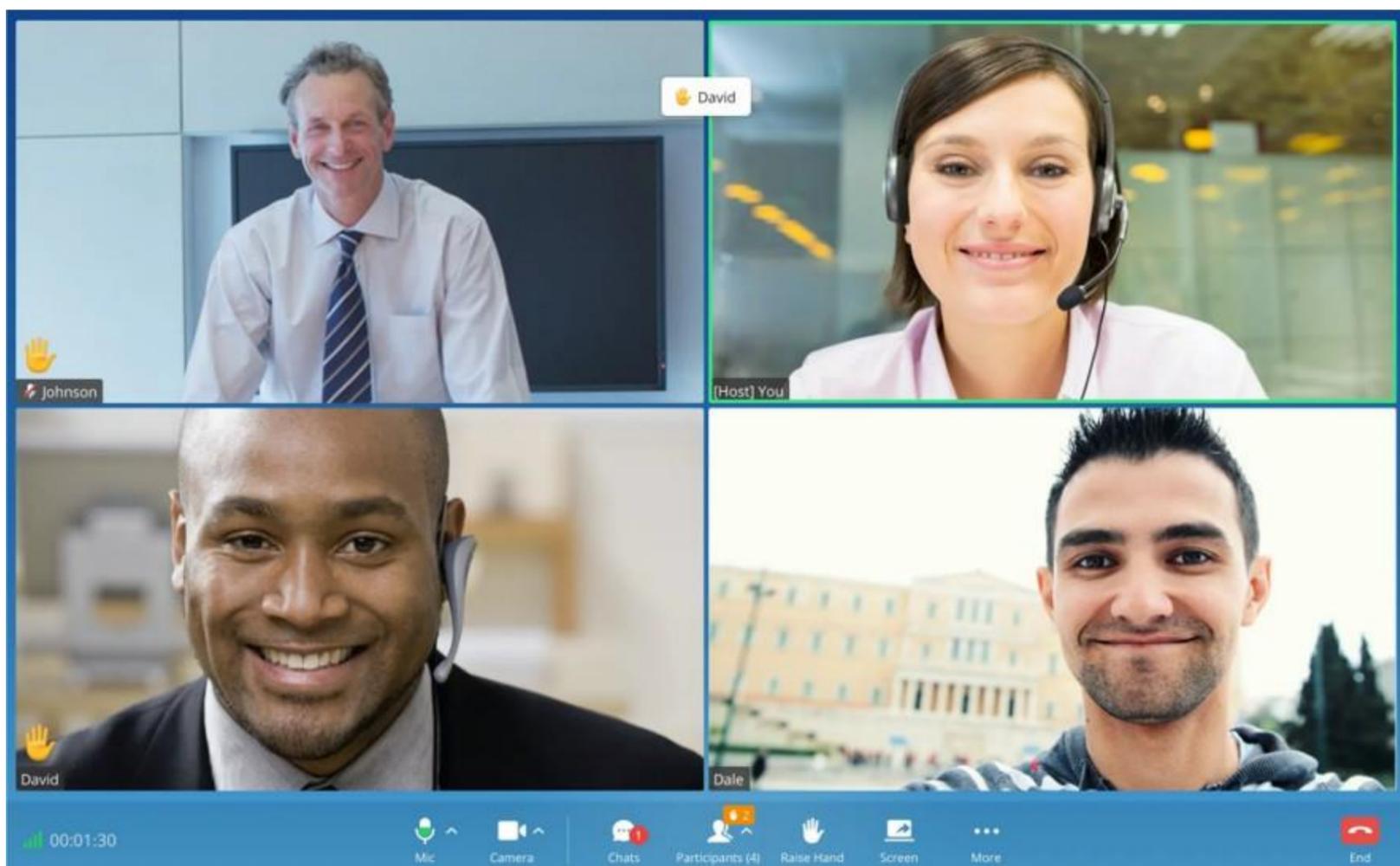
Invite Participants

If the UCM admin has enabled "Allow User Invite" for the meeting room, any participant in the meeting can invite other participants. Otherwise, only moderator can invite other participants.

Users can invite other participants by generating meeting link or dialing other participants.
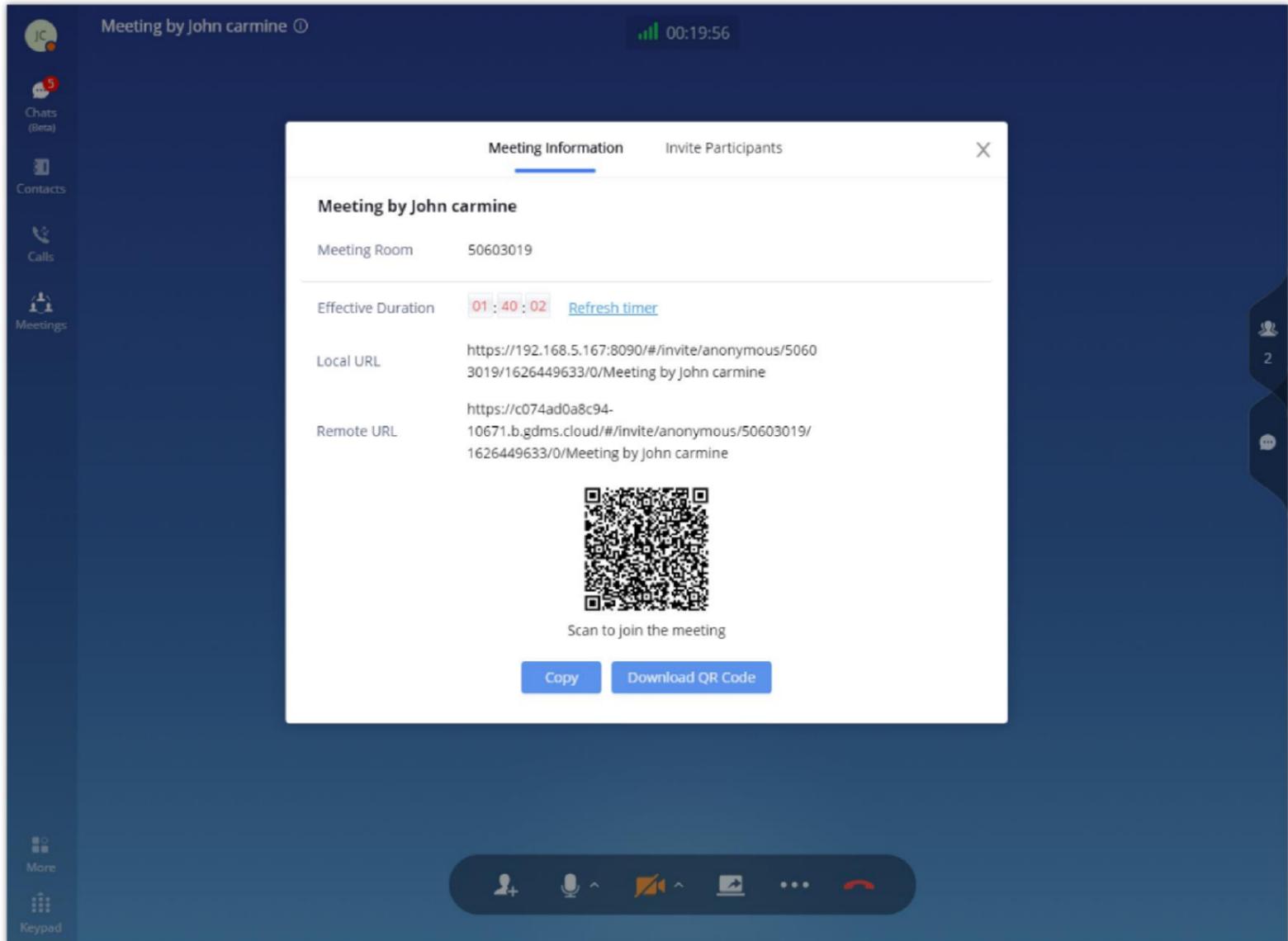
Invite Participants

- **Create invitation link:**

After selecting "Create Invitation Link", users will be prompt with link information as below. The users can send the link or QR code to other parties for them to join the meeting.
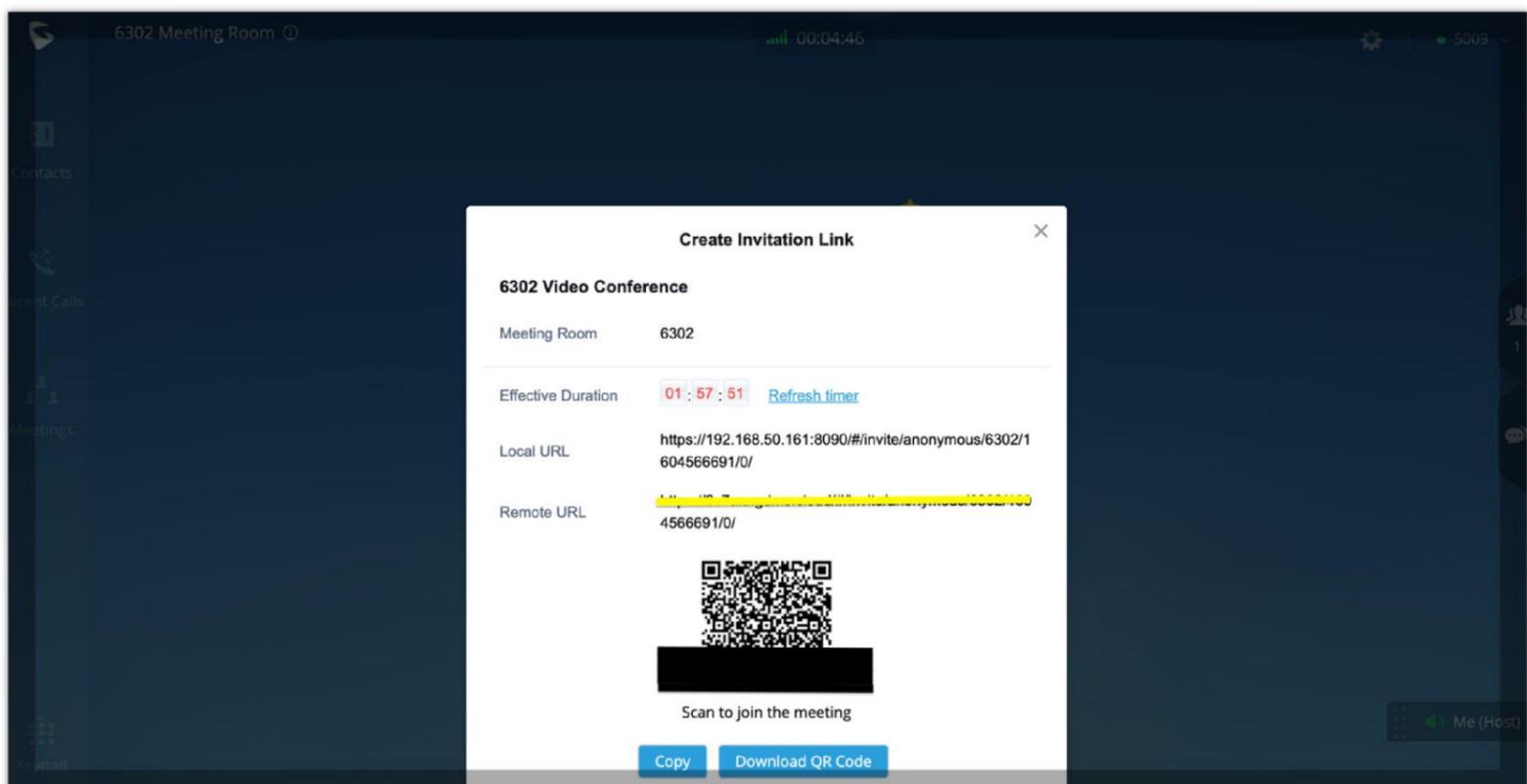
Create invitation link

- **Invite participants:**

After selecting "Invite Participants", users can select a contact to invite or enter the number to invite.

The meeting's host can also invite the participants quickly. . To do this, the user needs to click on button ![Participants button] in the menu bar at the bottom of the screen to bring the participants menu up:
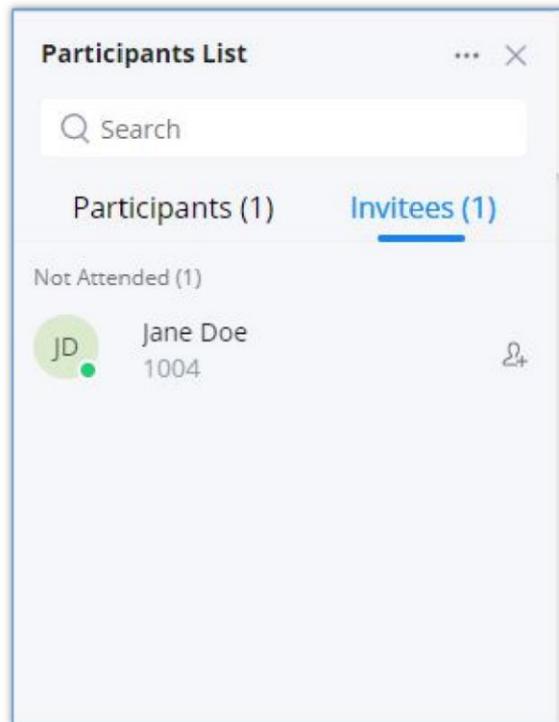
Pariticipants List

On the invitees tab, the user needs to click on ![icon] to quickly invite the participant.

Managing Participants

During meeting, click on icon ![icon] to open participant list.
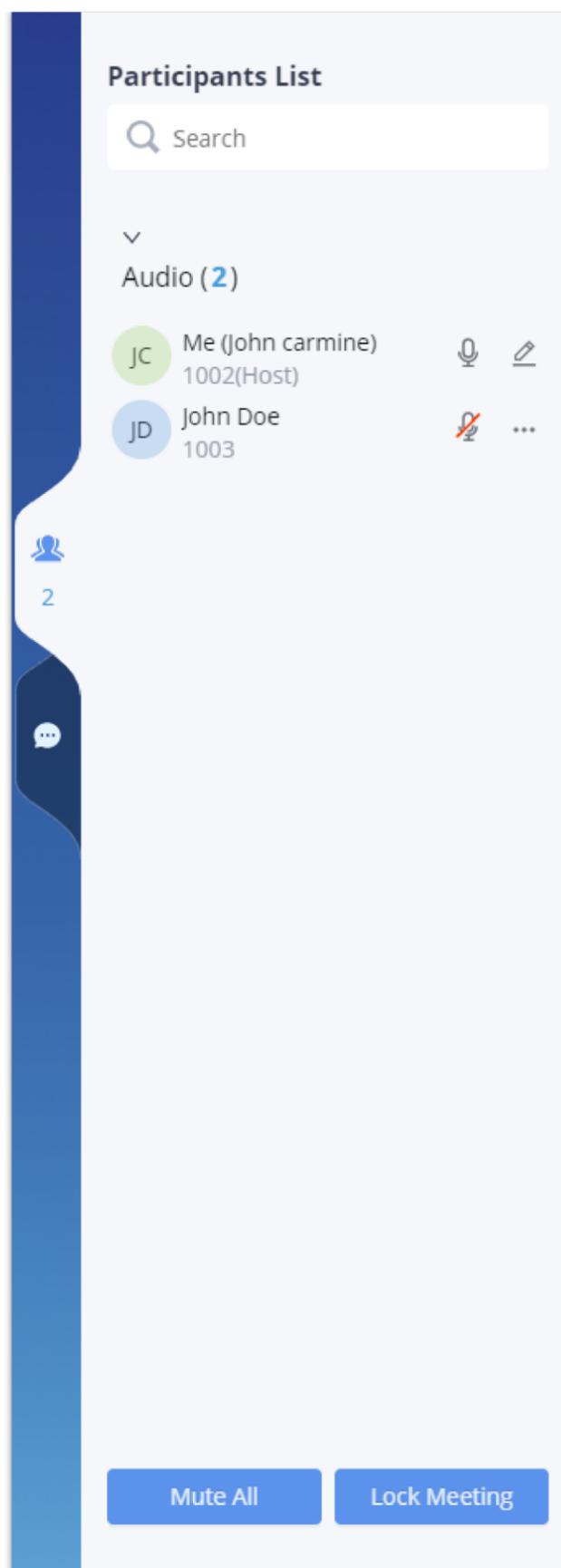
Participant list

Participants can view the list only, while moderator has more options to manage the participants.

- ○ ✎：Modify display name.

- ○ ◤：This indicates the participant has video on. If moderator clicks on it, it will turn off the participant's video.

- ○ ◤：This indicates the participant has video off. If moderator clicks on it, it will invite the participant to turn on video.

- ○ ▮：Mute. This indicates the participant has mic on. If moderator clicks on it, it will mute the participant's mic.

- ○ ▮: This indicates the participant is talking. If moderator clicks on it, it will mute the participant's mic.

- ○ ▮：This indicates the participant is muted. If moderator clicks on it, it will turn the mic back on for this participant.

- ○ ⋯：More options to operate for this participant, such as "Transfer Moderator", "Remove" and "Chat".

- ○ 💬：Chat. Click to open chat window.

- ○ Lock Meeting：Click to lock meeting so that no one can join the meeting room anymore.

- ○ Mute all: Click to mute all participants in one click.

Invitees List

If the current user is the meeting host, the user can view the list of participants who are not attending the meeting. The participants can only view the list of current attended participants. The meeting's host can send an invitation to the people who have not attended the meeting or those who left. Please see the screenshot below.
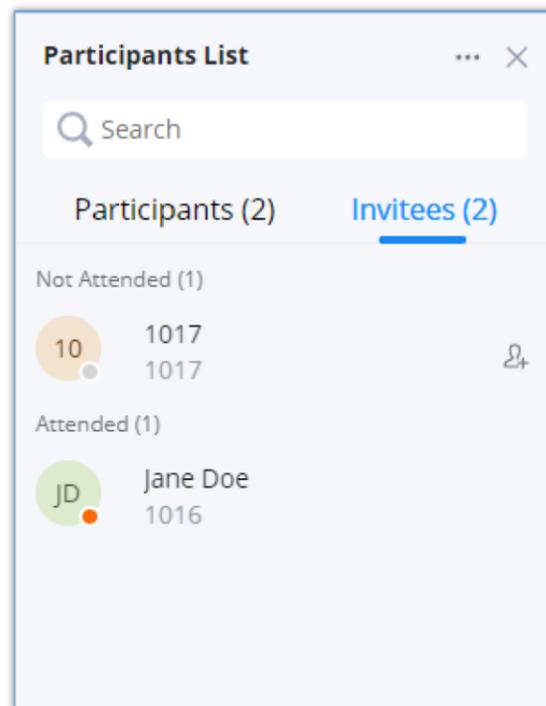
Invitees List

Chat During Meeting

During meeting, users can click on 💬 to open chat window. The chat messages can either be sent to a specific participant or to all the participants.
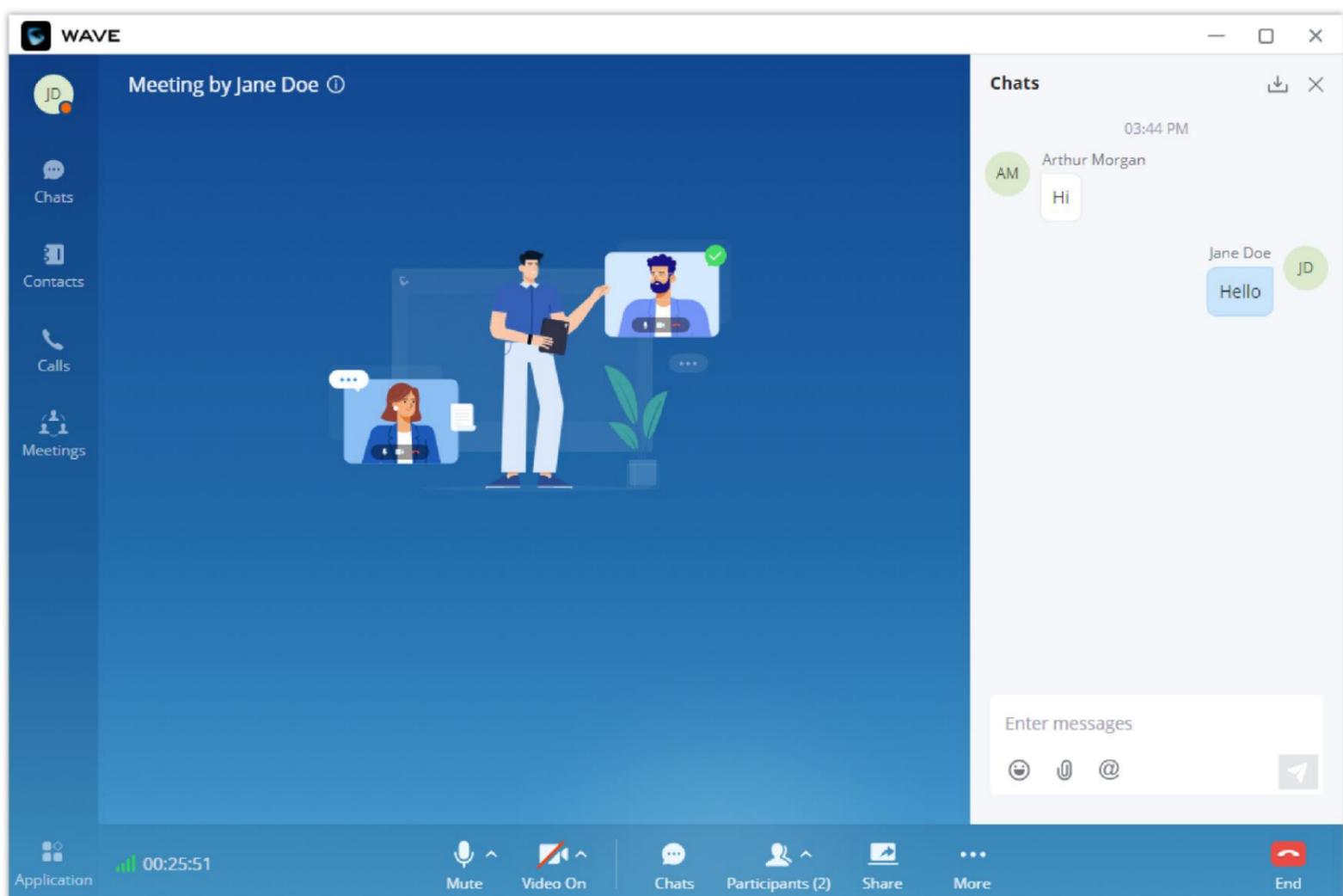
Chat during Meeting

- Chat window not only displays all chat messages, but it also shows real-time notification when a participant joins meeting or leaves meeting.

- Wave supports chat with members who join the conference via browser, PC client, and mobile APP.

- The user can choose to send a message to all members or select a specific member to send the message.

- Click the icon 💬 under the participant list for a specific user chat privately with him/her. Only supported for wave users.

Meeting Call Layout

You can arrange the layout of the tiles of the participants in a specific meeting in two arrangements, to do that please click on "More" button ⬝⬝⬝, then select either ⬛ Speaker Layout Or ⬛ Tiled Screen Layout

- **Tiled Screen Layout**: The tiles will be arranged in the same size without putting the focus on the speaker.

- **Speaker Layout:** Whenever someone is speaking his tile will be enlarged and showed under the tiles of the listeners. This puts the focus on the speaker and his/her video feed if he/she has the webcam on.

The meeting host can also control to have one participant's tile pinned. To do that, the meeting host can click on the three dots on the top right corner of the user's tile, then click on "Focus For All" as the screenshot below shows.
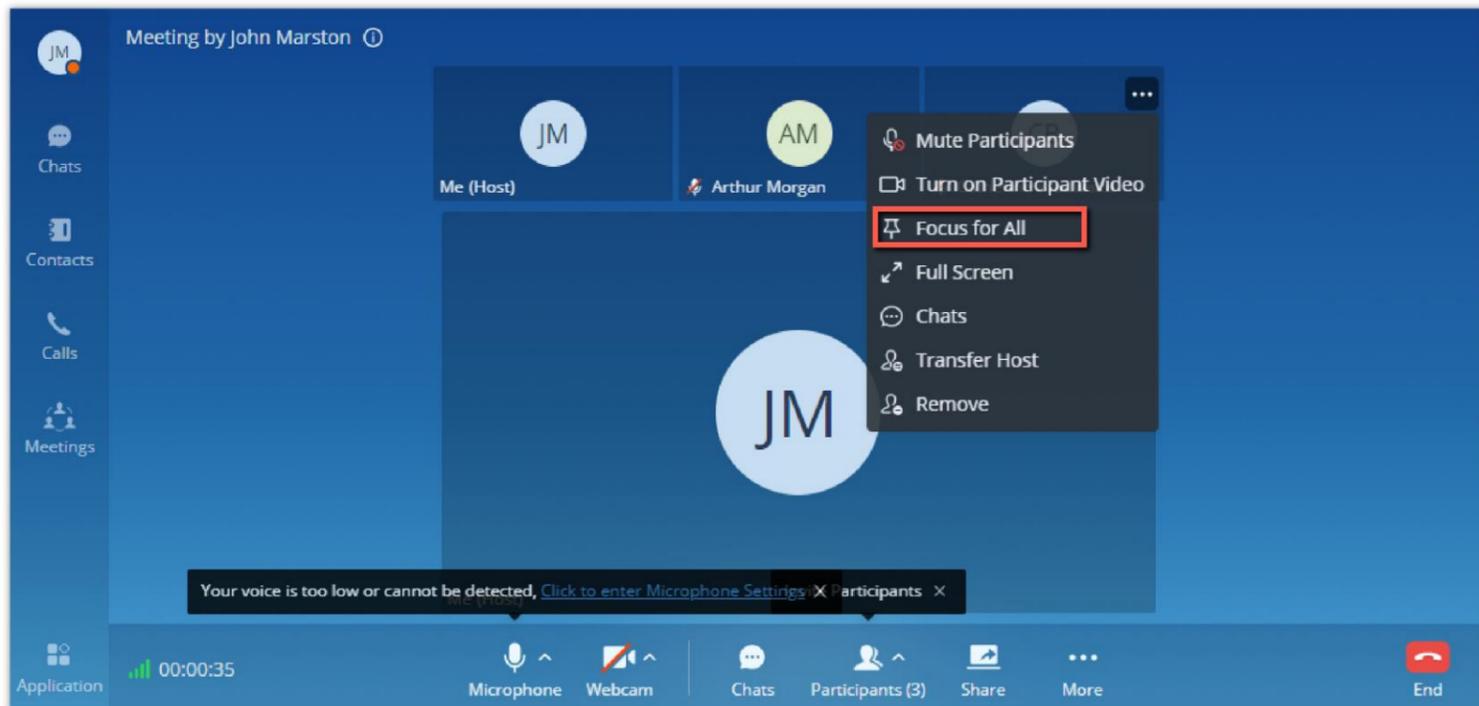
Focus for All

The host can perform various action depends on the user, please see the screenshot below.
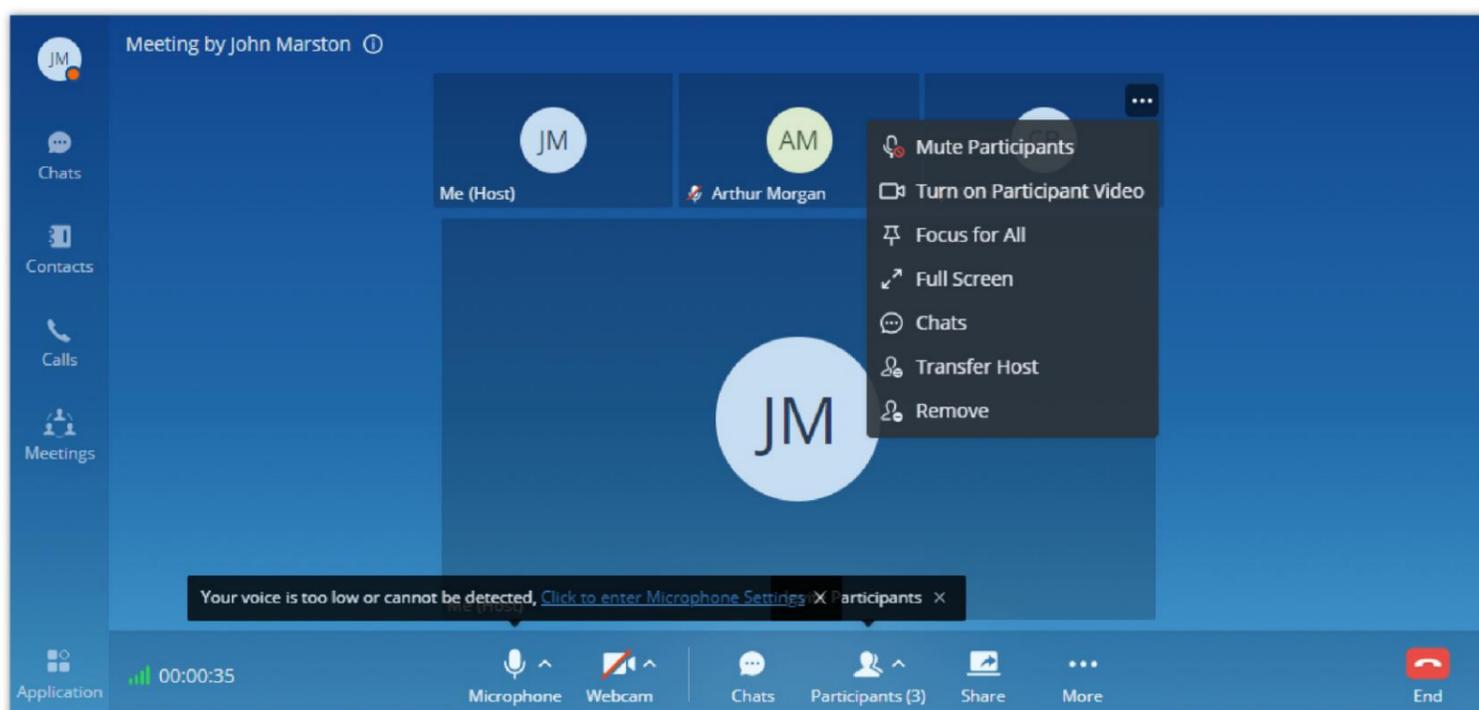
Host Controls

- **Mute Participant:** The host can mute a specific participant. The participant can activate the microphone by pressing and holding the space bar. The microphone will be activated in as long as the participant is holding the space bar and the will be disabled once the participant let go of the space bar.

- **Turn on Participant Video:** The host can turn on the sound of a certain participant.

- **Focus For All:** The host can enable focus on one speaker tile/webcam feed.

- **Full Screen:** The host can toggle one speaker tile/webcam feed to full screen.

- **Chats:** The host can directly mention the speaker in the chat using this button.

- **Transfer Host:** The host can relegate its role as a meeting host to a different participants.

- **Remove:** The host can use this feature to remove a participant from the meeting.

The host can hide the participants whom have not turned on their webcams by clicking on [···More], then hover the mouse cursor on "Layout" then click on "Hide Non-video Participants".
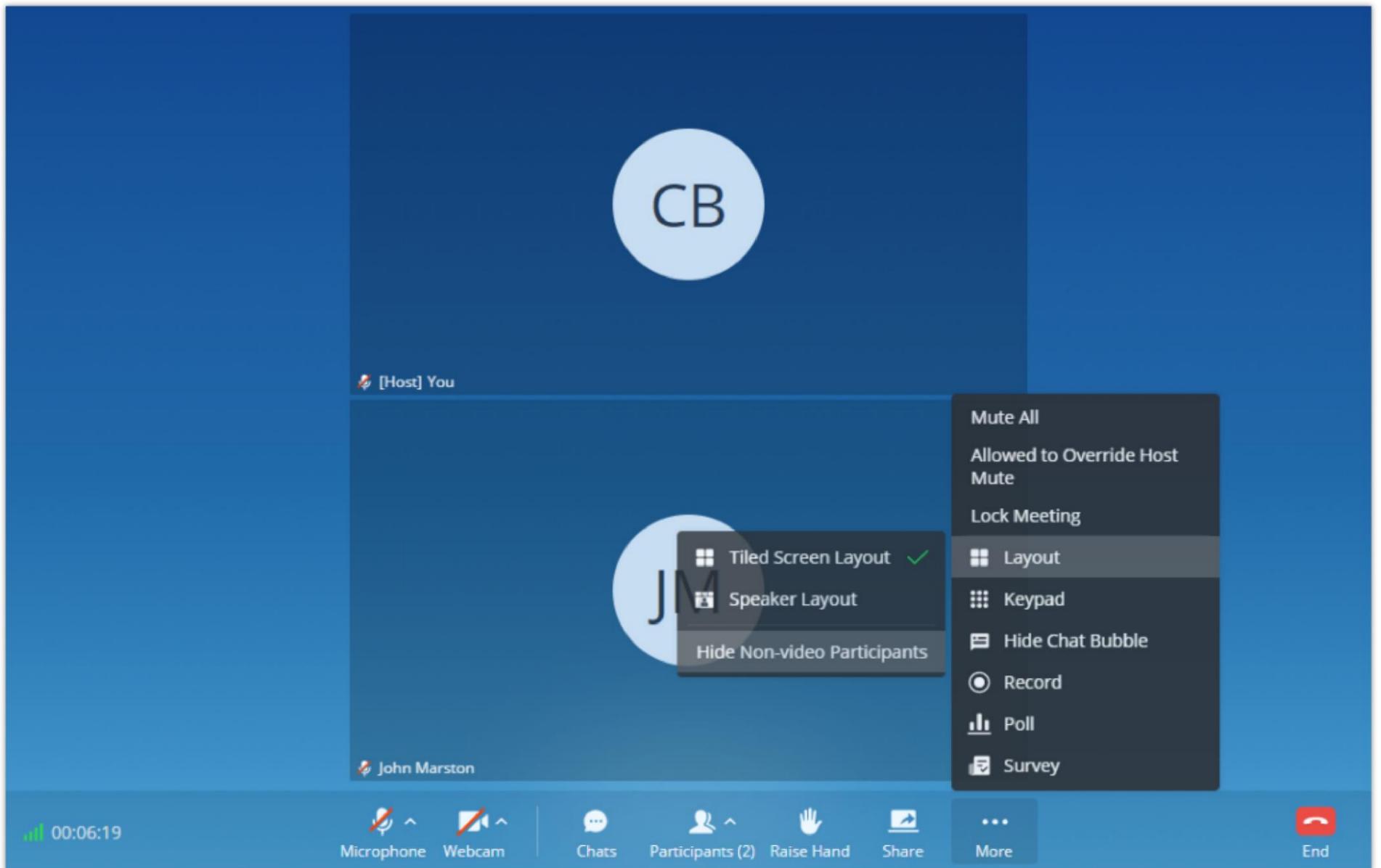
Hide Non-Video Participants

DTMF

1. **Step 1:** During the meeting, the user can click the "More" button [···] on the menu and click DTMF button [DTMF] to open the DTMF soft keyboard, as the screenshot shows below.

2. **Step 2:** The user can click the digit button on the keyboard to enter the digits.
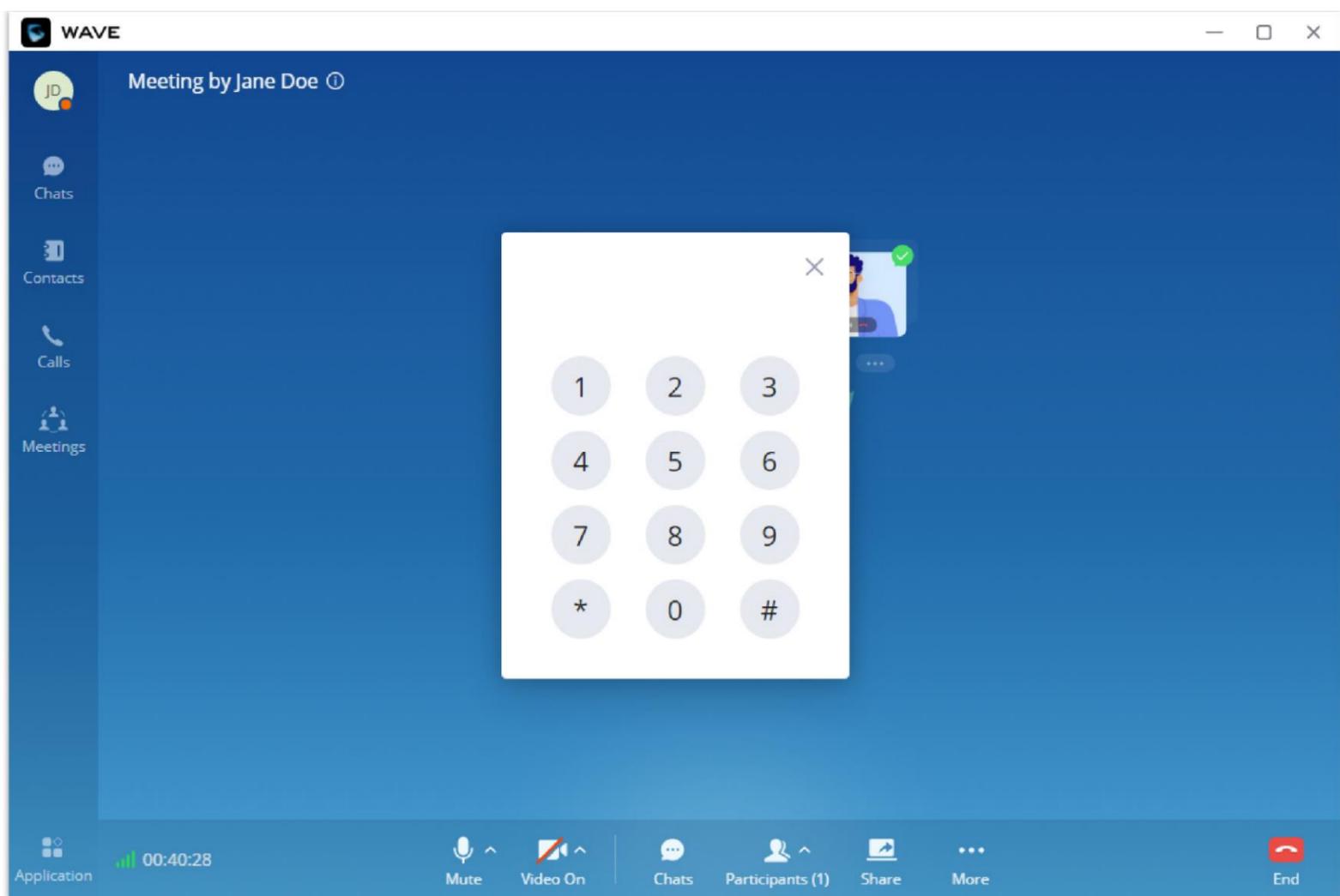
DTMF Soft Keyboard

Chat Bubble

During the meeting, the user can click ••• button to enable the chat bubble function. If there is a new message during the meeting, the chat content will be displayed in the form of bubbles on the right side of the interface, as the screenshot shows below:
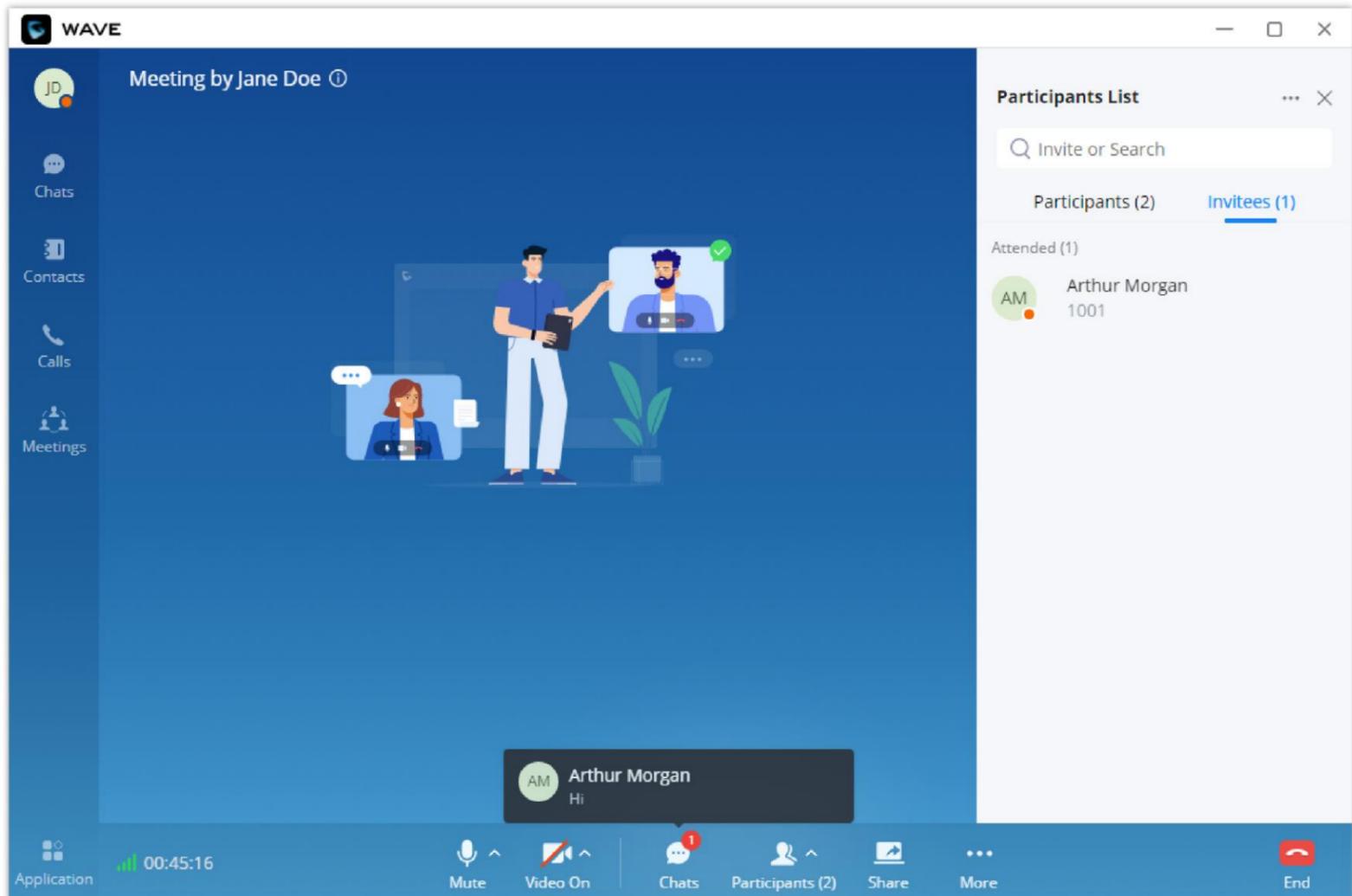
Chat Bubble Interface

Record an Ongoing Meeting

During a meeting, the host can start recording it. To do that, you need to click on "More" on the menu at the bottom of the screen, then click "Record".

When the meeting is ended, the meeting organizer can view the recording files in Meeting Details.
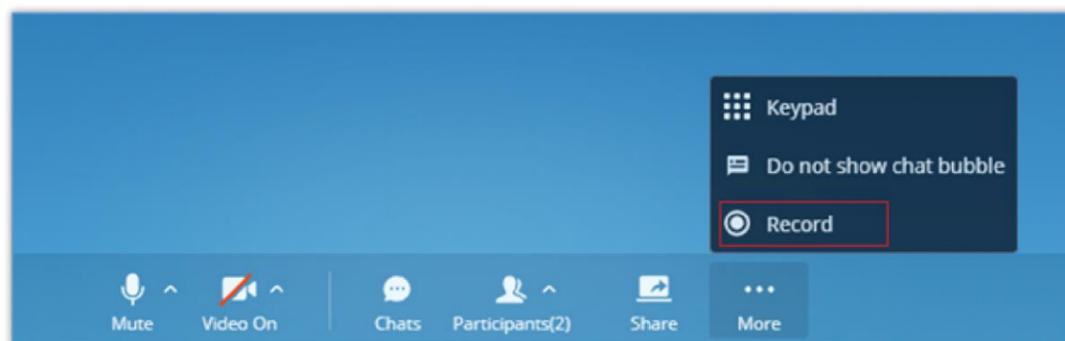
Record an Ongoing Meeting

After the meeting is finished, the host can check the recording by navigating to the meeting tab, then select the meeting and after that click on the recording's icon on the top right-hand corner. Please see the screenshot below.
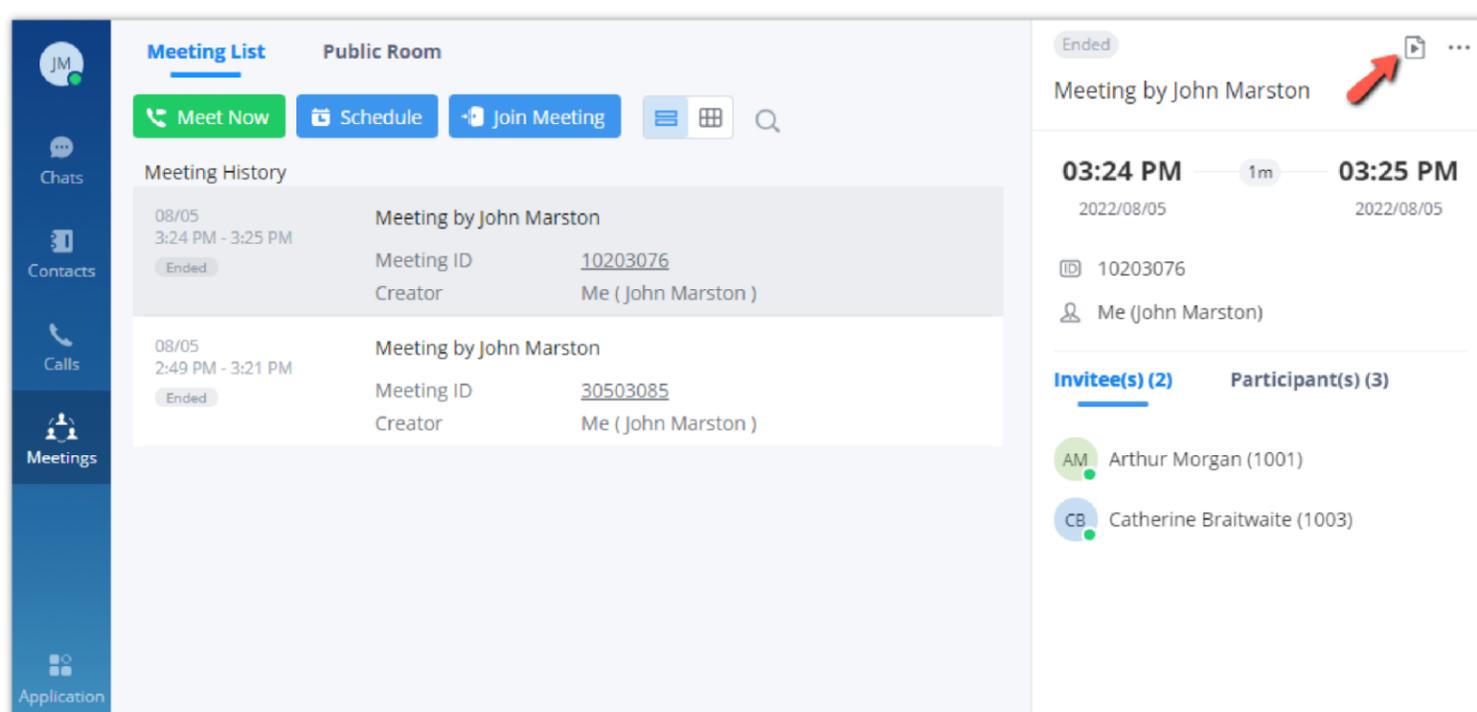
Meeting's Info

The recording files will appear with possibility to play them, download, or delete them.
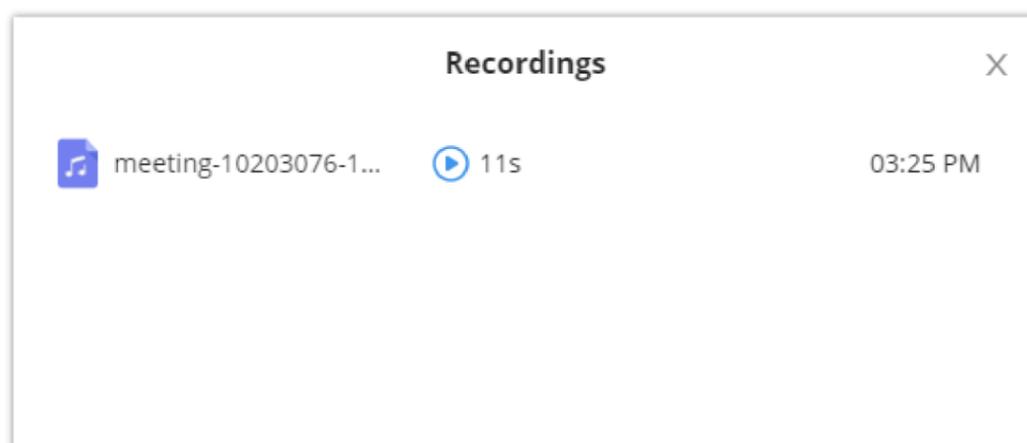
The recordings of the meeting

Manage Meeting

- **End meeting**

When a meeting participant clicks on ☎ to end meeting, the participant will leave the meeting immediately.

When a moderator clicks on ☎ to end meeting, a prompt will be displayed asking the moderator to confirm whether to leave meeting only or end the meeting. If the moderator selects leaving meeting only, Wave desktop will request the moderator to select another participant to be the moderator. After that, the user will leave the meeting while the meeting is still ongoing for the other participants. If the moderator selects ending the meeting, all participants will be disconnected from the meeting.
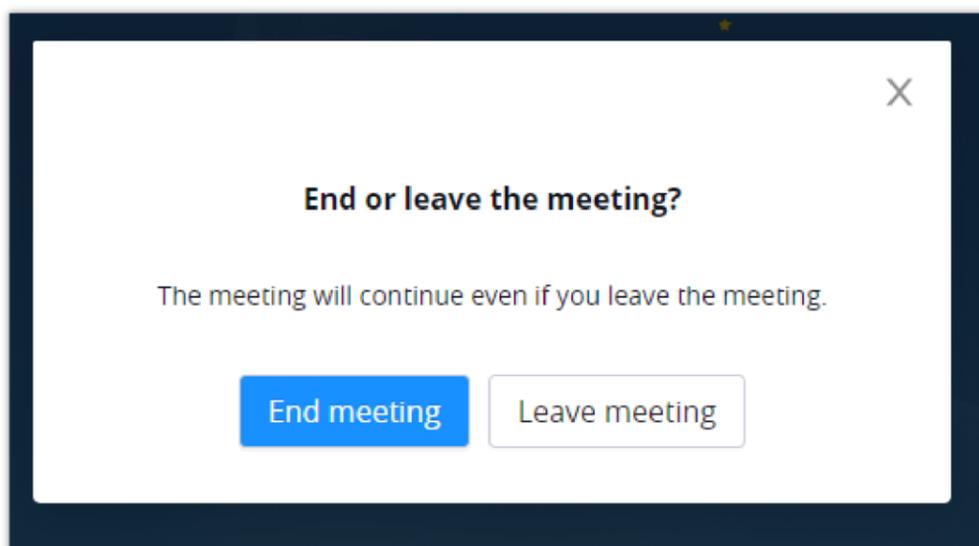
End Meeting as Moderator
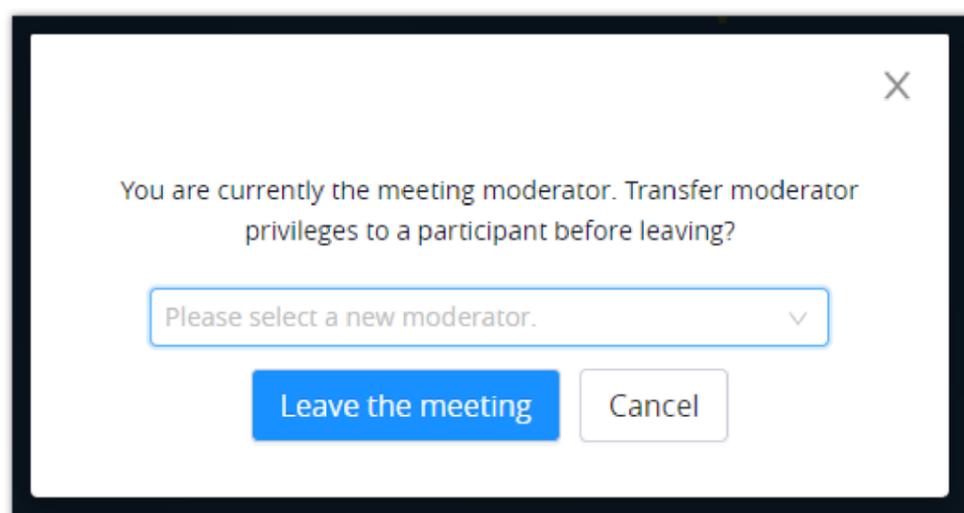
End Meeting as Moderator – Transfer Moderator Privileges

Note

- If there is only one participant in the meeting, and the total duration of the meeting reaches 30 minutes, the specific participant will be prompted whether to continue the meeting Create a group chat after successfully scheduling the meeting. Messages created during the meeting will be automatically synced to the group after the meeting.

- When the meeting duration is about to reach 12 hours and the meeting host is still in the meeting, the meeting interface of the host will be prompted whether to extend the meeting. The meeting host can click to extend the meeting for another 12 hours. The meeting can only be extended once. After another 12 hours, the meeting will be ended. If the meeting host is not in the meeting, the meeting will be ended when the meeting duration reaches 12 hours.

You can also end an ongoing meeting by going to **Meetings** then hover the mouse cursor over the meeting you would like to end then click on end meeting.
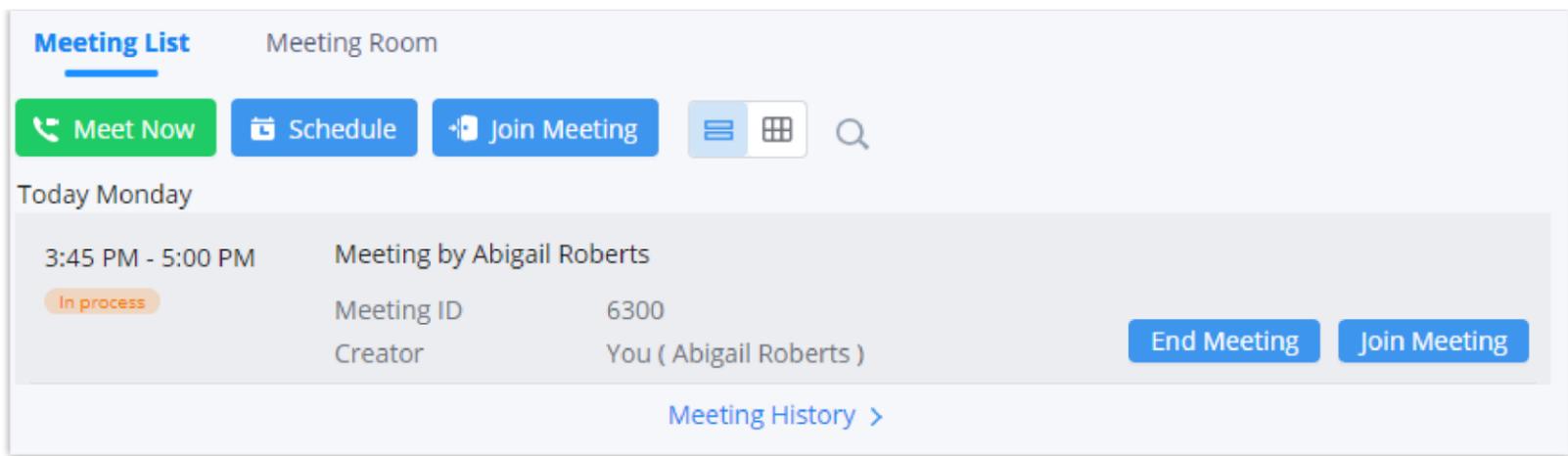
Meeting List – End Meeting

- **Edit a scheduled meeting**

The user can edit a meeting after it has been scheduled, to change its name, meeting room type, time, recurrence, password, and invitees. To edit a meeting, the user should navigate to **Meetings** tab on Wave, then hover the mouse cursor over the meeting that they want to edit, then select *Edit Meeting*.
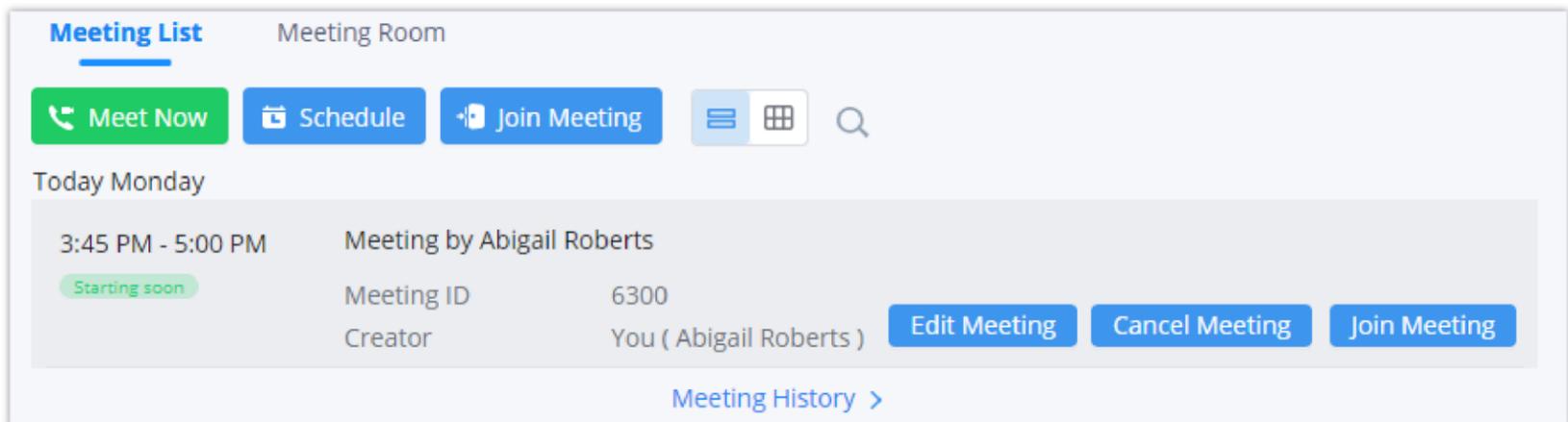
Meeting List – Edit Meeting

Note

Please note that once the meeting has started, it cannot be edited.

- **Cancel meeting**

The user can cancel a meeting after it has been scheduled. To do that, the user should navigate to **Meetings** tab and then hover the mouse cursor over a specific meeting then click on *Cancel Meeting*.
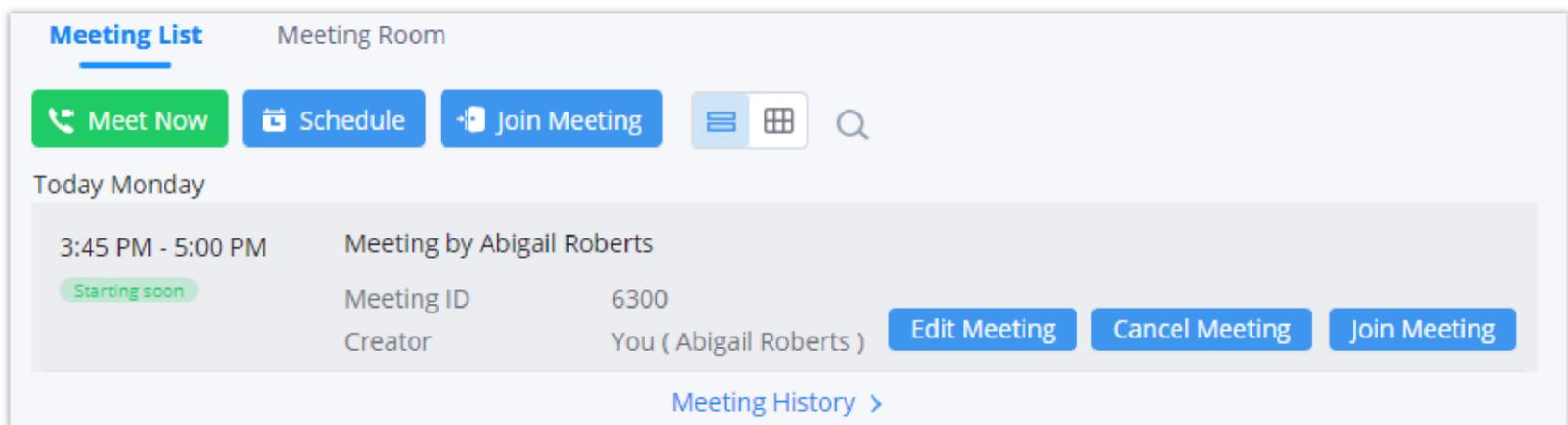
Meeting List – Cancel Meeting

Note

Please note that once the meeting has started, it cannot be cancelled.

Meeting Group Chat

Only the meeting organizer can create a group that consists of the same members that were previously in a meeting, in case they wish to continue the discussion through text chat. The user needs to navigate to the "Meetings" tab, then on the top right-hand corner, click on the three dots and select "Create and Forward Chat History".
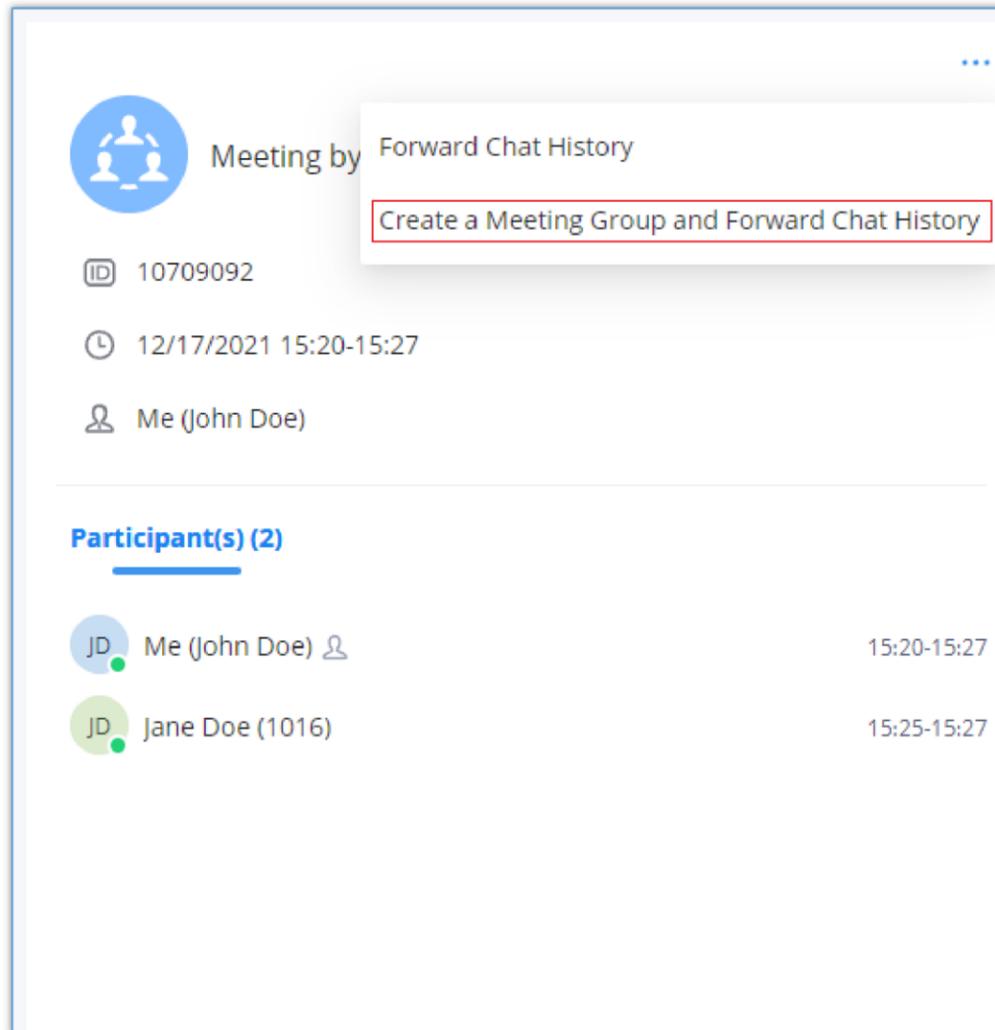
Create a Chat Group After The Meeting Has Ended

Note

Please note that only the host of the meeting can create the group chat and forward the chat history.

Once that's clicked, a window will appear with the members of the meeting selected, with the possibility to add any users that were not in the meeting:
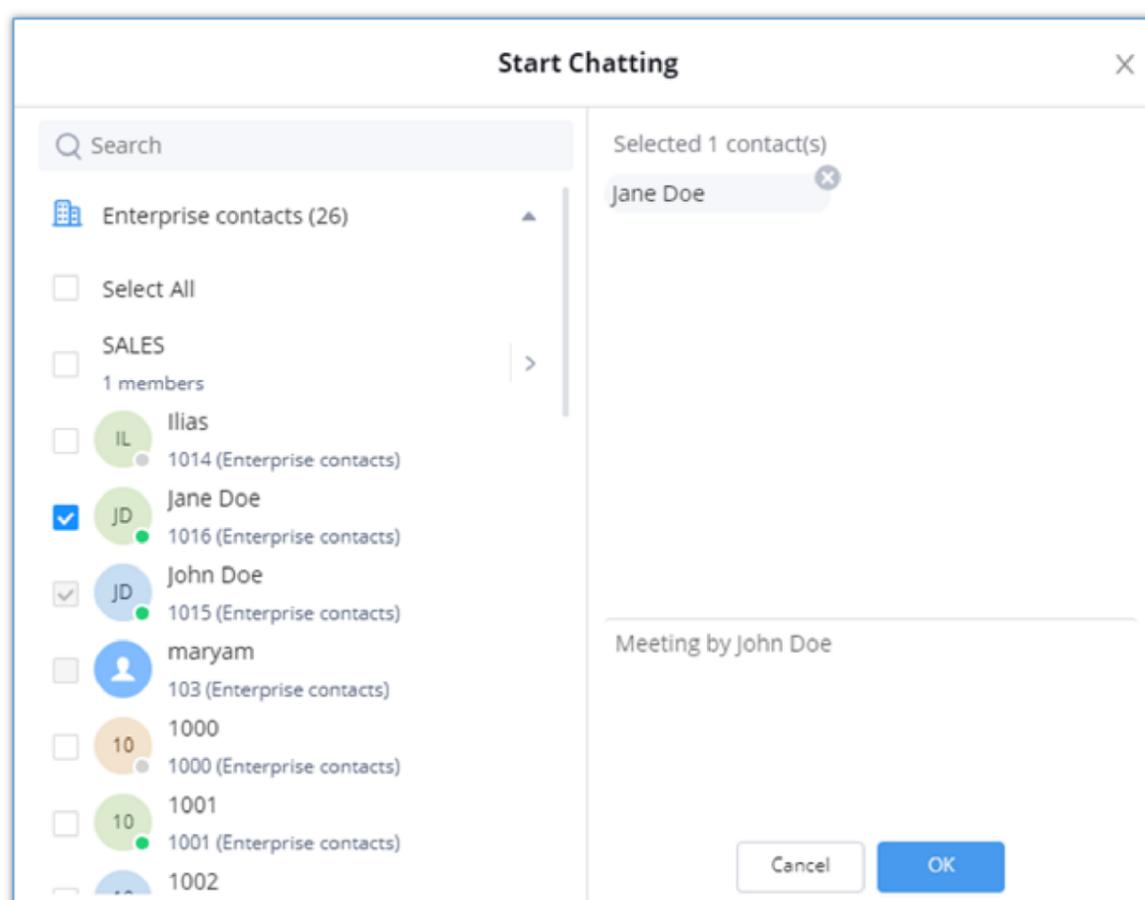
Choose the Participants

Press "OK" to create the group and forward the chat history of the meeting.

The group will be created, and the chat history will be displayed similar to the image below.
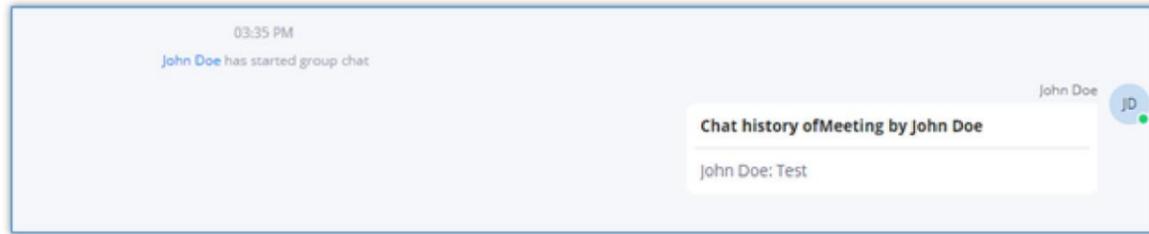
Forwarded Meeting Chat History

At any point the host of the group can relegate his/her role to another member by going to "Group Settings" as the figure below shows:
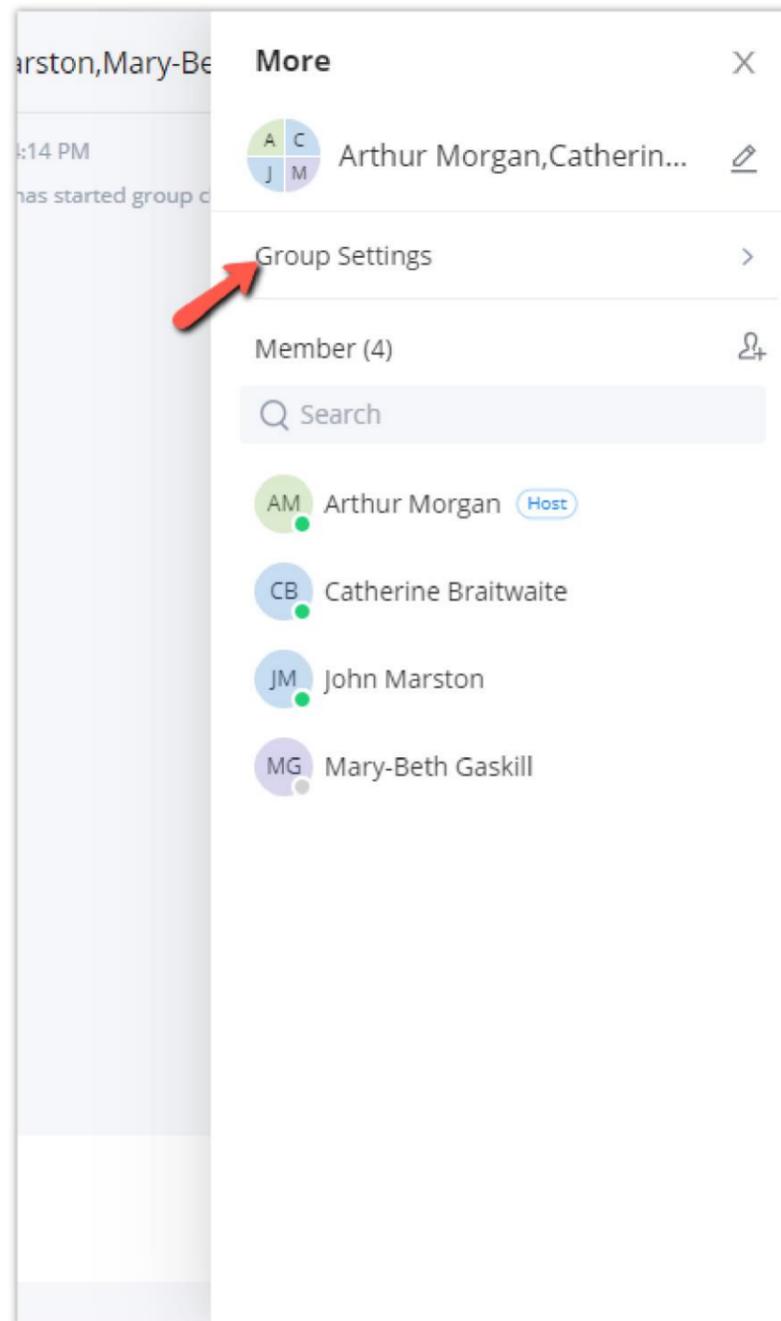
Group Settings

Then select "Change Group Owner":
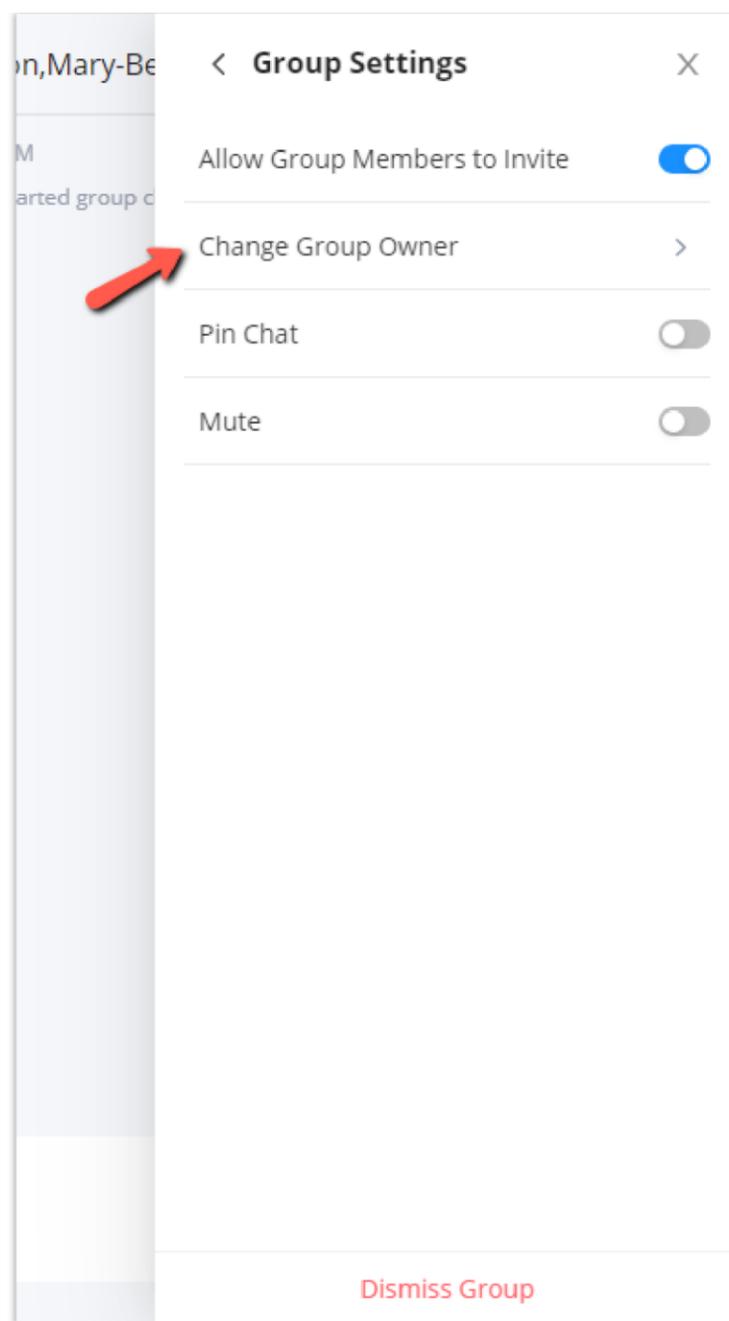
Change Group Owner

Then choose the new group owner among the existing members of the group.
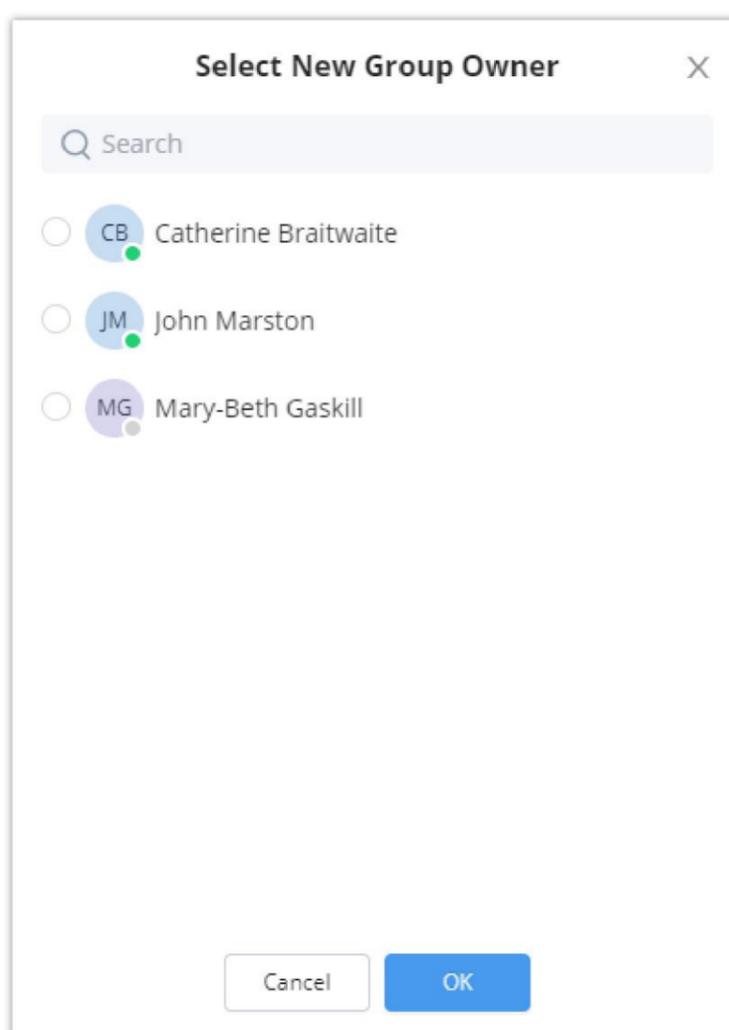
Select New Group Owner

Download The Chat History

During a meeting, the host can download the chat history at any point of time. To do that, the host needs to open the chat sidebar in the meeting screen and then click on the download button on the top right corner of the screen, as the screenshot below shows.
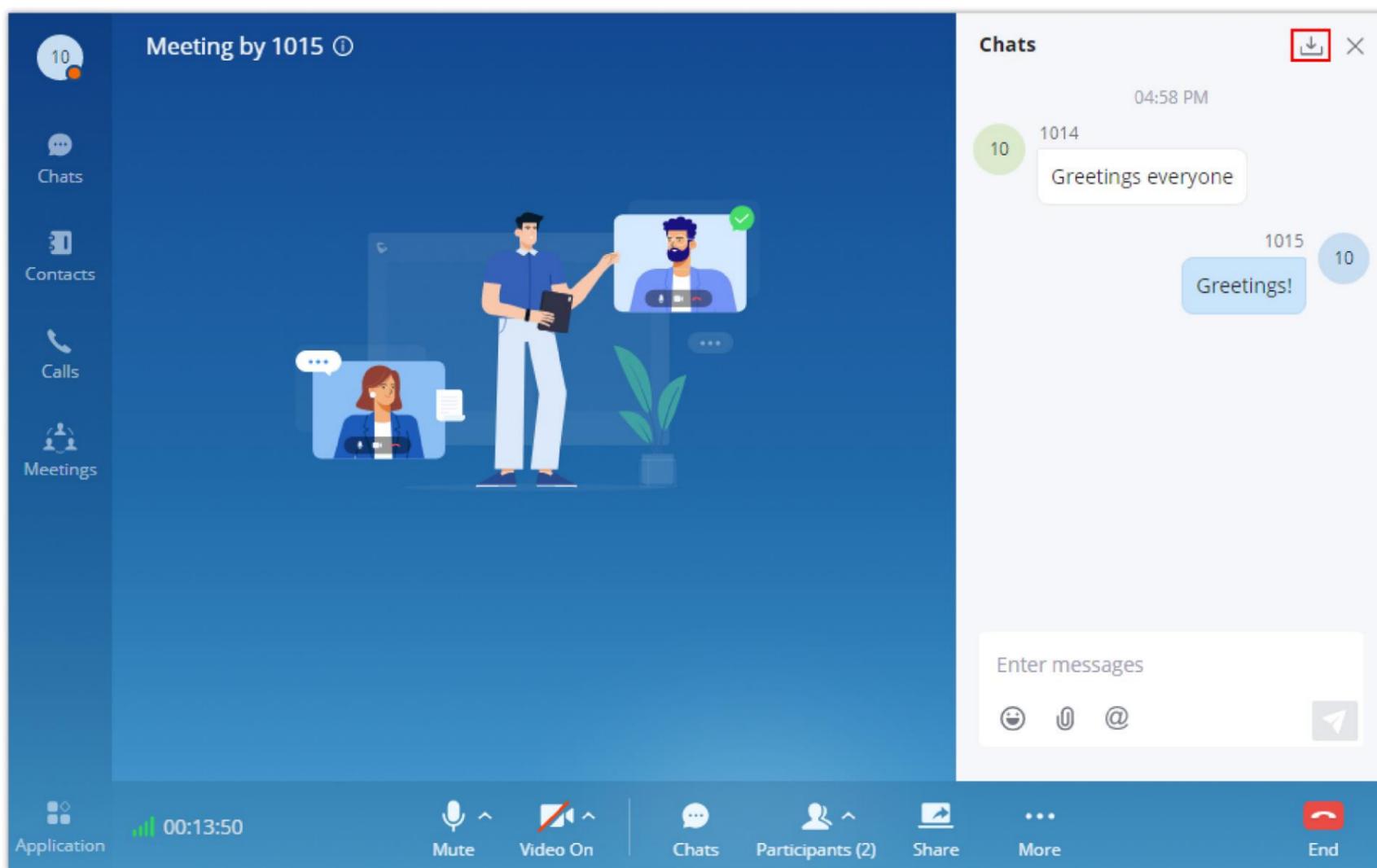
Download Chatlog

The chat history will be downloaded as a .txt file.

Note

Only the host is allowed to download the chat history.

If the host wishes to download the chat history after the meeting has ended, then he/she need to navigate to "Meetings" tab, then click on three dots on the top right corner of the window, and select "Download chat history"
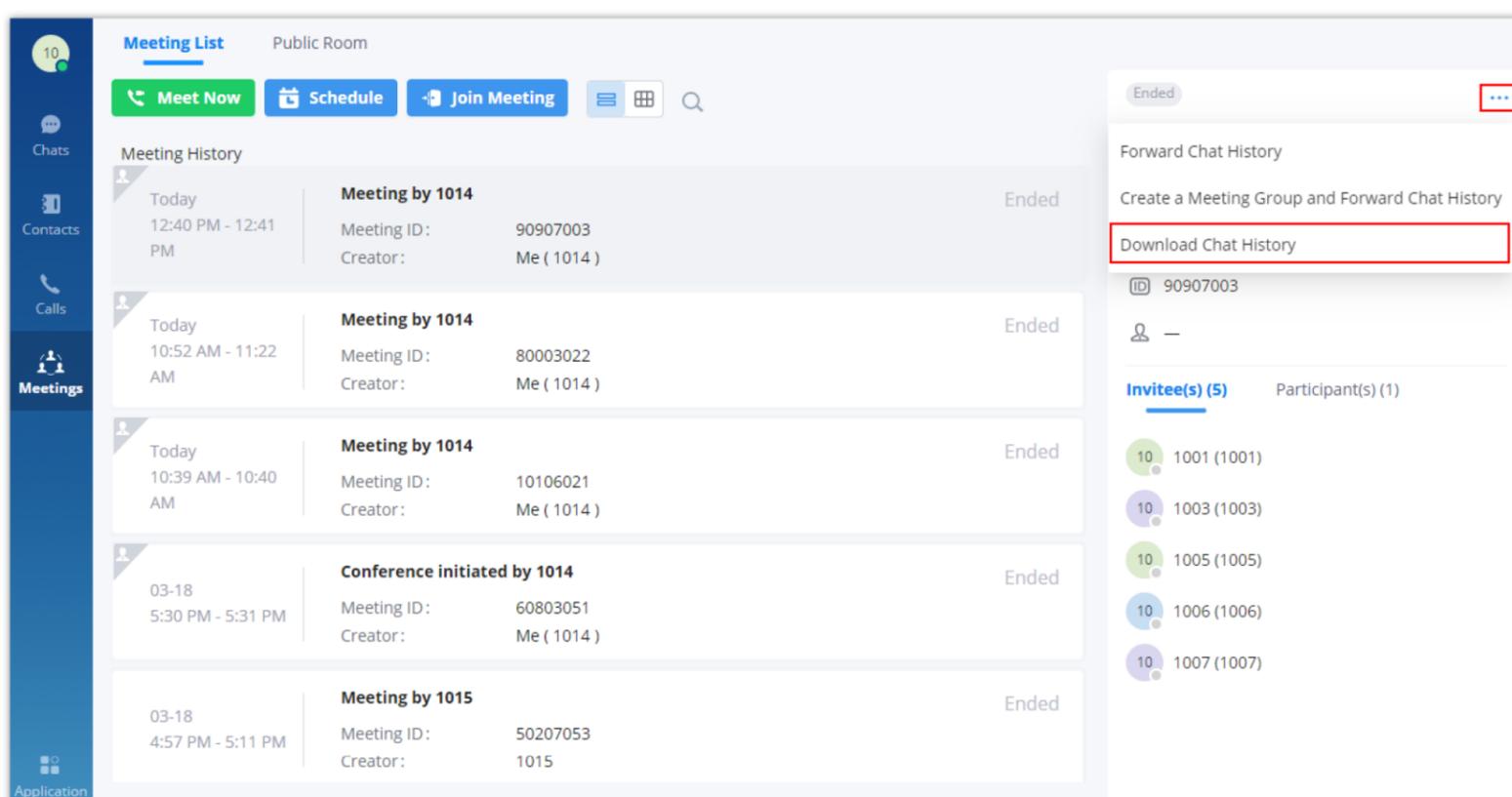
Download Chat History

MEETING MANAGEMENT

Schedule Virtual Meeting

Wave desktop users can schedule meeting after logging in with SIP extension number and SIP registration password. Click on Meetings on the left panel and select "Schedule Meeting" on the top. A new window to edit schedule meeting will be prompted.

Schedule Meeting

Schedule Meeting Options	
Subject	Configure meeting subject.
Conference Type	Select video or audio conference.
Meeting Room	The user can select to use a public meeting room. ● **Disable**: The meeting will use a random meeting number. ● **Enable**: The meeting will use the public meeting room number. The meeting number will be selected from the existing audio/video meeting room.
Time	Select the date and time for the meeting. **Note**: Please avoid time conflict on schedules in the same meeting room.
Recurrence	Choose when to repeat a scheduled meeting: ● **No Repeat** ● **Every Day**

	● **Weekly** ● **Monthly**
Password	Configure the password for participants to join a meeting. The password must be at least 4 digits.
Invitees	Defines the extensions or emails of the members to attend a scheduled conference. After adding one invitee, click on ENTER to confirm. **Note:** -If the invitee's extension does not have email configured on the UCM extension setting, the user can click on "(Add Email)" to add email for this invitee. -To remove an invitee, click on "x" for the invitee. The user can click the "Add" button to add the participants from contacts or groups.
Meeting Agenda	Set the agend of the scheduled meeting. (Up to 500 characters)
Host Settings	
Host	This is used to select a meeting host.
Email	This is the host email address.
Host Code	This is used to configure the host code. The password must be at least 4 digits.
Advanced Settings	
Time Zone	Defines the time zone of the scheduled meeting. The default setting is the time zone of the current client.
Email Reminder (minutes)	If configured, email reminders will be sent out x minutes before the start of the conference. **Note**: After editing the time of a single recurrence of a scheduled meeting, a cancelation email will now be sent out followed by a meeting update email.
Allow participants to invite	If enabled, any participant in the meeting can invite other parties.
Allowed to override Host Mute	If enabled, the participants will be able to unmute themselves after the host has muted them.
Auto-call Participants	If enabled, invited participants will be called when the meeting starts.

Create Meeting Group	Create a group chat after successfully scheduling the meeting. Messages created during the meeting will be automatically synced to the group after the meeting.

Schedule Meeting Specifications

After the meeting is scheduled, it will be listed in the meetings page. Meeting participants will receive email notification for the scheduled meeting. At the same time, the system will send the meeting assistant message to the invitees automatically.

Scheduled Meeting

Meeting Assistant Interface

If meeting schedule information is modified, participants will receive email update. An email reminder will also be sent to the participants at the configured email reminder time, If the meeting has been modified, or the meeting reminder will be sent to the participants through the meeting assistant.

To join meeting, the Wave user can click on the link in the email notification to join meeting directly, or Wave mobile app user can scan the QR code in the email notification to join meeting as well. The user can click the meeting assistant message to enter the meeting.

Schedule Onsite Meeting

The users can schedule onsite meetings by going to **Meetings** and clicking on **Schedule.**
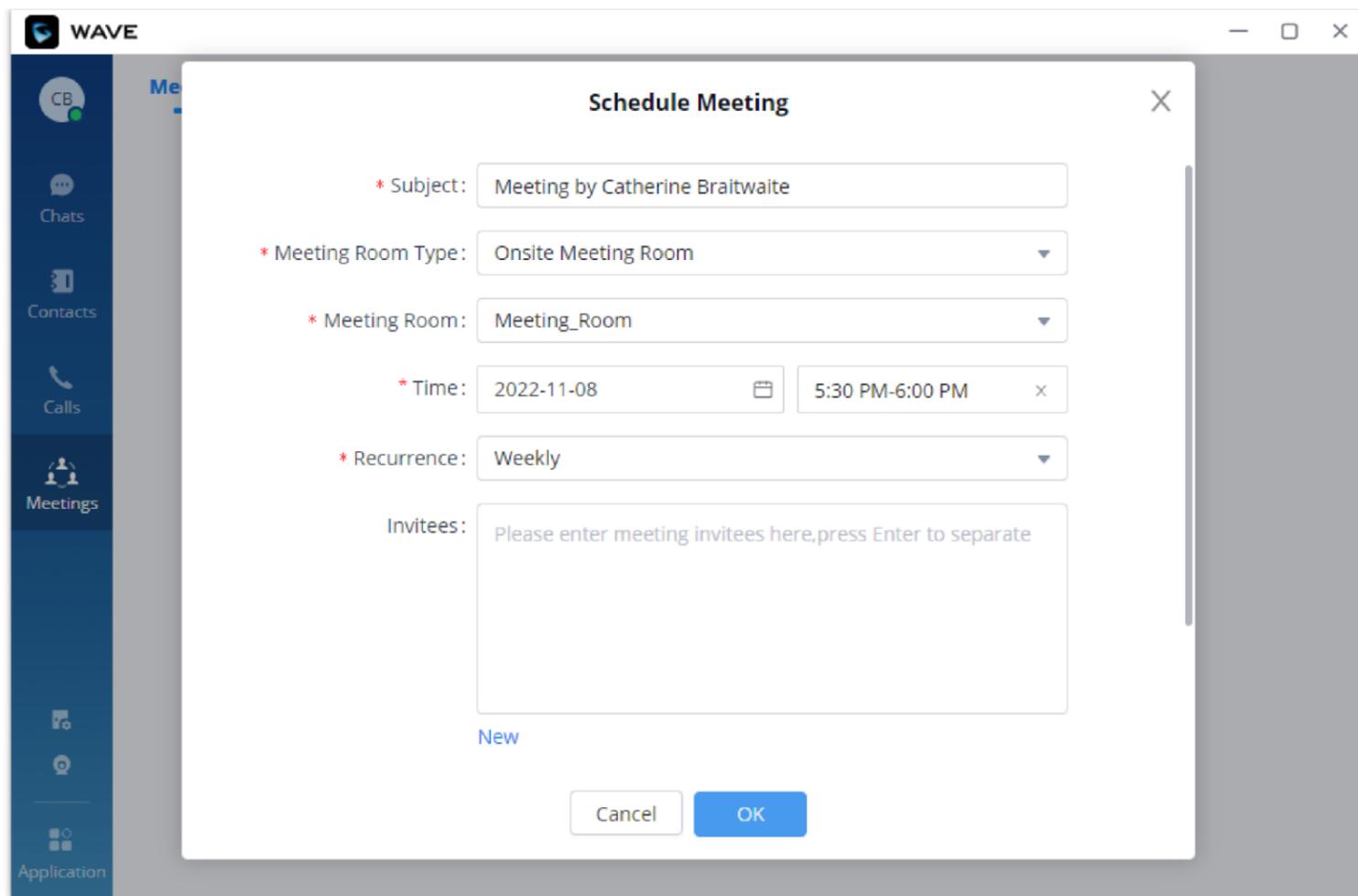
Schedule Onsite Meeting

Subject	Enter the subject of the meeting.
Meeting Room Type	Select Onsite Meeting room.
Meeting Room	Select the meeting room on which the meeting will take place.
Time	Select the duration of the onsite meeting.
Recurrence	Select the recurrence of this meeting. The options are *Daily, Weekly,* and *Monthly*
Invitees	Select the invitees of this meeting.

Meeting Agenda

When scheduling a meeting, the host can configure an agenda name to the meeting to be reminded of that purpose of that meeting.

Schedule Meeting Parameters

After creating the meeting, you can check the agenda in the meeting details tab. Please see the screenshot below:

Meeting Details

When the meeting starts, the user can click to view the meeting details to check the meeting agenda. Please see the screenshot below:

Meeting Agenda

Meeting List

To view all the scheduled and ongoing meeting, click on **Meetings** tab, then click on **Meeting List.** The following window will be displayed.

Meeting List

- **Virtual Meeting:**

Virtual Meeting Information

- **Onsite Meeting**

Onsite Meeting Information

Meeting Room

To view all the rooms that have been created for meetings (this includes virtual and onsite meeting rooms), navigate to **Meetings** tab then click on **Meeting Room.**

Onsite Meeting – Meeting Room

From this window, you can directly schedule meetings. Select a time interval to start scheduling the meeting.

PUBLIC ROOM

The user can click the "**Meeting**" menu on the left side of the Wave application main interface to open the meeting interface. The user can click "**Public Room**" tab on the top of the meeting interface to access to the list of the public meeting rooms in the current UCM. Please see the figure below:
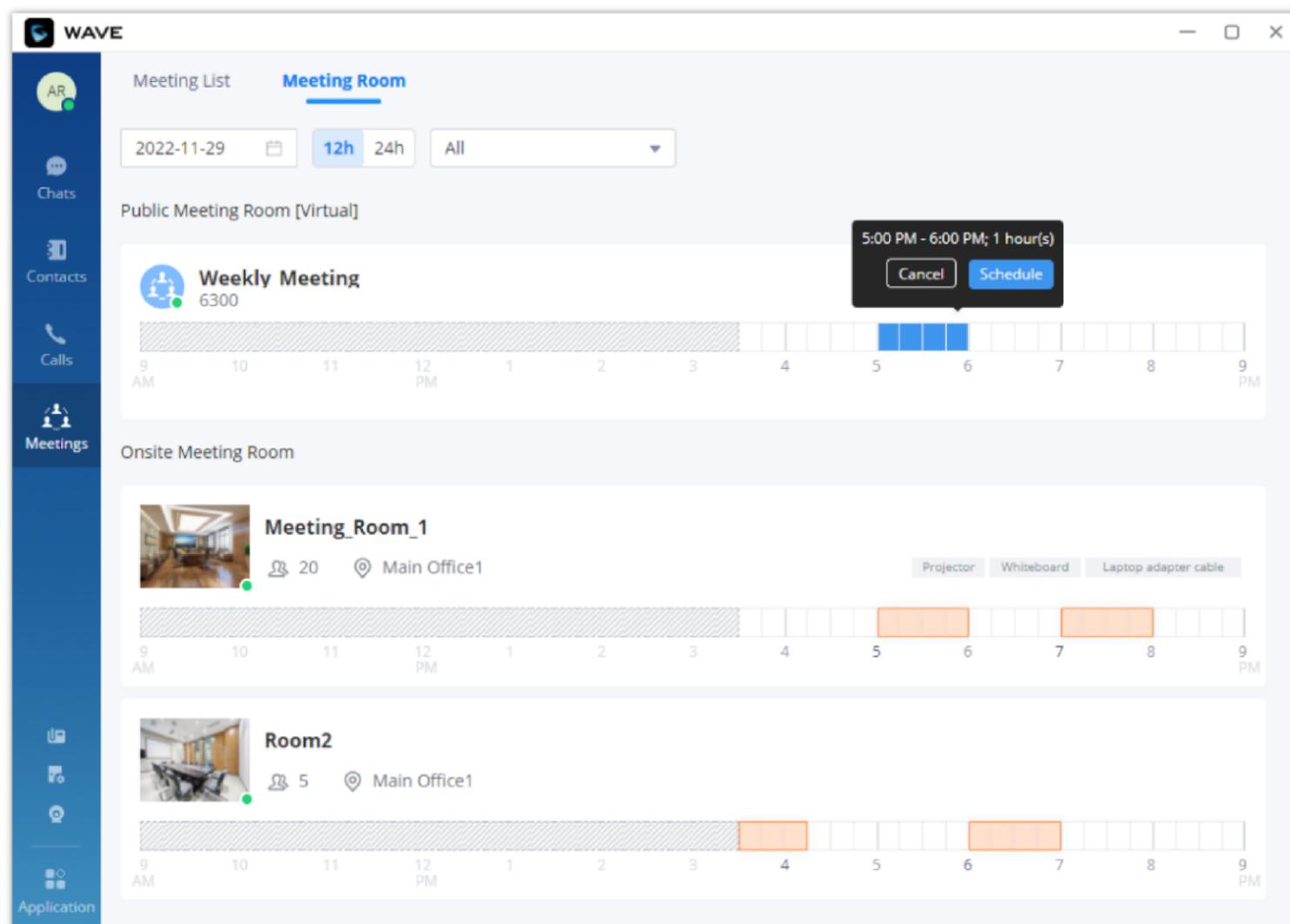
Meeting Room List

The timeline is displayed under each public meeting room. The blank field represents the vacant period, and the blue field represents the period that has been scheduled. It supports to click to switch the date ![2021-03-26] ![12h 24h] , and the user can also switch the time range displayed in the timeline by clicking "**12h/24h**".

The user can select a specific meeting room and click button ![Join Meeting] to access to the public meeting room. If there is a meeting in the current public meeting room, the user will be directed to the current meeting. If there is no meeting in the current meeting room, the user will join the meeting as a participant.

Edit/Cancel Meeting

Only the meeting creator can edit/cancel the meeting.

Step 1: The user can click the "**Meeting**" button on the left side of the main interface to access to the meeting list interface.

Step 2: Move the cursor to the wanted meeting and click "**Edit Meeting**" or "**Cancel Meeting**".
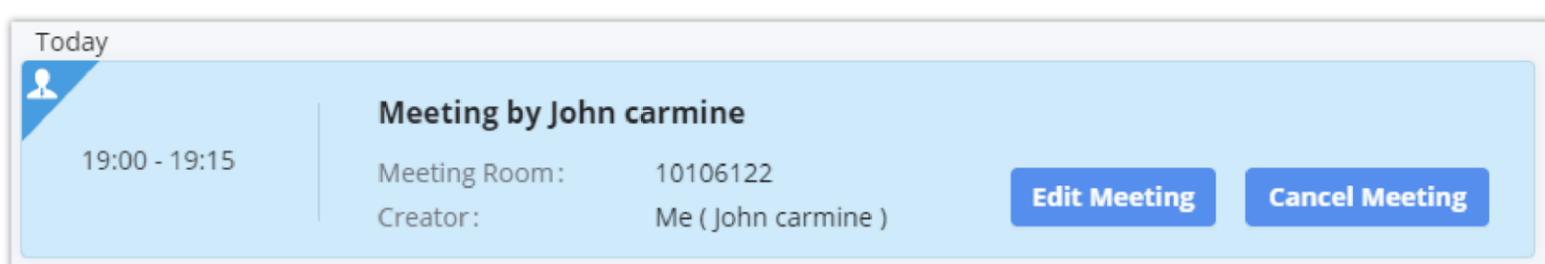
Edit/Cancel Meeting

Step 3: After editing/canceling the meeting, the user can click "**OK**" button to apply the changes, and the meeting modification notification will be sent to the invitees immediately.

> **Note**
>
> If the user edits any information of the meeting, including invitees, meeting property, if the user selects the email notification option, the system will send the emails to all invitees automatically.

Reschedule Meeting

For the "**Ended**" meetings, the user can reschedule the meetings from Wave application.

Step 1: The user can click the "**Meeting**" button on the left side of the main interface to access to the meeting list interface.

Step 2: Find the "**Ended**" meeting in the calendar.

Step 3: Move the cursor to the meeting and click "**Reschedule**" button or click the "**Reschedule**" button on the meeting details interface.
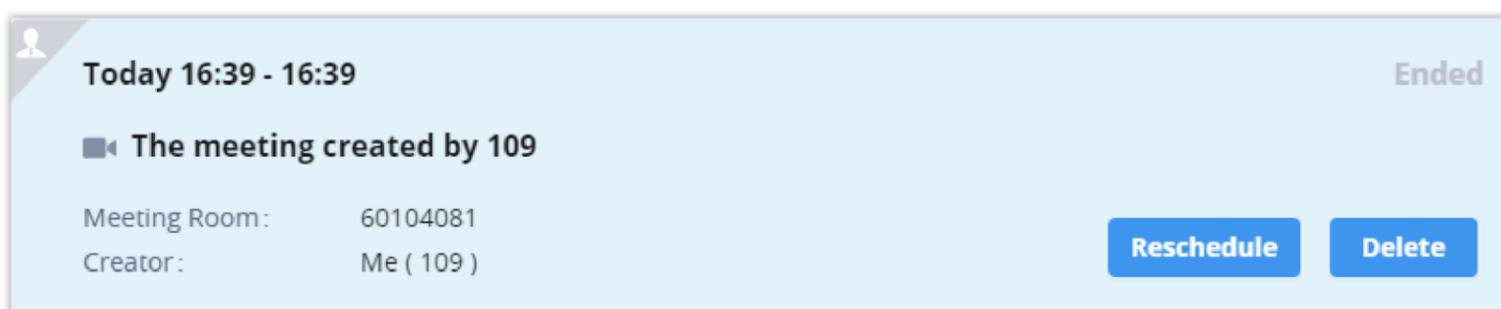
Reschedule Meeting

Step 4: The user will be directed to the meeting rescheduling interface, and the current meeting subject, invitees, meeting property information will be filled in the corresponding fields automatically.

Step 5: The user can click "**Schedule Meeting**" button to reschedule the meeting as a new meeting.

Share Meeting

In the meeting details interface, the user can click the share button ⬆ on the right upper corner to copy the meeting information, or the user can download the meeting QR code, and send the meeting information to the contacts through chat, email, etc.
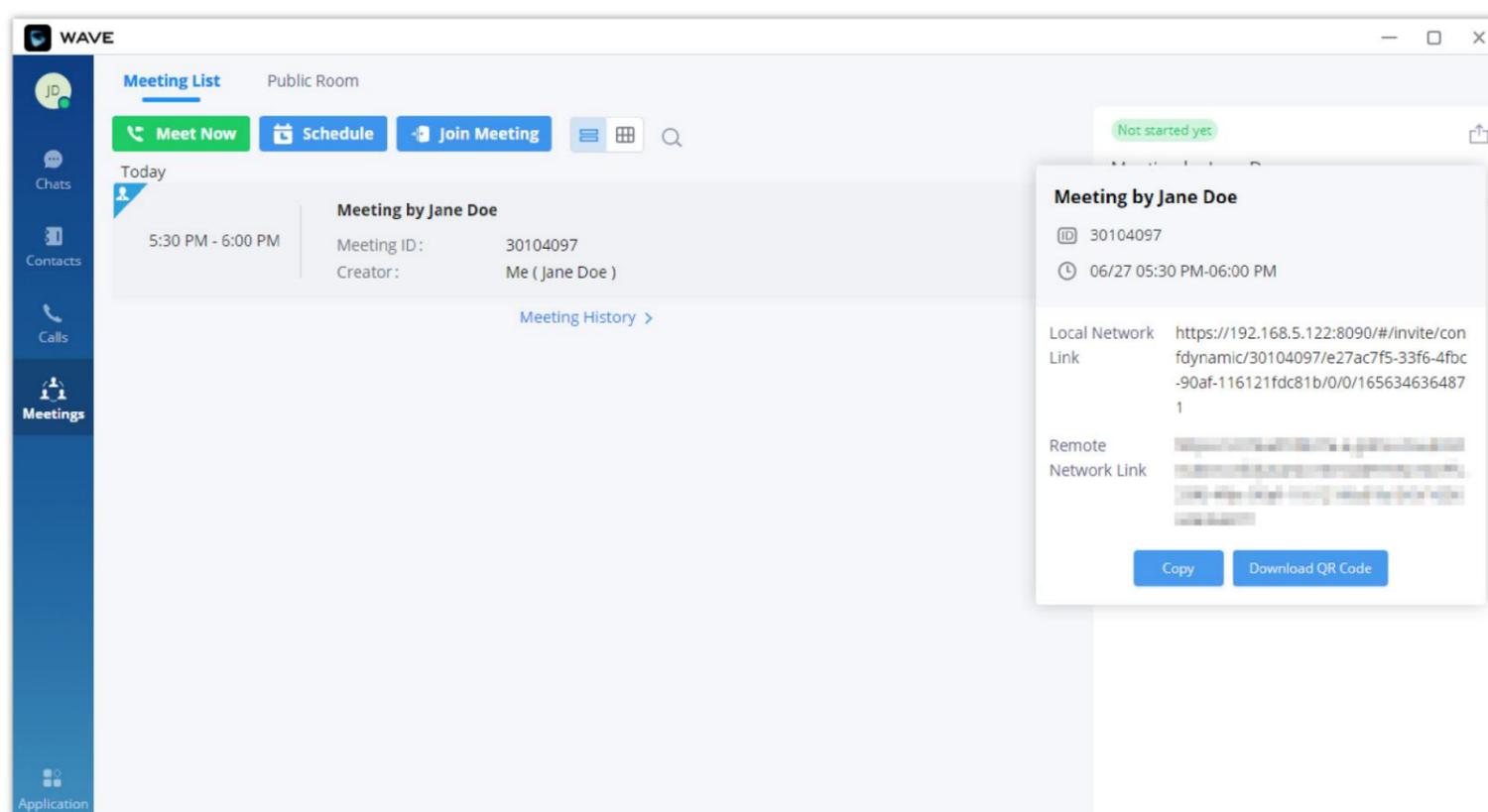
JOIN MEETING

Method 1: In the chat interface in Wave application, the user can click "**Meeting Assistant**" to find the meeting notification which will be sent to the invitees 10 minutes before the meeting starting time and click "**Join**" button to join the meeting.
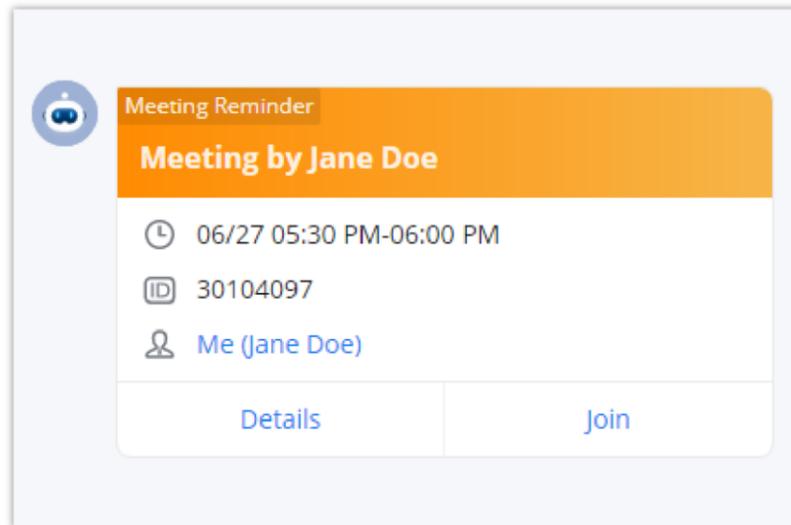
Join via Meeting Notification

Method 2: In the meeting list in Wave application, the user can find the meeting which has invited the user and click "**Join**" to join the meeting.

Method 3: In the "**Meeting Room**" list of the meeting interface in Wave application, the user can click to join the public meeting room directly.

Method 4: The user can enter the meeting number to join the meeting directly through dial panel.

Method 5: The user can join the meeting by click "**Join**" button in the meeting invitation email.

Method 6: The user can click "**Join**" button in the meeting invitation in the lower right corner of the Desktop to join the meeting.
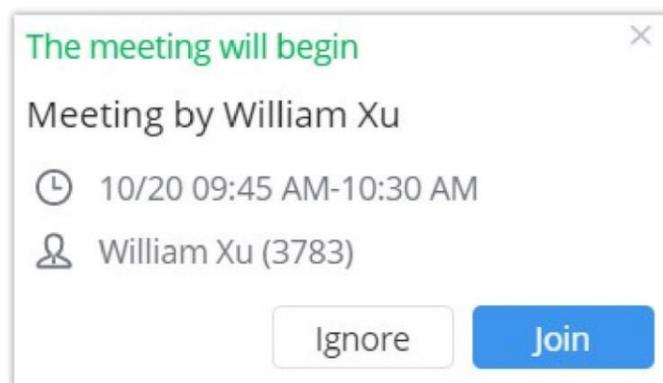
Meeting Invitation

Join Meeting via Link

If users do not have UCM extension to log in Wave desktop, the users can join meeting via link. The link can be obtained from the meeting invitation email or from the meeting organizer/participant who shares the link directly.

After the users join meeting via link, the users can change the display name after opening participant list and selecting the current name.

COMPLETE MEETING

On the meeting list, the meeting creator can click **Completed** button to end the meeting which is currently in progress. Then, the meeting will be ended directly.

Figure 74: End Meeting

VOICEMAIL

Users can click on the "**Calls**" menu on the left side of the Wave application UI and click "**Voicemail**" menu to view all voicemail of the current Wave account.

In "**Voicemail**" module, users can check all voicemail received by the account, including the common voicemail and urgent voicemail.

Users can play the voicemail, set the voicemail to read, and download/delete the voicemail.

Users can also dial to the contacts and send messages to the contacts from this interface. Please refer to the screenshot below for the voicemail interface:
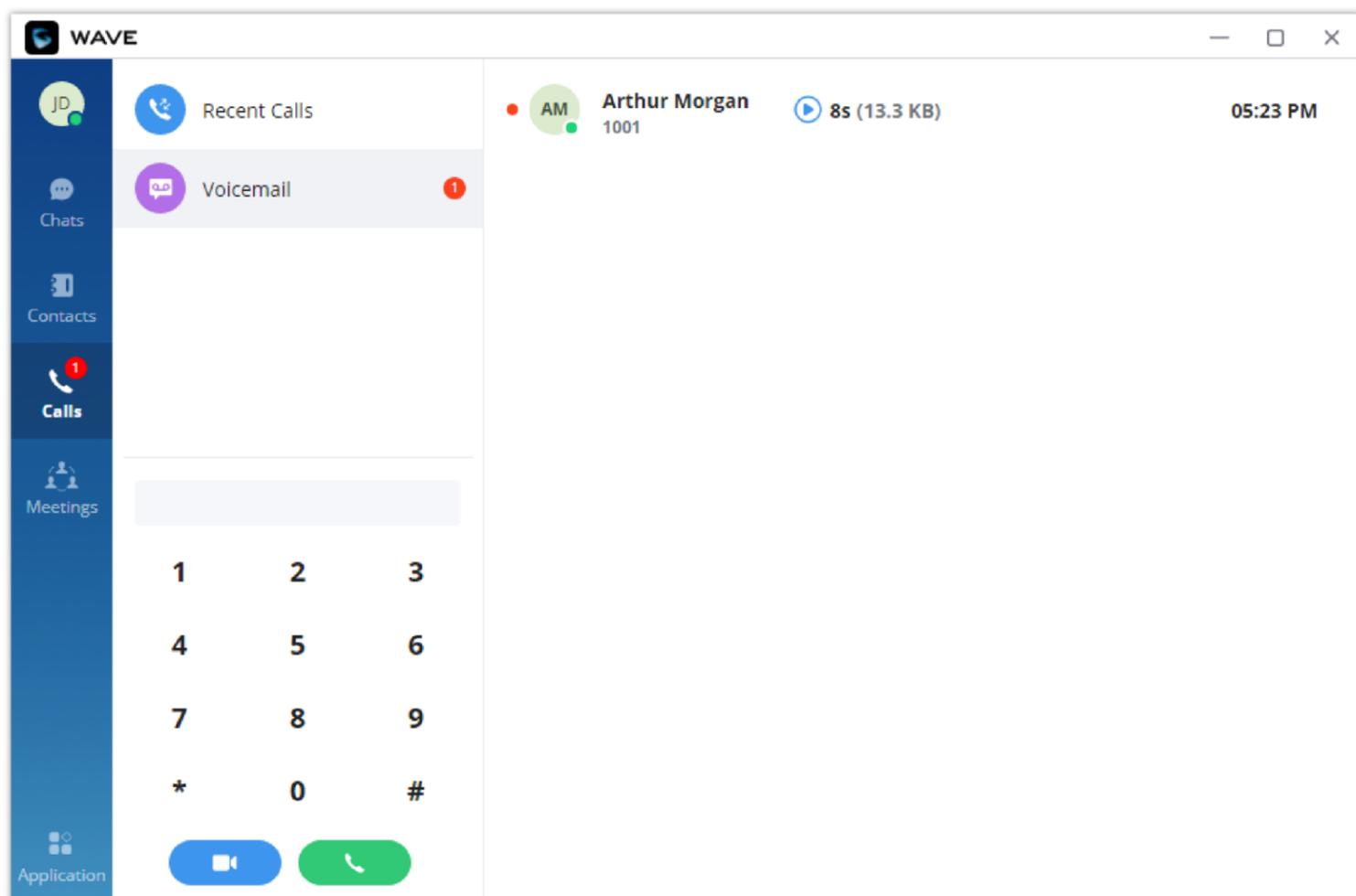
Voicemail Interface

The users can delete all the voicemails or select the ones to be deleted in batches. Please refer to the screenshot below.
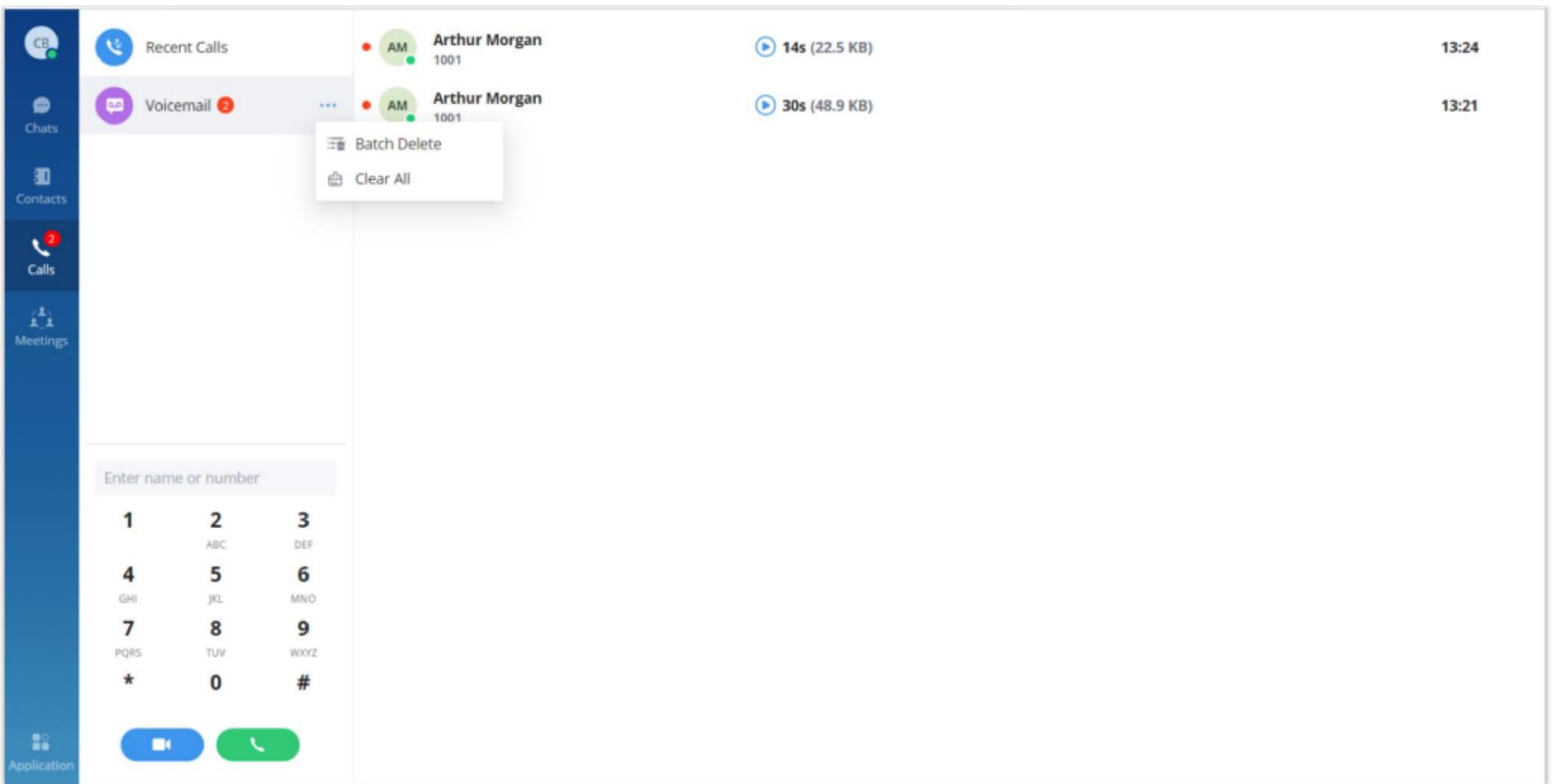
Users can click "**Application**" tab on the left side of the application UI and click on "**Voicemail**" module to access to the user portal interface on the UCM Web UI.
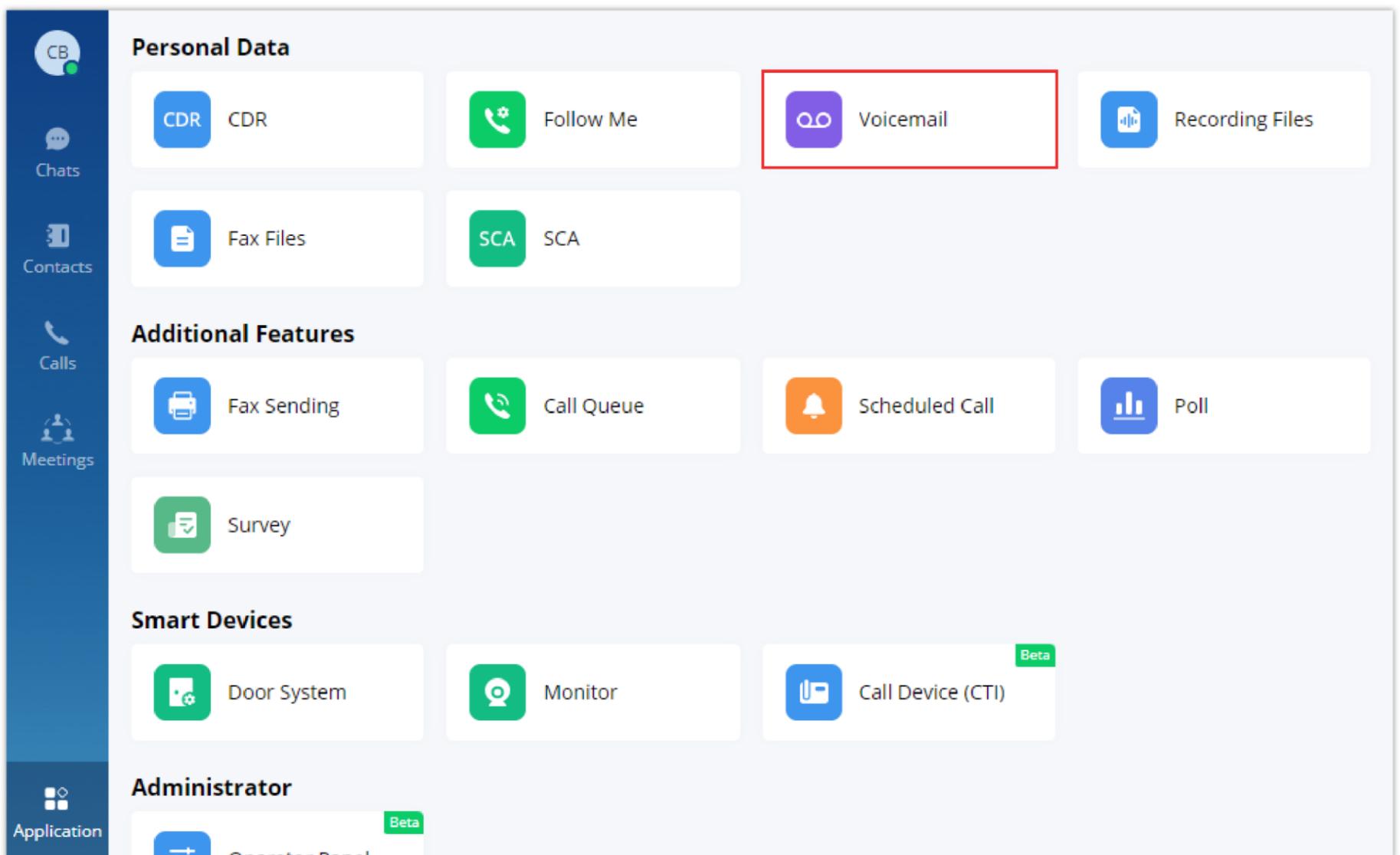
Application – Voicemail

Then the UCM user portal page will open on which the user can download or delete the voicemails received.

1. Open keypad on Wave desktop, enter the voicemail access code. For example, *98 is the default feature code on UCM for users to access voicemail box.

2. Follow the IVR from UCM to enter the voicemail box and password.

3. If the password is correct, users will be able to hear voicemail options and listen to the voicemail.

Note: The voicemail access code and voicemail password are pre-configured in UCM. Please contact UCM admin to obtain the voicemail access code and password.

CONTACTS

In Wave desktop, users can click "**Contacts**" menu on the left side to view all contacts, favorites, LDAP contacts, local UCM contacts, CloudIM contacts, view their presence, and call status. Users can also select the contact to view details and call the contact.

Search Contacts

Users can enter username or number to search contacts. On the search result, users can click to view contact details, click on   to initiate video call or click on   to initiate audio call.
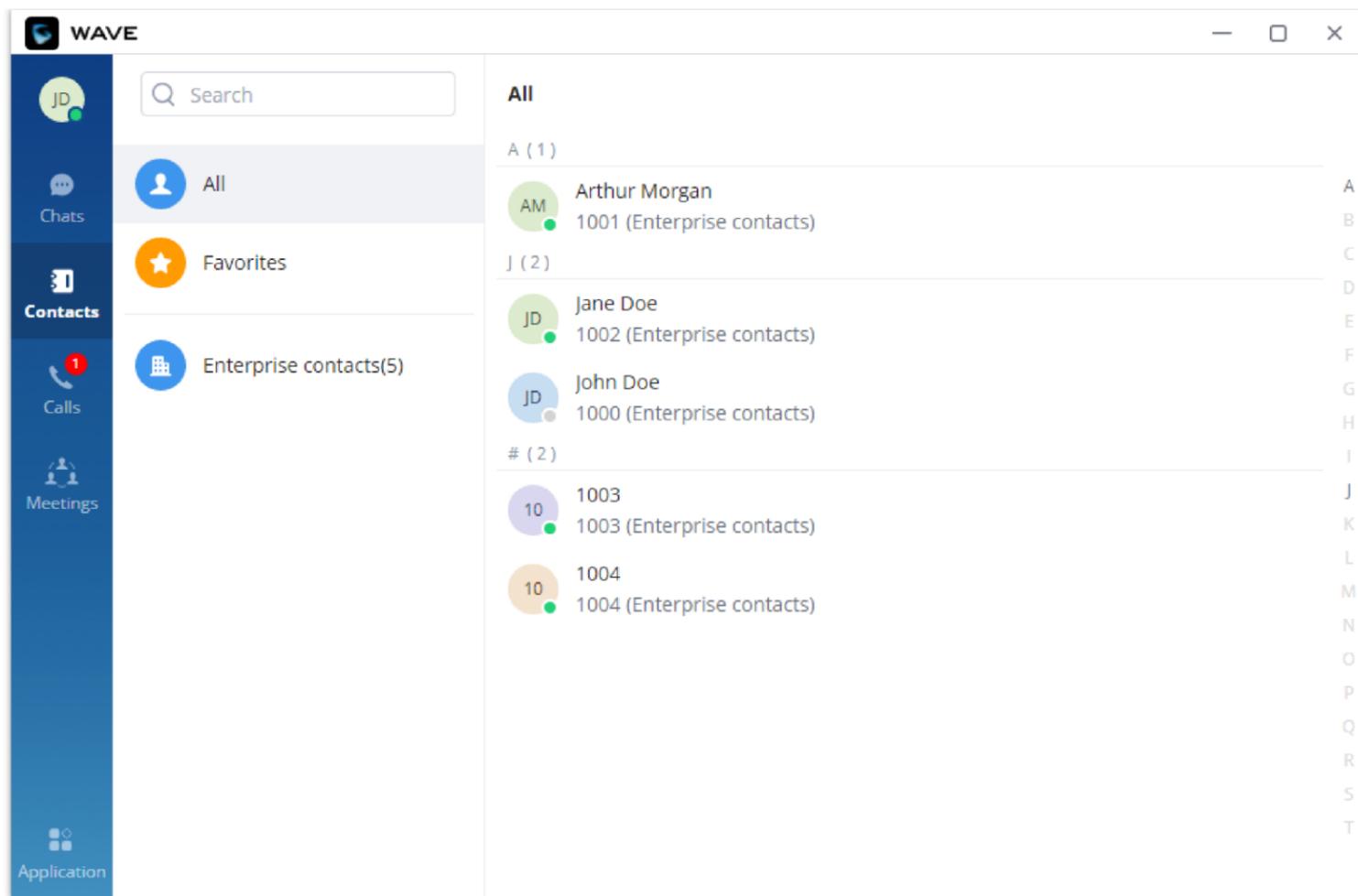
Contacts

The multi-level department structure in the contacts book is configured by the administrator of the UCM enterprise platform. If the CloudIM has been enabled, the Contacts module will display the contacts for other UCM devices.

CALL HISTORY

Users can click on "**Calls**" menu on the left side of the application UI and click "**Calls**" menu to view all call history of the current Wave account. Users can view call history, search in call history, view details or initiate calls from there.
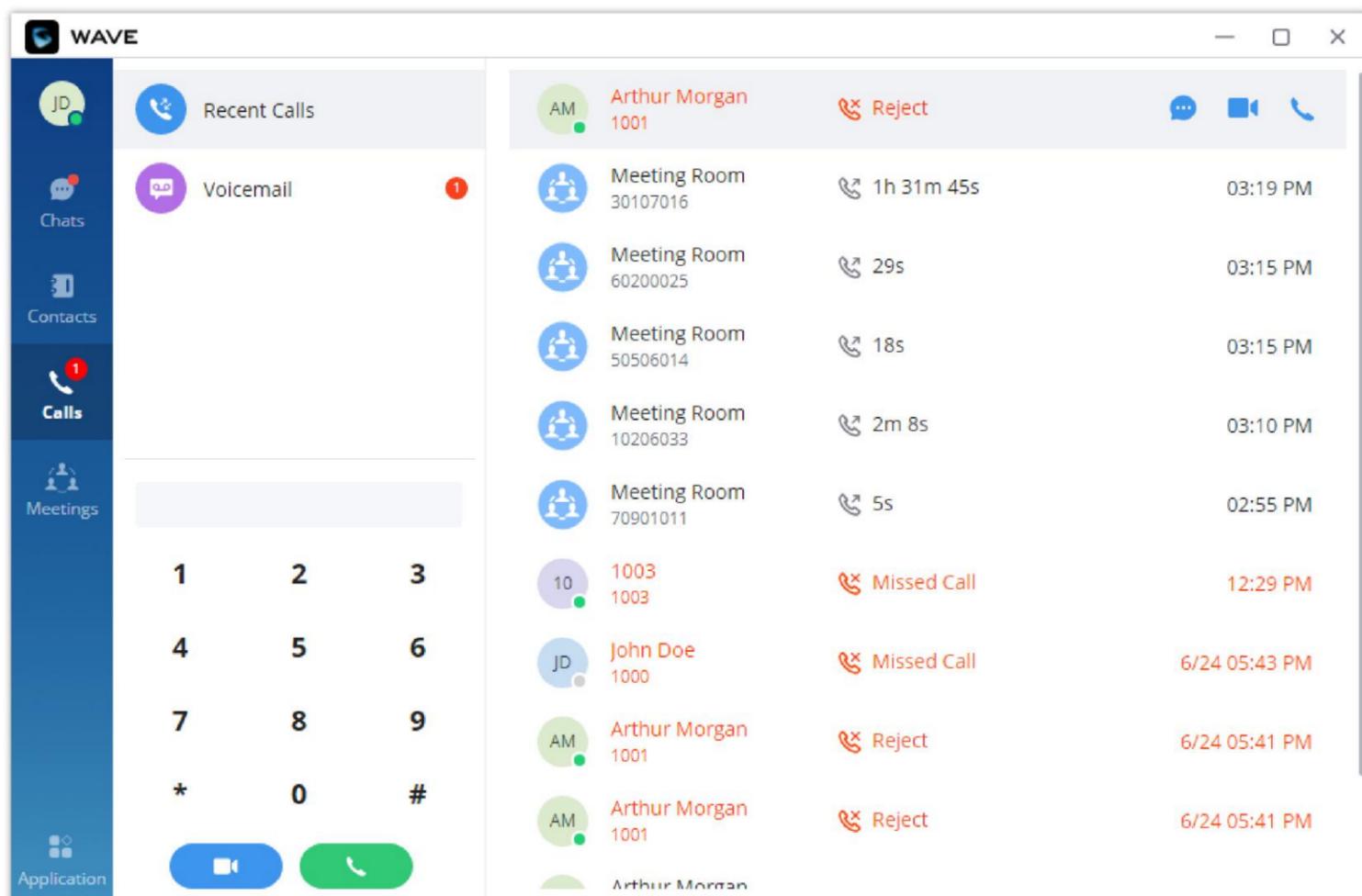
Recent calls

- The user can enter the number or username to search in call history.

- Scroll up and down to view more call history if existed.

- For the call history entry, click on 🎥 to make a video call and click on 📞 to make an audio call or ● for a chat.

- When a call history entry is selected, the details of this entry are displayed on the right side.

- Click on [🔵 Recent Calls ⋯] for more options:

    - "**Batch Delete**": To select multiple entries and delete them.

    - "**Clear All**": To delete all the call history entries at once.
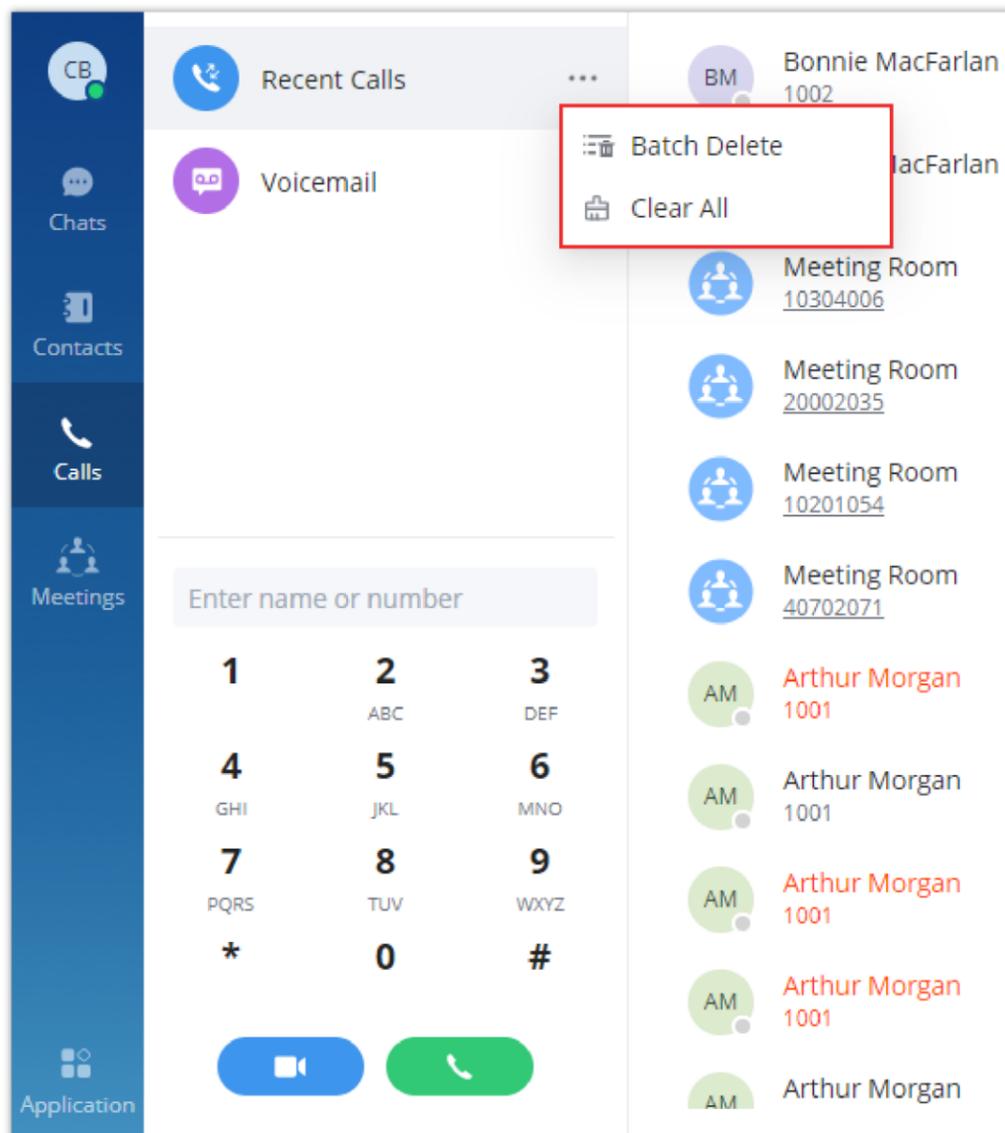
Call History – Batch Delete / Clear All

Call history can have the following type of calls:

- 🔽 : Incoming audio calls

- 🔼 : Outgoing audio calls

- ❌ : Missed audio/video calls and rejected calls

- ◢ : Incoming video calls

- ◥ : Outgoing video calls

SETTINGS

The Settings menu is on the left side of the Wave application main UI. Users can click the user icon to open the Settings menu, the menu includes Account Information, Account Settings, Call Settings, Audio/Video Device, Language, Launch on system startup option, Help and Feedback, Export logs option, About, Download mobile client, and Log out option.
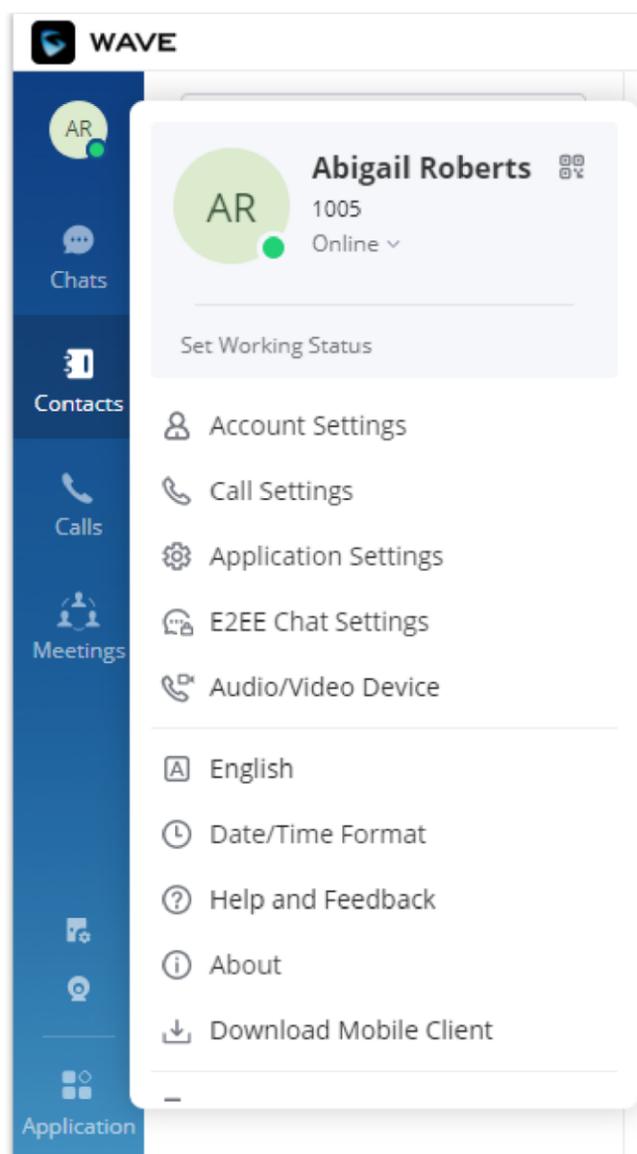
Settings Menu

Account Information

Account information screenshot is shown as follows:
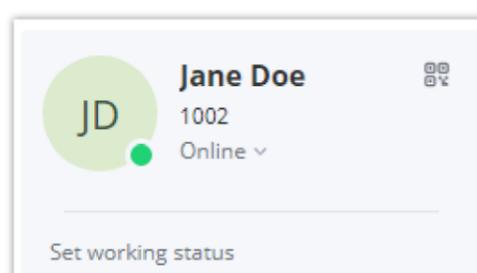
Account Information

- The Account Information interface displays the username, QR code, SIP number and personal status.

- Users can scan the SIP account QR code with the Wave mobile version to quickly log in the account.

- Users can set the personal status, which can be divided into account status and working status, and the status will be displayed in the contacts book and chat module.

Account Settings

Users can enter the Settings menu and click "**Account Settings**" to access to the account settings interface in the UCM Web UI, as the screenshot shows below:
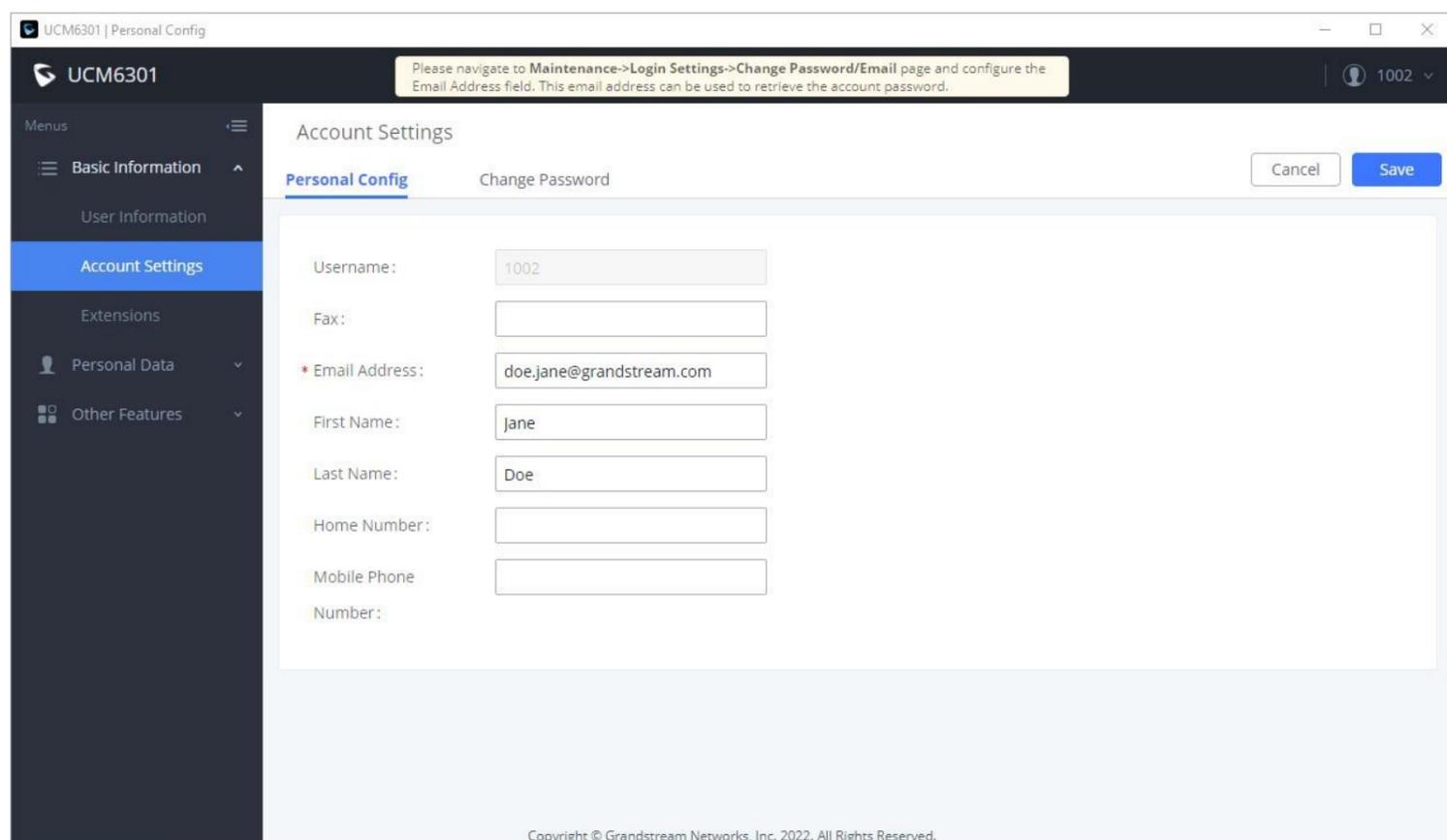
Account Settings

Users can click "**Account Settings**" option and users will be directed to the account settings interface in the UCM management platform, and users can go to "**Personal Configuration**" tab to fill in the personal basic information. Then, the updated information will be saved and applied to Wave application.

Call Settings

Users can enter the Settings menu and click "**Call Settings**" to access to the call settings interface in the UCM Web UI, as the screenshot shows below:
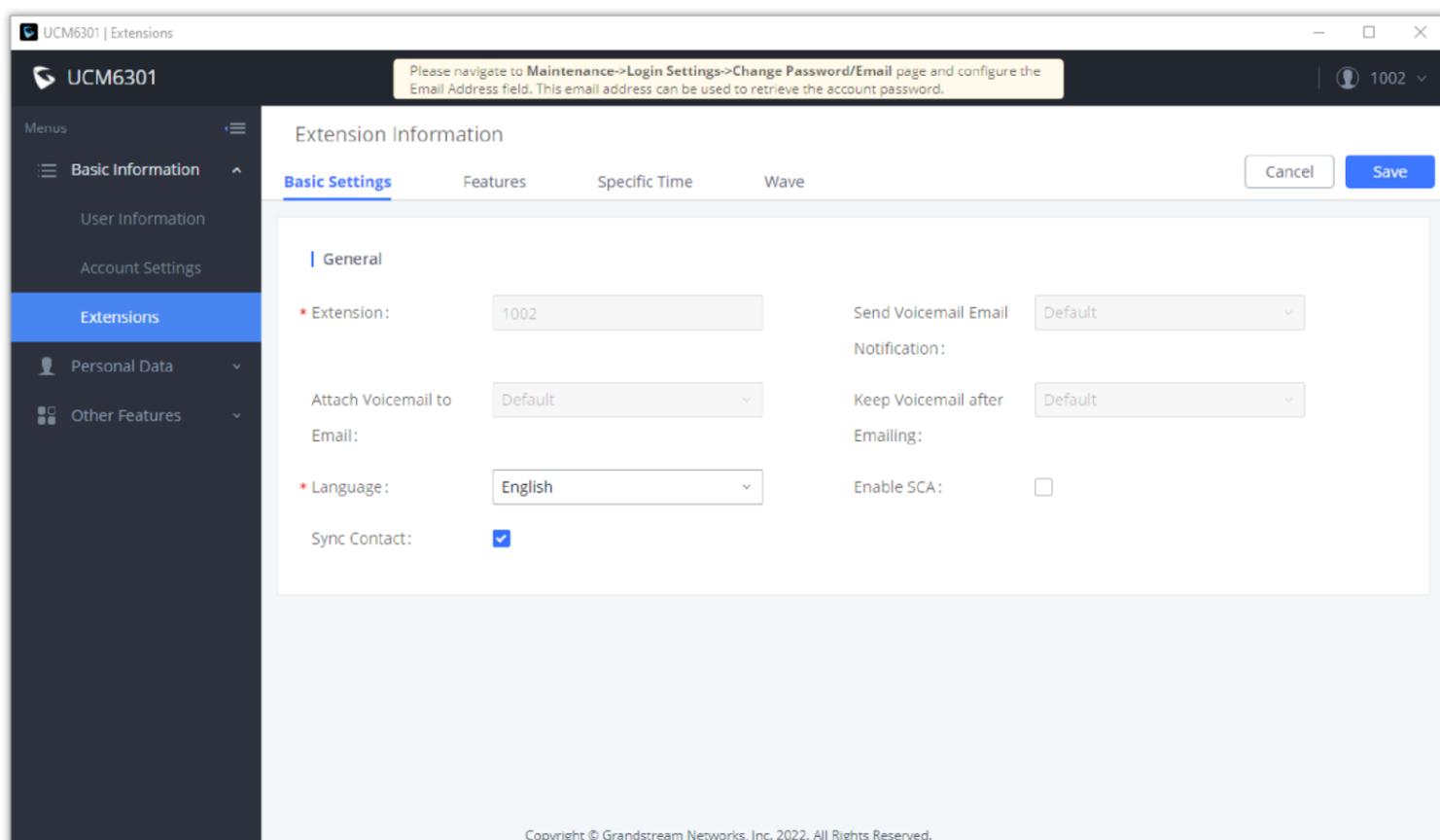
Call Settings

Users can click "**Call Settings**" option and users will be directed to the call settings interface in the UCM management platform, and users can go to "**Extension**" tab to set the SIP accounts settings. Then, the updated information will be saved and applied to Wave application.

Application Settings

Applications settings control the behavior of Wave Desktop, such as starting Wave Desktop when the operating system boots up, dial tone when using the keypad, keeping the app running when its window has been closed, whether to be notified about all the messages or only mentions in group chats and private messages, also, whether to play a sound with the notification, incoming calls, and meeting reminders.
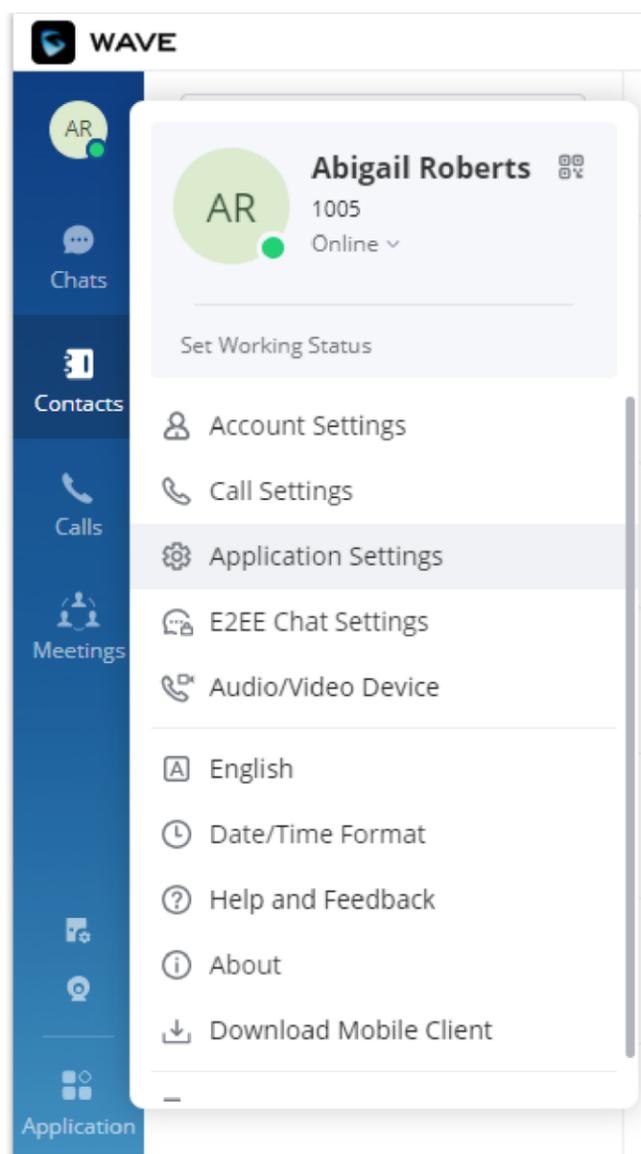
Wave Desktop Menu
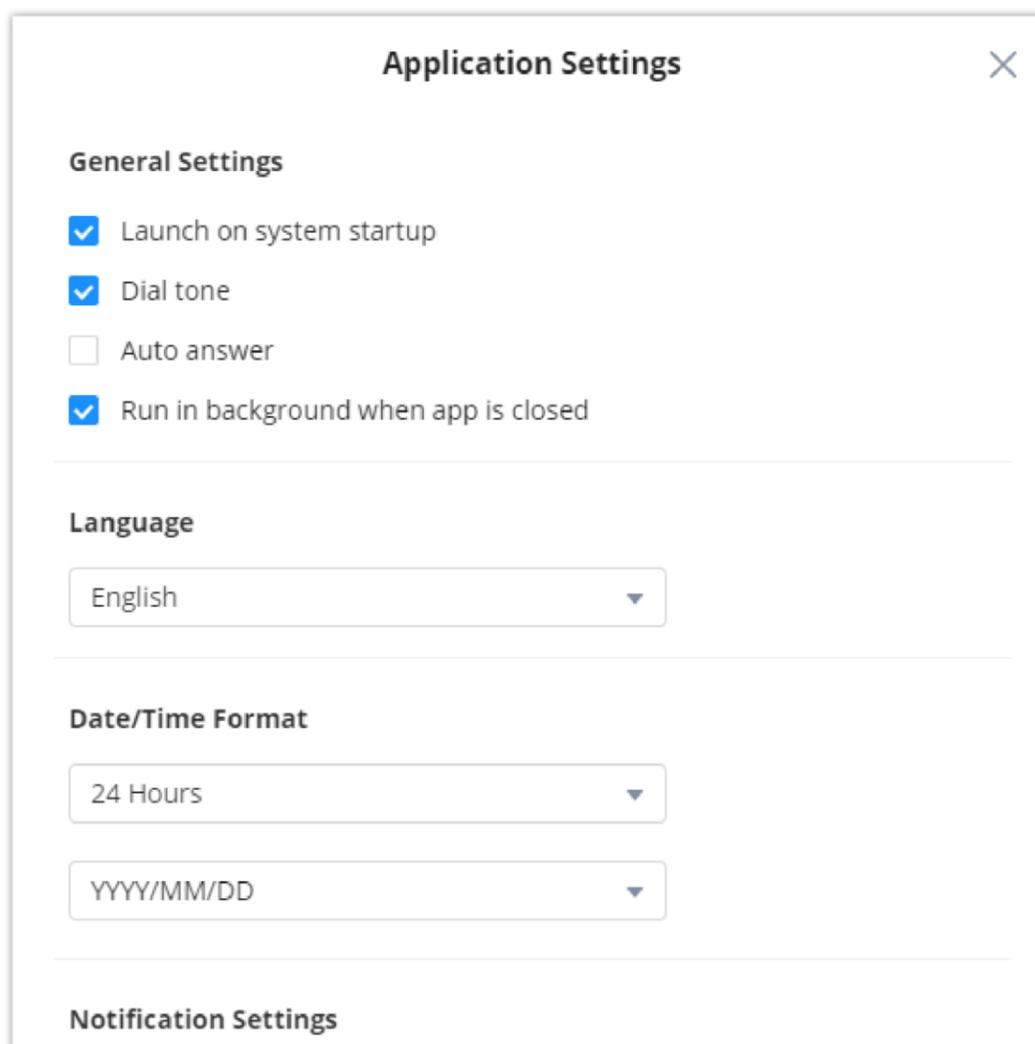
Wave Desktop Application Settings

- **General Settings**

Launch on system startup: Enable this option to have Wave launch automatically when the operating system boots up.

Dial tone: Enable this option to play a tone for each key when dialing a number using the number pad.

Auto answer: Enable this option to have Wave answer the calls received automatically.

Run in background when app is closed: Enable this option to keep Wave running in the background when Wave window is closed.

- **Date/Time Format & Language**

You can select the language, date and format according to your region.

Language and Time/Date Format

The languages supported by Wave are the following. English, Chinese, French, Spanish (Latin America), Spanish (Spain), Italian, Greek, Arabic, Russian, German, Polish, Portuguese, Vietnamese, Thai, Czech, Turkish, and Hebrew.

Note

Please note that language cannot be changed during a call.

- **Notification Settings**

Wave can be configured to notify the user based on the preferences set. The user can set the preference to be notified for all the messages exchanged in the groups he/she is part of, direct messages, mentions or none at all.

The user can also configure Wave to play a notification sound when they receive a message, when they received an incoming call, or when they receive a reminder of a meeting.

- **Dial Plan Settings**

Set the dial plan rules grammar for the number dialed. You can either enable the dial plan to have Wave take it into consideration, or to ignore completely when dialing numbers.

Here are the valid values:
1, 2, 3, 4, 5, 6, 7, 8, 9, 0, *, #, T,+, A-Z, a-z

Dial Plan rules:

- xx – Any 2-digit number
- xx+ – At least 2-digit number
- xx. – At least 1-digit number
- xx? – 1-digit or 2-digit number
- ^ – Reject
- T – Delay call after matching
- | – Or
- + – Add + to the number
- [3-5] – Dial the number 3, 4, or 5
- [147] – Dial the number 1, 4, or 7

- <2=011> – When the dial number is 2, it is replaced with 011

- Set \{x+\} – All all digital numbers to make outgoing calls

- "+character" – It indicates a fixed character. **Note:** it does not need to be added in front of * and #, and it cannot be added in front of T^,; and |

- Set \{X+\} Allow all 0-9, A-Z, a-z inputs with at least one character

Example:

- Example 1: {[369]11 | 1617xxxxxx} – Allow 311, 611, 911, any 10-digit call that starts with 1617 to make the outgoing calls.

- Example 2: {^1900x+ | <=1617>xxxxxxx} – It will refuse to dial numbers starting with 1900, and adding the prefix 1617 when dialing any 7-digit number

- Example 3: \{ax+\} – It will dial a number starting with a and followed by at least 1-digit

End to End Encryption Chat Settings

Sync Secret Key

If the user wants to use another device to log in and the local secret key is not up to date, the user needs to sync the secret key before using the E2EE chat feature. The user can synchronize the secret key by exporting it then importing it in the other device. Please follow the sections **Export a secret key** and **Import a secret key** below.

Export Secret Key

Wave allows exporting the privacy key from one device to another, to do that, please click on you profile picture on Wave Desktop interface to open Wave Settings menu, the click on **E2EE Chat Settings**. The following window will appear:
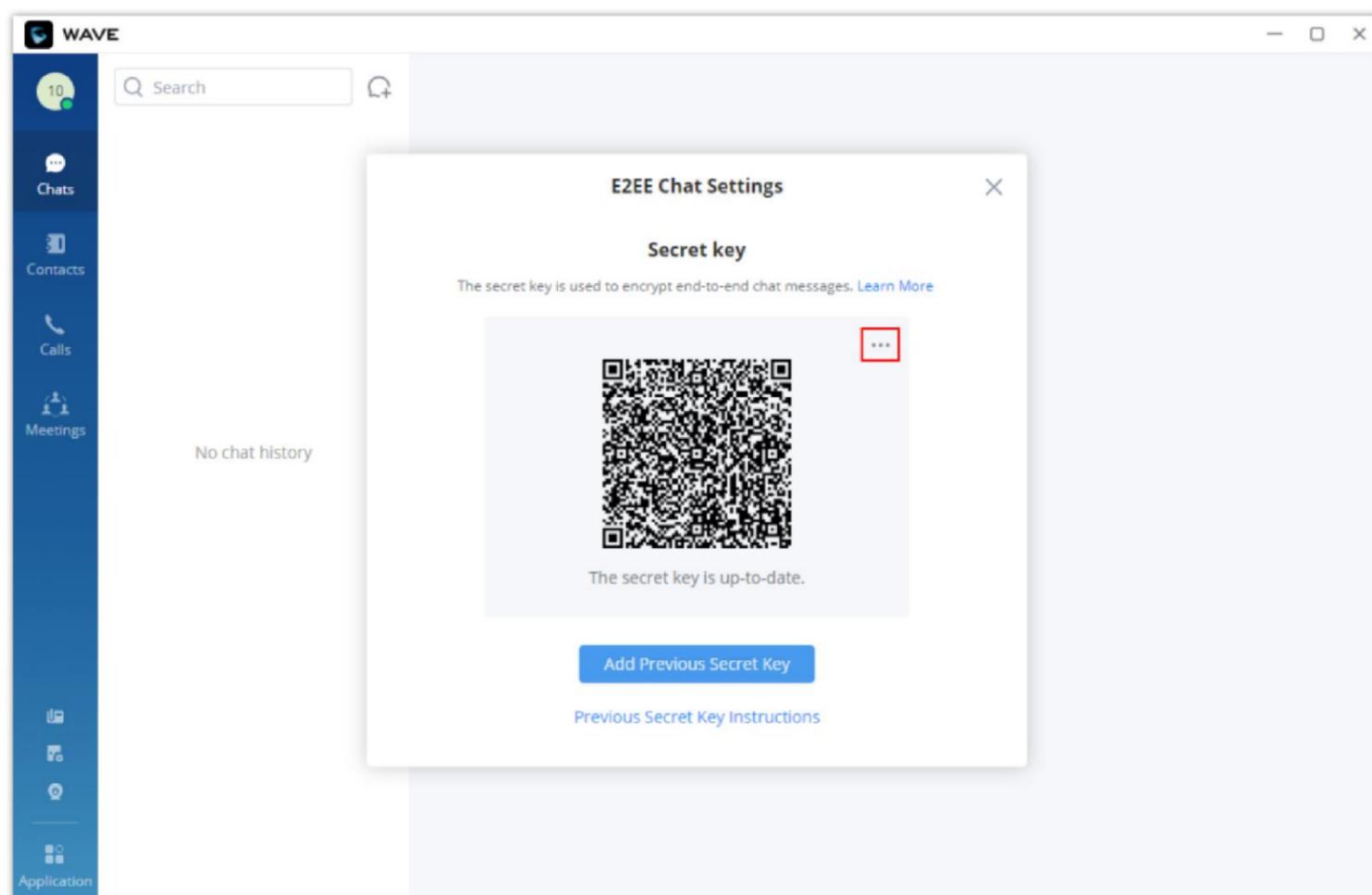
E2EE Chat Settings Secret Key

The select **Export Secret Key**
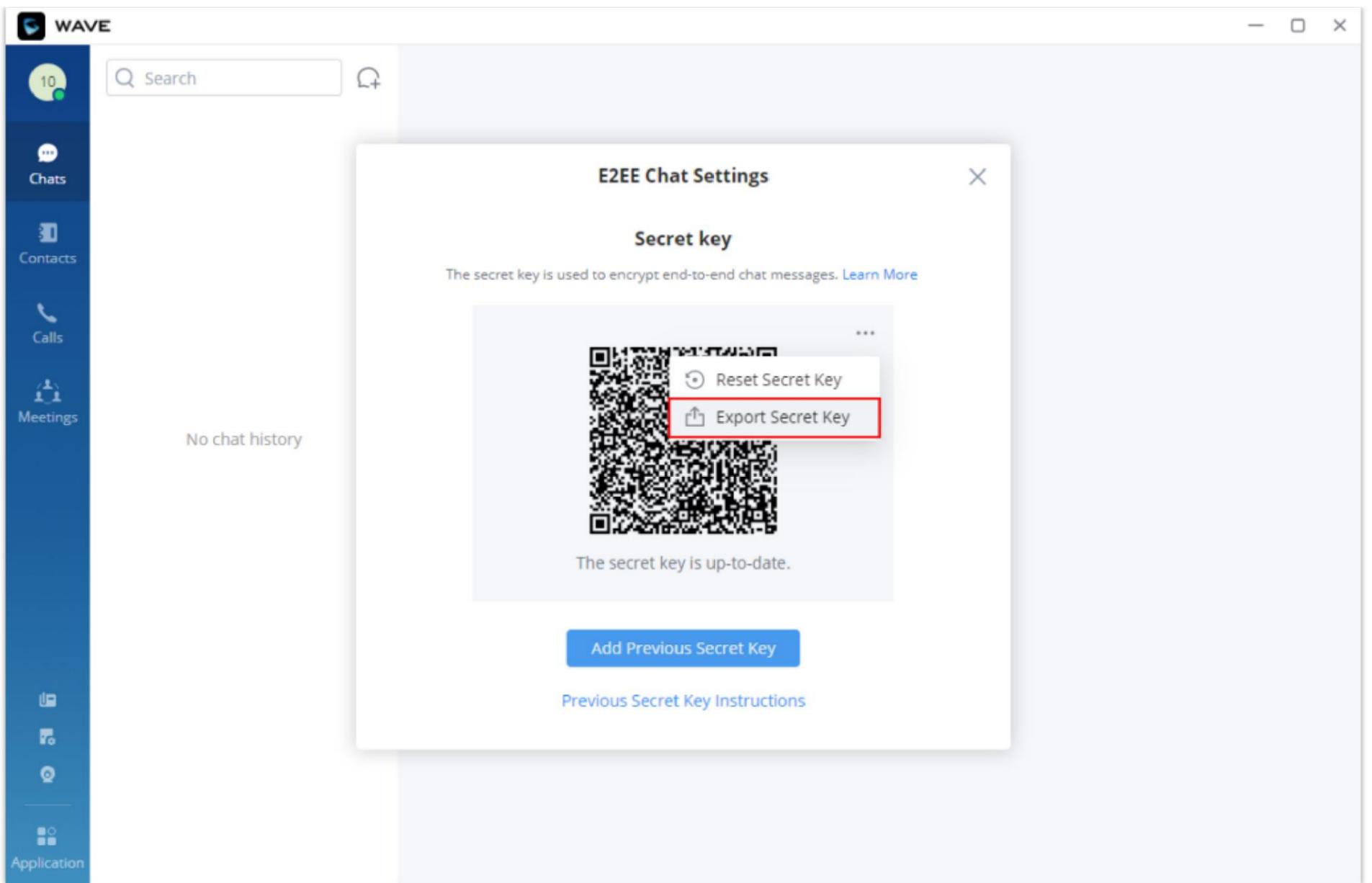
Export Secret Key

Then select the directory where you want to save the key file, then click **Save**.

Add Previous Secret Key

To import a secret key, click on **Add Previous Secret Key** as the screenshot below shows
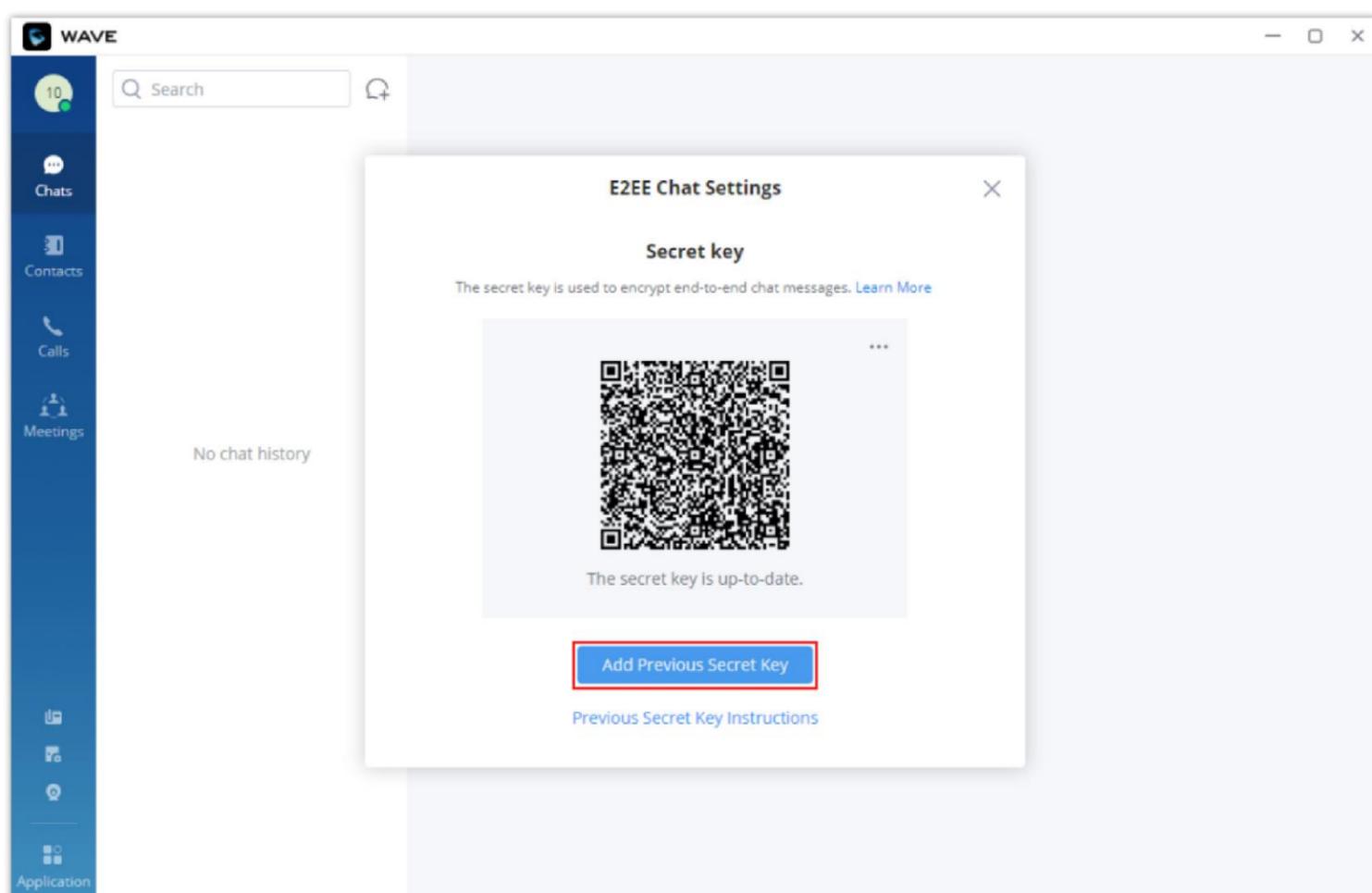
Add Previous Secret Key

Select the secret key from the location where it is stored, then click on **Open,** and the key will be imported to Wave Desktop.

Reset Secret Key

To reset Wave end to end encryption to the initial key, open E2EE Chat Settings, click on the three dots on the top right side of the key window and then select **Reset Secret Key**.
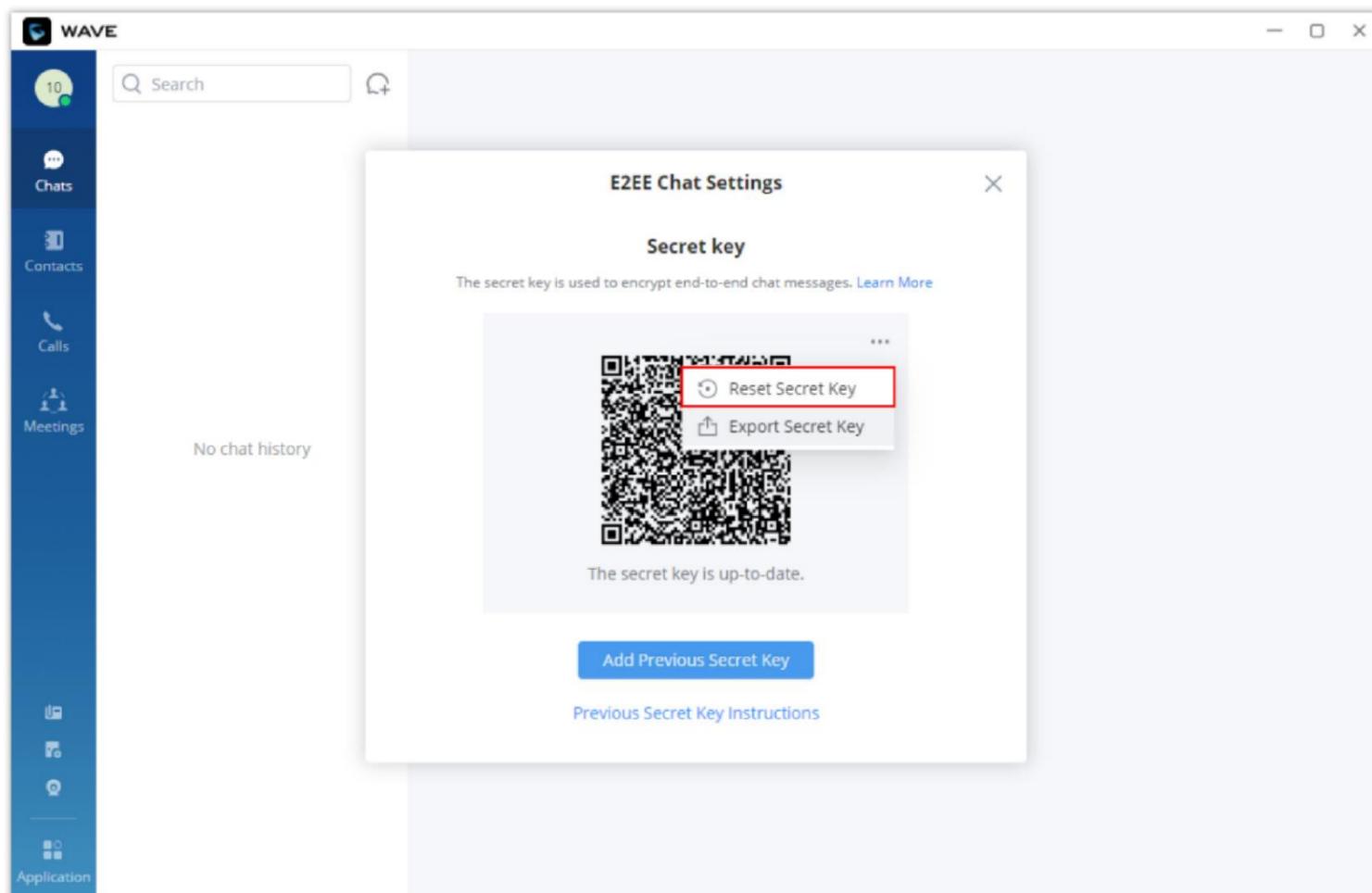
Reset the Secret Key

Audio/Video Device

Audio Settings

When the device is connected to multiple audio devices, the user can select audio device through audio settings.

For PC client users, the application allows users to select the alternative ringing speaker. When the user receives an incoming call, the preferred and alternative speakers ring at the same time.

Reference Scenario: The PC connects to a headphone, but the user does not wear the headphone. The alternative ringing speaker is set, when the user receives an incoming call, the user can hear the ring tone from the PC's built-in speaker.

Step 1: The user can click the user icon to enter the settings menu, move the cursor to "**Audio/Video Device**" option, and click "**Audio Settings**" to enter the microphone/speaker settings interface, as the figure shows below:
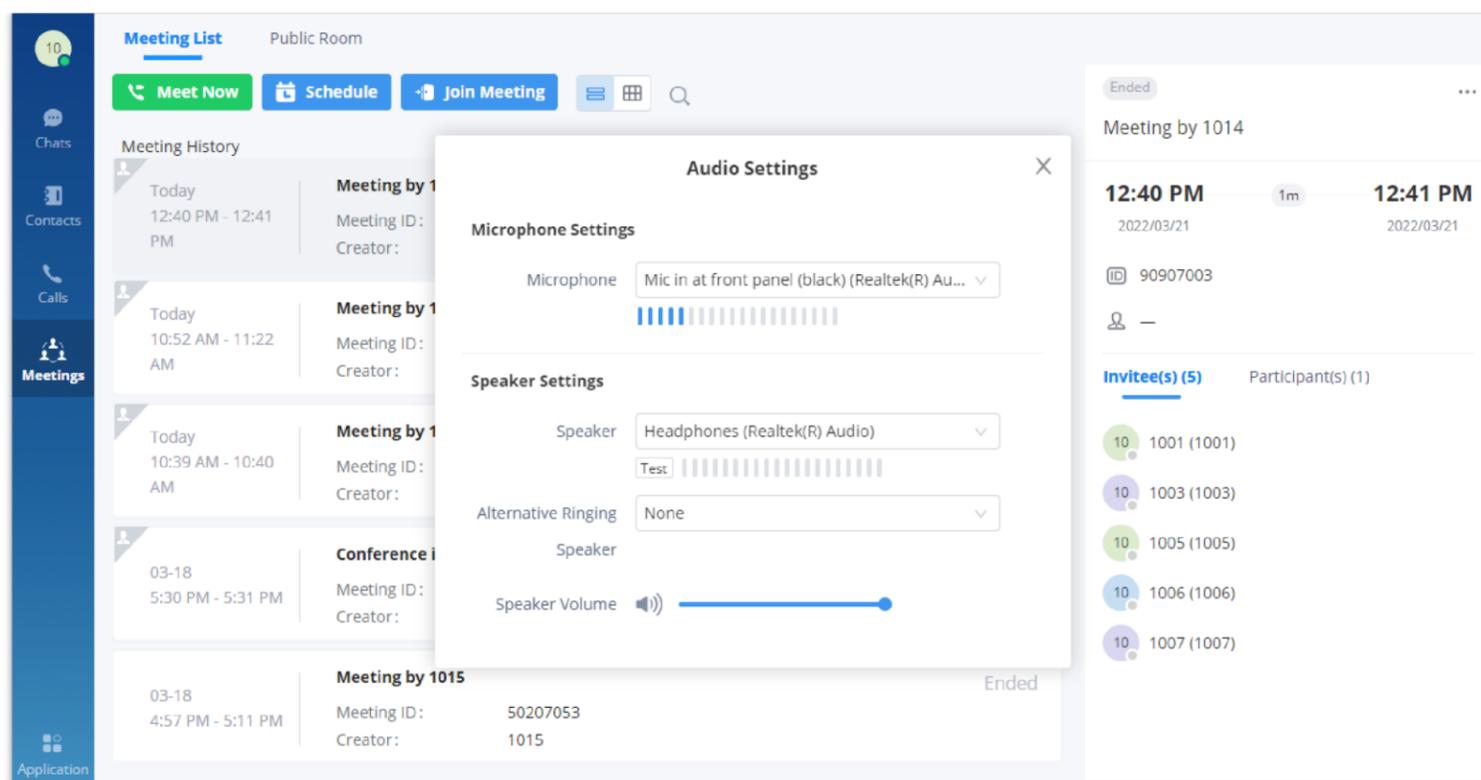
Alternative Ringing Speaker

Step 2: Go to "**Alternative Ringing Speaker**" option and click to set the alternative speaker.

Step 3: Click "**OK**" button to apply the changes. The preferred and alternative speakers will ring at the same time when there is an incoming call.

Note

1. When the user first time logs into Wave application, the system will ask the user to set up an audio device.

2. The Wave Desktop users can enable noise detection and reeducation mode function during the meeting.

3. When the call is established, only the preferred speaker device will be used.

Video Settings

Video settings screenshot is shown as below:
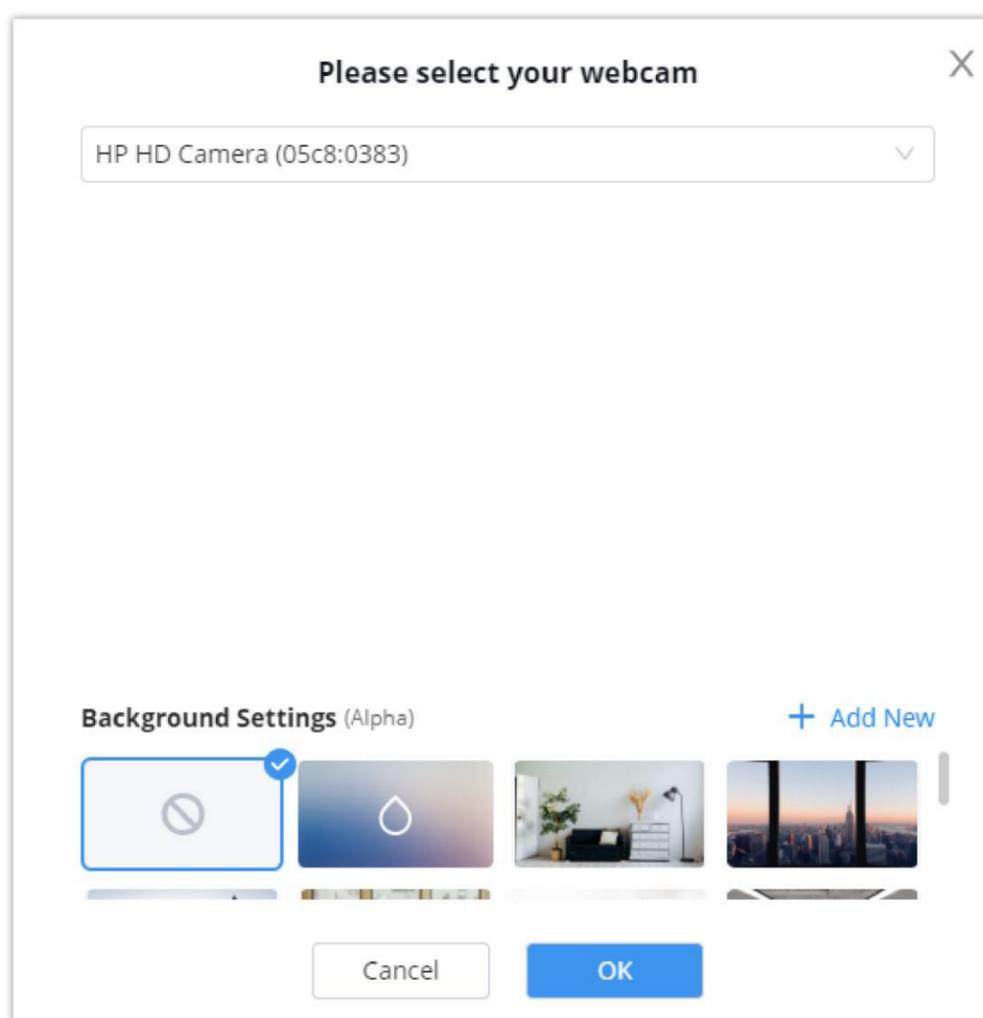
When the PC connects to multiple camera devices, the user can select the video device by "Video Settings". The user can also set the virtual background in Wave application.

Step 1: The user can click the user icon to enter the settings menu, move the cursor to "**Audio/Video Device**" option, and click "**Video Settings**" to enter the camera settings interface, as the figure shows below.

Step 2: The user can select the camera and set the virtual background.

Step 3: The user can view the preview result and save/apply the changes. When the virtual background is set, the setting will be saved locally in the application, and the virtual background will be applied for each call/meeting.

When the user first time logs into Wave application, the system will ask the user to set up a video device.

Virtual Background Settings

In meetings and peer-to-peer calls, the user can set the virtual background in the application locally and the virtual background will replace the background in the camera and send to the remote client.

Step 1: The user can click the user icon to enter the settings menu, move the cursor to "**Audio/Video Device**" option, and click "**Video Settings**" to enter the camera settings interface, as the figure shows below.
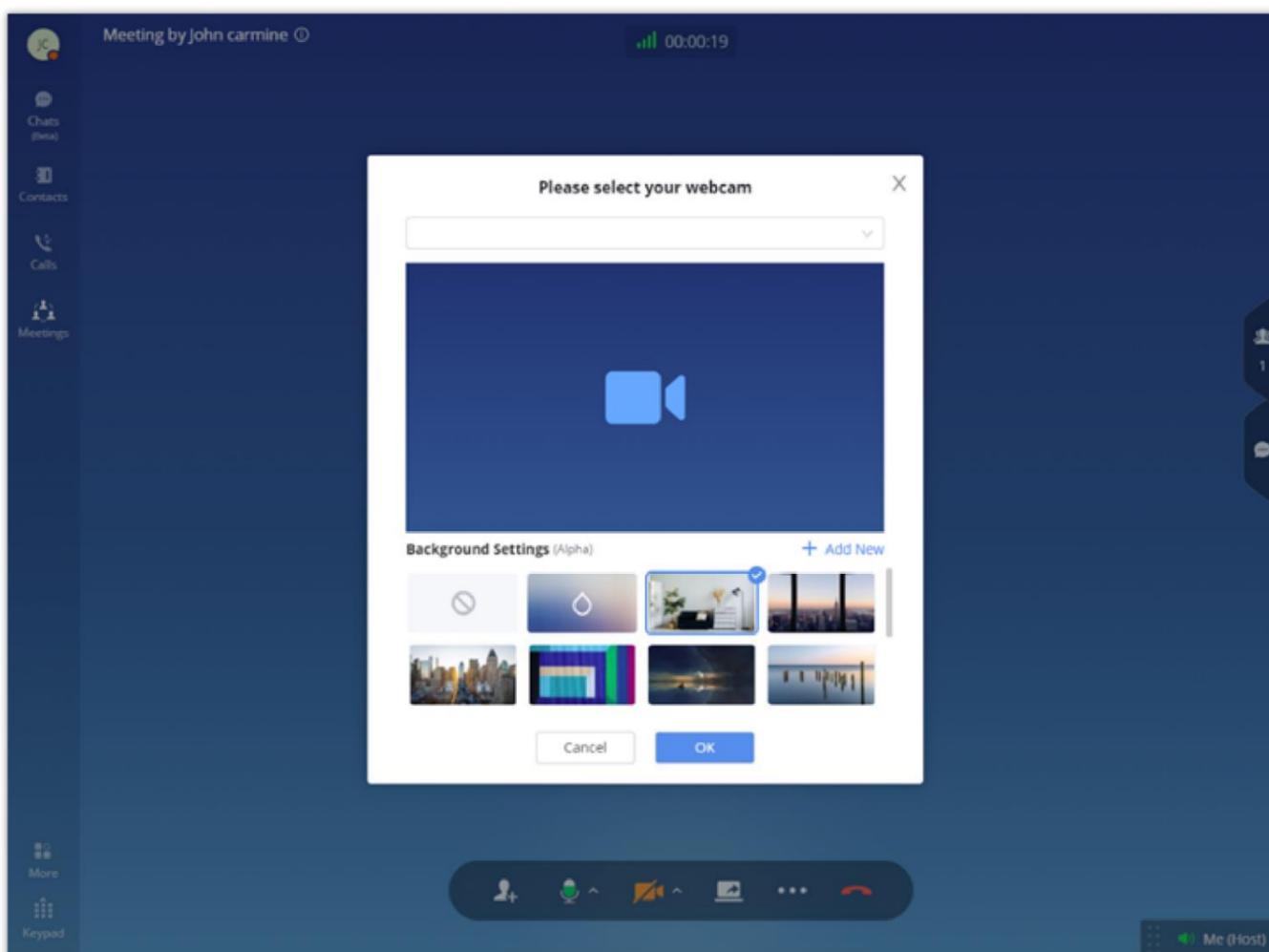
Virtual Background

Step 2: Users can select the images in the library or customize the uploaded images to create a virtual background.

Step 3: Customize Uploaded Image: Click the button + Add New on the virtual background settings interface to open the local file selection window, and the user can select and customize the image to upload.

Step 4: The user can view the preview result and save/apply the changes. When the virtual background is set, the setting will be saved locally in the application, and the virtual background will be applied for each call/meeting.

- ○ : Remove background.

- ○ : Fuzzy background.

There is no background image by default. The limit of the size of custom uploaded image is 20MB, and the upper limit of the image amount is 10 images. Users can upload images for multiple times. Each uploaded image will generate a new background, the length and width of the image is adaptive 16:9 and the image will be saved locally. The suggested fuzzy background color should be set to avoid being similar as the color of the actual scene and clothes.

Keyboard Shortcut

Wave desktop supports performing many actions quickly by using keyboard shortcuts. These are the keyboard shortcuts and the actions that they correspond to.

General	
Display Keyboard Shortcuts	
Open Filter	
Open a New Chat	
Open Help	
Export Logs	
Close/Exit	
Navigation	
Open the Chat Tab	
Open the Contacts Tab	
Open the Call Tab	
Open the Meeting Tab	
Open the Application Tab	
Message	
Search Current Chat	

Enter Compose Box	
Send Message	
Wrap	
Attach File	
Calls and Meetings	
Temporarily Unmute	
Display Shared Toolbar	
Invite Participants	
Open Meeting Chat	
Speed Dial	
Answer	

To open the list of keyboard shortcuts, please click on your profile picture, and choose "Keyboard Shortcuts" from the list.
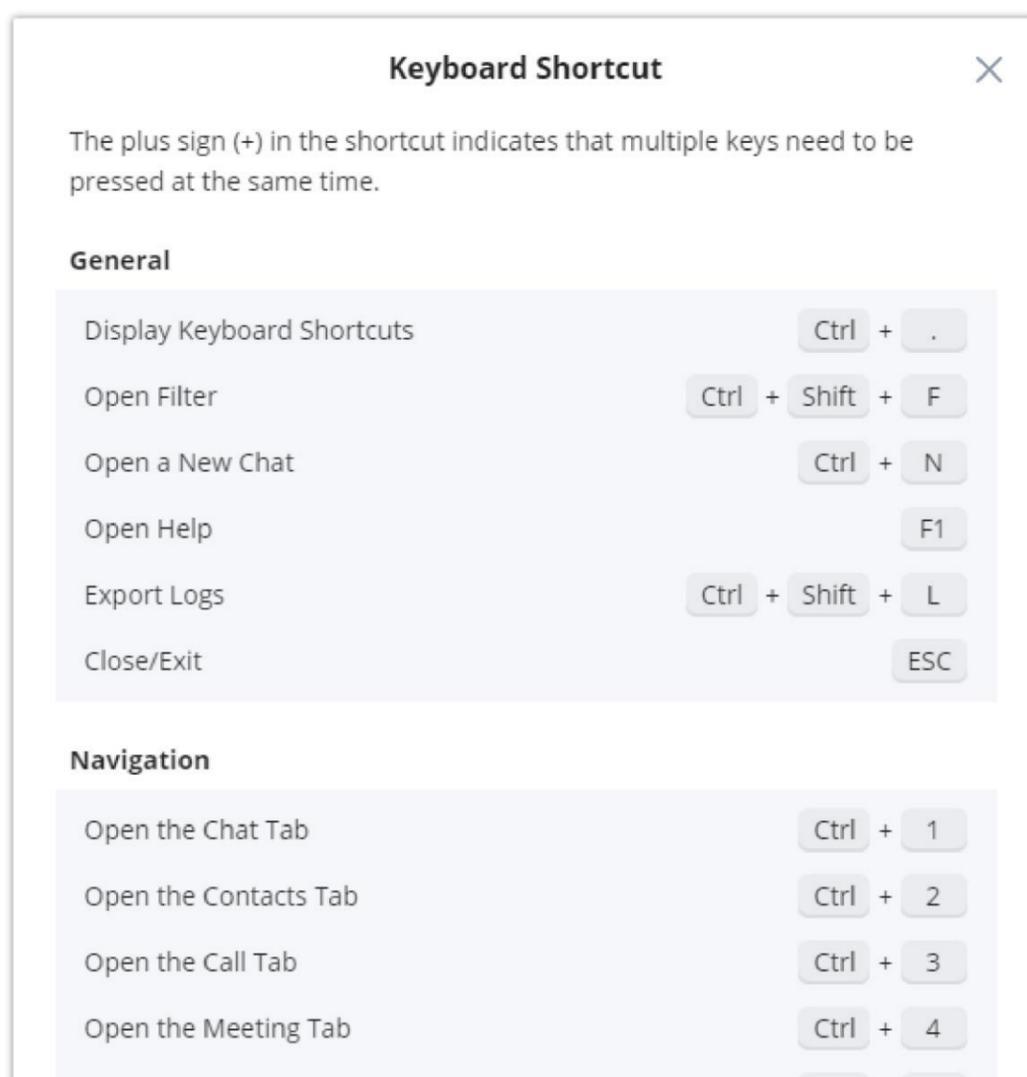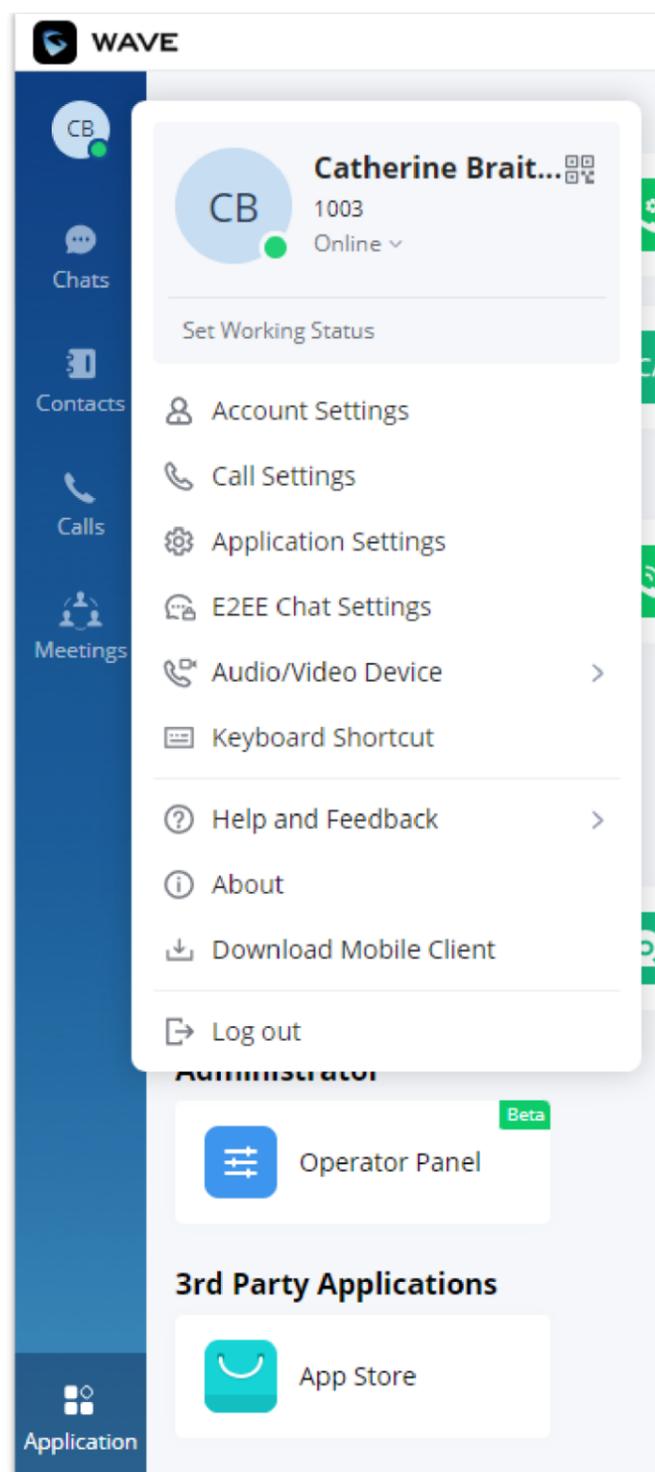
Keyboard Shortcuts

Date/Time Format

The Wave application allows to change the date and time format.
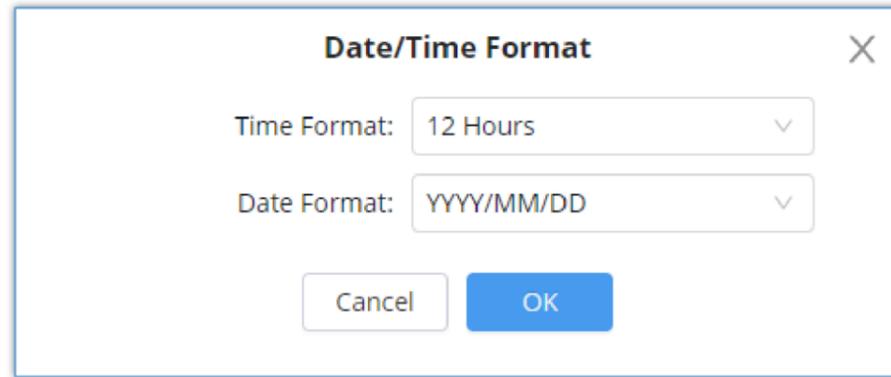
Date/Time Format

Language

The Wave application supports Chinese, English, French, Spanish, and other languages. Users can set up languages by requirements.

Note

Users cannot set the language during the call.

Launch on System Startup

To configure Wave desktop client to launch when the operating system boots up, click on the profile picture of your account, then click on **Application Settings**. After that tick the option "Launch on system startup". This option is enabled by default.
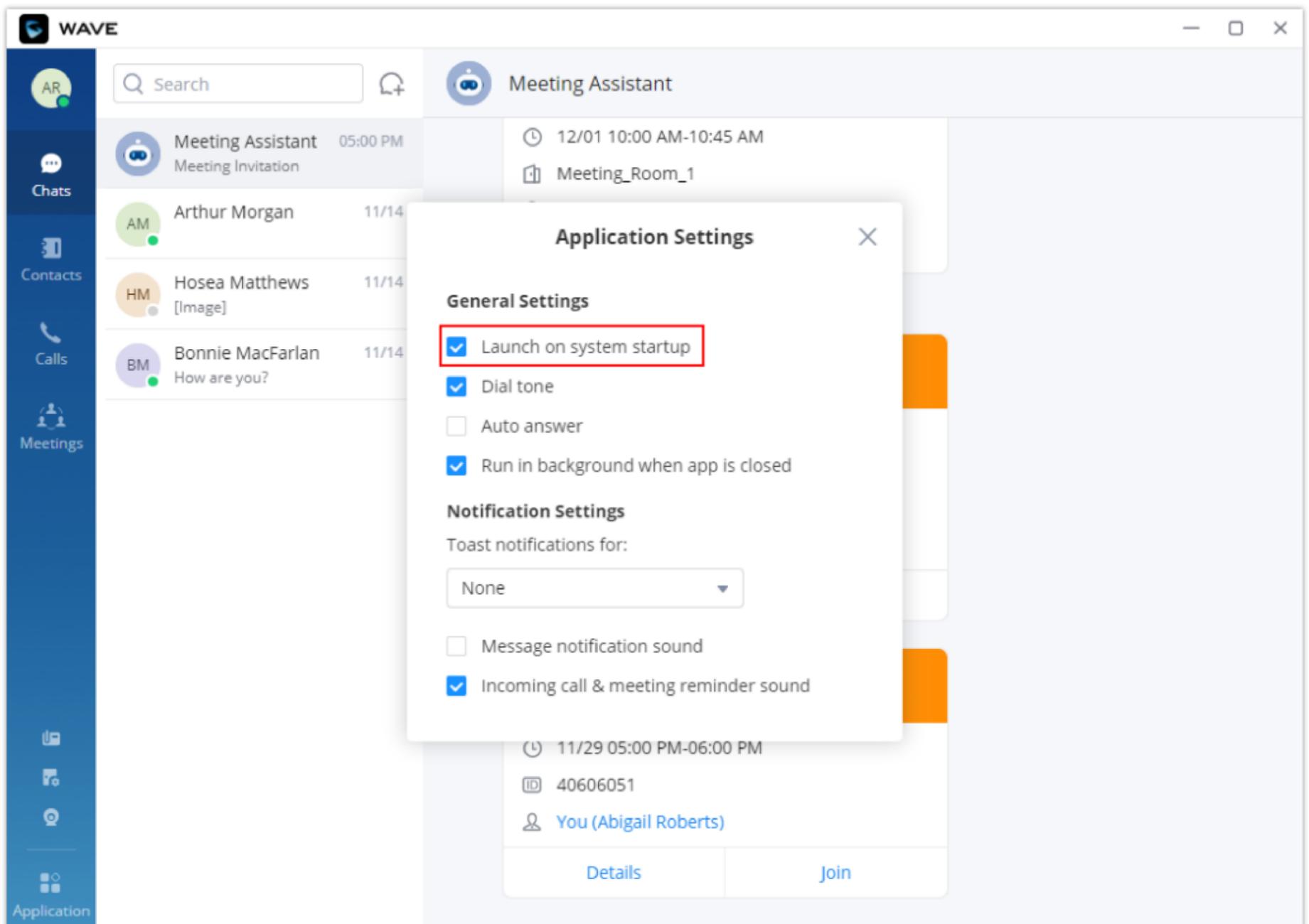
Help and Feedback

Users can go to the settings menu and click "**Help and Feedback**" to display the help, feedback, and exporting logs menu.

Help

If the user has any questions while using Wave application, the user can click "**Help**" option to go to the official website of Grandstream and view the user guide of Wave application.

Feedback

If the user encounters any problems with Wave application, or the user wants to share any suggestions about Wave application, the user can click "**Feedback**" option to connect to the Grandstream Feedback System. It allows users to share feedback and we can collect questions/suggestions from users, so that we can provide better using experiences for users.
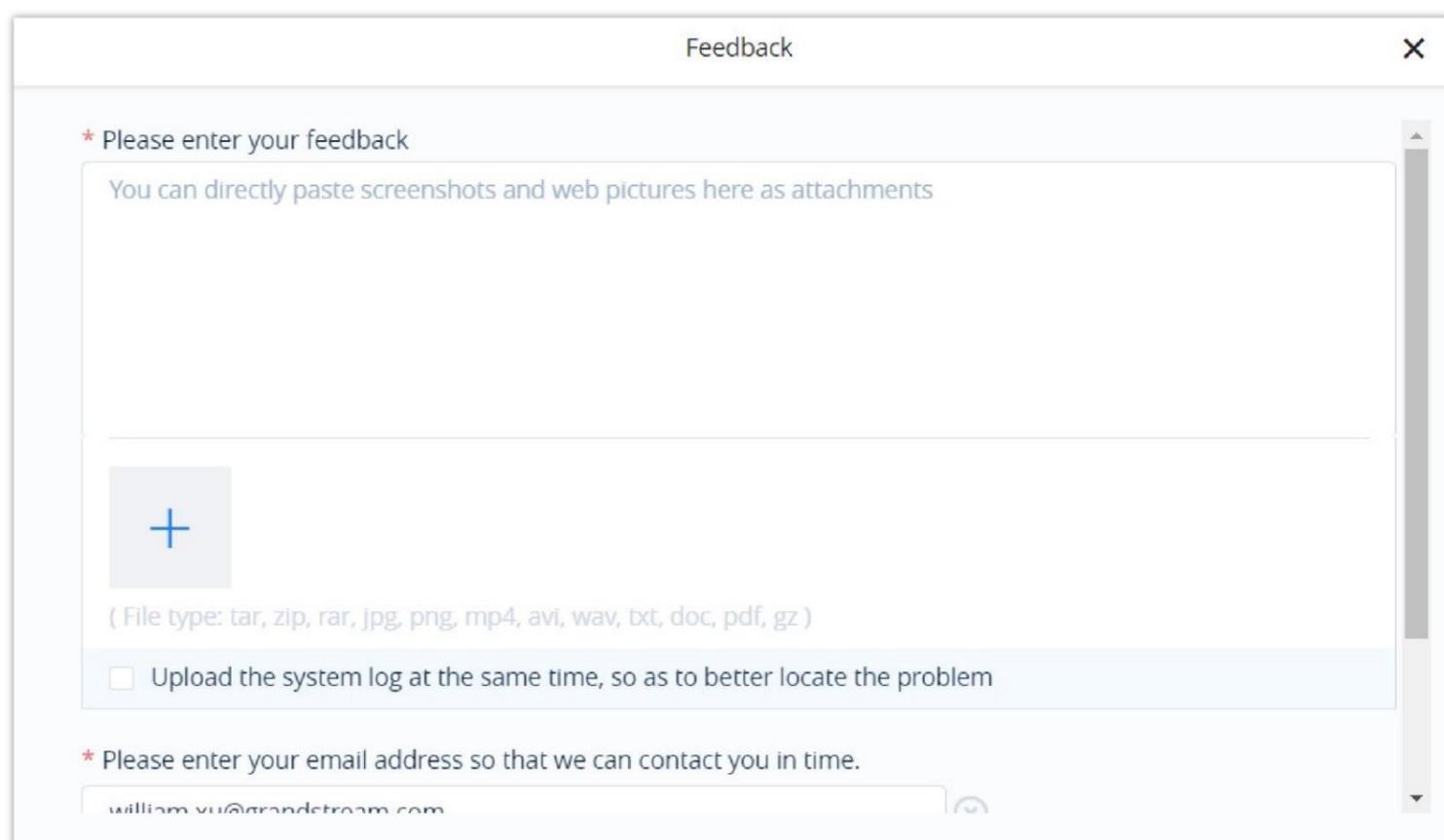
Feedback Interface

Export Logs

Users can go to the settings interface and click "Export Logs" option to export the application logs. If the user encounters any issues about the Wave application, the user can export the logs and save them in the PC. The exported logs can help users to troubleshoot the issues so that we can offer users better using experiences.

About

- Users can go to the settings interface and click "**About**" to get more details about the Wave application.

- Display the current version of the Wave application.

- If there is an updated application version, the user can click "**Update Version**" to upgrade the application.

- The user can click on "**Privacy Terms**" to view the privacy terms of Wave application.

- The user can click on "**Help**" to direct to Grandstream Official website to view the Wave application user manual.
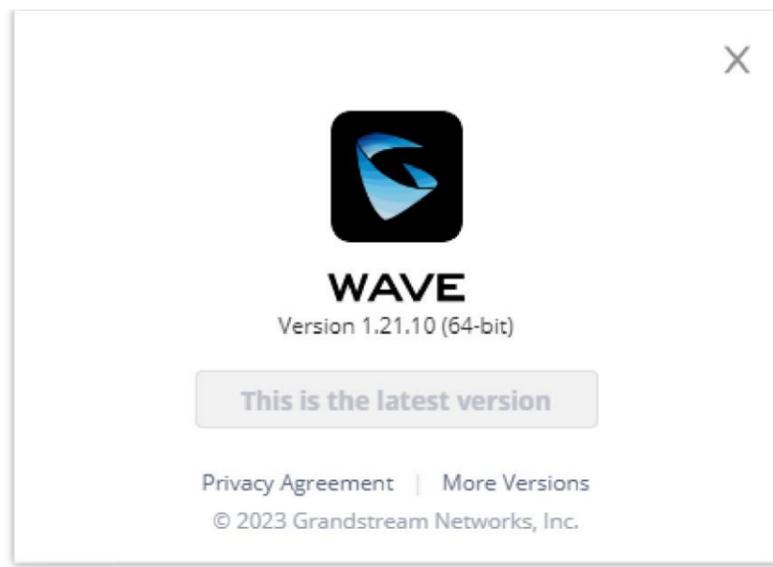
About

Download Mobile Client

Users can download Wave application from Grandstream Official website. When the application has been downloaded to the local PC, the user can follow the instructions to install the application.

Log out

Users can click "**Log out**" to jump to the login interface and log in again.

APPLICATIONS

More applications interface screenshot is shown as below:
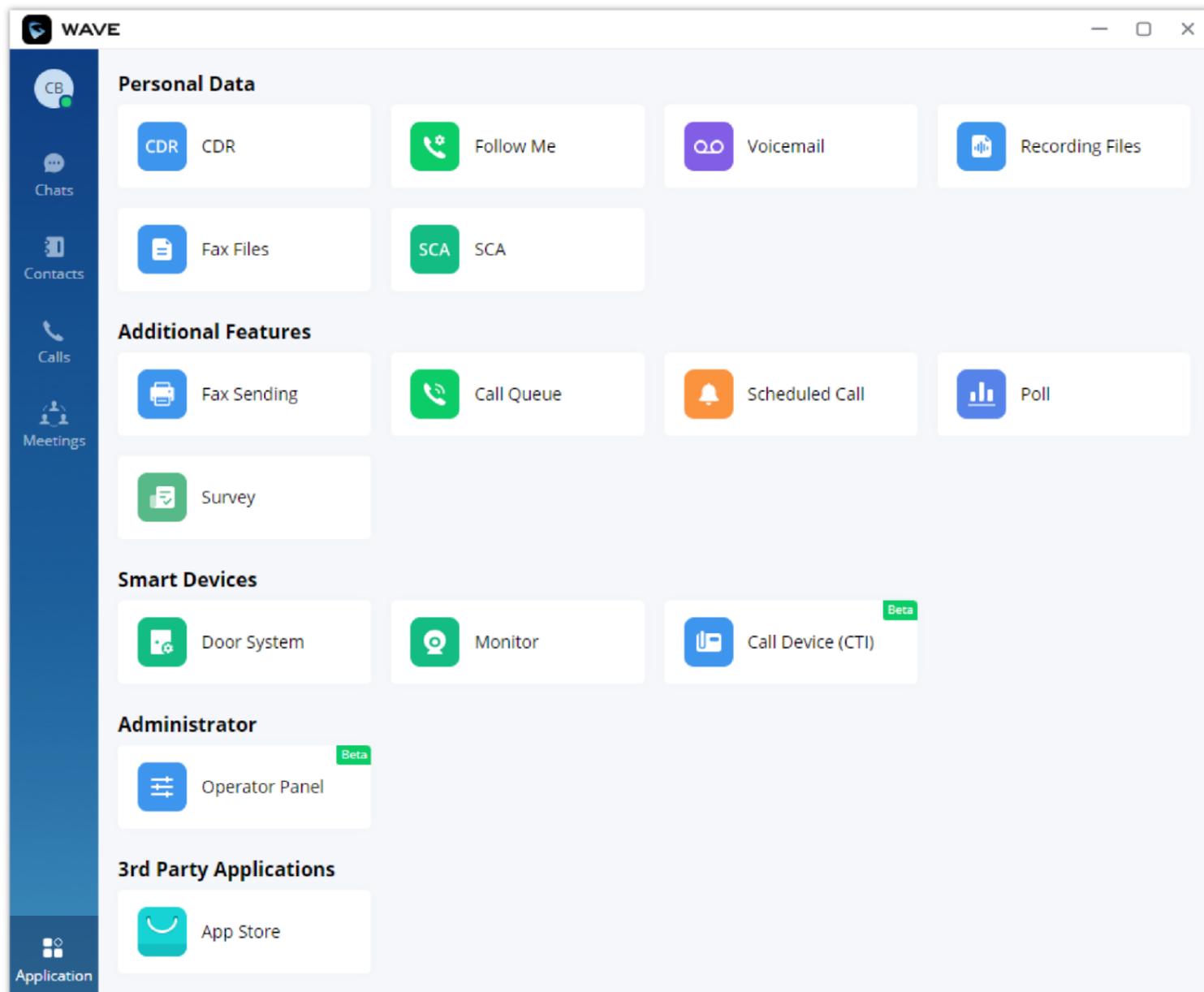
Application

Users can click "More" button on the left menu on the main application UI to view more applications. It includes personal services, value-added services, and smart devices. Users can also set door system and monitors according to the requirements.

Services

The services include personal services and value-added services.

The Wave application integrates UCM's User Portal functionality. Users can directly enter the User Portal interface through the services entry. Please see the screenshot below:
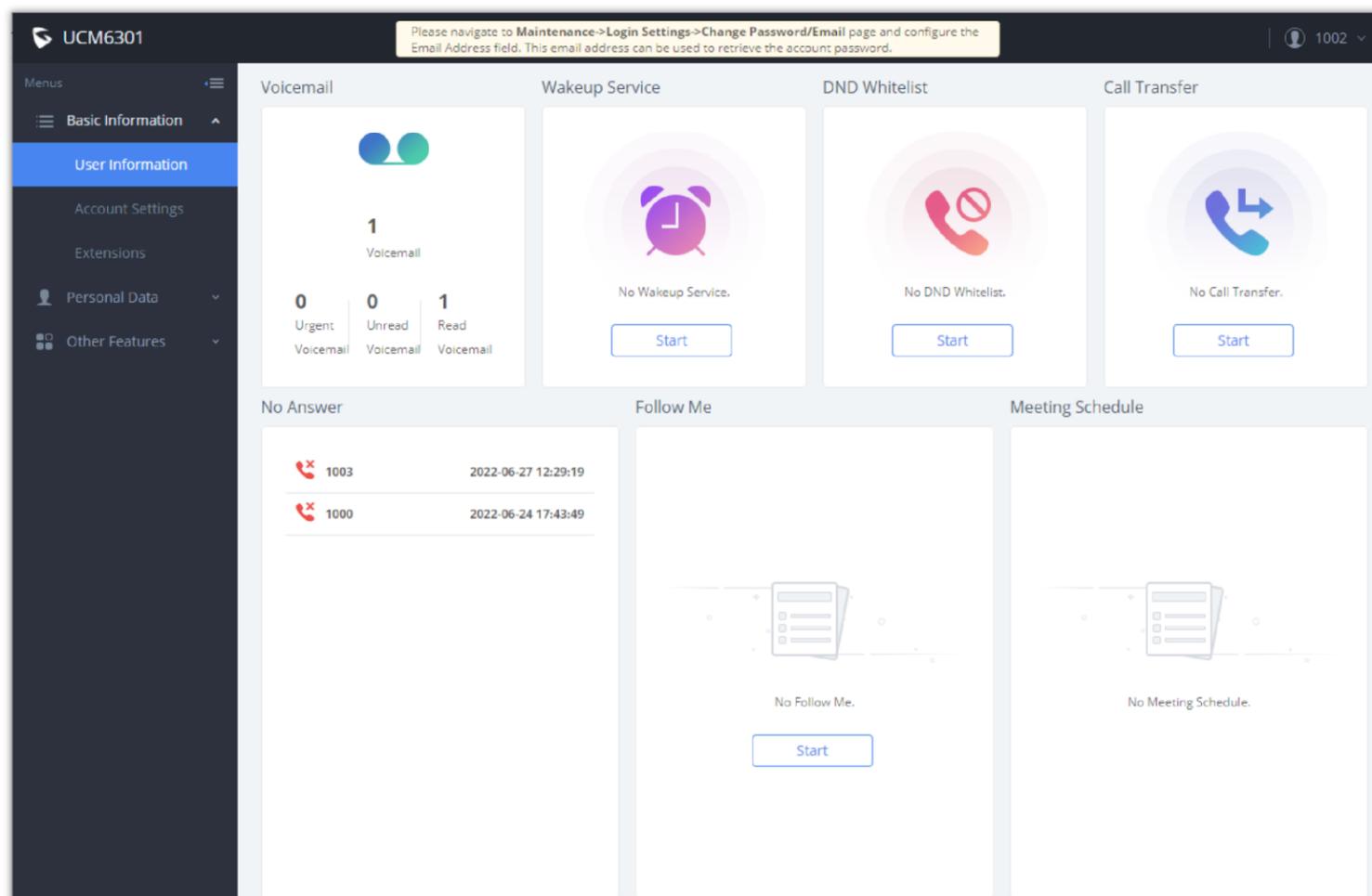
User Portal Interface

Users can set the following personal services and value-added services:

- CDR
- Follow me
- Voicemail
- Recording Files
- Fax Files
- SCA
- Fax Sending
- Call Queue
- Wakeup Service

For more information about the services, please refer to the UCM User Portal Guide in Grandstream official website.

Smart Devices

Door System

Please follow the instructions below to set up the door system:
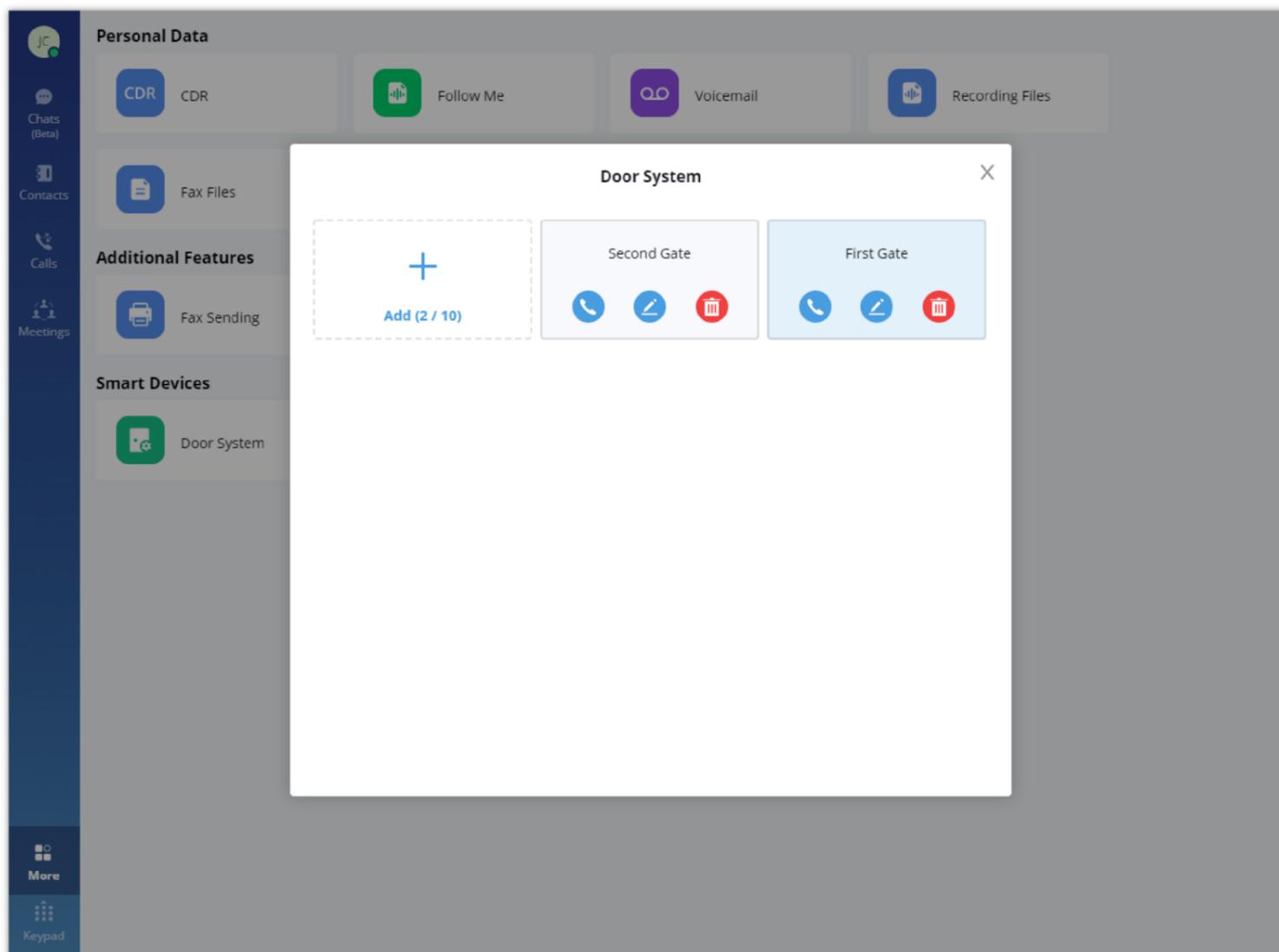
Door System Interface

Users can click "**Add**" button to set up the relevant parameters for door system. Please see the screenshot below:

Add Door System

- ○ **Notes**
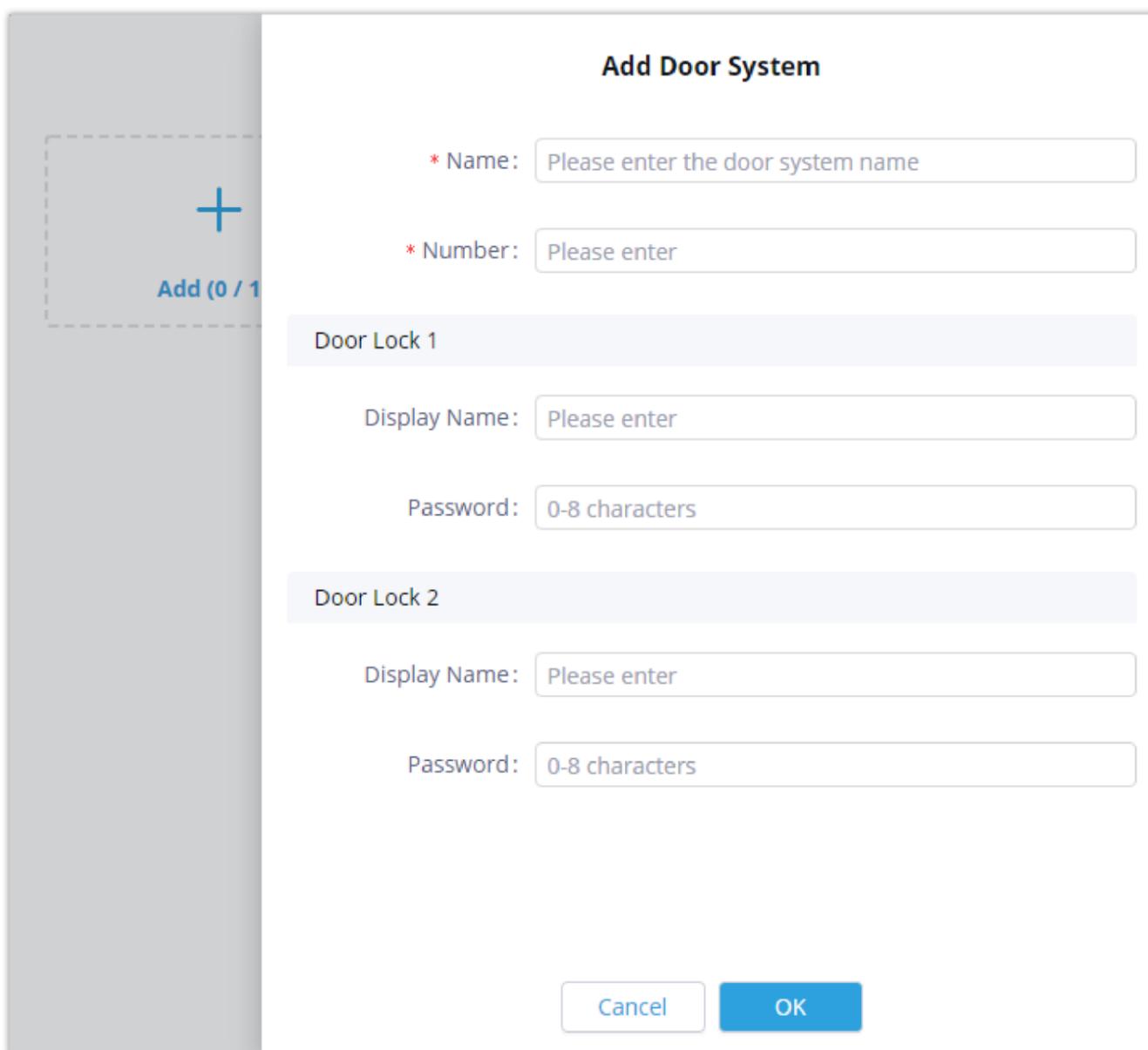
- Users need to set the correct password to open the door for door system.

- The user needs to go to GDS Web UI -> Door System Settings -> Basic Settings -> enables DTMF option so that the user can see the "Open Door" option once the user receives an incoming call from the GDS device in the Wave application.

When the door system is set up, the user can receive an incoming call from the door system once someone rings the doorbell. Please see the screenshot below:
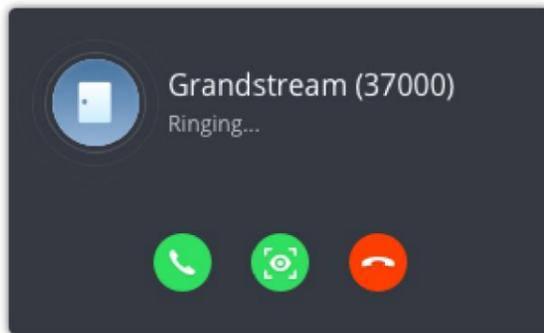
Ringing by Door System

The user can click ![phone] button to answer the call, and initiate the video call, as the screenshot shows below:
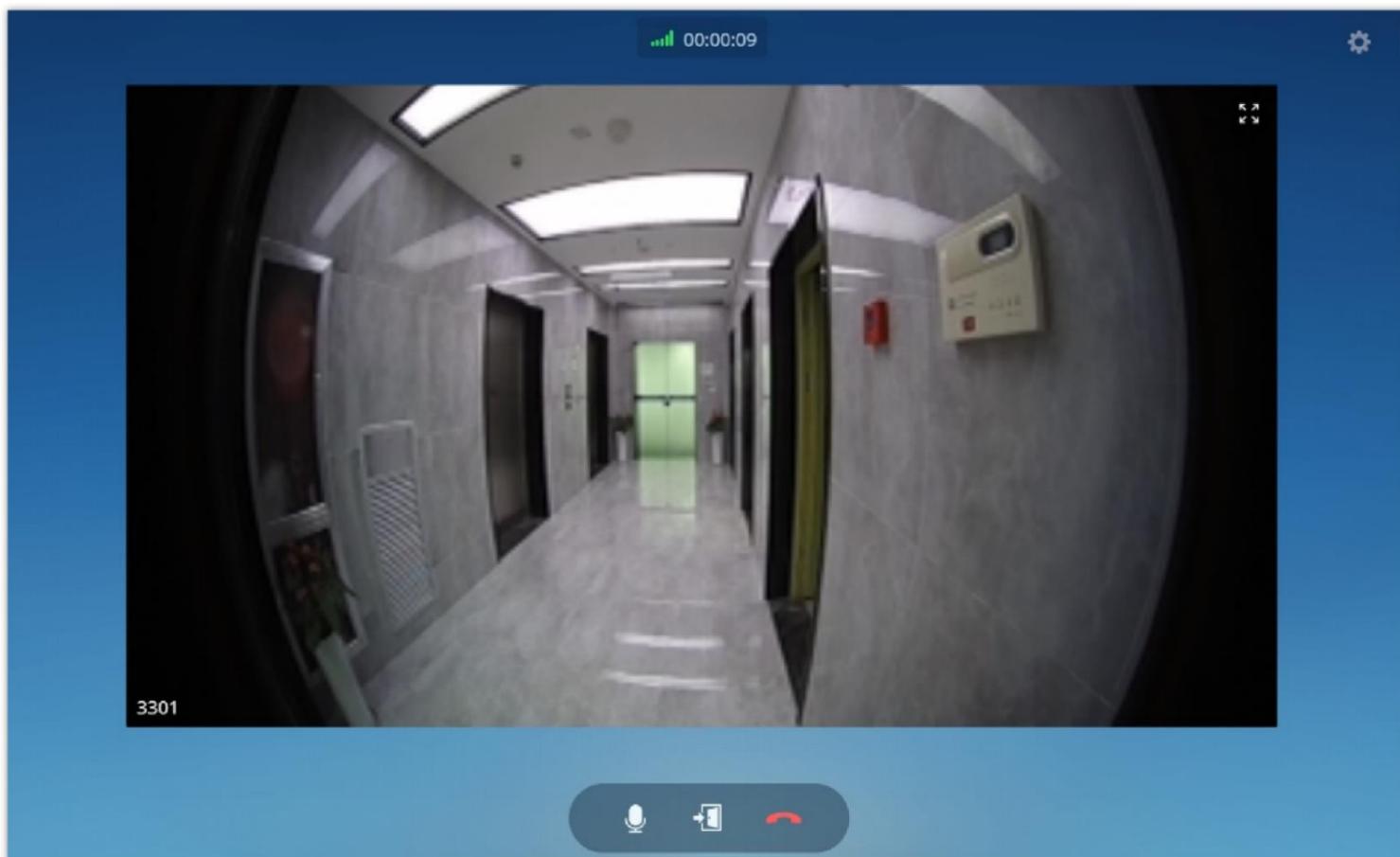
Video from Door System

Users can click ![open door] button to open the door.

Note

This function is only supported by Grandstream GDS Door System products and certain third-party door systems.

Monitor

This feature allows the user to retrieve the video feed of the monitoring devices that he/she has permission to user. These devices and permissions are handled by the UCM. To know how to configure these devices on the UCM side, please refer to this guide below.

https://documentation.grandstream.com/knowledge-base/ucm-device-management/

Operator Panel

Operator Panel in the Wave application is used as call management platform, including Extension module, Call module, Ring Group module, Call Queue module, Parking Lot module, and Voicemail Group module, as the screenshot shows below:

In the Operator Panel, the administrator who has the permission can manage calls from this module. The administrator needs to get the permission from UCM Web UI -> Call Features -> Operator Panel and add the administrator's Wave account in the Operator Panel list before using this function. The administrator can simply click/drag the calls/extensions to manage incoming/outgoing multiple calls in real time, it greatly improves the call management efficiency for users.

The administrator who has the permission can click "**More**" menu on left side of the Wave application UI and click "**Operator Panel**" to access to the management platform.
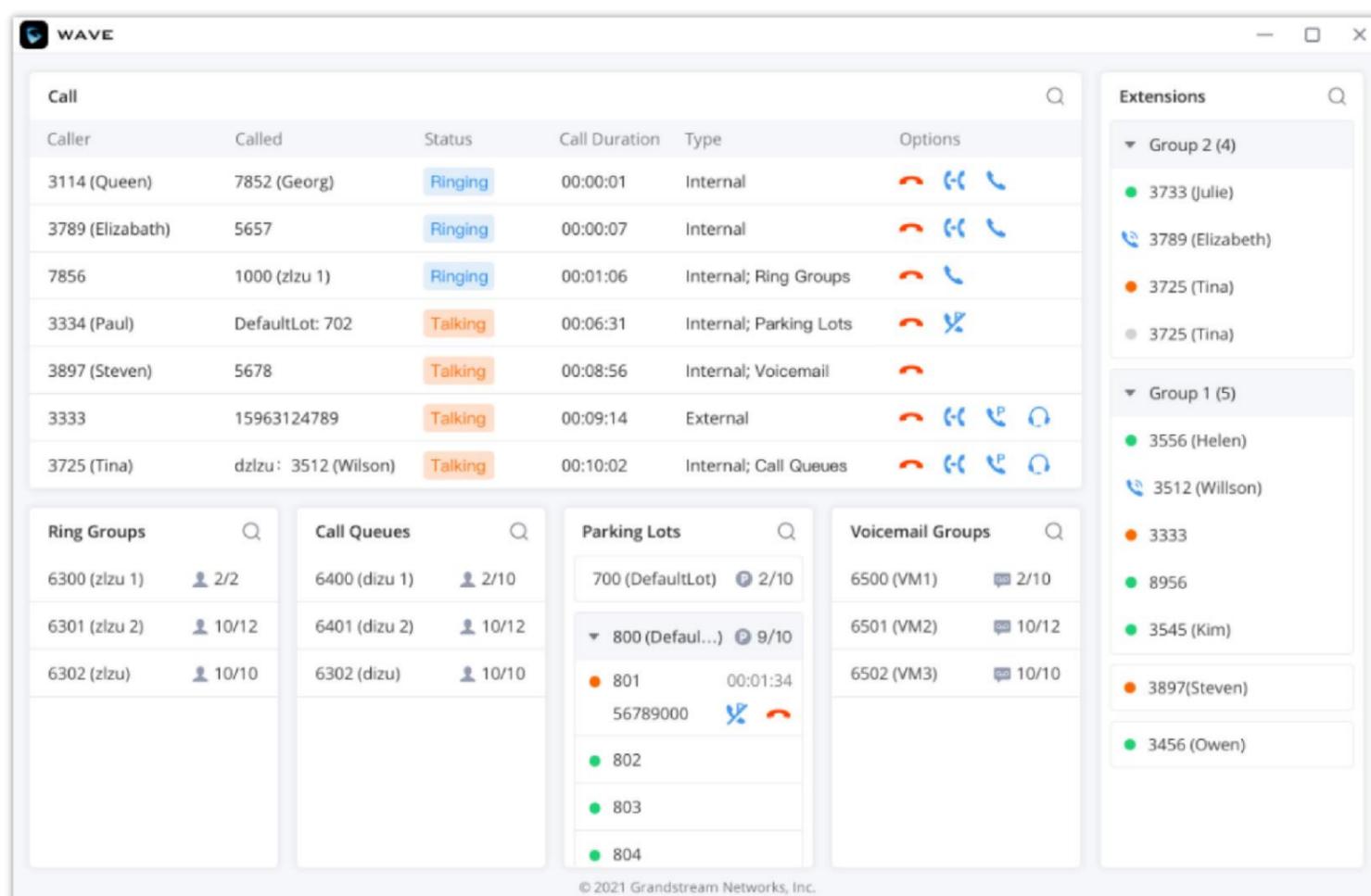
Operator Panel

The user can customize the panels that will be displayed on the board of the operator panel.

To do that, please click on the settings icon ≋ on the top left of the operator panel, the tick off the panels you would like to hide
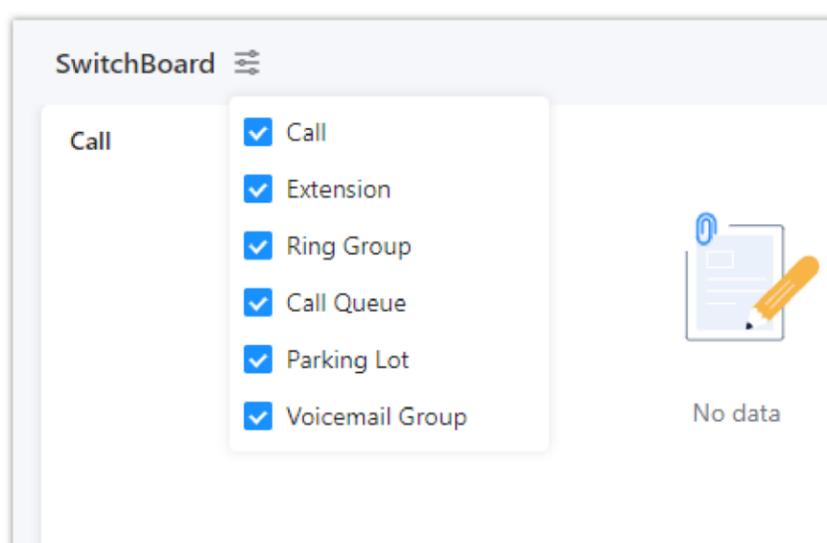
Note

If the user wants to use Operator Panel function, the user needs to obtain the permission of the calls administrator from the enterprise UCM administrator. For more details, please refer to the User Guide of UCM devices in Grandstream official website.

Extension

The Extension list will show all extensions and extensions group you have permission for management, including extensions/extensions group names, and the extensions status.

The administrator can move the mouse over the extension to view the status of the extension, received voicemail amount and unread voicemail amount.
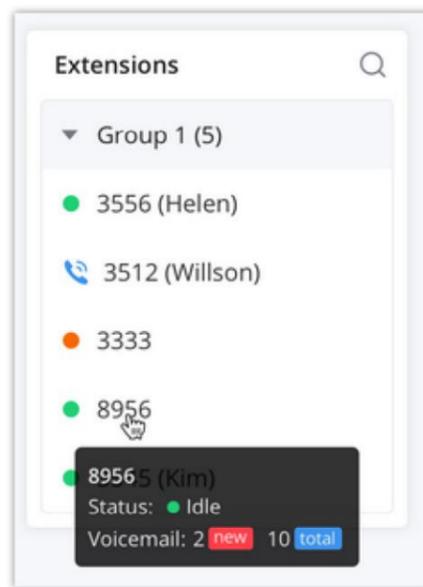
Extension

- ○ ● : Idle
- ○ 📞 : Ringing
- ○ ● : Call in progress
- ○ ● : Offline

Call

The Call module displays all calls allocated to local management extensions, ringing groups, call queues, parking lots, and voicemail. The administrator can pick up the call, monitor the call, transfer/park/end the call, as the screenshot shows below:

Caller	Called	Status	Call Duration	Type	Options
3114 (Queen)	7852 (Georg)	Ringing	00:00:01	Internal	
3789 (Elizabath)	5657	Ringing	00:00:07	Internal	
7856	1000 (zlzu 1)	Ringing	00:01:06	Internal; Ring Groups	
3334 (Paul)	DefaultLot: 702	Talking	00:06:31	Internal; Parking Lots	
3897 (Steven)	5678	Talking	00:08:56	Internal; Voicemail	
3333	15963124789	Talking	00:09:14	External	
3725 (Tina)	dzlzu: 3512 (Wilson)	Talking	00:10:02	Internal; Call Queues	

Call Module

- ○ 📞 : **Call Pickup**. Users can click the button to answer the call.

- ○ 🎧 : **Monitoring**. Users can click the button to monitor the call, including Call Monitoring, Whisper Monitoring, and Barge Monitoring.

- ○ (•(: **Transfer**. Users can click the button to transfer the call, including Blind Transfer and Attended Transfer.

- ○ 📞ᴾ : **Call Park**. Users can click the button to park the call to the corresponding parking lot.

- ○ � : **End**. Users can click the button to end the call.

Call Pickup

When one of the managed extensions receives an incoming call and the call is not answered, the administrator can pick up the call on Operator Panel.

Step 1: The user can click 📞 button to pick up the ringing call on the Operator Panel. The system will transfer the call to the administrator.

Step 2: The call is answered in the administrator's client successfully.

| 3114 (Queen) | 7852 (Georg) | Ringing | 00:00:01 | Internal | ⌒ (•(📞 |
| 3789 (Elizabath) | 5657 | Ringing | 00:00:07 | Internal | ⌒ (•(📞 |

Call Pickup

Note

The call pickup permission needs to be assigned in the UCM management platform -> Call Features -> Feature Codes -> Feature Codes and enable the "Pickup on Ringing Prefix" option, the default setting is "**". The UCM administrator can modify this option from UCM Web UI. Once the option is enabled, the administrator can pick up all calls of managed extensions.

Monitoring

The monitoring methods include Call Monitoring, Whisper Monitoring, and Barge Monitoring. The administrator can select to monitor the calls based on different service scenarios.

- ○ **Call Monitoring:** The administrator can monitor the call directly. The line of the administrator will be muted, both caller and callee cannot hear the audio from the administrator.

- ○ **Whisper Monitoring:** The administrator can select to join the caller or callee side to assist the caller or callee through the call. Only the monitored extension can hear the audio from the administrator during the call.

- ○ **Barge Monitoring:** The administrator can join the call to assist the caller and callee through the call. Both caller and callee can hear the audio from the administrator.

Step 1: On the Operator Panel, select the call which the user wants to monitor.

Step 2: Click on 🎧 button, and select the monitoring method between Call Monitoring, Whisper Monitoring, and Barge Monitoring. As the screenshot shows below:

| 3725 (Tina) | dzlzu: 3512 (Wilson) | Talking | 00:10:02 | Internal; Call Queues | ⌒ (•(📞ᴾ 🎧 |

End

| Listen |
| Whisper |
| Barge In |
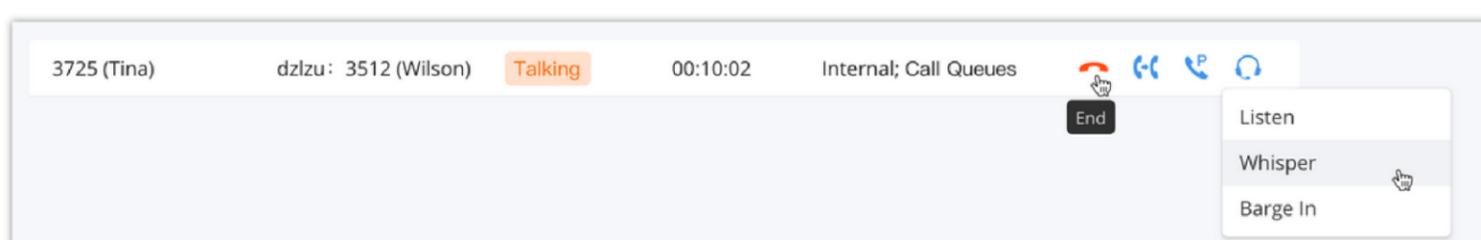
Monitoring

Step 3: Click Call Monitoring button or Barge Monitoring button, the administrator will receive the incoming call from the caller's extension, and the administrator can click answer button to pick up the call.

Step 4: Click Whisper Monitoring button to select the monitored extension from the popup window. As the screenshot shows below:
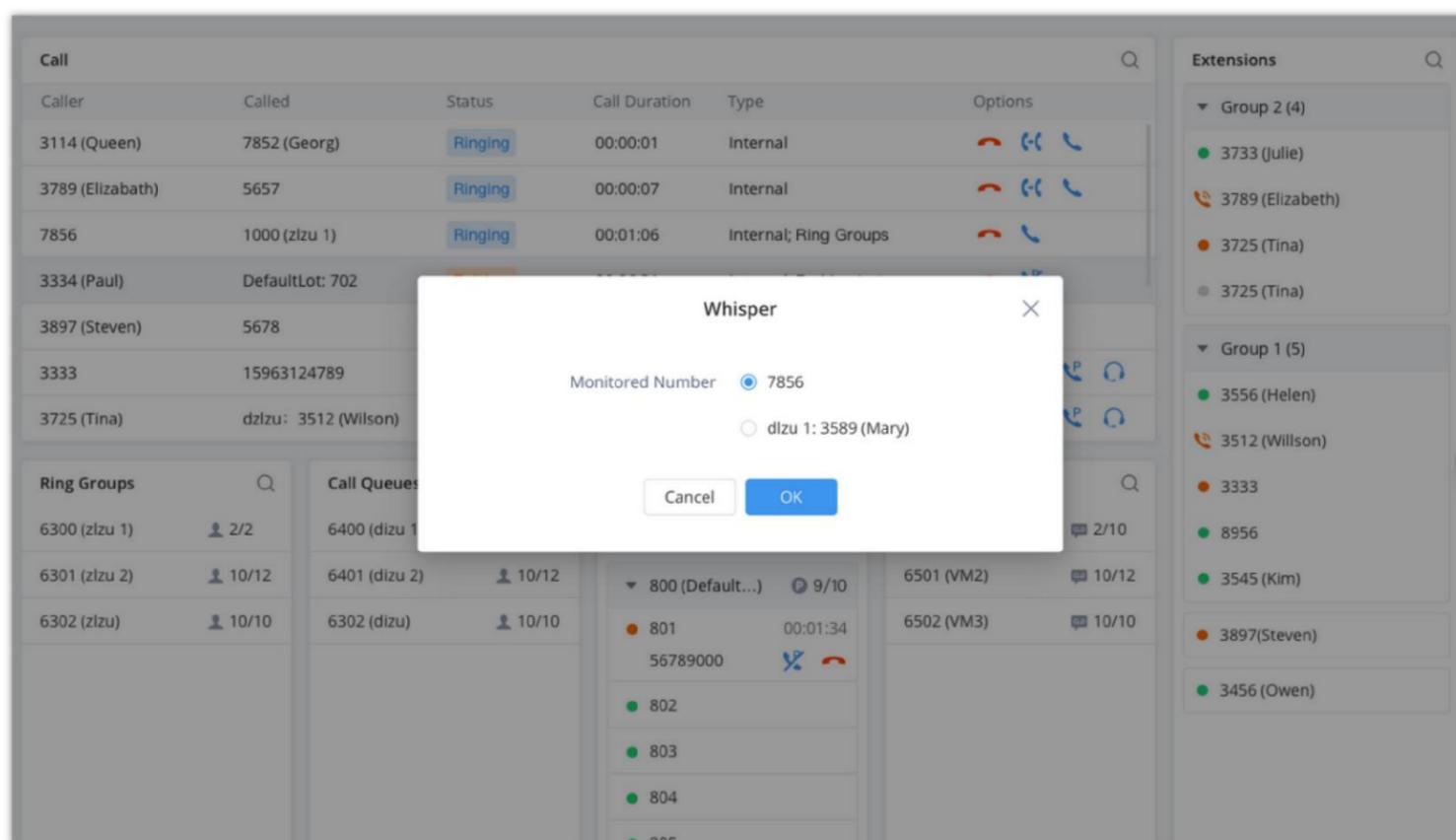
Whisper Monitoring

Step 5: The user can click "**OK**" button, and the system will send an incoming call to the administrator's extension.

Step 6: Once the administrator's extension receives the incoming call from the monitored extension, the administrator can click answer button to monitor the call.

Transfer

The administrator can transfer the selected calls via Operator Panel, including Blind Transfer and Attended Transfer.

Blind Transfer

Step 1: There is a call which is in progress between John and Arthur.

Step 2: The administrator can select the call and click ⟨ button following the call, select Blind Transfer, and select the transferred extension 1001 as the screenshot shows below:
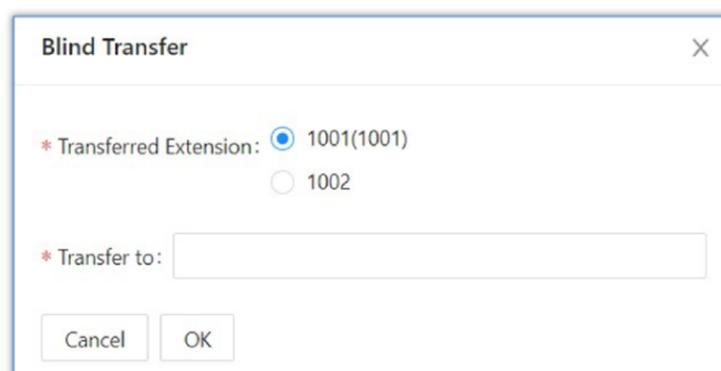
Blind Transfer

Step 3: Enter the transferring target extension 1003 in "**Transfer to**" field and click "**OK**" button.

Step 4: The extension 1003 will receive the new incoming call from extension 1001.

Step 5: The call between extension 1001 and 1002 will be ended. The call between extension 1001 and 1003 will be established. The Blind Transfer is successful.

On the Operator Panel, the administrator can drag the call to Ringing Group, Call Queue, or Voicemail Group to blind transfer the call to these groups.

Attended Transfer

Step 1: There is a call which is in progress between extension 1001 and 1002.

Step 2: The administrator can select the call and click   button following the call, select Attended Transfer, and select the transferred extension 1001 as the screenshot shows below.

Step 3: Enter the transferring targe extension 1003 in "**Transfer to**" field and click "**OK**" button.

Step 4: The extension 1003 will receive the new incoming call from extension 1002. The call of extension 1001 will be held. The call between extension 1002 and 1003 will be established. Once the extension 1003 hangs up, the call between extension 1001 and 1002 will be resumed.
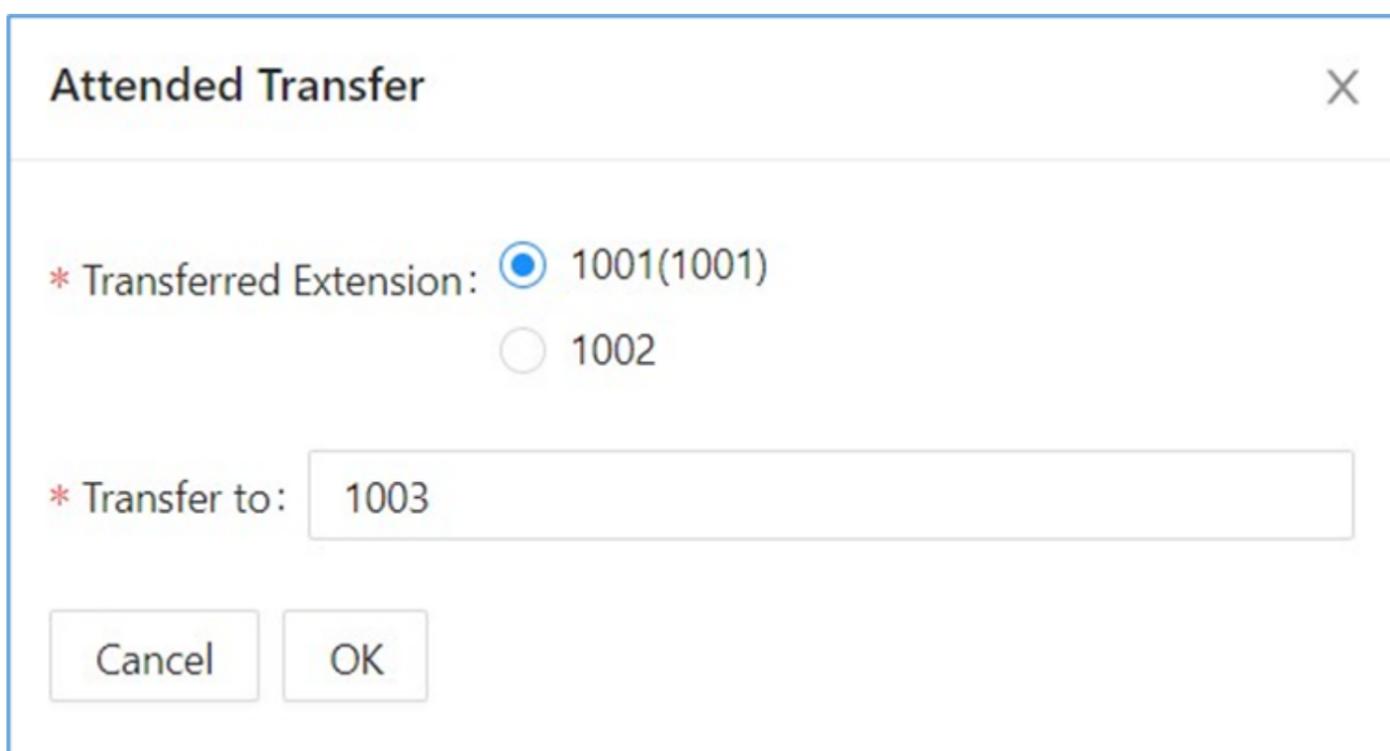
Figure 104: Attended Transfer

Note

When the administrator tries to transfer the call to a call queue, the UCM administrator needs to check "Enable Feature Codes" option in the UCM Web UI -> Call Features -> Call Queue -> Advanced Settings -> Other Settings. Otherwise, the call queue members cannot be transferred. For more details, please refer to the UCM User Guide in Grandstream official website.

Call Park/Retrieve

The administrator can park the calls and retrieve the calls through Operator Panel.

Call Park

There are two methods to park calls.

Method 1:

Step 1: Select the call in Operator Panel which the user wants to park.

Step 2: Click   button, and there will be a popup window to allow the user to select the parked extension, as the figure shows below:
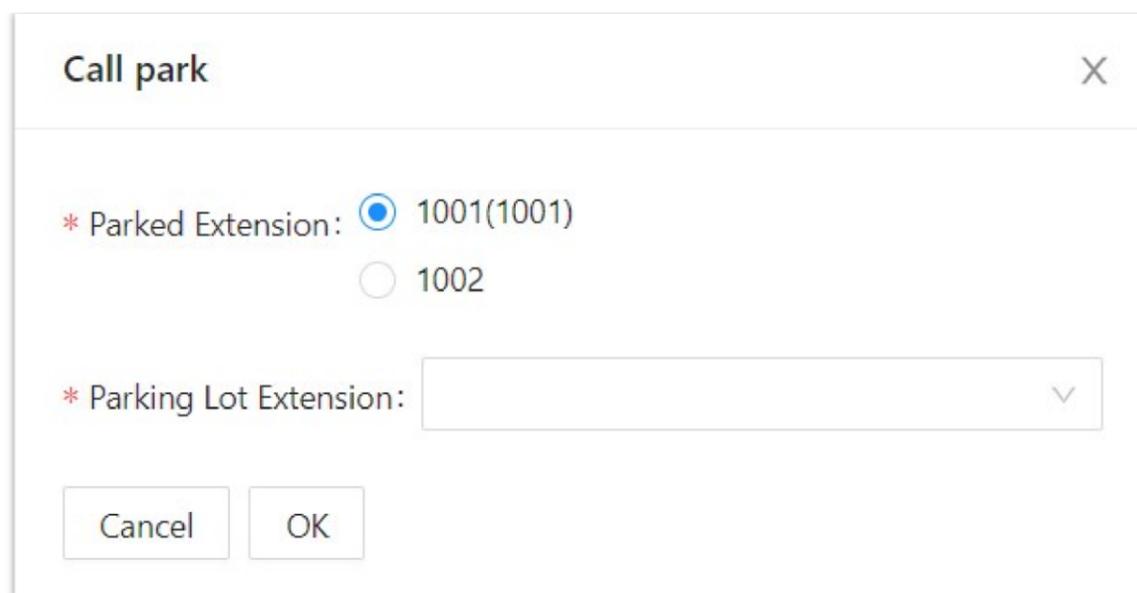
Call Park

Step 3: Select the Parked Extension and Parking Lot Extension.

Step 4: Click "**OK**" button to park the call to the idle parking lot.

Method 2:

Step 1: Select the call in Operator Panel which the user wants to park.

Step 2: Drag the call to the idle parking lot on the Parking Lot list directly to park the call.
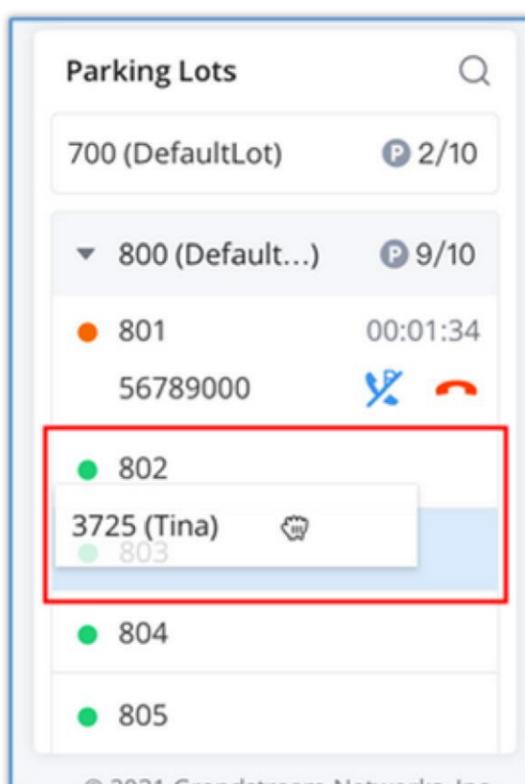
Drag to Park Calls

Note

If the UCM administrator does not check the option "Use Parking Slot as Extension", the user can only park the call to the parking lot extension, the parking slots including the parking extensions will not be displayed, the parking lot extension will be randomly assigned. For more details, please refer to the User Guide of UCM device in Grandstream official website.

Call Retrieve

There are 2 methods to retrieve the parked calls.

Method 1:

Step 1: Select the call which the user wants to retrieve in the Operator Panel.

Step 2: Click ![icon] button, the call will be retrieved in the administrator's Wave account.

56789000	DefaultLot: 801	Talking	00:01:34	Internal; Parking Lots	↵	✄
3334 (Paul)	DefaultLot: 702	Talking	00:06:31	Internal; Parking Lots	↵	✄

Retrieve Parked Call

Step 3: The administrator can click to answer the call to retrieve the parked call.

Method 2:

Step 1: Select the parked call which the user wants to retrieve from a busy parking lot.

Step 2: Click ![icon] button, the call will be retrieved in the administrator's Wave account. As the screenshot shows below:
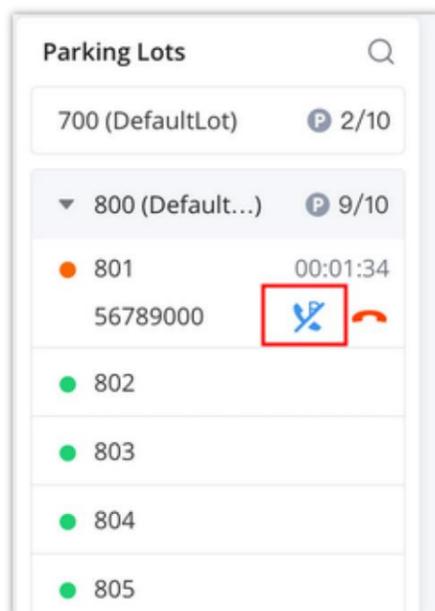
Retrieve Parked Call from Parking Lot

End Call

Step 1: Select the call which the user wants to end in Operator Panel.

Step 2: Click ![icon] button and click "**OK**" button to end the call. As the screenshot shows below:

Step 3: The current call will be ended.

Caller	Called	Status	Call Duration	Type	Options
3114 (Queen)	7852 (Georg)	Ringing	00:00:01	Internal	↵ ⊱ ☎
3789 (Elizabath)	5657	Ringing	00:00:07	Internal	↵ ⊱ ☎

End Call

Ringing Group

The Ringing Group panel will show the information of each ringing group, including the number of free members and the total number of members.

The administrator can search the ringing group by number or name.

Ringing Group

Call Queue

The Call Queue panel shows the information of each call queue, including the number of free members and the total number of members.

The administrator can search the call queue by number or name.

Call Queue

Parking Lot

The Parking Lot panel shows the status of each parking lot (parking extension).

If the parking lot is busy, the administrator can view the parking period, parking call information, and the administrator can also end/retrieve the parked call.

As the screenshot shows below:
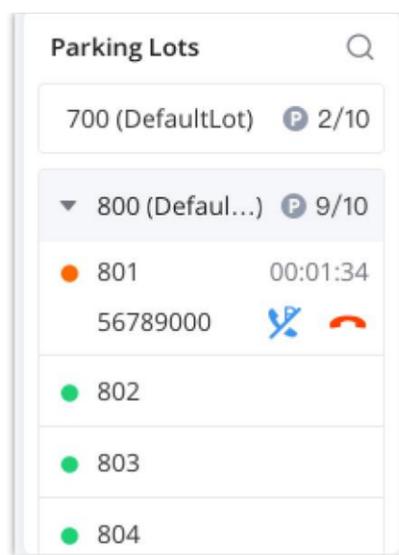
Parking Lot

Note

The UCM administrator can check the option "**Use Parking Slot as Extension**" in the UCM Web UI, so that the Operator Panel user can select the parking extension and view each parking lot status on the extended parking extensions list.

Voicemail Group

The Voicemail Group panel shows the status of each voicemail group, including the name and number of each voicemail group, and unread voicemail amount and total voicemail amount.

The administrator can search the voicemail group by number or name.
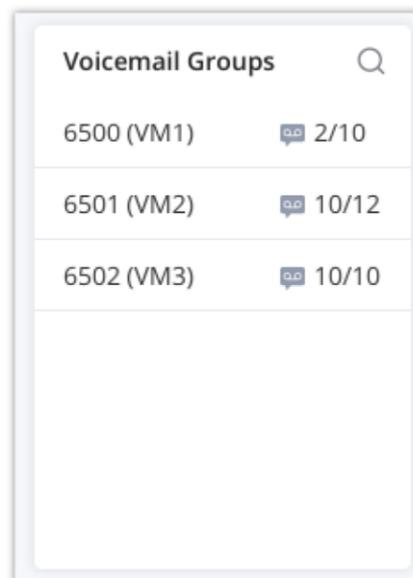
Voicemail Group

Note

The UCM administrator can add the voicemail group in the UCM Web UI -> Call Features -> Voicemail -> Voicemail group.

CTI Mode

CTI mode allows the user to manage calls received on the desk phone through the Wave Desktop client. For example, if you receive a call on your desk phone you can choose to answer it or reject it through the Wave Desktop.

When the user enables CTI function, the DND status in the Wave account and Desk phone will be synchronized. If the user sets DND in Wave Desktop application, the same account in the Desk phone will be set as DND; If the Desk phone disables DND status, the same account in the Wave application will disable the DND function at the same time.

For the point-to-point call, if the user has enabled the CTI function, the user can dial/end the call, or answer/reject the call through the Wave application for the Desk phone.

If the user joins the meeting through the Wave Desktop client, the account in the Desk phone will also join the meeting simultaneously. During the meeting, if the user mutes/unmutes the microphone through the Wave Desktop application, or end/leave the meeting, the account in Desk phone will also mute/unmute, or end/leave the meeting simultaneously.

First you need to go to "More" tab on your Wave Desktop client, then select CTI Mode.
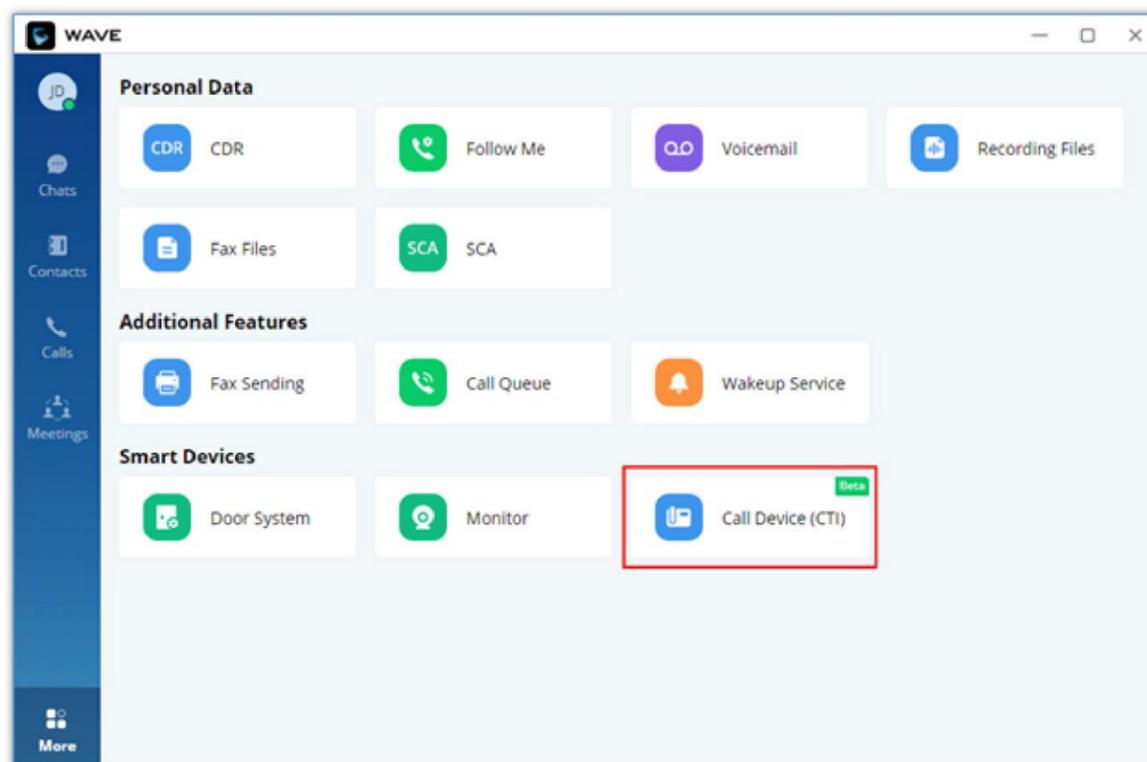
CTI Mode

Then click on "Bind Device"
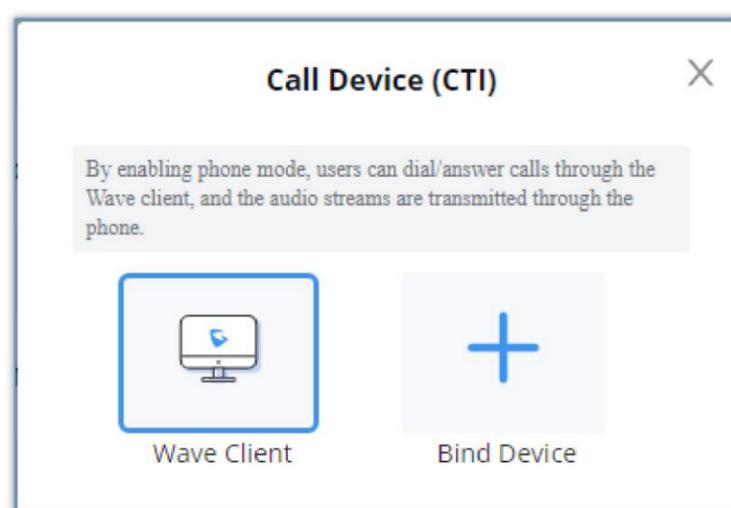
Bind Device

Enter your desk phone IP address
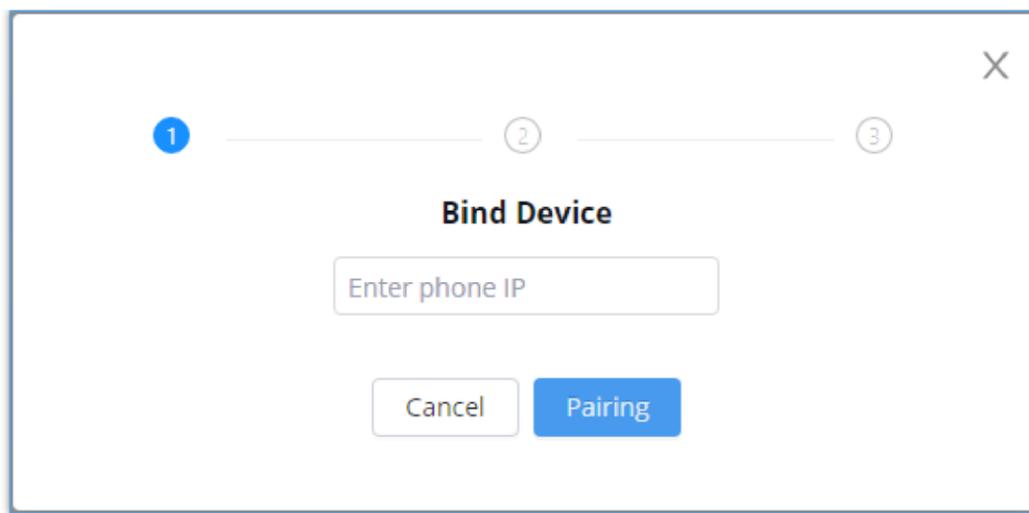
Enter the IP Address

Then enter the authentication code that is displayed on your desk phone's screen
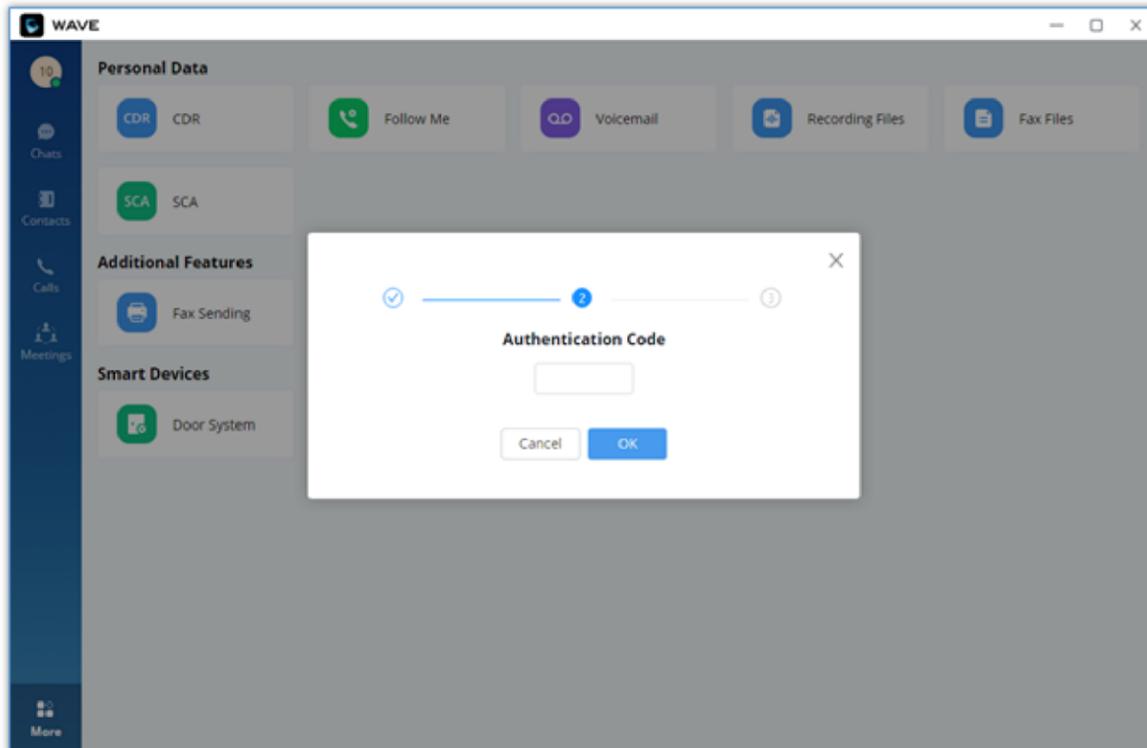
Enter the Authentication Code

Once that's the one this prompt will appear informing you that the binding has been established successfully
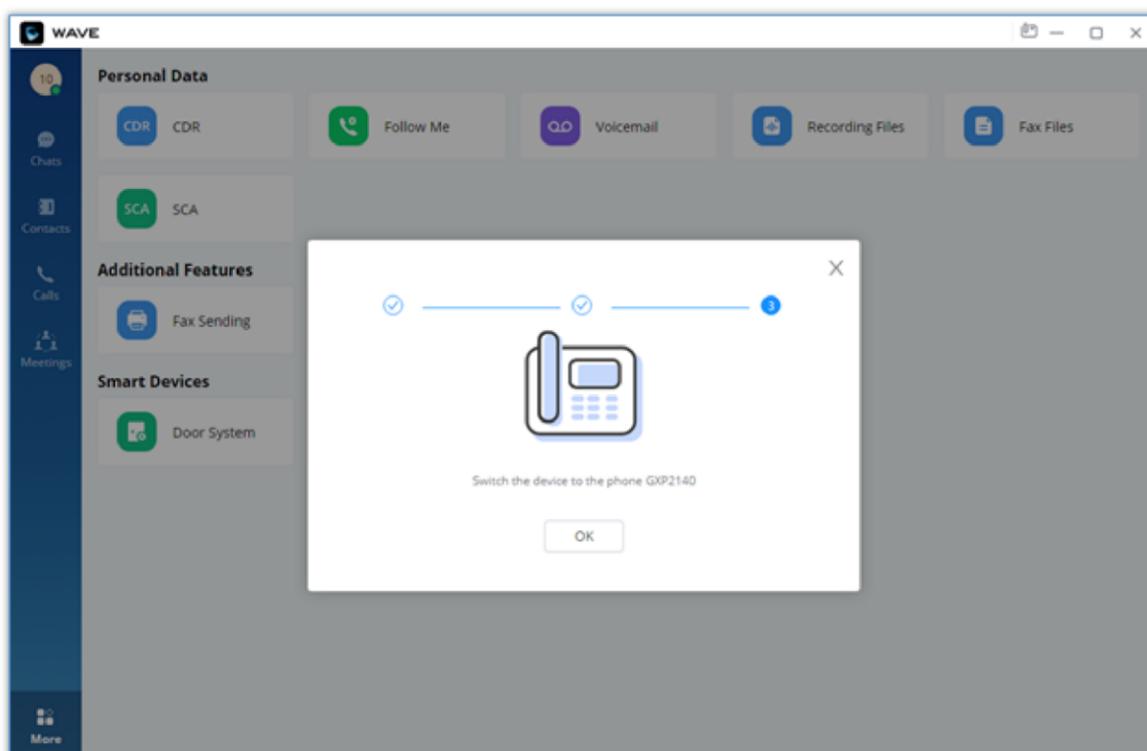
Binding Successful

You can choose which device to receive the call on, to do that go to the top right-hand corner of the screen and click on the call device icon 👆 then pick which device you want receive the calls on.
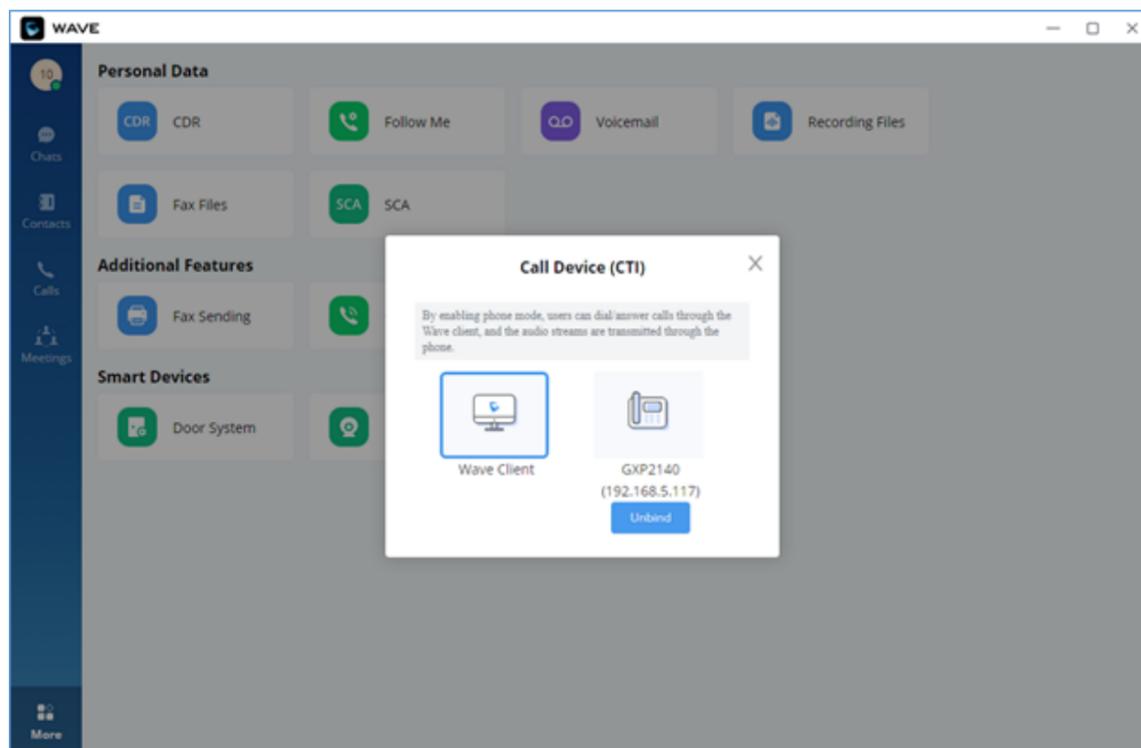
Select a Device

CTI Mode is supported on several Grandstream desk phones while other models are not. Please refer to the list below to see which models are supported on which firmware versions.

- **GRP260X and GRP261X series** – 1.0.1.X or later firmware version.

- **GXP17XX series** (GXP1760, GXP1780, GXP1782) – 1.0.9.X or later firmware version.

- **GXP21XX series** (GXP2130, GXP2135, GXP2140, GXP2160, GXP2170) – 1.0.9.X or later firmware version.

- **GXV33XX series** (GXV3350 – 1.0.3.31 or later firmware version, GXV3370 – 1.0.3.29 or later firmware version, GXV3380 – 1.0.3.30 or later firmware version).

Add-ins

Wave desktop offers a number of add-ins with various features, for example, customer relationship management (CRM) which allow the user to track and synchronize contacts and call detail records, as well as productivity integrations like Google Drive, Office 365 and integrations for messaging service like WhatsApp. Or our conferencing solution IPVideoTalk. Please find below a comprehensive list of all the integrations offered on Wave desktop.

Important Note

Please note that to be able to use this feature, the UCM should have a paid RemoteConnect, for more information, please refer to the following link: https://ucmrc.gdms.cloud/plans

- **CRM Add-ins**
    - Act! CRM
    - Bitrix24
    - Dynamics 365
    - Freshdesk
    - HubSpot
    - SalesForce
    - Sugar CRM

- Vtiger CRM

- Zendesk

- Zoho CRM

Note

To configure the CRM add-ins properly, please refer to this guide: Wave Desktop CRM Add-ins – User Guide

- **Other Add-ins**
  - WhatsApp

  - Office 365

  - IPVideoTalk

  - Wave Add-in for Outlook

  - Wave H5 Add-in for Google Chrome

Note

To configure 3rd party add-ins properly, please refer to this guide: Wave Desktop 3rd Party Add-ins — User Guide

- **Step 1:** navigate to "Application" tab on Wave Desktop app then click on "App Store", as the figure below shows:
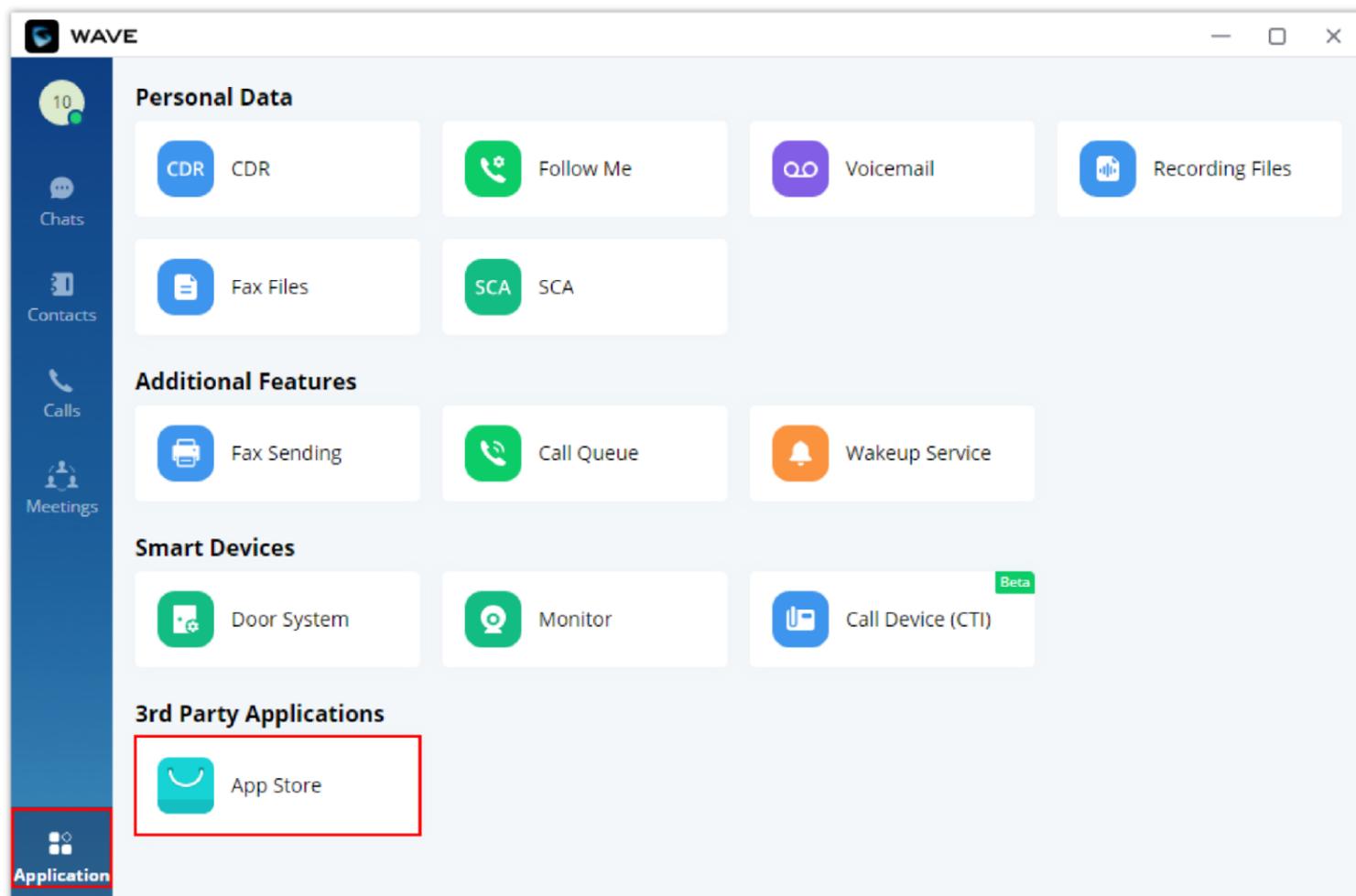
App Store

Step 2: Choose the add-in you want to install.
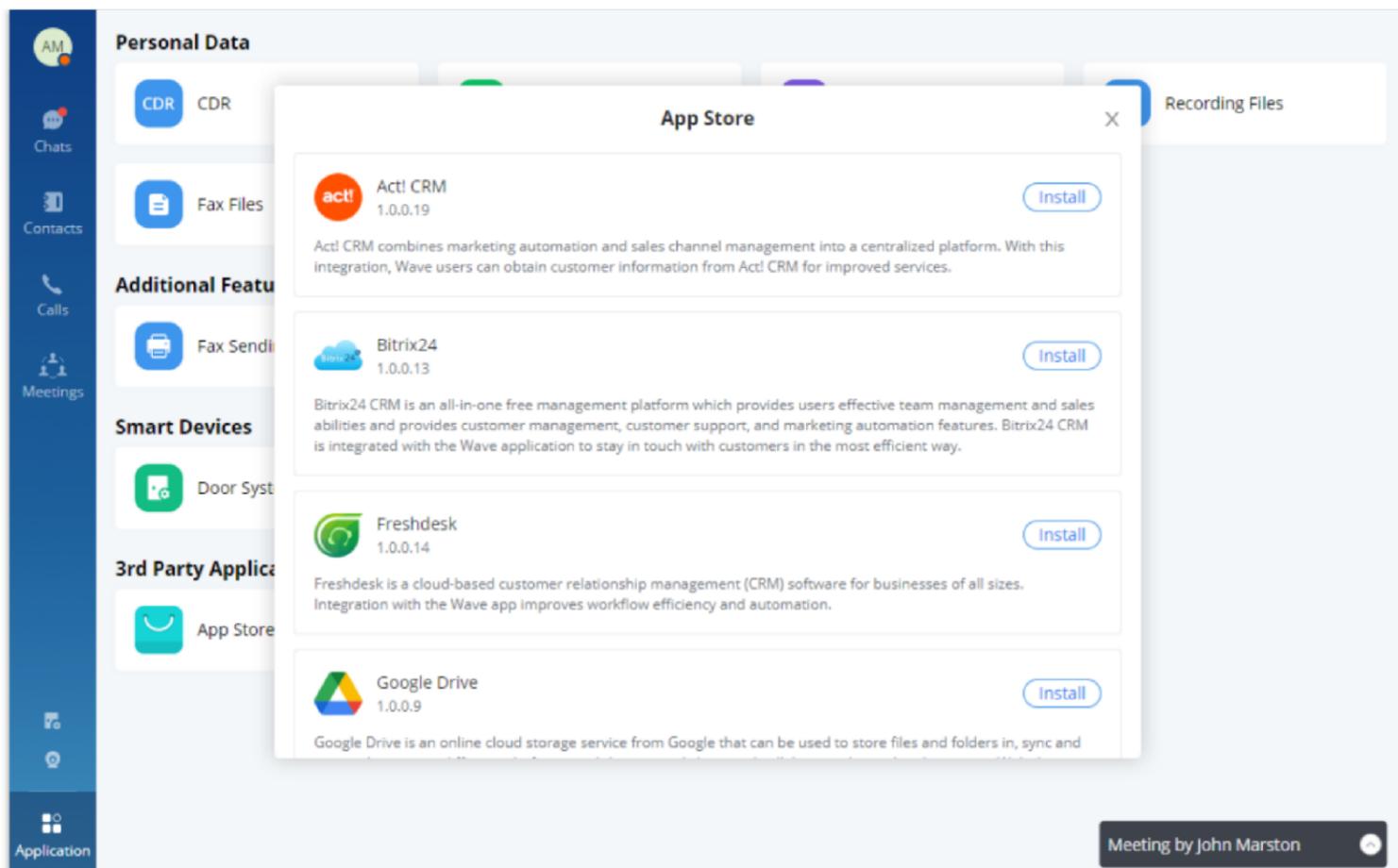
Install an Add-in

Once installed, the add-in will appear in the 3rd Party Applications section.
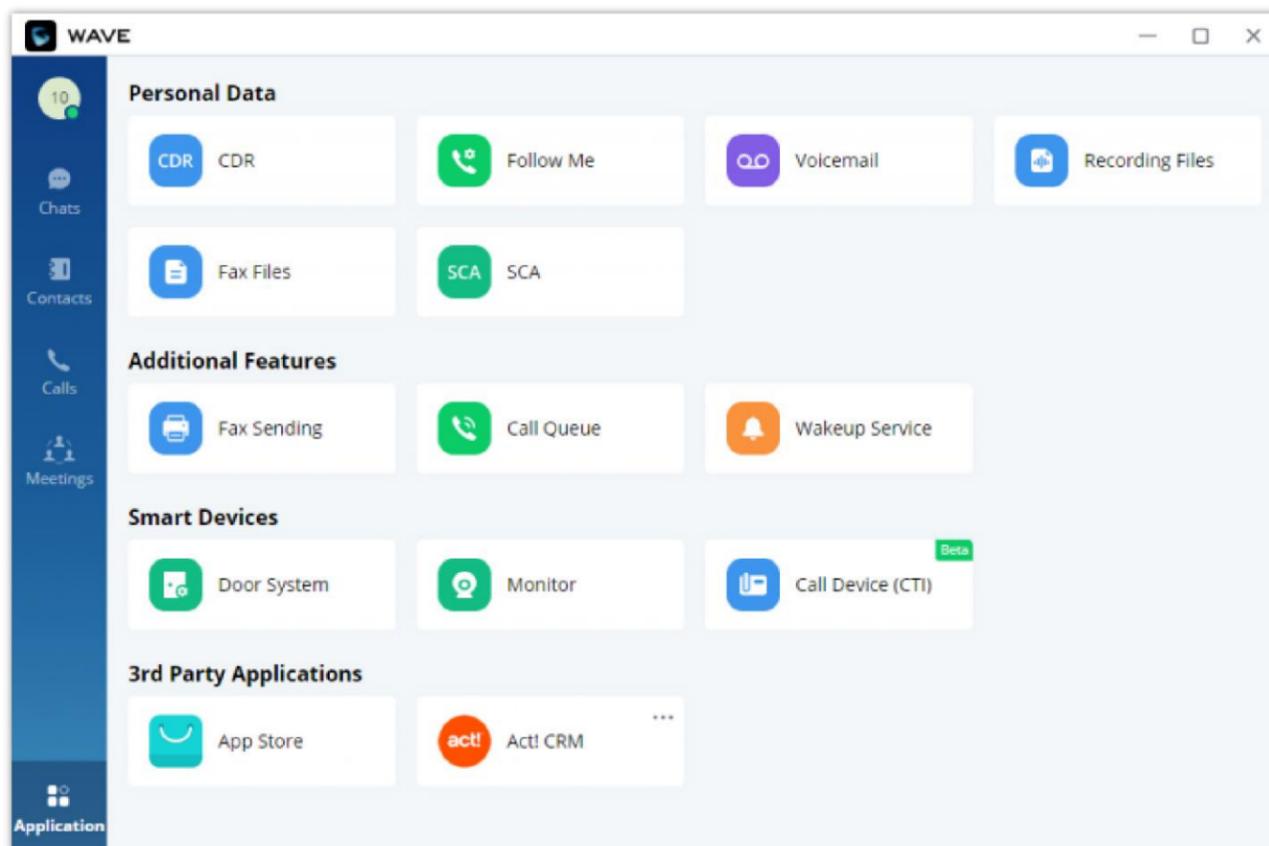
Applications

LOGO CUSTOMIZATION

Once done, the administrator can log in to the UCM management platform and customize the Wave LOGO, please refer to the UCM RemoteConnect user guide for details:

After customizing the logo, all Logos on the Wave page are displayed as customized Logos.
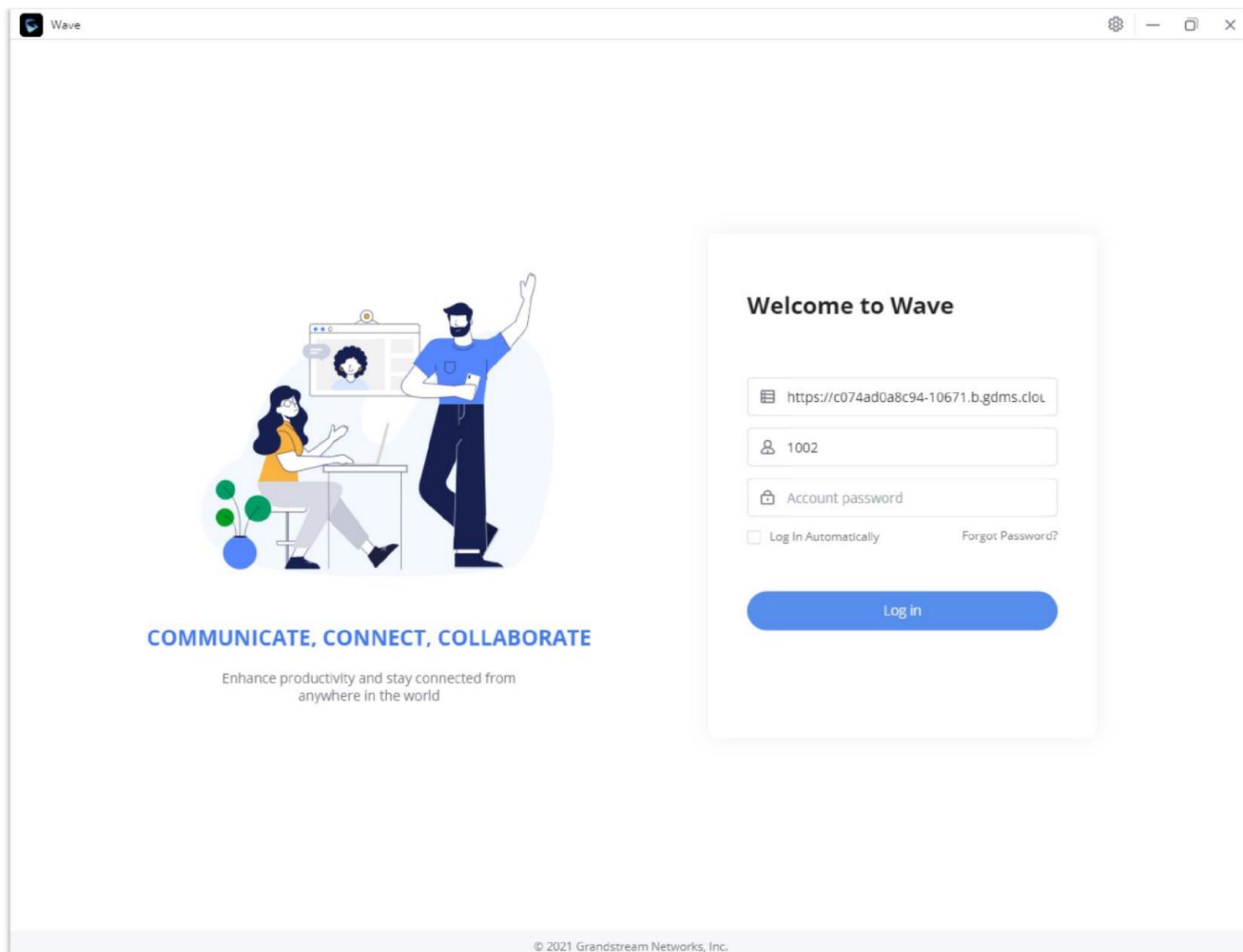
Customized Logo Interface

Note

To know which RemoteConnect plans offer this feature, please refer to the following link: https://ucmrc.gdms.cloud/plans

CHANGELOG

Firmware 1.0.21.10

- Users can login into Wave Web/Desktop by scanning the QR code on Wave Mobile. [Log In By Scanning QR Code]

- Raise Hand feature has been added. [Multimedia Meeting]

- When a participant is muted, the participant can press and hold the space bar to activate the microphone. [Meeting Call Layout]

- The users can now hide meeting participants who do not have their webcam on. [Meeting Call Layout]

- Users can now configure a dial plan on Wave. [Dial Plan Settings]

- Users can now delete call history and voicemail all at once or by batches. [Call History][Voicemail]

- "Delivered" and "Read" messages are now supported in point-to-point chats. [View Unread Messages]

- Users can quickly delete multiple chats or choose to delete all the chats at once. [Delete Message]

- Poll and Survey features have been added. [Create Poll/Survey]

- The Operator Panel can now be customized by hiding some panels. [Operator Panel]

- Users can now annotate and sketch when they are sharing their screen. [Screen Sharing]

- Wave Desktop now supports keyboard shortcut keys. [Keyboard Shortcut]

- Wave Desktop now supports T9 contact search. [Contacts]

Firmware 1.19.12

- Added WhatsApp add-in, Office 365 add-in, and IPVideoTalk add-in to the Wave App Store. [Add-ins]

- Added Wave add-in on Outlook [Add-ins]

- Added Wave H5 Google Chrome add-in [Add-ins]

- Added a toolbar and a small personal window that appears during screen share [During a Call]

- Calls and meetings will now use their own window [During a Call]

- Users can now change what they are sharing without exiting the current screen share [Screen Sharing]

- Added a call/meeting ending indicator tone

- Added support for GSFEC, which improves audio packet loss protection capabilities.

- Users can now forward multiple chat messages to a contact [Forward Message]

- The local time of Wave contacts outside the user's time zone will now be displayed at the bottom of chats and under contact details [Contact Local Time]

- Images can now be forwarded to other chats and rotated. Note: Forwarded images will not retain rotation [Send Files]

- Added end to end encryption feature to chat [End to End Encryption Chat]

- Added the Personal Contacts feature [Personal Contacts]

- Users can now schedule onsite meetings [Schedule Onsite Meetings]

- Meeting hosts can now edit and cancel upcoming meetings from the Meeting List page. Ongoing meetings can also be ended from this page. [Meeting List]

Firmware 1.17.8

- Made several UI improvements.

- The last 10 server addresses logged into will now be remembered. These server addresses can be viewed and selected by clicking on the arrow icon in Server Address field on the login page. [Logging In To Wave Desktop]

- Added Notification Settings that would allow the user to select the notifications to receive from Wave. [Application Settings]

- Users can now drag and drop items in the application page to the wave sidebar for easy access. Note: Users may need to long-click on an item before it can be dragged.

- Google Drive add-in is now available and can be installed from the Application →3rd Party Applications→App Store page. Once installed, users can log into their Google account and share files from it directly to chats. [Send Files]

- The following CRM add-ins are now available and can be installed from the Application→3rd Party Applications→App Store page: Bitrix24 CRM, Freshdesk CRM, HubSpot CRM, Zendesk CRM.

- Users can now select to download application updates in the background.

- Users can now have up to 6 simultaneous calls instead of just 2.

- Added a callback button to missed call notifications. [Missed Calls]

- Improved attended transfer functionality. [Attended Transfer]

- Improved CTI functionality. After a call between Wave Desktop and an IP endpoint is established and is converted into a meeting, the Wave Desktop user can start presentations during the meeting.

- When copy/pasting a number with special characters into the dial pad, the special characters will be automatically filtered out.

- Added the Change Group Owner option to the group chat settings to transfer ownership of the group to an existing group member. [Meeting Group Chat]

- Added additional emojis.

- Improved image viewing functionality when looking at images uploaded to chats.

- Users can now start and stop video recordings during meetings. Recordings can be viewed and played directly from Wave. If the meeting does not support video recordings, audio will be recorded instead. [Record an Ongoing Meeting]

- Users can now change the video feed layout of meetings by clicking on the More button during meetings and selecting either Speaker Layout (1 large video feed w/ others being smaller) or Tile Layout (equally sized video feeds). [Meeting Call Layout]

- Meeting hosts can now access options under each video feed such as muting, selecting the feed as the focus video, full screening the feed, or removing the participant from the meeting. [Meeting Call Layout]

- Users can now create a meeting group chat when scheduling a meeting. [Schedule Meeting]

- When there is only 1 participant in a meeting, and the meeting duration has reached 30 minutes, a prompt will appear asking whether to extend the meeting. If extended, the meeting will last another 30 minutes. Otherwise, the meeting will automatically end after 5 minutes. [End Meeting]

- If the duration of a meeting is about to reach 12 hours, and the meeting host is in the meeting, they can extend the meeting for another 12 hours once. The meeting will automatically end once another 12 hours have passed. If the meeting host is not in the meeting after the initial 12 hours, the meeting will automatically end. [End Meeting]

- Users can now transition a screenshare into a whiteboard. The last frame on the screenshare will be used as the background image of the whiteboard.

- Users can now see their own shared screen.

- Users can now also share their PC audio in addition to sharing their screens by toggling on the Share PC Audio checkbox when selecting the application or screen to share. [Screen Sharing]

- Users can now invite IP camera devices they have permission to access to meetings. Other meeting participants can view the video feed of invited IP camera devices.

- Added the Allowed to override Host Mute option to the Edit Meeting / Schedule Meeting pages → Advanced Settings page. If enabled, participants muted by the meeting host will be able to unmute themselves. [Schedule Meeting]

- The meeting start notification will no longer appear if the user is already in the meeting waiting room.

Firmware 1.15.11

- Added Basic call control support for Microsoft Teams-certified headsets.

Firmware 1.15.7

- Added support for sharing whiteboard and pdf files. [On Screen Sharing]

- Added support for joining meetings via entering the correspondent link. [Invite Participants]

- Added support to control whether chat group participants can invite other users. [Add Group Members]

- Added support for voice message in instant messaging. [Audio Message]

- Added support for searching within discussions.[Search Within a Conversation]

- Added support for downloading the chat history during and after a meeting has ended. [Download The Chat History]

- Microphone level can be checked directly when clicking "audio settings". [Audio Settings]

- Added support for searching for contacts within a specific directory.

- Added support for enabling and disabling "Dial Tone". [Application Settings]

- Added support for CRM add-ins.

Firmware 1.13.9

- Made several UI improvements.

- Added ability to change date and time format. [Date/Time Format]

- Added Portuguese and Vietnamese language support. [Table 2: Wave Desktop Specifications] [Language]

- Added support for recording an ongoing point-to-point call. [Record an Ongoing Point-to-Point Call]

- Added support for recording an ongoing Wave meeting. [Record an Ongoing Meeting]

- Meeting hosts can now view the list of invited participants that don't attend a meeting. [Invitees List]

- Meeting creators can now create group chats from past meetings and their participants. [Meeting Group Chat]

- Added *Meeting Agenda* information to *Meeting Details*.[Meeting Agenda]

- Added support for Call Flip function. [Call Flip Function]

- Added support for viewing contacts based on UCM contact privilege settings. [Contacts]

- Added support for restricting visibility of chat history when inviting contacts to a group chat. [Contacts]

- Added more emojis. [Reply with Emoji]

- Added support for emoji previewing when using emoji shortcuts. [Reply quickly with an emoji shortcut]

- Added support to delete messages that failed to send. [Message Sending Failure]

- Up to 500 users can be selected when creating a group chat. [Start a group chat]

- The server address field now has a character limit of 64 characters. [LOGGING IN TO WAVE DESKTOP]

- The Enter key can now be used to dial out. [Initiating a Call from Keypad]

- Added a file download failure prompt. [Send Files]

- Added a red box to the screen share feed. [Share Desktop]

- Added CTI support for GXP, GRP, and GXV endpoints. [CTI Mode]

- Improved noise detection and reduction during calls.

- Added support for displaying all the received and sent files in one list. [Files List]

- Added support for changing the group chat name quickly. [Change Group Name]

- Added the ability to quickly invite other participants to a meeting. [Quickly Invite Participants]

Firmware 1.11.4

- Added Operator Panel function in Wave Desktop. [Operator Panel]

- Added Voicemail function in Wave Desktop. [VOICEMAIL]

- Added more functions in Chat module. [Reply with Emoji] [Receive New Messages]

- Added custom avatar function in Wave Desktop. [Custom Avatar]

- Added Help and Feedback module in Wave Desktop. [Help] [Feedback]

- Added chat bubble function during the meeting. [bubble function]

- Merged audio conference and video conference to Conference module. [Conference]

- Added noise detection function during the meeting and supported to enable noise reeducation mode in Audio settings for Wave Desktop users. [Audio Settings]

Firmware 1.9.12

- Added support to login via User Password instead of the SIP Password. [LOGGING IN TO WAVE DESKTOP]

- Added support for Custom status on wave web. [Custom Status]

- Added support for sending 5000 characters on chat. [Send messages]

- Added possibility to send excel content under chat. [Send Excel Content]

- Added support for sending DTMF under meeting. [DTMF]

- Added possibility to complete meeting from the Meeting list. [COMPLETE MEEINTG]

- Added more account related settings. [Settings]

- Added more applications. [More Applications].

- Added support for virtual background. [Virtual Background Settings]

- Added support for alternative ringing speaker. [Audio Settings]

Firmware 1.7.8

- Added New features in chat module: [Quote to Reply Message] [Delete Message] [Pin Chat Box to Top] [Hide Chat Box]

- Supported multi-lines calls. [MULTIPLE LINES]

- Supported to transfer an active call to a video conference. [Transfer to Meeting Room]

- Added public meeting room list and the list will show the meeting room status in different periods. [PUBLIC ROOM]

- Added to create a meeting with random meeting number. The meeting can be created as instant meeting or scheduled meeting. [Meet Now] [Schedule Meeting]

- Added to display the actual meeting duration and actual participants list for the previous meetings. [MEETING LIST]

- Supported to add participants from contacts/groups when scheduling a meeting. [Schedule Meeting]

- Supported to set meeting subject and add invitees for instant meetings. [Meet Now]

- Added meeting assistant module. When there are new meeting invitations, meeting reminders and meeting cancelation notifications, the meeting assistant will send messages to the host and participants. [MEETING MANAGEMENT]

Firmware 1.5.4

- This is the initial version.