Yealink

Yealink VC Desktop for Mac User Guide

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About This Guide

Yealink VC Desktop for Mac is an easy-to-use video conferencing application that extends video communications to mobile professionals, other than only in the typical conference room. With Yealink VC Desktop for Mac, not only it is easy for you to realize video conferencing, but also you can initiate a presentation, pictures, etc. on your Mac in HD quality.

This guide provides everything you may need to start your Yealink VC Desktop for Mac quickly. Before use, read the **Getting Started** chapter in this guide carefully, and be sure that the computer performance and IP network environment are ready for VC Desktop configuration.

Typographic Conventions

You need to know the following basic typographic conventions to distinguish types of in-text information:

Convention	Description
Bold	Highlights the user interface items such as menus or menu selections when they are involved in a procedure or user action (e.g., Click **Check for update**). Also used to emphasize text
Blue Text	Used for cross references to other sections within this documentation (e.g., refer to Troubleshooting).
Blue Text in Italics	Used for hyperlinks to Yealink resources outside of this documentation such as the Yealink documentations (e.g., For more information, refer to *Yealink VC Cloud Management Service Administrator Guide*.

You also need to know the following writing conventions to distinguish conditional information:

Convention	Description
<>	Indicates that you must enter specific information. For example, when you see <IP address>, enter the IP address.
->	Indicates that you need to select an item from a menu. For example, ->**About** indicates that you need to select **About** from .

Terms

As you read this guide, you'll notice that the same terms are used repeatedly. Make sure you familiarize yourself with these terms.

Cloud endpoints: This term refers to the endpoints that support Cloud feature, including SIP VP-T49G IP phone, VC400/VC120/VC800 video conferencing system, VC110 all in one HD video conferencing endpoint.

Software

If it is your first time to install and use Yealink VC Desktop for Mac, we recommend you to download the latest software from the Yealink official website: *http://www.yealink.com* using Internet Explorer 8 or later.

If you have already installed the Yealink VC Desktop for Mac, you can upgrade the Yealink VC Desktop for Mac in order to the latest version. For more information on how to upgrade the Yealink VC Desktop for Mac, please refer to Updating Yealink VC Desktop for Mac on page 9.

Hardware and Software Requirements

These hardware and software requirements are determined by the specific test scenarios. Due to different software and hardware, the system's actual performance may vary from one to another.

Hardware or Software	Requirement
Mac OS X	Mac OS X 10.8 or later
Mac Device	• Mac desktops: MAC mini, MAC Pro, iMAC, iMac Pro • Mac notebooks: MacBook, MacBook Air, MacBook Pro
Cameras	Integrated or external cameras
Audio	Microphone and Speaker

System Capabilities and Constraints

The following resolution and algorithms are supported by Yealink VC Desktop for Mac.

Resolution

The following table lists the resolutions supported by Yealink VC Desktop for Mac.

Resolution and Frame Rate	Source
Up to 720p/30fps	Video sent from camera
Up to 720p/30fps	Video received from far site
Up to 720p (1280×720)/5fps	Content showing from the computer

Resolution and Frame Rate	Source
Up to 1080p (1920×1080)/5fps	Content received from far site

Actual transmitted video resolution is affected by several factors, such as camera capability, computer performance, network conditions, the far-end system's capability, and whether content is being received, it can also be affected by the presentation frame rate of far-site device.

Algorithm

The following table lists the algorithms supported by Yealink VC Desktop for Mac.

Algorithms	Description
Audio	• G.711μ or G.711A • G.722.1 • G.722.1 C • G.722 • Automatic Gain Control (AGC) • Acoustic Echo Cancellation (AEC) • Voice Activity Detection (VAD) • Comfort Noise Generator (CNG) • Packet Loss Concealment (PLC) • Adaptive Jitter Buffer (AJB)
Video	• H.264 High Profile • H.264 Baseline Profile • H.263
Encryption	AES-128 media encryption TLS/SRTP supported in SIP calls

Icon Instruction

Icons appearing on the user interface are described in the following table:

Icon	Description
	Network is available

Icon	Description
	Network is not available
	SIP account is registered
	H.323 account is registered
	Yealink Cloud account is registered
	Local contacts
	Yealink Cloud contacts
	Dial
	Directory
	Call history
	Settings
	Missed calls (H.323 account/SIP account/IP Call)
	Missed calls (Cloud platform)
	Outgoing calls (H.323 account/SIP account/IP Call)
	Outgoing calls (Cloud platform)
	Incoming calls (H.323 account/SIP account/IP Call)
	Incoming calls (Cloud platform)
	Answer calls
	Reject calls
	Delete local contacts or call records

Icon	Description
	Add contacts to local directory from the call history list
	Edit local contacts
	SRTP call or H.235 call
	View more icons
	Call statistics
	Non-current page
	Current page
	The microphone is unmuted
	The microphone is muted
	The speaker is unmuted
	The speaker is muted (icon displays on the volume slider)
	Initiate presentation
	Full screen
	Exit full screen mode
	End a call
	Turn off your camera
	Turn off your video
	Turn on your video/camera
	The call is held

Icon	Description
	Change the video layout
	Change audio and video devices
	Keypad
	Unfold the sharing toolbar
	Fold the sharing toolbar
	Change the sharing content

In This Guide

Topics provided in this guide include:

- Chapter 1 Getting Started
- Chapter 2 Customizing Yealink VC Desktop for Mac
- Chapter 3 Using Yealink VC Desktop for Mac
- Chapter 4 Troubleshooting

Table of Contents

Getting Started

This chapter contains the following information about Yealink VC Desktop for Mac:

Installing Yealink VC Desktop for Mac

Before you install the Yealink VC Desktop for Mac application on your Mac, you need configure the system preferences of your Mac.

To install the Yealink VC Desktop for Mac:

1. Click the System Preferences icon  in the Dock at the bottom of the screen.
2. Select **Security & Privacy**.
3. Click **General,** and then mark the radio box of **Anywhere** in the **Allow apps downloaded from:** field.
4. Download the installation file from *Yealink official website*.
5. Follow the installer wizard instruction.

To start the Yealink VC Desktop for Mac manually:

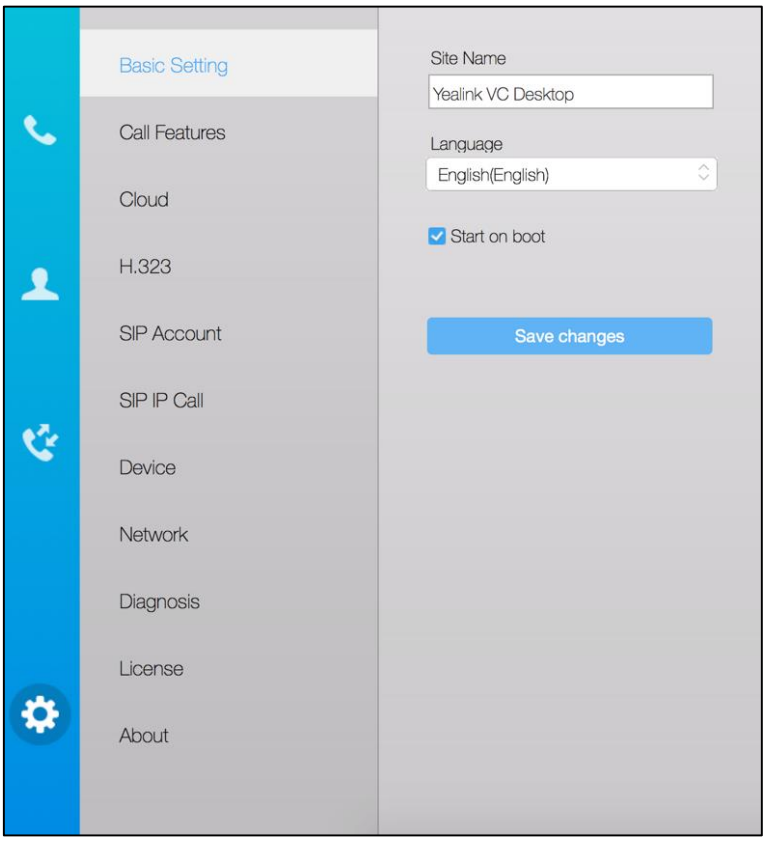
1. Click the Finder icon  in the Dock at the bottom of the screen.
2. Select **Application**.

3. Double-click the Yealink VC Desktop for Mac icon to start the Yealink VC Desktop for Mac manually.

To configure start on boot via the Yealink VC Desktop for Mac:

1. Click ->**Basic Setting**.
2. Check the **Start on boot** checkbox.

   The Yealink VC Desktop for Mac will start automatically when your Mac starts.



3. Click **Save changes**.

   These settings take effect the next time you restart the Mac.

Uninstalling Yealink VC Desktop for Mac

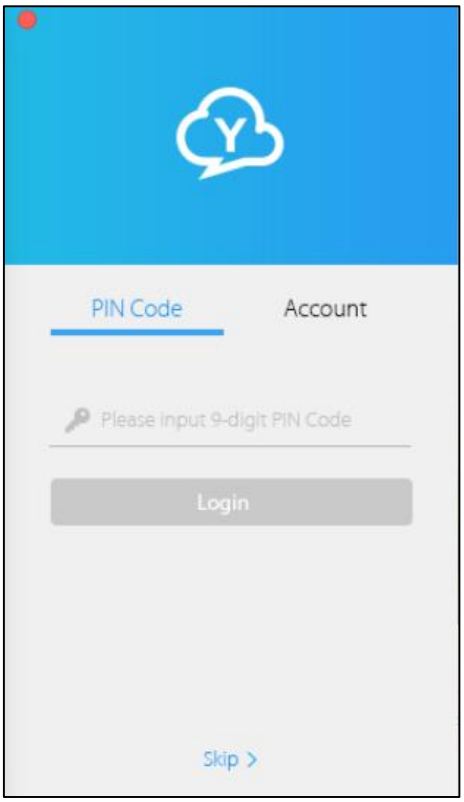
You can uninstall the Yealink VC Desktop for Mac at any time. Note that after you uninstall the Yealink VC Desktop for Mac, you can no longer use it. If you decide to use the Yealink VC Desktop for Mac again, you must reinstall it.

To uninstall the Yealink VC Desktop for Mac application:

1. Click the Finder icon in the Dock at the bottom of the screen.
2. Select **Application.**
3. Right click the Yealink VC Desktop for Mac icon , and then select **Trash** to uninstall Yealink VC Desktop for Mac.

Login Interface

For the first time you start the Yealink VC Desktop for Mac, the login interface is displayed as below:



If you want to activate the Yealink VC Desktop for Mac directly, you can click **Skip.** For more information, refer to License Activation on page 3.

You can log into Yealink VC Desktop for Mac using Yealink Cloud accounts directly. For more information, refer to Account Settings on page 30.

License Activation

When you first start Yealink VC Desktop for Mac, you can click **Skip**->**30-day Trial** to use the trial version.

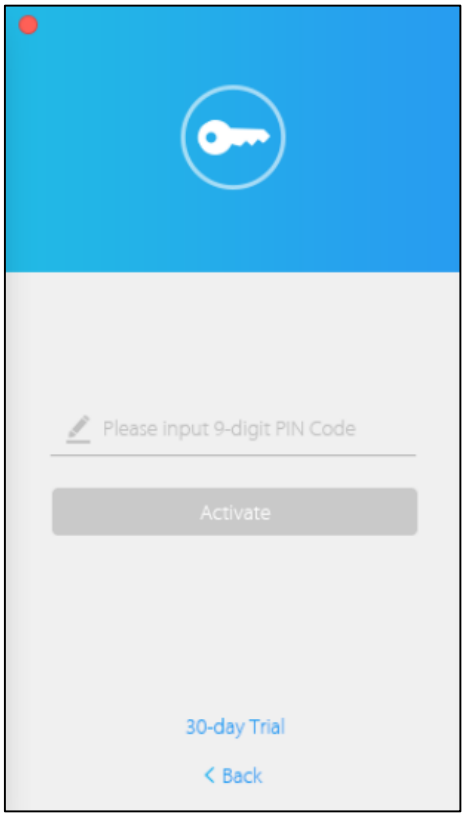
For a permanent version, you should activate the Yealink VC Desktop for Mac by activation code. You can obtain the activation code from Yealink resellers. You can also log into the Yealink VC Desktop for Mac using a Yealink Cloud account instead of activation. For more information, please refer to Account Settings on page 30.

You can activate the Yealink VC Desktop for Mac in the login interface or settings menu.

To activate the Yealink VC Desktop for Mac in the login interface:

1. Click **Skip**.

2. Enter the activation code.

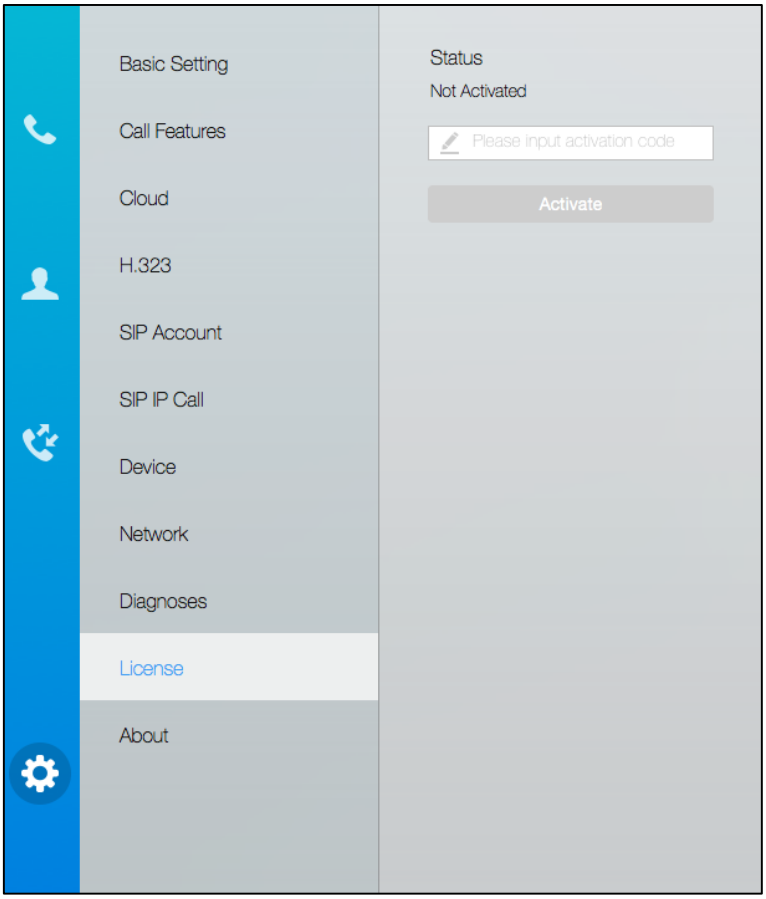


3. Click **Activate**.

To activate the Yealink VC Desktop for Mac in the settings menu:

1. Click -> **License**.

The current software activation state is shown as below:



2. Enter the activation code.
3. Click **Activate**.

About

You can view the Yealink VC Desktop for Mac information and update status.

Do the following:

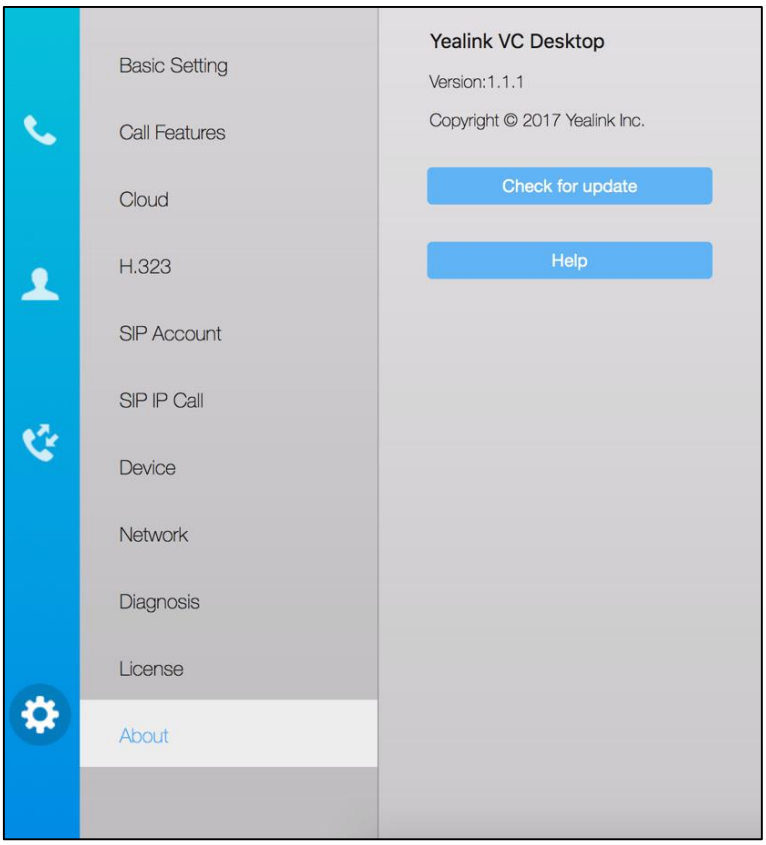
1. Click -> **About**.

   You can view the current the Yealink VC Desktop for Mac version number and copyright information.

   You can do one of the following:

   - Click **Check for update**.

The Yealink VC Desktop for Mac will automatically check for update and prompt you whether to update to the latest software.



For more information, please refer to Updating Yealink VC Desktop for Mac on page 6.

- Click **Help** to visit the Yealink official website.

Updating Yealink VC Desktop for Mac

Yealink VC Desktop for Mac will check for updates automatically and give you an update notification, you can choose to update or just ignore it.

You can do one of the following:

- One-click Update
- Installation Package Update

One-click Update

To update the Yealink VC Desktop for Mac using one-click update:

1. Click ->**About**->**Check for update**.

If an update is available, you will be prompted to perform the update, and then follow the prompt to update Yealink VC Desktop for Mac.

The Yealink VC Desktop for Mac application will be upgraded to the latest version.

If the Yealink VC Desktop for Mac fails to update, the failure reasons will be given in the dialog box. For more information, please refer to General Issues on page 83.

Installation Package Update

When you update the Yealink VC Desktop for Mac by using the installation package, the software will identify whether the software has already been installed on your Mac. If you have installed Yealink VC Desktop for Mac, the new software will cover the old one.

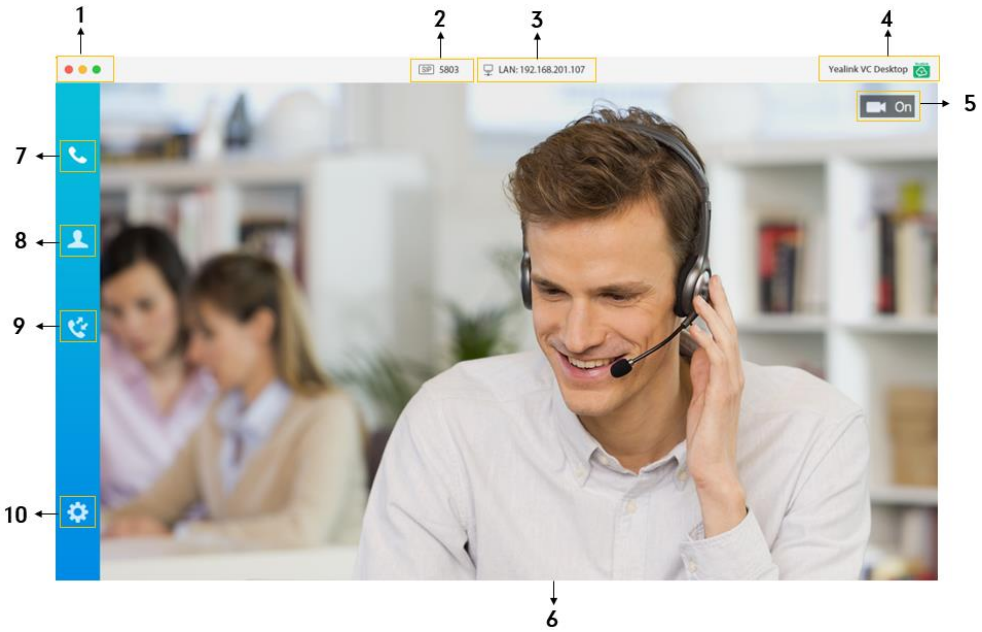
Updating Yealink VC Desktop for Mac will save the user data of the last version by default. The user data includes your call history, local directory or the configuration information.

The update process follows the installation steps.

User Interface Overview

Main Window

The main window appears when Yealink VC Desktop for Mac starts. From the main window, you can place a call, manage contacts, view history and modify settings.

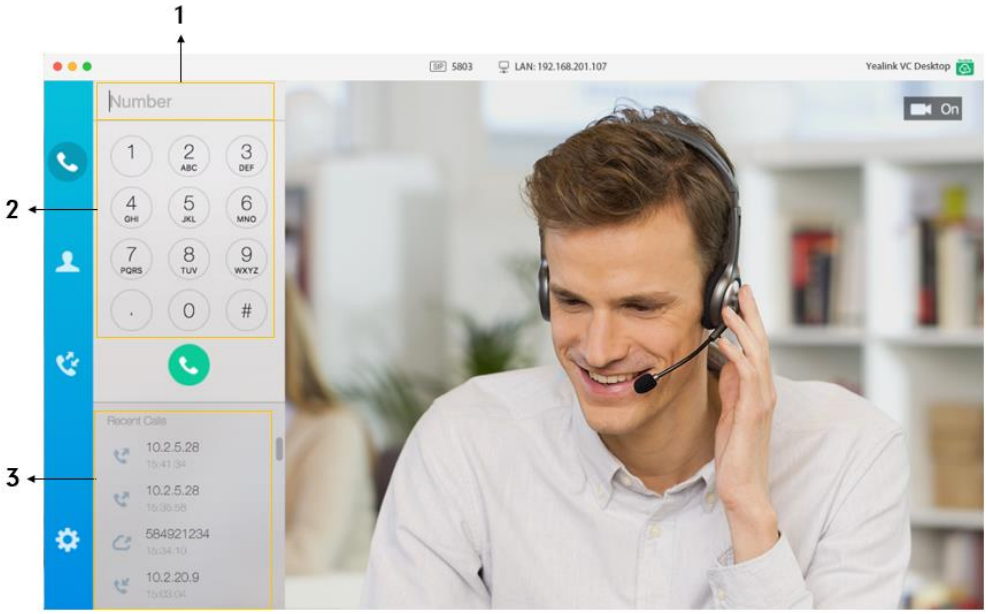


No.	Name	Description
1	Window control area	Controls the main window. You can minimize, maximize, restore the window or

No.	Name	Description
		close the window.
2	Registered account	If a SIP account is registered on Yealink VC Desktop for Mac, the account icon is shown as SIP. For more information, refer to SIP Settings on page 35.
		If an H.323 account is registered on Yealink VC Desktop for Mac, the account icon is shown as H.323. For more information, refer to H.323 Accounts on page 33.
		If a Yealink Cloud account is registered on Yealink VC Desktop for Mac, the account icon is shown as VC. For more information, refer to Yealilnk Cloud Accounts on page 30.
3	IP Address	Displays the IP address of your Mac.
4	Site name	Displays the site name of Yealink VC Desktop for Mac. For more information on how to change the site name, refer to Site Name on page 53.
5	Camera	Turns off your camera or turns on your camera. For more information, please refer to Turning off Your Camera on page 70 and Turning on Your Camera on page 70.
6	Video image	Displays local video.
7	Dial	Enters dialing window.
8	Directory	• Manages the local directory. • If Yealink VC Desktop for Mac is registered with Yealink Cloud account, you can also manage the Yealink Cloud directory. For more information, refer to Directory on page 55.
9	Call history	Includes incoming, outgoing and missed calls. For more information on how to manage the call history, refer to Call History Management on page 60.
10	Settings	Enter settings window.

Dialing Window

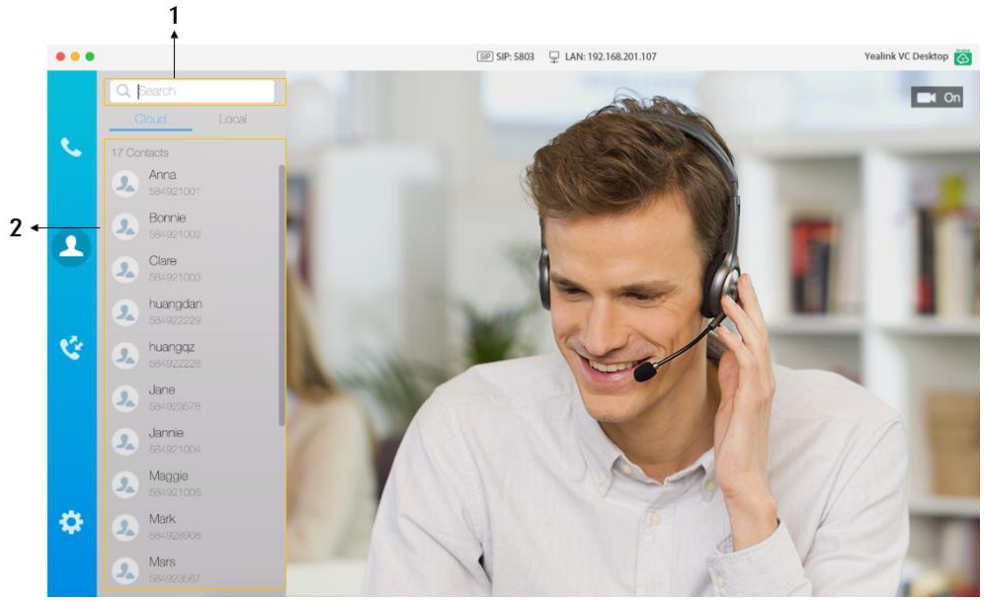
Click to enter the dialing window.



No.	Name	Description
1	Input box/Search box	Displays the calling information you entered.
2	Keypad	Provides numbers, "#" and ".".
3	Recent calls/Search results	Display the recent calls or the search results. When you don't enter any character in the search box, the recent calls are displayed.

Directory Window

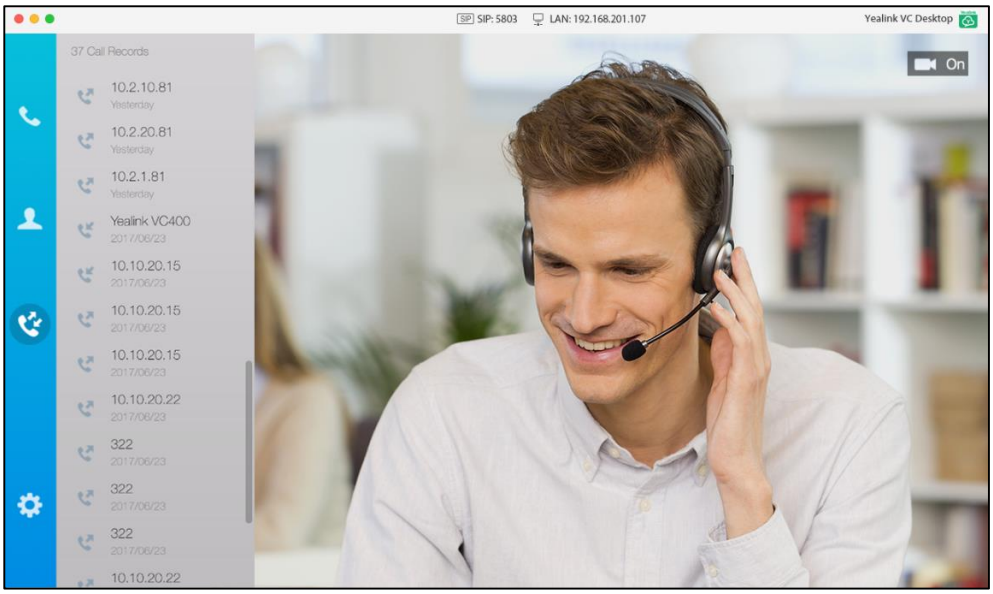
Click to enter the directory window. If Yealink VC Desktop for Mac is registered with Yealink Cloud account, you will enter the Yealink Cloud directory listed under the Cloud tab by default. Use the local directory or Yealink Cloud directory to place a call or search for contacts. For more information, please refer to Directory on page 55.



No.	Name	Description
1	Search box	Displays the searching information you entered.
2	Contact list/Search results	Display the contact list or the search results.

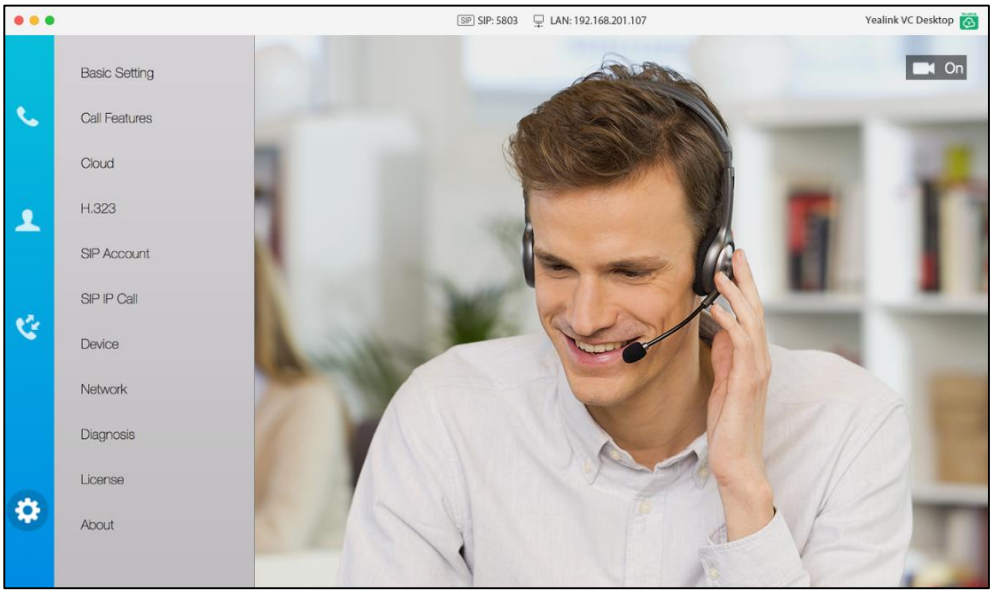
History Window

Click to enter the history window. The History lists show you the incoming, outgoing and missed calls. Manage call history by deleting entries.



Settings Window

Click to enter the settings window.



Call Window

The call window is the main work area during calls. In call window, you can perform operations

on current calls, such as ending the call or sending DTMF tones.

To close the call window during a call:

1. Click .

   A dialog box pops up to ask if you confirm to end the talking, shown as below:

2. You can do one of the followings:

   - Click **Yes** to end the call. The call window is closed and Yealink VC Desktop for Mac application is hidden in the system tray.
   - Click **Minimize** to continue the call. The call window is zoomed out automatically and brought to front in the bottom-right of the Mac.

To minimize the call window during a call:

1. Click .

   The far-site video image is zoomed out automatically and brought to front in the bottom-right of the Mac.

   The local video image will not be displayed.

Video Call Window

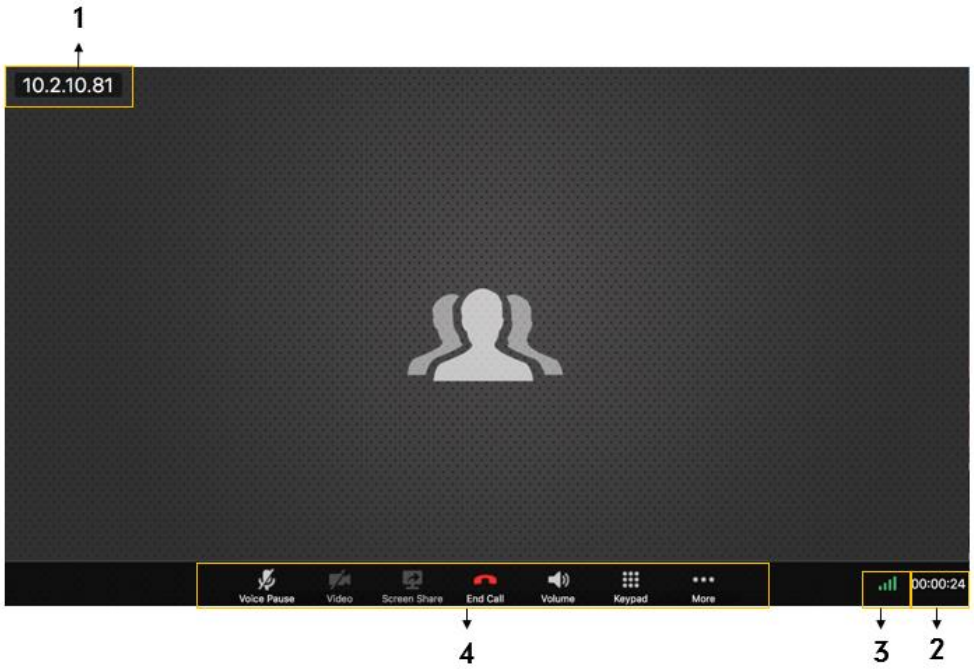
If the far site supports video, Yealink VC Desktop for Mac enters the video call window. The far-site video image displays in a large window, the local site displays in a small window in the bottom-right corner of the window by default.

No.	Name	Description
1	Far-site name	Displays the site name of the far site.
2	Video image	Displays far-site video by default. You can swap the video images. For more information, refer to Swapping the Video Images on page 75.
3	Video image	Displays local video by default. You can swap the video images and show or hide the video image in the small window. For more information, refer to Changing the Video Layout on page 74.
4	Call duration	Displays the duration of the current call.
5	Call statistics	Contain the parameters about audio, video and share. For more information on how to view the call statistics, refer to Call Statistics on page 76.
6	In-call toolbar	Provides the basic operations on current calls. For more information on the icons, refer to Icon Instruction on page vii.

Note The video layout varies, depending on whether the presentation is initiated locally or by the far site.

Audio Call Window

If the far site does not support video, Yealink VC Desktop for Mac enters the adaptive audio call window.



No.	Name	Description
1	Far-site name	Displays the site name of the far site.
2	Call duration	Displays the duration of the current call.
3	Call statistics	Contains the parameters about audio, video and share. For more information on how to view the call statistics, refer to Call Statistics on page 76.
4	In-call toolbar	Provides the basic operations on current calls. The icons in gray indicate that you cannot share presentation and turn on video during an audio call. For more information on the icons, refer to Icon Instruction on page vii.

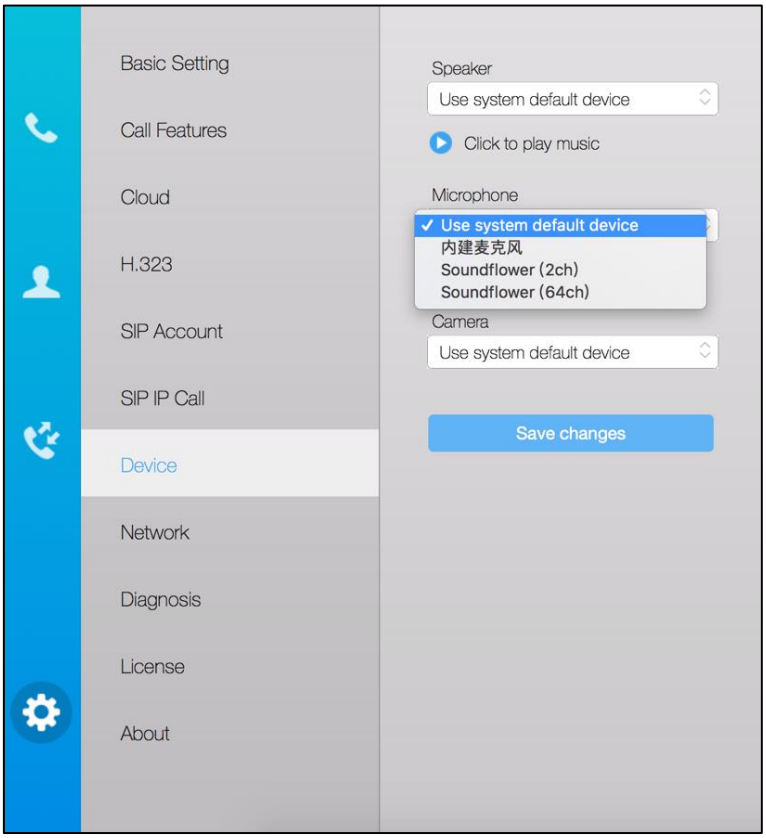
Audio and Video Device

If you do not connect new audio or video device, the Yealink VC Desktop for Mac will select a system default device for audio or video capture automatically. And you can also select the desired audio or video device manually.

If you connect new audio or video device, Yealink VC Desktop for Mac will select the new audio or video device automatically.

To configure audio input device via the Yealink VC Desktop for Mac:

1. Click ->**Device**.
2. Select the available microphone from the pull-down list of **Microphone**.
3. Click to test the volume.

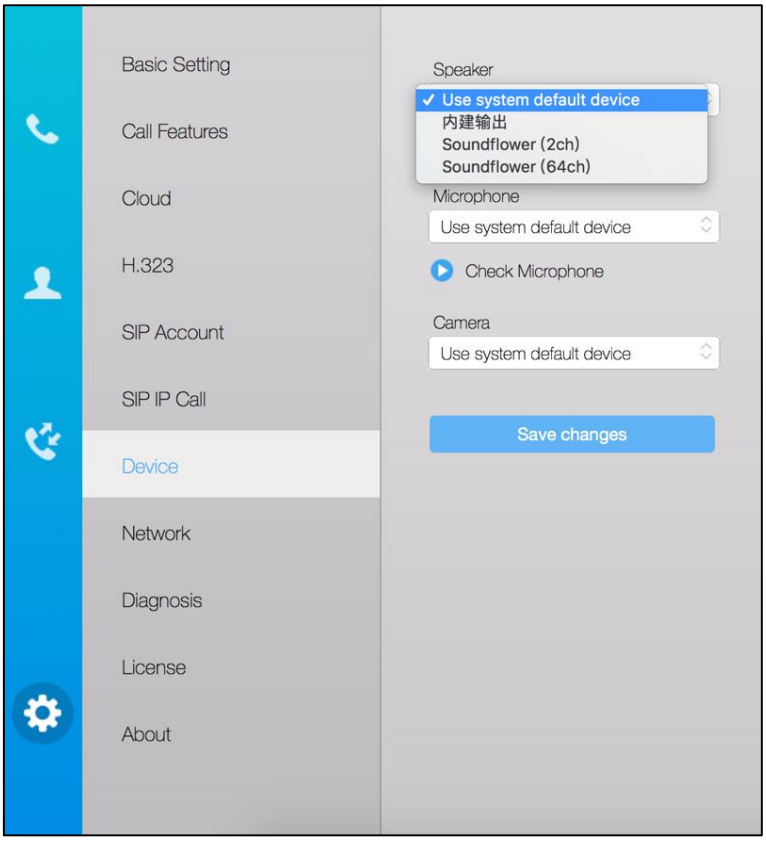


4. Click **Save changes**.

To configure audio output device via the Yealink VC Desktop for Mac:

1. Click ->**Device**.
2. Select the available speaker from the pull-down list of **Speaker**.

3. Click to test the volume.

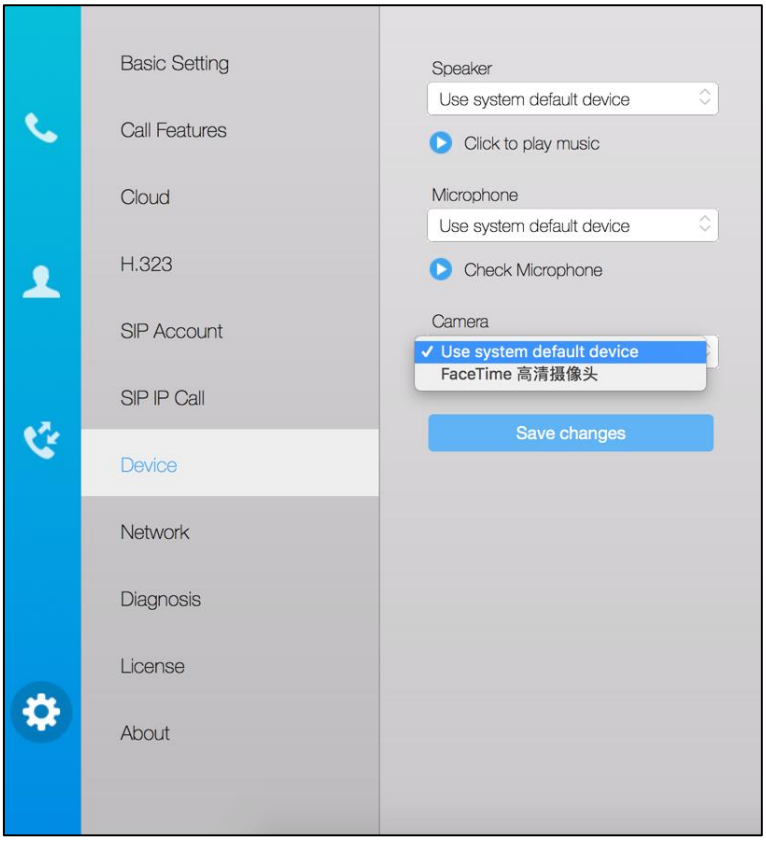


4. Click **Save changes**.

To configure video device via the Yealink VC Desktop for Mac:

1. Click -> **Device.**

2. Select the available camera from the pull-down list of **Camera**.



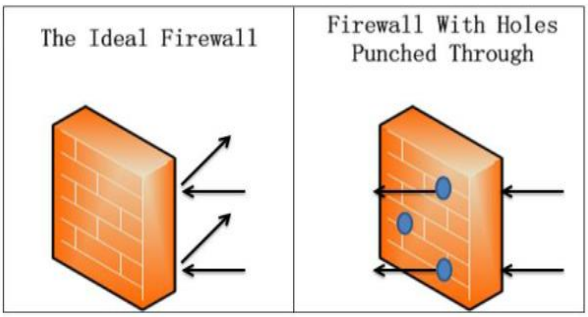
3. Click **Save changes**.

If your Mac does not have available devices or connects a bad device, the user interface prompts the error.

For more information on the error, please refer to Camera Issues on page 83 and Video & Audio Issues on page 84.

Configuring Yealink VC Desktop for Mac for Use with a Firewall or NAT

A firewall protects the organization's IP network by controlling data traffic from outside the network. Unless the firewall is designed to work with video conferencing equipment, you must configure the firewall to allow incoming and outgoing traffic to the Yealink VC Desktop for Mac through the reserved ports. Users placing calls through a firewall to the Yealink VC Desktop for Mac may experience one-way audio or video if the firewall is not properly configured.



You must configure your firewall to allow incoming and outgoing traffic through the following ports:

Description	Port Range	Port Type
Gatekeeper	1719	UDP
H.323 signal port	1720	TCP
SIP (default transport protocol)	5060	UDP
SIP (when selecting the TCP transport protocol)	5060	TCP
SIP (when selecting the TLS transport protocol)	5061	TCP
Reserved ports of the Yealink VC Desktop for Mac. For more information, refer to Reserved Ports on page 18.	50000-50499 (default range)	TCP/UDP

Reserved Ports

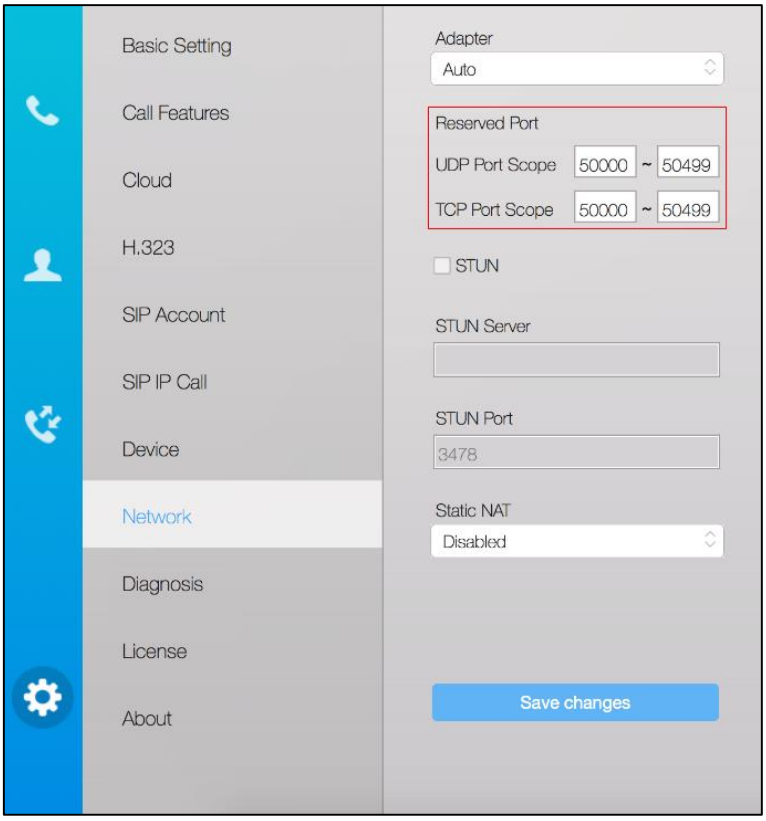
By default, the Yealink VC Desktop for Mac communicates through TCP and UDP ports in the range of 50000 - 54999 for video, voice and presentations, and only a small number of these ports will be used during a call. The amount of used ports depends on how many people join the call, which protocols are used, what kind of call you are making (audio or video) and what kind of presentation you are making. You can configure the range of reserved ports to limit the amount of TCP and UDP ports.

Parameters for reserved ports on the Yealink VC Desktop for Mac are described below:

Parameter	Description
UDP Port Scope	Configures the range of the UDP ports. **Valid values:** 1-65535 **Default range:** 50000-50499 **Note**: SIP and H.323 calls share the configured ports.
TCP Port Scope	Configures the range of the TCP ports. **Valid values:** 1-65535 **Default range:** 50000-50499 **Note**: SIP and H.323 calls share the configured ports.

To configure reserved ports via the Yealink VC Desktop for Mac:

1. Click -> **Network**.
2. Configure the UDP port range in the **UDP Port Scope** field.
3. Configure the TCP port range in the **TCP Port Scope** field.

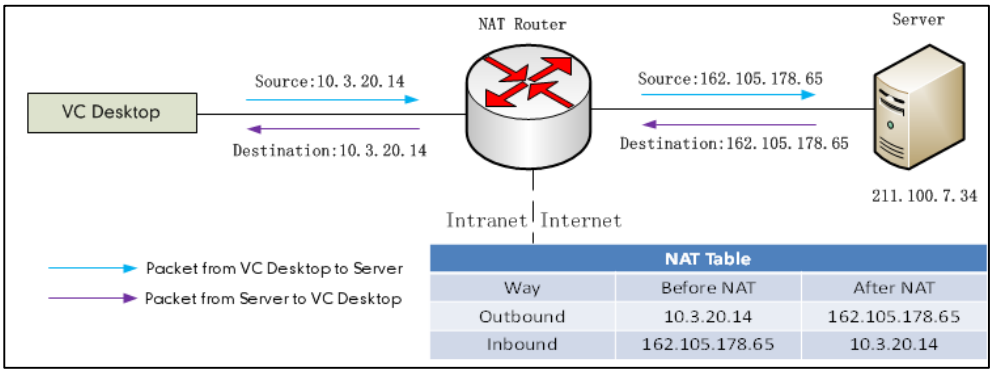


4. Click **Save changes**.

Note The difference between the maximum UDP/TCP port and the minimum UDP/TCP port should be not less than 200. For example, you set 50000 as the minimum UDP port, the maximum UDP port should be not less than 50200.

Network Address Translation

If you choose to place your Yealink VC Desktop for Mac in a private LAN, you must use NAT to communicate with outside systems. This may include enabling static NAT on your software.



Static NAT

NAT enables communication between devices on your LAN that have private IP addresses and devices that are accessed through a public IP network. Static NAT ensures that the same public IP address always maps to a Yealink VC Desktop for Mac's private IP address so that data from the public network intended for the Yealink VC Desktop for Mac can be routed to the destination reliably. If you are using static NAT to associate a public IP address with the private IP address of your system, you must configure your Yealink VC Desktop for Mac to work with your static NAT server.

Note If H.460 Firewall Traversal is enabled on the Yealink VC Desktop for Mac, H.323 calls will automatically ignore the static NAT settings. For more information on H.460 Firewall Traversal, refer to Enabling H.460 Firewall Traversal for H.323 Call on page 35.

NAT feature parameters apply to SIP protocol. NAT feature parameters on the Yealink VC Desktop for Mac are described below:

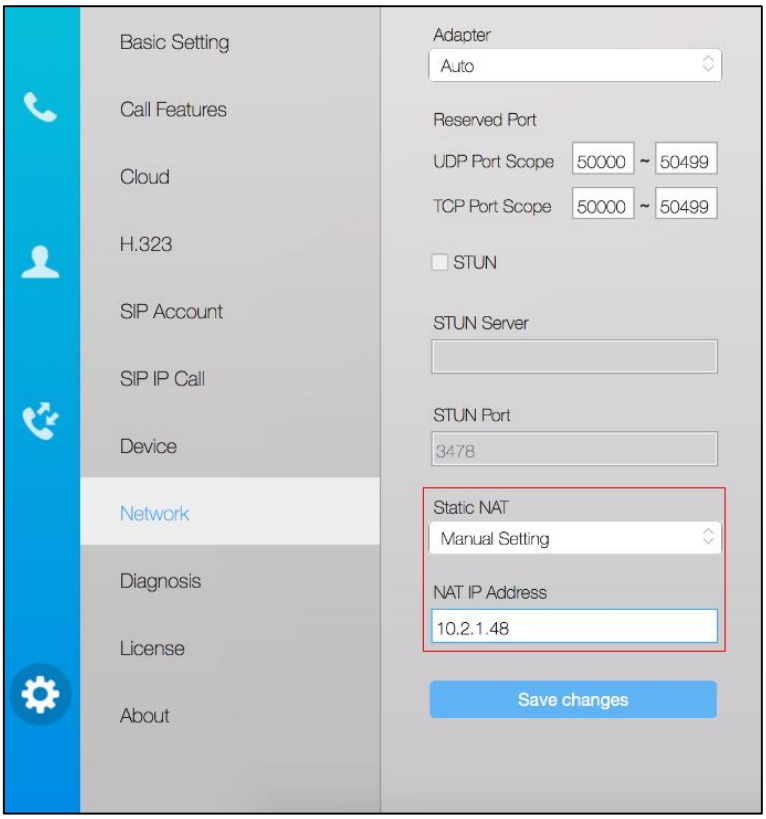
Parameter	Description
Static NAT	Specifies the static NAT type. • **Disabled**–the Yealink VC Desktop for Mac does not use the NAT feature. • **Manual Setting**–the Yealink VC Desktop for Mac uses the

Parameter	Description
	manually configured NAT public address. • **Auto**–the Yealink VC Desktop for Mac obtains the NAT public address from the specified Yealink server. **Default:** Disabled
NAT IP Address	• Displays the NAT public address automatically obtained from the Yealink-supplied server if the static NAT is set to **Auto.** • Configures the NAT public address for the Yealink VC Desktop for Mac if the static NAT is set to **Manual Setting**.
NAT Type	Configures the NAT traversal type. You can configure it for the SIP account or SIP IP call separately. • **Disabled** • **STUN** • **Static** **Default:** Disabled **Note:** Static NAT works only if this parameter is set to **Static**.

To configure NAT via the Yealink VC Desktop for Mac:

1. Click  ->**Network**.
2. Select the desired value from the pull-down list of **Static NAT**.

3. Configure the NAT public address in the **NAT IP Address** field if **Manual Setting** is selected from the pull-down list of **Static NAT**.

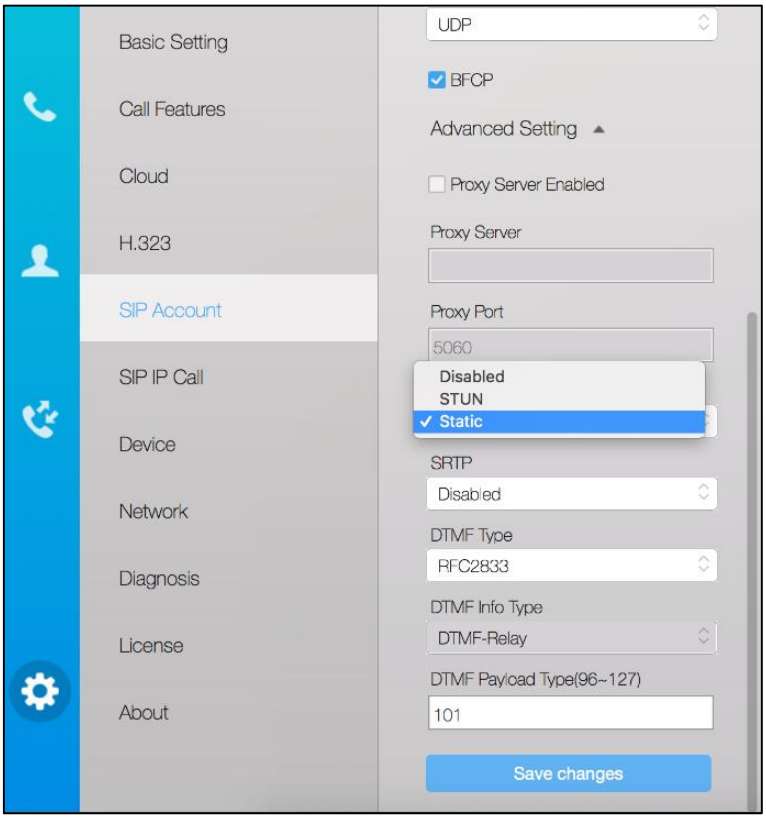


4. Click **Save changes**.

To configure Static NAT for SIP account via the Yealink VC Desktop for Mac:

1. Click -> **SIP Account** -> **Advanced Setting**.

2. Select **Static** from the pull-down list of **NAT Type**.

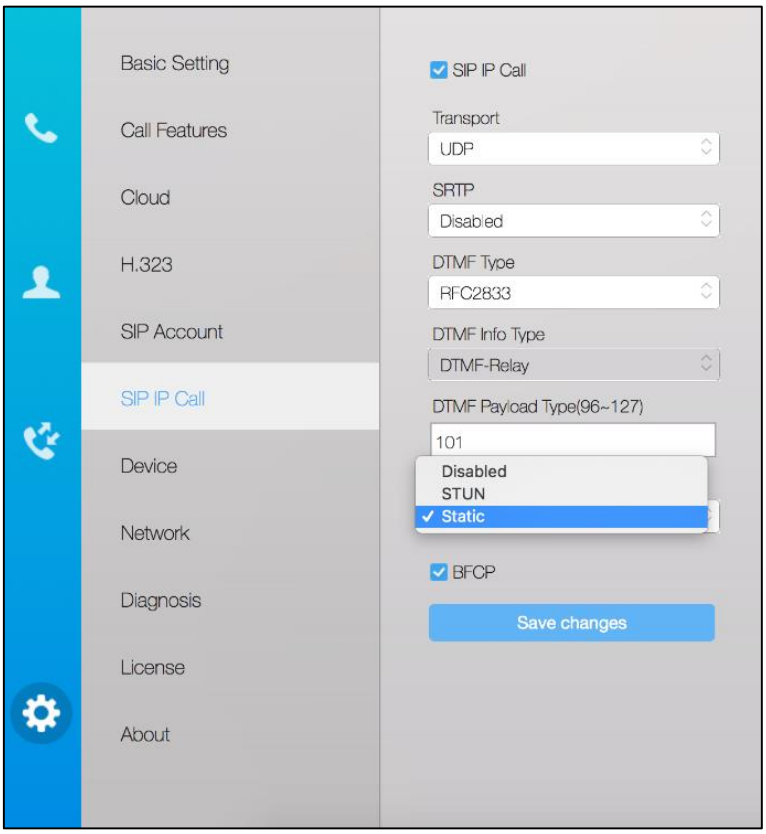


3. Click **Save changes**.

To configure Static NAT for SIP IP call via the Yealink VC Desktop for Mac:

1. Click  ->**SIP IP Call**.

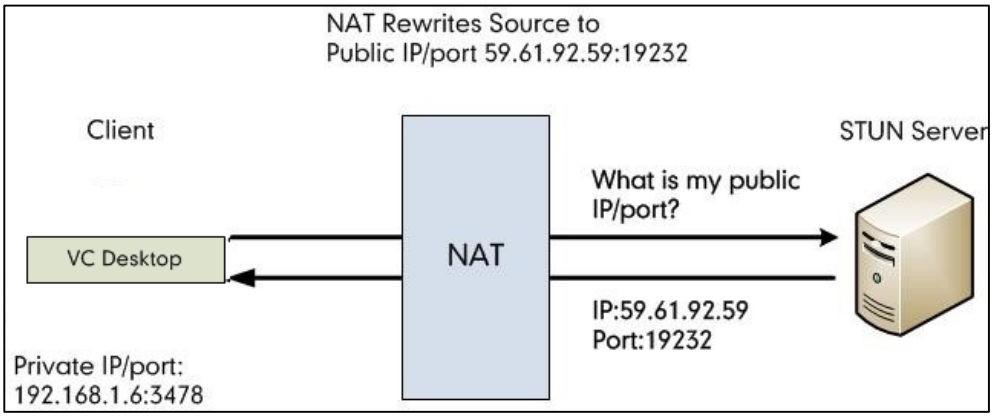
2. Select **Static** from the pull-down list of **NAT Type**.



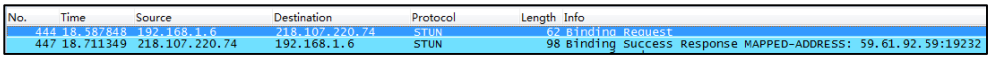
3. Click **Save changes**.

STUN

STUN (Session Traversal Utilities for NAT) is a network protocol, used in NAT traversal for applications of real-time voice, video, messaging, and other interactive IP communications. The STUN protocol allows entities behind a NAT to first discover the presence of a NAT and the type of NAT (for more information on the NAT types, refer to NAT Types on page 28.) and to obtain the mapped (public) IP address and port number that the NAT has allocated for the UDP connections to remote parties. The protocol requires assistance from a third-party network server (STUN server) usually located on public Internet. The Yealink VC Desktop for Mac can be configured to work as a STUN client, to send exploratory STUN messages to the STUN server. The STUN server uses those messages to determine the public IP address and port used, and then informs the client. For more information, refer to RFC3489.



Capturing packets after you enable the STUN feature, you can find that the Yealink VC Desktop for Mac sends Binding Request to the STUN server, and then mapped IP address and port is placed in the Binding Response: Binding Success Response MAPPED-ADDRESS: 59.61.92.59:19232.



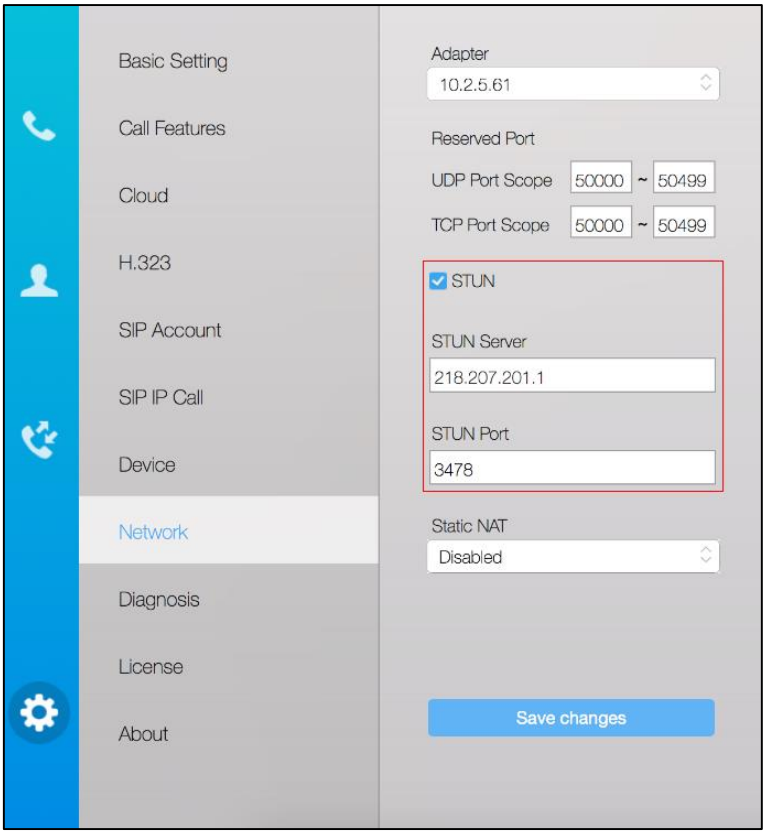
STUN feature parameters apply to SIP protocol. STUN feature parameters on the Yealink VC Desktop for Mac are described below:

Parameter	Description
STUN	Enables or disables the STUN. **Default**: Disabled
STUN Server	Configures the IP address or the domain name of the STUN (Simple Traversal of UDP over NATs) server. **Default**: Blank
STUN Port	Configures the port of the STUN (Simple Traversal of UDP over NATs) server. **Default:** 3478

Parameter	Description
NAT Type	Configures the NAT traversal type. • **Disabled** • **STUN** • **Static** **Default:** Disabled **Note:** STUN works only if this parameter is set to **STUN**.

To configure STUN server via the Yealink VC Desktop for Mac:

1. Click -> **Network**.
2. Check the **STUN** checkbox.
3. Enter the IP address or the domain name of the STUN server in the **STUN Server** field.
4. Enter the port number of the STUN server in the **STUN Port** field.

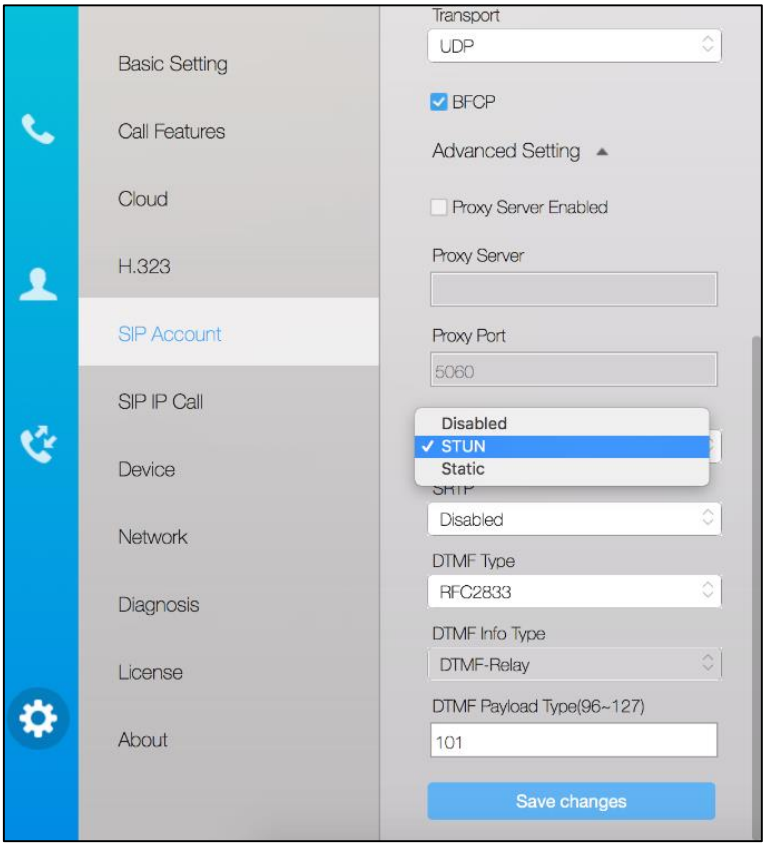


5. Click **Save changes**.

To configure STUN for SIP account via the Yealink VC Desktop for Mac:

1. Click -> **SIP Account**-> **Advanced Setting**.

2. Select **STUN** from the pull-down list of **NAT Type**.

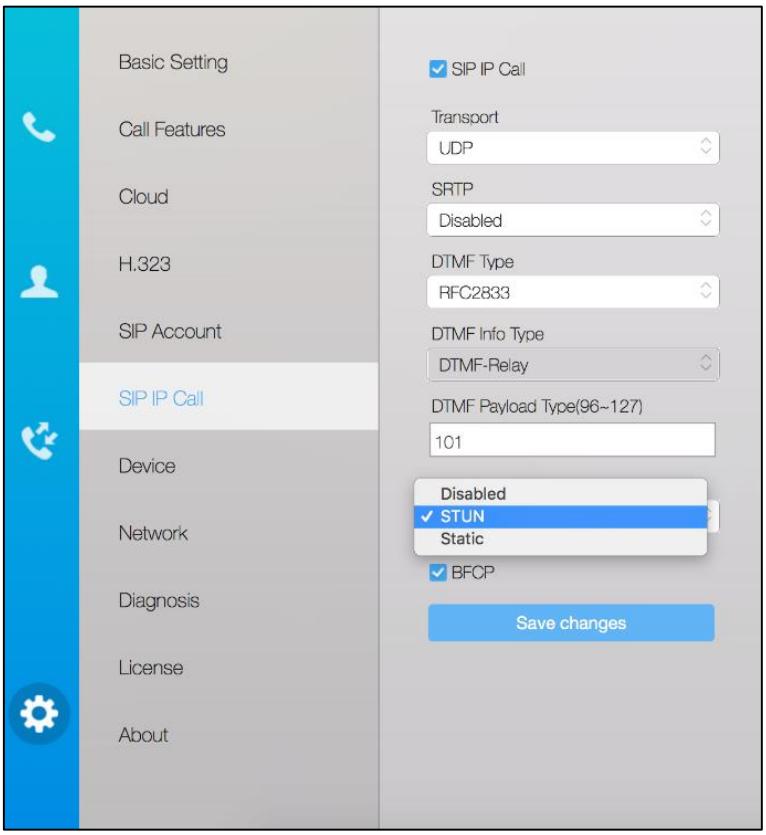


3. Click **Save changes**.

To configure STUN for SIP IP call via the Yealink VC Desktop for Mac:

1. Click  ->**SIP IP Call**.

2. Select **STUN** from the pull-down list of **NAT Type**.



3. Click **Save changes**.

NAT Types

Full Cone:

A full cone NAT is the one where all requests from the same internal IP address and port are mapped to the same external IP address and port. Furthermore, any external host can send a packet to the internal host, by sending a packet to the mapped external address.

Restricted Cone:

A restricted cone NAT is the one where all requests from the same internal IP address and port are mapped to the same external IP address and port. Unlike a full cone NAT, an external host (with IP address X) can send a packet to the internal host only if the internal host had previously sent a packet to IP address X.

Port Restricted Cone:

A port restricted cone NAT is like a restricted cone NAT, but the restriction includes port numbers. Especially, an external host can send a packet, with source IP address X and source port P, to the internal host only if the internal host had previously sent a packet to IP address X and port P.

Symmetric:

A symmetric NAT is the one where all requests from the same internal IP address and port, to a specific destination IP address and port, are mapped to the same external IP address and port. If the same host sends a packet with the same source address and port, but to a different destination, a different mapping is used. Furthermore, only the external host that receives a packet can send a UDP packet back to the internal host.

ICE

ICE (Interactive Connectivity Establishment) is a technique that use STUN, TURN and other methods to solve the NAT traversal issue. Meanwhile, it is also a considerable solution to the complex problem of NAT traversal which always enables connectivity regardless of how many NATs is involved. Since ICE incorporates many of the methods proposed for NAT traversal of SIP which do not rely on the firewall or NAT device, the Yealink VC Desktop for Mac can discover other peers and then establish a connection with it.

The advantage of ICE is that the client does not need to judge the NAT types by itself. Besides, ICE uses a server to allocate unilateral address and at the same time is allowed to connect with the client directly, while STUN and TURN are totally dependent on an additional server. Hence, either of a STUN server or a TURN server fails, ICE can still continue the call process. Moreover, the main disadvantage of the traditional STUN is that it cannot work fine in all network topologies, especially for the symmetric NAT (for more information on symmetric NAT, please refer to NAT Types on page 36). And for STURN protocol, packet loss and packet delay are easy to come by since the server is overload. However, ICE provides a solution to load balancing by means of turning the transmitted service to the lowest priority service, ensuring the service reliability and flexibility.

ICE is supported, but it is configurable on Yealink VC Desktop for Mac.

TURN

TURN (Traversal Using Relay around NAT) is the relay extensions to STUN. To put it simply, the similarity between TURN and STUN is that both of them realize NAT traversal by changing the private network address in application layer, and the difference between them is that TURN realizes NAT traversal by the relay.

If a host is behind NAT, it cannot realize direct point-to-point connection with other host. In this case, the intermediate nodes are required to provide connection services. TURN protocol allows the host to control the relay's action and to use the relay to exchange data with the terminal. The difference between TURN and other relays is that TURN can allow a client to be connected with multiple terminals by using one relay address.

TURN is supported, but it is configurable on Yealink VC Desktop for Mac.

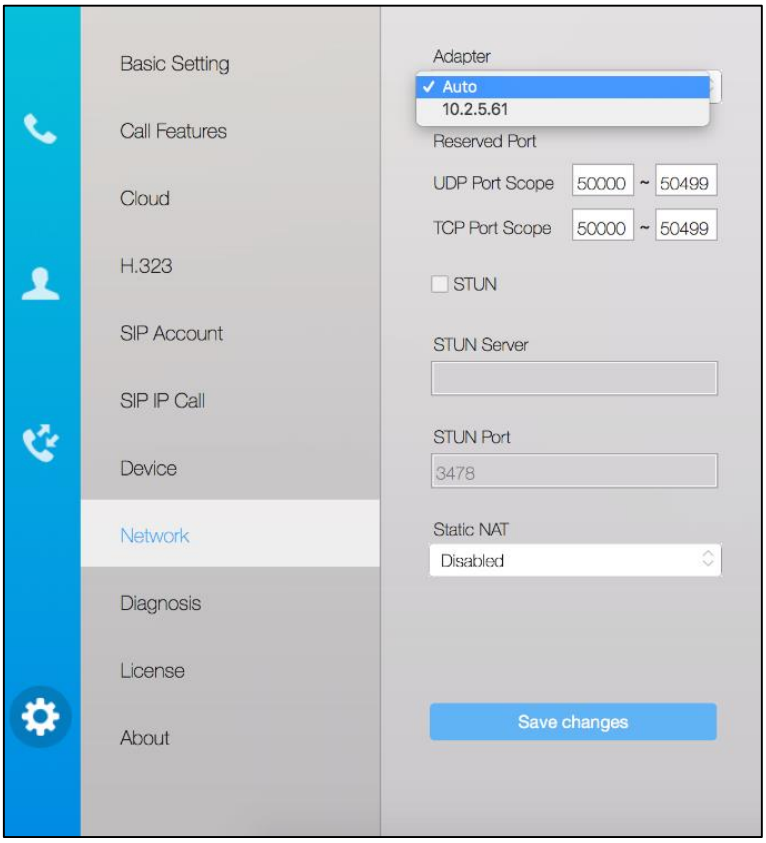
Adapter

If your network has more than one adapters, you can choose the desired IP address for Yealink VC Desktop for Mac.

This value is set to **Auto** by default, Yealink VC Desktop for Mac will use the current adapter to connect to the Internet.

To select the adapter via the Yealink VC Desktop for Mac:

1. Click ->**Network**.
2. Select desired value or **Auto** from the pull-down list of **Adapter**.



3. Click **Save changes**.

Account Settings

Yealilnk Cloud Accounts

When you first start Yealink VC Desktop for Mac, you can log into the Yealink VC Desktop for Mac using Yealink Cloud account in the login interface directly instead of activation. You can also log into the Yealink VC Desktop for Mac using Yealink Cloud account in the settings menu.

The Yealink Cloud account information contains PIN code, Cloud number and password, which can be obtained from your administrator. And you can only log into Yealink VC Desktop for Mac by one account. While one Yealink Cloud account can be used to log into five Cloud endpoints at most simultaneously.

The Yealink VC Desktop for Mac supports two ways to log into Yealink VC Desktop for Mac

using Yealink Cloud accounts:

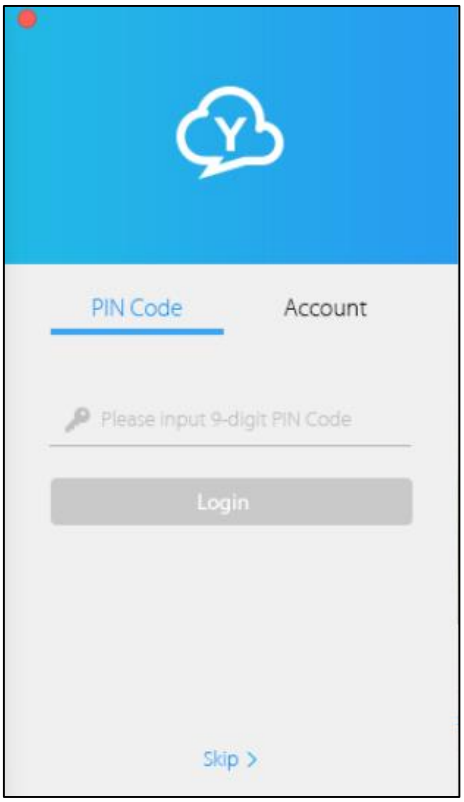
- PIN Code
- Account

PIN Code

You can register the Yealink Cloud account using PIN code in the login interface or in the settings menu. Note that the PIN code can only be used once.

To register the Yealink Cloud account using PIN code in the login interface:

1. Click **PIN Code**.



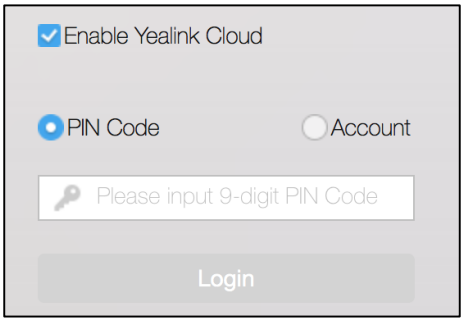
2. Enter the PIN code in the corresponding field.
3. Click **Login**.

To register the Yealink Cloud account using PIN code in the settings menu:

1. Click ->**Cloud**.
2. Check the **Enable Yealink Cloud** checkbox.

   It is checked by default.

3. Mark the radio box of **PIN Code**.



4. Enter the PIN code in the corresponding field.
5. Click **Login**.

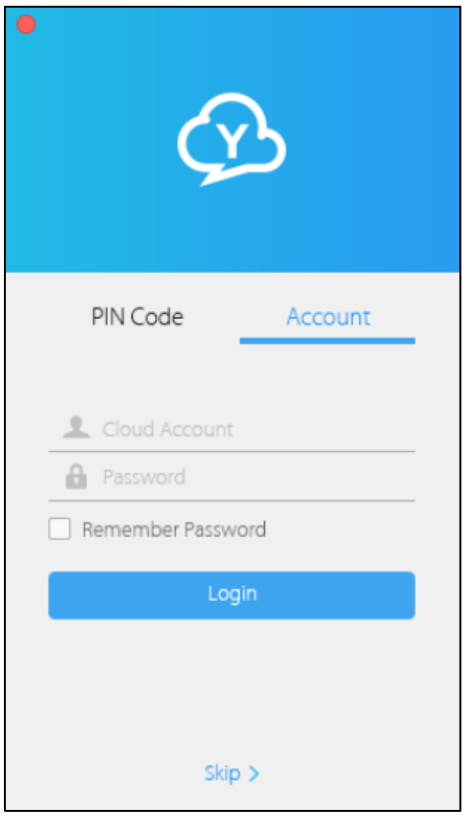
Note If you fail to register the Yealink Cloud account using PIN code, you can re-enter the PIN code according to the prompt or contact your cloud enterprise administrator.

Account

You can register the Yealink Cloud account using Cloud number and password in the login interface or in the settings menu.

To register the Yealink Cloud account using Cloud number and password in the login interface:

1. Click **Account**.



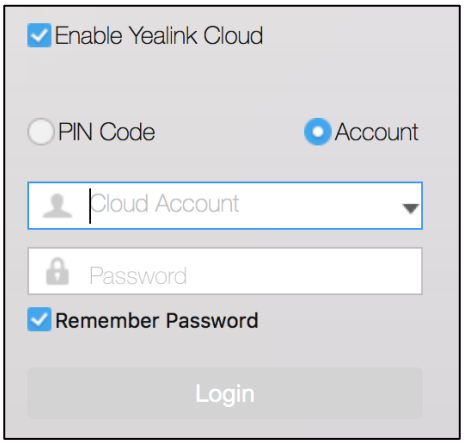
2. Enter the Cloud number and password in the corresponding field.
3. To remember the password, check the **Remember Password** checkbox, therefore you do not need to enter the password next time.

   It is checked by default.
4. Click **Login**.

To register the Yealink Cloud account using Cloud number and password in the settings menu:

1. Click ->**Cloud**.
2. Check the **Enable Yealink Cloud** checkbox.

   It is checked by default.
3. Mark the radio box of **Account**.



4. Enter the Cloud number and password in the corresponding field.
5. To remember the password, check the **Remember Password** checkbox, therefore you do not need to enter the password next time.

   It is checked by default.
6. Click **Login**.

Note If you fail to register the Yealink Cloud account using account, you can re-enter the Cloud number and password according to the prompt or contact your cloud enterprise administrator.

H.323 Accounts

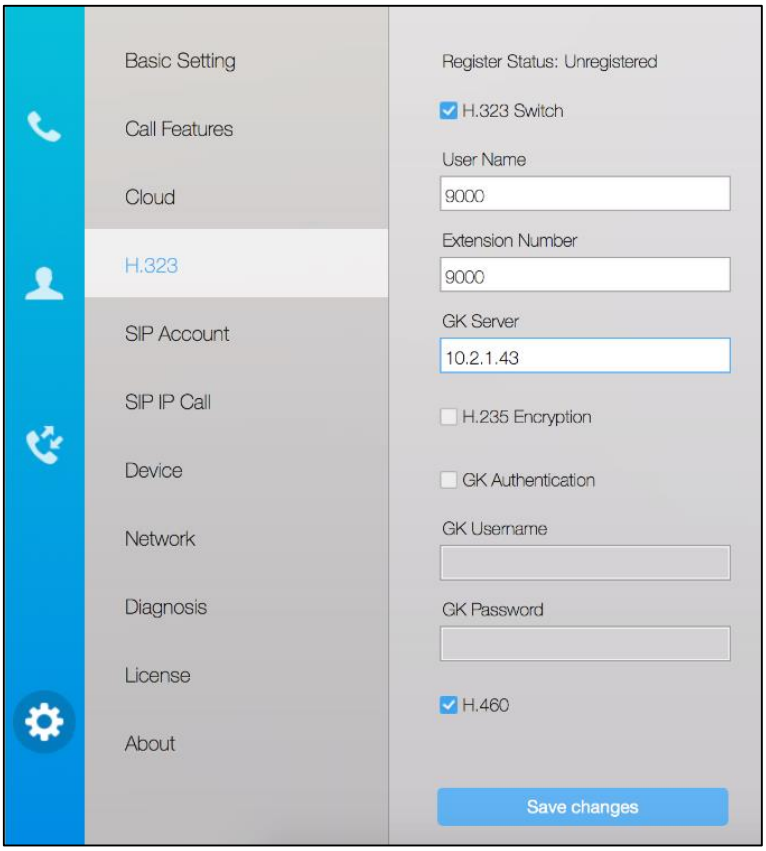
Yealink VC Desktop for Mac supports H.323 protocol. If a gatekeeper is used on your network, you can register an H.323 account for Yealink VC Desktop for Mac, and specify its H.323 name and extension, which allows others to call the Yealink VC Desktop for Mac via its H.323 name or extension instead of its IP address.

H.323 settings parameters on the Yealink VC Desktop for Mac are described below:

Parameter	Description
H.323 Switch	Enables or disables the H.323 protocol. **Note:** Check H.323 checkbox to enable this feature. If it is set to disabled, the Yealink VC Desktop for Mac cannot place or receive calls using the H.323 protocol.
H.323 Name	Specifies the name that gatekeepers and gateways use to identify different Yealink VC Desktop for Mac. You can make point-to-point calls using H.323 names if both Yealink VC Desktop for Mac are registered to one same gatekeeper. **Default:** blank
Extension Number	Specifies the extension that gatekeepers and gateways use to identify different Yealink VC Desktop for Mac. **Note:** Users can place point-to-point calls using the extension if both Yealink VC Desktop for Mac are registered with one same gatekeeper.
GK Server	Configures the IP address or domain name of the primary gatekeeper.
H.235 Encryption	Enables or disables the H.235 encryption. **Note:** Check H.235 checkbox, and the Yealink VC Desktop for Mac negotiates with the far site whether to use H.235 for media encryption in H.323 calls. Otherwise, the Yealink VC Desktop for Mac does not use H.235 in H.235 calls.
GK Authentication	Enables or disables gatekeeper authentication. **Default:** Disabled **Note:** When Gatekeeper Authentication is enabled, only the trusted Yealink VC Desktop for Mac is allowed to access the gatekeeper.
GK Username	Specifies the user name for authentication with gatekeeper **Default**: Blank
GK Password	Specifies the password for authentication with gatekeeper. **Default**: Blank
H.460	Enables or disables firewall traversal of H.323 calls using H.460 protocols. **Default:** Disabled For more information, refer to Enabling H.460 Firewall Traversal for H.323 Call on page 35.

To configure H.323 account via the Yealink VC Desktop for Mac:

1. Click -> **H.323**.
2. Configure the H.323 account settings.



3. Click **Save changes**.

   The H.323 name appears in the status bar if it is registered successfully.

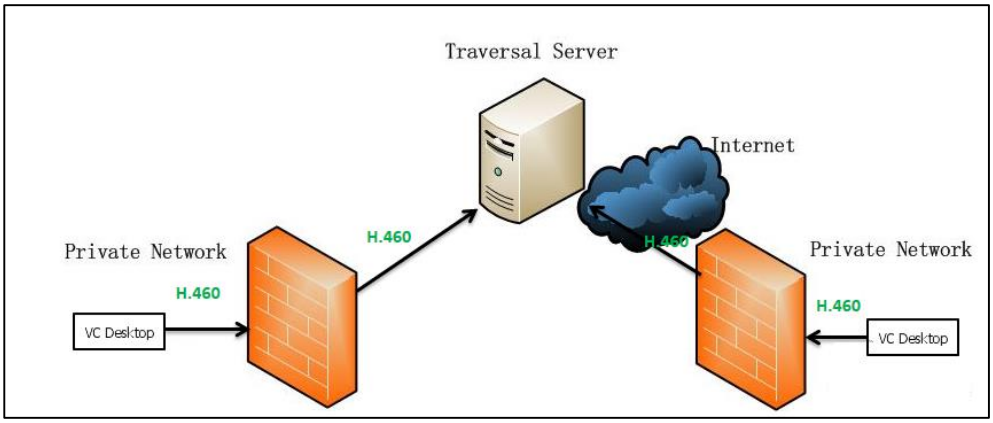
Enabling H.460 Firewall Traversal for H.323 Call

Yealink VC Desktop for Mac supports firewall traversal of H.323 calls using H.460 protocols. You must have an H.460 server configured in your environment for this feature to function properly.

Note

If you configure H.323 settings and enable H.460 support, the system ignores Static NAT settings. For more information on NAT, refer to Static NAT on page 20.

The process is shown as below:

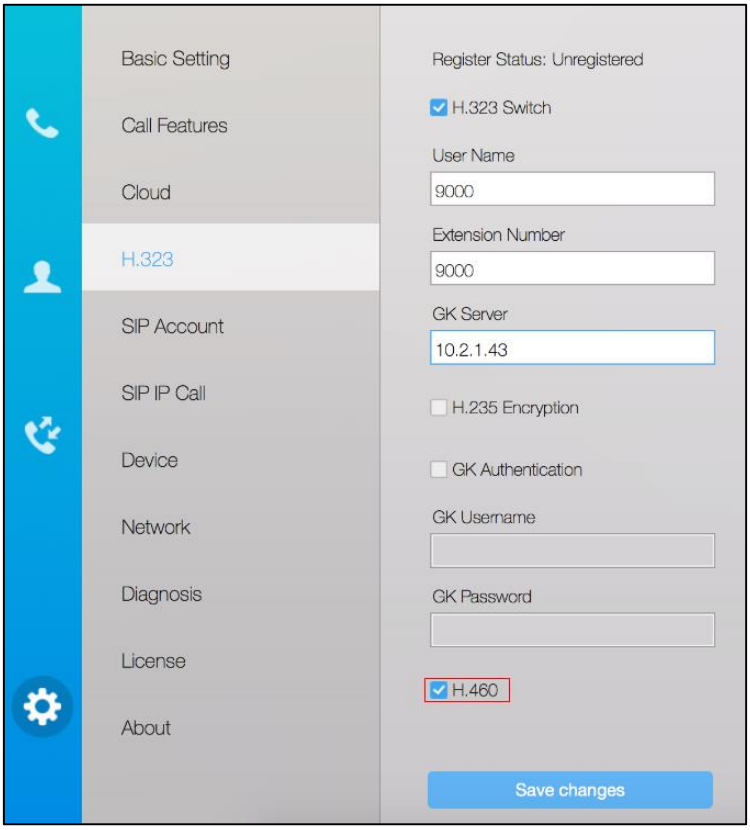


The H.460 firewall traversal parameter is described below:

Parameter	Description
H.460	Enables or disables firewall traversal of H.323 calls using H.460 protocols. **Default:** Disabled

To configure H.460 firewall traversal via the Yealink VC Desktop for Mac:

1. Click -> **H.323**.
2. Check the **H.460** checkbox to enable H.460 firewall traversal feature.



3. Click **Save changes**.

SIP Settings

Yealink VC Desktop for Mac supports Session Initiation Protocol (SIP). If your server supports SIP, you can use SIP to establish calls.

SIP Account

To establish calls using SIP, you can configure a SIP account for the Yealink VC Desktop for Mac.

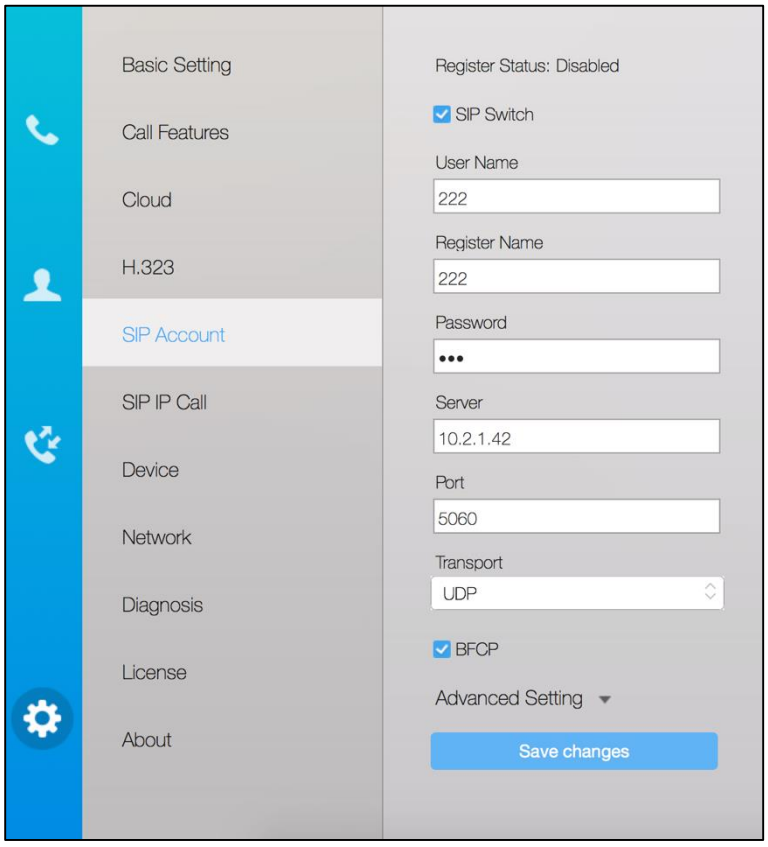
SIP account parameters on the Yealink VC Desktop for Mac are described below:

Parameter	Description
SIP Switch	Enables or disables the SIP account. **Default:** Enabled **Note**: Check the **SIP Switch** checkbox to enable this feature. Otherwise, the Yealink VC Desktop for Mac cannot place or receive calls with the SIP protocol.
User Name	Specifies the user name for authentication when registering on a SIP server. **Default**: Blank
Register Name	Configures the user name of the SIP account for authentication registration. **Default**: Blank
Password	Specifies the password associated with the user name used to authenticate the Yealink VC Desktop for Mac to the SIP server. **Default**: Blank
Server	Configures the IP address or domain name of the SIP server for SIP account. **Default**: Blank
Port	Configures the port number for the SIP account. **Default:** 5060 **Note**: An integer between 0 and 65535.
Proxy Server Enabled	Enables or disables the Yealink VC Desktop for Mac to send requests of the SIP account to the proxy server. **Default:** Disabled
Proxy Server	Configures the IP address or domain name of the proxy server for the SIP account.

Parameter	Description
	Default: it is configurable only when the Proxy Server is enabled.
Proxy Port	Configures the port number for the proxy server port. **Default:** 5060 **Note**: An integer between 1 and 65535.
Transport	Configures the type of transport protocol for the SIP account. • **UDP—**provides best-effort transport for SIP signal. • **TCP—**provides reliable transport for SIP signal. • **TLS—**provides encrypted transport of SIP signal. • **DNS-NAPTR—**performs the DNS NAPTR and SRV queries for the service type and port if no server port is given. **Default:** UDP **Note**: TLS is available only when the Yealink VC Desktop for Mac is registered on a SIP server that supports TLS.

To configure SIP account via the Yealink VC Desktop for Mac:

1. Click -> **SIP Account**.
2. Configure the SIP account.



3. Click **Save changes**.

   The SIP name appears in the status bar if it is registered successfully.

SIP IP Call

When making an IP call using the SIP protocol, the Yealink VC Desktop for Mac doesn't support the TLS transport protocol. So configuration parameters of SIP IP call are divided from the SIP account. You can configure SIP IP call separately.

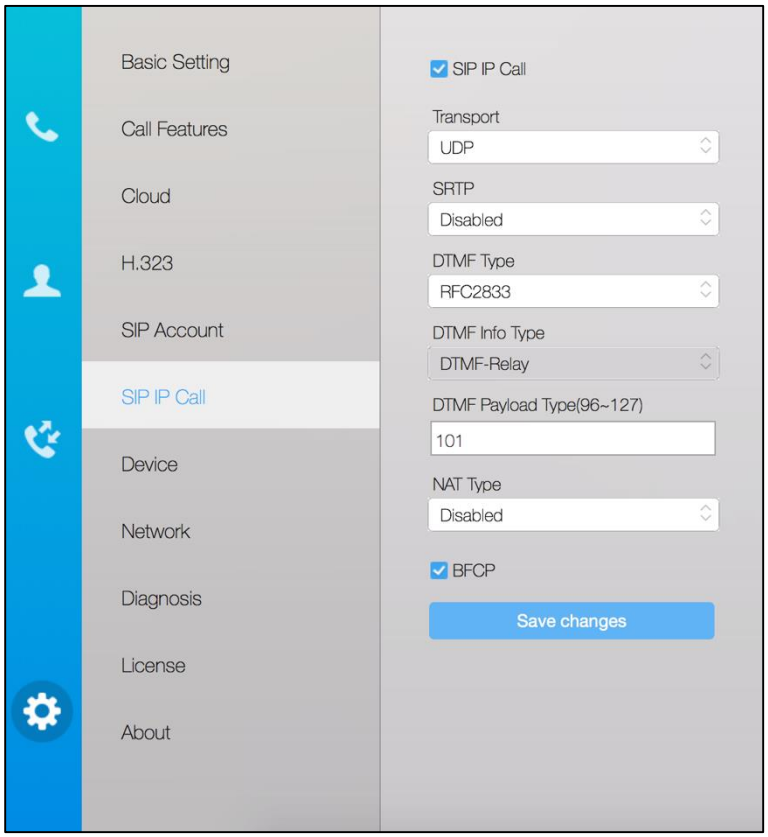
SIP IP call parameters on the Yealink VC Desktop for Mac are described below:

Parameter	Description
SIP IP Call	Enables or disables the SIP IP Call. **Default:** Enabled. **Note:** When it is set to Enabled on both sites, the Yealink VC Desktop for Mac can call the far site by dialing an IP address directly.
Transport	Configures the type of transport protocol for the SIP IP call. • **UDP**–provides best-effort transport via UDP for SIP signal. • **TCP**–provides reliable transport via TCP for SIP signal. • **DNS-NAPTR**–performs the DNS NAPTR and SRV queries for the service type and port if no server port is given. **Default:** UDP

To configure SIP IP call via the Yealink VC Desktop for Mac:

1. Click  ->**SIP IP Call**.

2. Configure the SIP IP call.



3. Click **Save changes**.

DTMF

DTMF (Dual Tone Multi-frequency), better known as touch-tone, is used for telecommunication signaling over analog telephone lines in the voice-frequency band. DTMF is the signal sent from the IP phone to the network, which is generated when pressing the keypad during a call. Each key pressed on the IP phone generates one sinusoidal tone of two frequencies. One is generated from a high frequency group and the other from a low frequency group.

The DTMF keypad is laid out in a 4×4 matrix, with each row representing a low frequency, and each column representing a high frequency. Pressing a digit key (such as '1') will generate a sinusoidal tone for each of two frequencies (697 and 1209 hertz (Hz)).

DTMF Keypad Frequencies:

	1209 Hz	**1336 Hz**	**1477 Hz**	**1633 Hz**
697 Hz	1	2	3	A
770 Hz	4	5	6	B
852 Hz	7	8	9	C

	1209 Hz	1336 Hz	1477 Hz	1633 Hz
941 Hz	*	0	#	D

Methods of Transmitting DTMF Digit

Three methods of transmitting DTMF digits on SIP calls:

- **RFC2833 --** DTMF digits are transmitted by RTP Events compliant to RFC2833.
- **INBAND --** DTMF digits are transmitted in the voice band.
- **SIP INFO --** DTMF digits are transmitted by SIP INFO messages.

The method of transmitting DTMF digits is configurable on a per-line basis.

RFC2833

DTMF digits are transmitted using the RTP Event packets that are sent along with the voice path. These packets use RFC2833 format and must have a payload type that matches what the other end is listening to. The payload type for RTP Event packets is configurable. The Yealink VC Desktop for Mac defaults to 101 as the payload type, which uses the definition to negotiate with the other end during call establishment.

The RTP Event packet contains 4 bytes which are distributed over several fields denoted as Event, End bit, R-bit, Volume and Duration. If the End bit is set to 1, the packet contains the end of the DTMF event. You can configure the sending times of the end RTP Event packet.

INBAND

DTMF digits are transmitted within the audio of the Yealink VC Desktop for Mac conversation. It uses the same codec as your voice and is audible to conversation partners.

SIP INFO

DTMF digits are transmitted by the SIP INFO messages when the voice stream is established after a successful SIP 200 OK-ACK message sequence. The SIP INFO message is sent along the signaling path of the call and can transmit DTMF digits in three ways: DTMF, DTMF-Relay and Telephone-Event.

DTMF parameters apply to SIP protocol. DTMF parameters on the Yealink VC Desktop for Mac are described below:

Parameter	Description
DTMF Type	Configures the DTMF type. You can configure it for the SIP account or SIP IP call separately. • **INBAND—**DTMF digits are transmitted in the voice band. • **RFC2833—**DTMF digits are transmitted by RTP Events compliant

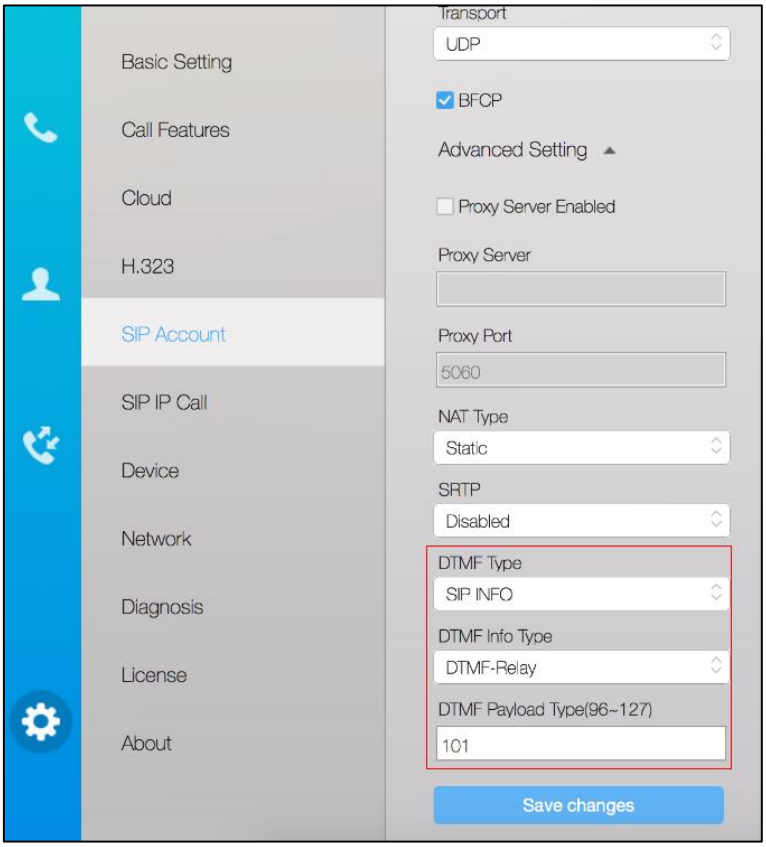
Parameter	Description
	to RFC 2833. • **SIP INFO—**DTMF digits are transmitted by the SIP INFO messages. **Default:** RFC2833
DTMF Info Type	Configures the DTMF info type when DTMF type is set to SIP INFO. You can configure it for the SIP account or SIP IP call separately. • **DTMF-Relay** • **DTMF** • **Telephone-Event** **Default:** DTMT-Relay
DTMF Payload Type（96~127）	Configures the value of DTMF payload. You can configure it for the SIP account or SIP IP call separately. **Default:** 101

To configure DTMF type for SIP account via the Yealink VC Desktop for Mac:

1. Click ->**SIP Account**->**Advanced Setting**.
2. Select the desired value from the pull-down list of **DTMF Type**.

   If **SIP INFO** is selected, select the desired value from the pull-down list of **DTMF Info Type**.

3. Enter the desired value in the **DTMF Payload Type(96~127)** field.



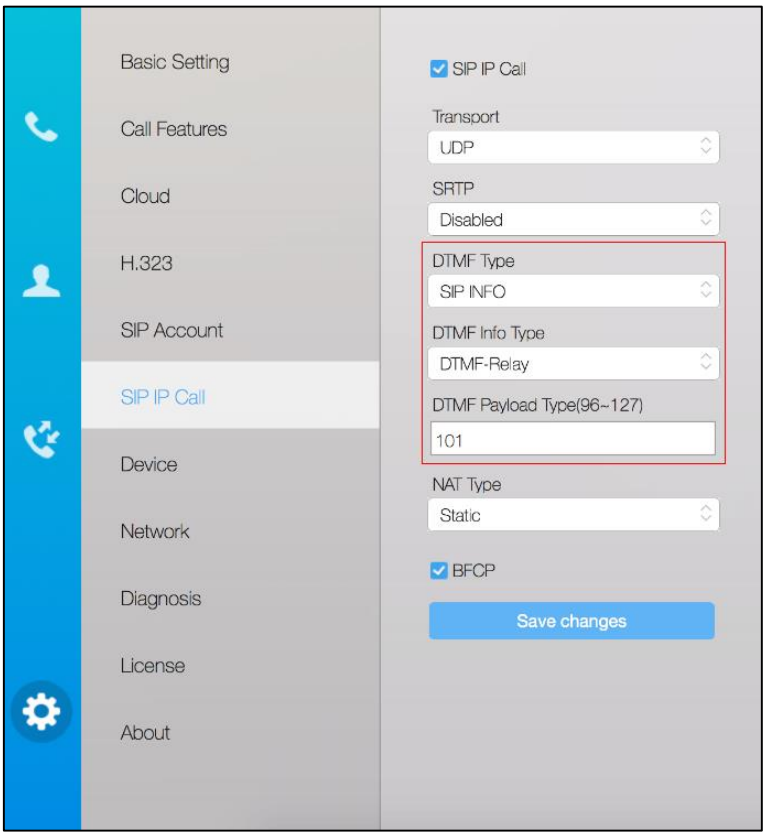
4. Click **Save changes**.

To configure DTMF type for SIP IP call via the Yealink VC Desktop for Mac:

1. Click -> **SIP IP Call**.
2. Select the desired value from the pull-down list of **DTMF Type**.

   If **SIP INFO** is selected, select the desired value from the pull-down list of **DTMF Info Type**.

3. Enter the desired value in the **DTMF Payload Type(96~127)** field.



4. Click **Save changes**.

Dual-Stream Protocol

To enhance communicating with others over video, the dual-stream protocol provides the ability to share content from a computer, such as video clips or documents. Both the video and the documents can be transmitted to the far site simultaneously, thus meeting the requirements of different conference scenarios, such as training or medical consultation.

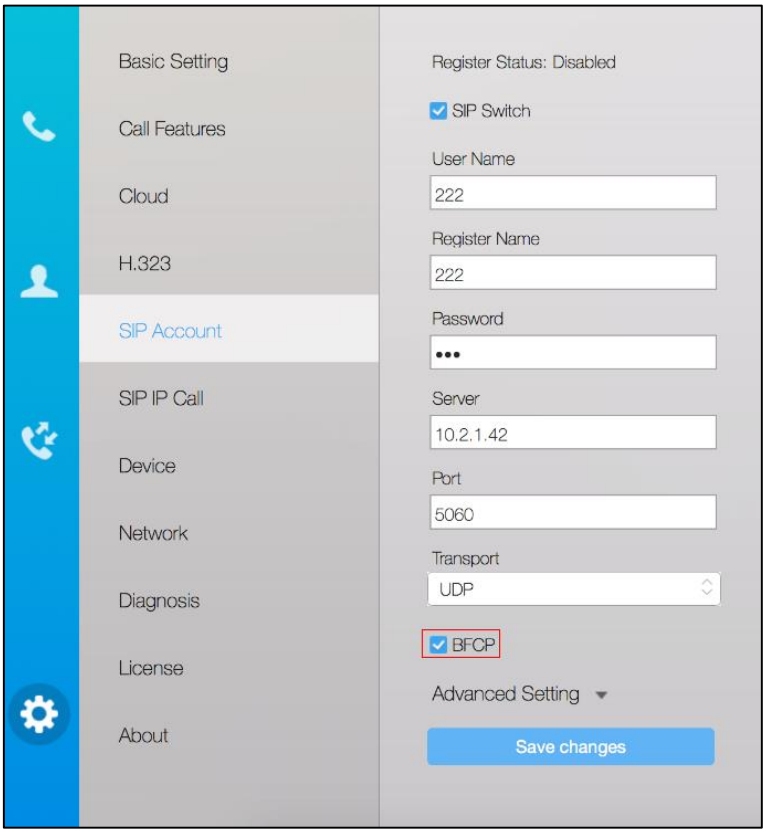
The Yealink VC Desktop for Mac supports the standard H.239 protocol and BFCP (Binary Floor Control Protocol). H.239 protocol is used for sharing content with the far site in H.323 calls. It is enabled by default and is not configurable. BFCP protocol is used for sharing content with the far site in SIP calls. Before enabling the desired protocol, ensure that the protocol is supported and enabled by the far site you wish to call.

BFCP parameters apply to SIP protocol. BFCP parameters on the Yealink VC Desktop for Mac are described below.

Parameter	Description
BFCP	Enables or disables the BFCP protocol for sharing content in SIP calls. You can configure it for SIP account or SIP IP call separately. **Default:** Disabled

To configure BFCP dual-stream protocol for SIP account via the Yealink VC Desktop for Mac:

1. Click ->**SIP Account**.
2. Check the **BFCP** checkbox to enable the BFCP protocol for sharing content in SIP calls.

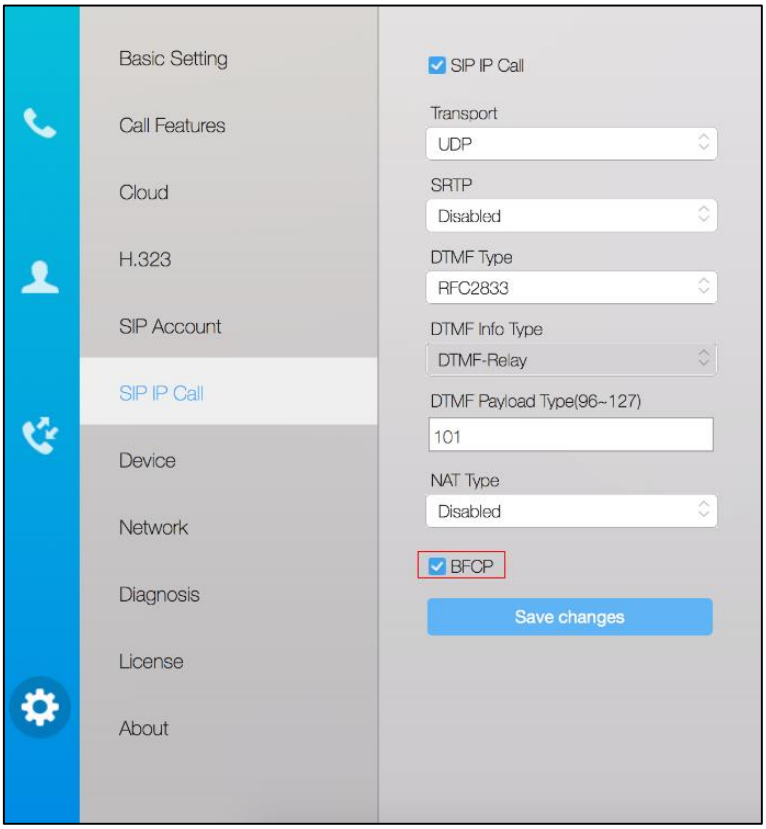


3. Click **Save changes**.

To configure BFCP dual-stream protocol for SIP IP call via the Yealink VC Desktop for Mac:

1. Click ->**SIP IP Call**.

2. Check the **BFCP** checkbox to enable the BFCP protocol for sharing content in SIP IP calls.



3. Click **Save Changes**.

Configuring Security Features

Transport Layer Security

Transport Layer Security (TLS), a commonly-used protocol, aims primarily to provide privacy and security of message transmission among communications. It allows Yealink VC Desktop for Mac to connect to HTTPS URL for provisioning and communicate with other remote parties that, in a way, prevents it from eavesdropping and tampering.

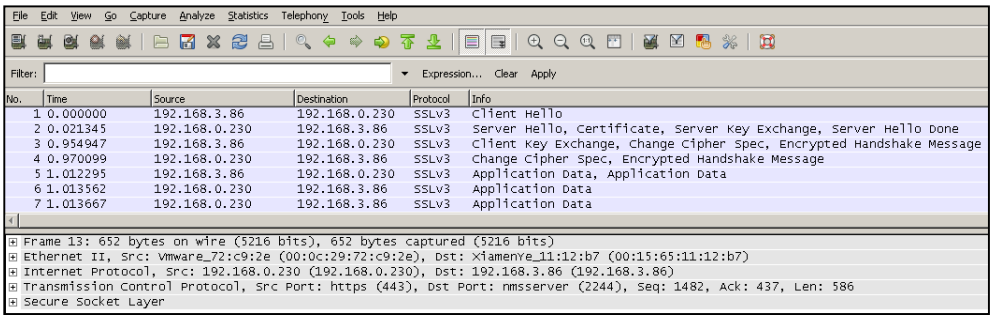
TLS protocol is composed of two layers: TLS Record Protocol and TLS Handshake Protocol. The TLS Record Protocol completes the actual data transmission and ensures the integrity and privacy of the data. As for the TLS Handshake Protocol, it allows the server and client to authenticate each other and negotiate an encryption algorithm and cryptographic keys before data is exchanged.

Yealink VC Desktop for Mac supports TLS 1.0. A cipher suite is a named combination of authentication, encryption, and message authentication code (MAC) algorithms used to negotiate the security settings for a network connection using the TLS/SSL network protocol. The Yealink VC Desktop for Mac supports the following cipher suites:

- DHE-RSA-AES256-SHA

- DHE-DSS-AES256-SHA
- AES256-SHA
- EDH-RSA-DES-CBC3-SHA
- EDH-DSS-DES-CBC3-SHA
- DES-CBC3-SHA
- DHE-RSA-AES128-SHA
- DHE-DSS-AES128-SHA
- AES128-SHA
- IDEA-CBC-SHA
- DHE-DSS-RC4-SHA
- RC4-SHA
- RC4-MD5
- EXP1024-DHE-DSS-DES-CBC-SHA
- EXP1024-DES-CBC-SHA
- EDH-RSA-DES-CBC-SHA
- EDH-DSS-DES-CBC-SHA
- DES-CBC-SHA
- EXP1024-DHE-DSS-RC4-SHA
- EXP1024-RC4-SHA
- EXP1024-RC4-MD5
- EXP-EDH-RSA-DES-CBC-SHA
- EXP-EDH-DSS-DES-CBC-SHA
- EXP-DES-CBC-SHA
- EXP-RC4-MD5

The following figure illustrates the TLS messages exchanged between the Yealink VC Desktop for Mac and TLS server to establish an encrypted communication channel:



Step1: The Yealink VC Desktop for Mac sends "Client Hello" message proposing SSL options.

Step2: Server responds with "Server Hello" message selecting the SSL options, sends its public

key information in "Server Key Exchange" message and concludes its part of the negotiation with "Server Hello Done" message.

Step3: The Yealink VC Desktop for Mac sends key session information (encrypted by server's public key) in the "Client Key Exchange" message.

Step4: Server sends "Change Cipher Spec" message to activate the negotiated options for all future messages which it will be sent later.

The Yealink VC Desktop for Mac can encrypt SIP with TLS, which is called SIPS. When TLS is enabled for the SIP account, the message of the SIP account will be encrypted after the successful TLS negotiation.

Secure Real-Time Transport Protocol

You can configure Secure Real-Time Transport Protocol (SRTP) to encrypt RTP streams to avoid interception and eavesdropping. Both RTP and RTCP signaling may be encrypted using an AES algorithm as described in RFC3711. Encryption modifies the data in the RTP streams so that, if the data is captured or intercepted, it cannot be understood−it sounds like noise, and only the receiver knows the key to restore the data. To use SRTP encryption for SIP calls, all participants in the call must enable SRTP simultaneously, and then Yealink YC Desktop will negotiate with the far-site device for the encryption algorithm used in the session. This negotiation process is compliant with RFC 4568.

When a site places a call on the SRTP enabled, the Yealink VC Desktop for Mac will sends an INVITE message with the RTP encryption algorithm to the destination device.

The following is an example of INVITE message carried with RTP encryption in SDP:

```
m=audio 11780 RTP/SAVP 0 8 18 9 101
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:NzFlNTUwZDk2OGVlOTc3YzNkYTkwZWVkMTM1YWFj
a=crypto:2 AES_CM_128_HMAC_SHA1_32
inline:NzkyM2FjNzQ2ZDgxYjg0MzQwMGVmMGUxMzdmNWFm
a=crypto:3 F8_128_HMAC_SHA1_80 inline:NDliMWIzZGE1ZTAwZjA5ZGFhNjQ5YmEANTMzYzA0
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=fmtp:18 annexb=no
a=rtpmap:9 G722/8000
a=fmtp:101 0-15
a=rtpmap:101 telephone-event/8000
a=ptime:20
a=sendrecv
```

The callee receives the INVITE message with the RTP encryption algorithm, and then answers the call by responding with a 200 OK message which carries the negotiated RTP encryption

algorithm.

The following is an example of the RTP encryption algorithm carried in the SDP of the 200 OK message:

```
m=audio 11780 RTP/SAVP 0 101
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:NGY4OGViMDYzZjQzYTNiOTNkOWRiYzRlMjM0Yzcz
a=sendrecv
a=ptime:20
a=fmtp:101 0-15
```

The SRTP parameter applies to SIP protocol on Yealink VC Desktop for Mac and is described below:

Parameter	Description
SRTP	Specifies the SRTP type. You can configure it for SIP account or SIP IP call • **Disabled—**do not use SRTP in SIP calls. • **Enabled**−negotiate with the far site whether to use SRTP for media encryption in SIP calls. • **Compulsory—**compulsively use SRTP for media encryption in SIP calls. **Default:** Disabled

Rules of SRTP for media encryption in SIP calls:

Far \ Near	Compulsory	Enabled	Disabled
Compulsory	SRTP Call	SRTP Call	Fail to establish call
Enabled	SRTP Call	SRTP Call	RTP Call
Disabled	Fail to establish call	RTP Call	RTP Call

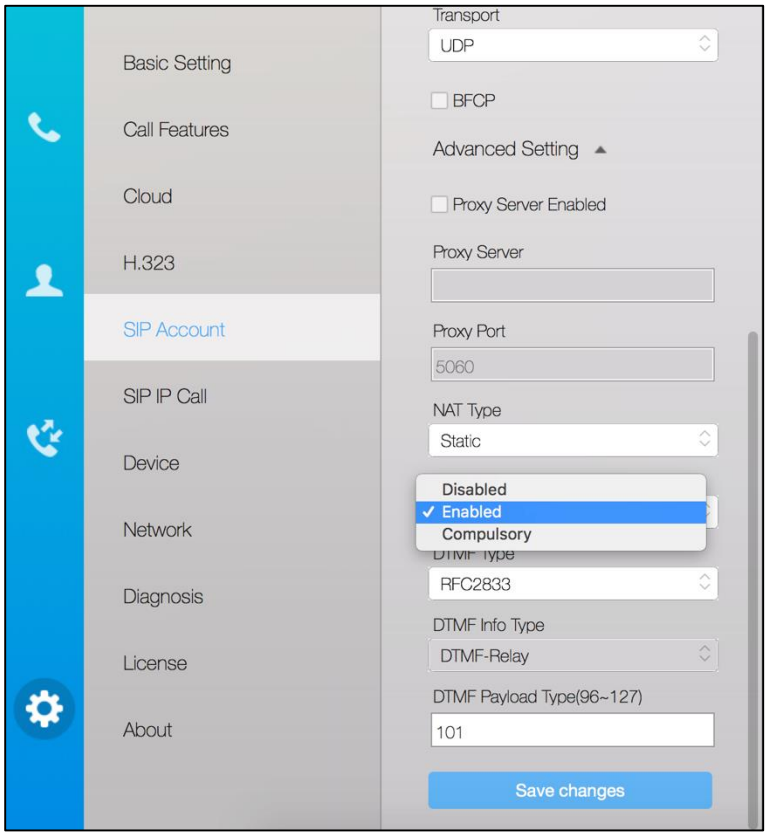
When SRTP is enabled on both devices, calls will be encrypted, and the lock icon will appear on the user interface of each site during a call.

Note If SRTP is enabled for the SIP account, you should also configure the transport type to TLS. ensuring the security of SRTP encryption. For more information on TLS, refer to Transport Layer Security on page 46.

To configure SRTP for SIP protocol via the Yealink VC Desktop for Mac:

1. Click -> **SIP Account** -> **Advanced Setting**.

2. Select the desired value from the pull-down list of **SRTP**.

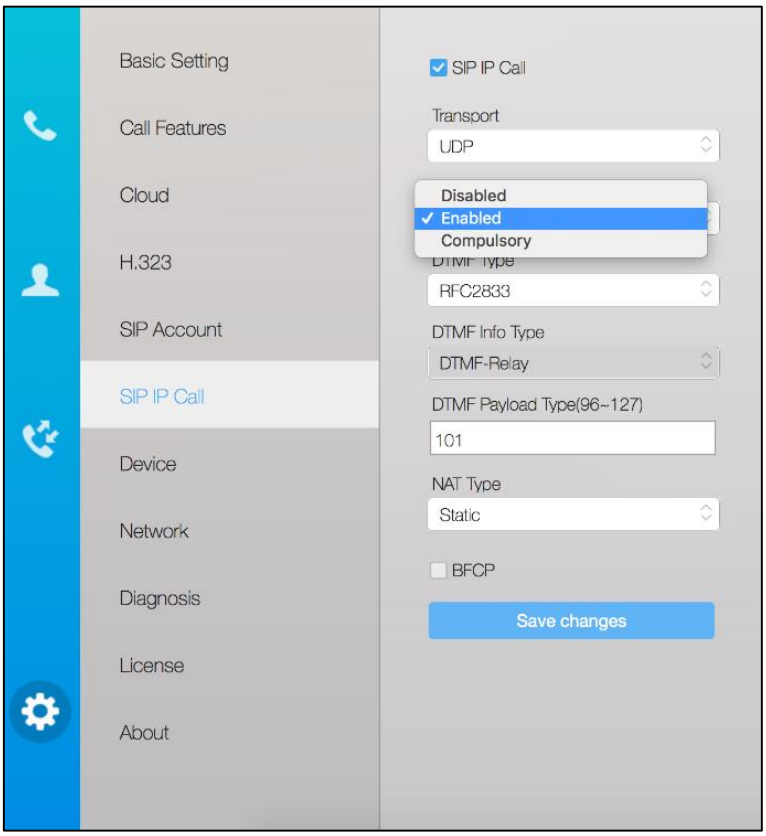


3. Click **Save changes**.

To configure SRTP for SIP IP call via the Yealink VC Desktop for Mac:

1. Click -> **SIP IP Call**.

2. Select the desired value from the pull-down list of **SRTP**.



3. Click **Save changes**.

H.235

Yealink VC Desktop for Mac supports H.235 128-bit AES algorithm using the Diffie-Hellman key exchange protocol in H.323 calls. To use H.235 feature for H.323 calls, the participants in the call must enable the H.235 feature simultaneously. After that, if a site places a call on Yealink VC Desktop for Mac, the Yealink VC Desktop for Mac negotiates the encryption algorithm with the destination devices.

The H.235 parameter on the Yealink VC Desktop for Mac is described below:

Parameter	Description
H.235 Encryption	Enables or disables the H.235 encryption. **Note:** Check **H.235 Encryption** checkbox, the Yealink VC Desktop for Mac negotiates with the far site whether to use H.235 for media encryption in H.323 calls. Otherwise, the Yealink VC Desktop for Mac does not use H.235 in H.235 calls.

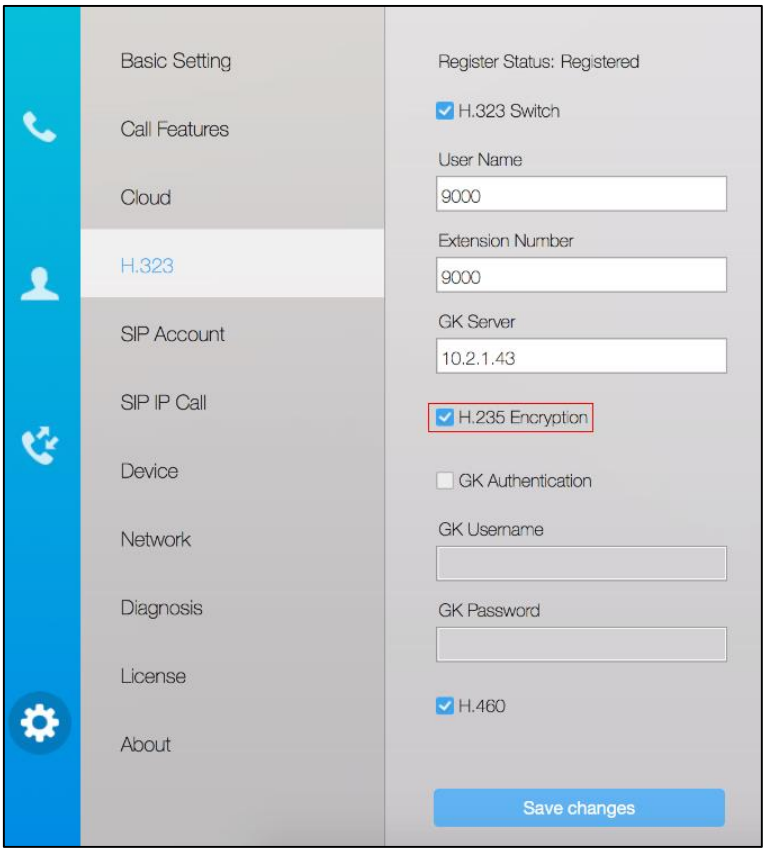
Rules of H.235 security in H.323 calls:

Far / Local	Enabled	Disabled
Enabled	H.235 Call	RTP Call
Disabled	RTP Call	RTP Call

When H.235 is enabled on both sites, calls will be encrypted, and the lock icon will appear on the user interface of each site during a call.

To configure H.235 for H.323 account via the Yealink VC Desktop for Mac:

1. Click -> **H.323**.
2. Check the **H.235 Encryption** checkbox.



3. Click **Save changes**.

Customizing Yealink VC Desktop for Mac

You can customize your Yealink VC Desktop for Mac by personally configuring certain settings, for example, site name, languages. You can add contacts to the local directory manually or from the call history.

This chapter provides basic operating instructions for customizing your VC Desktop. Topics include:

Basic Settings

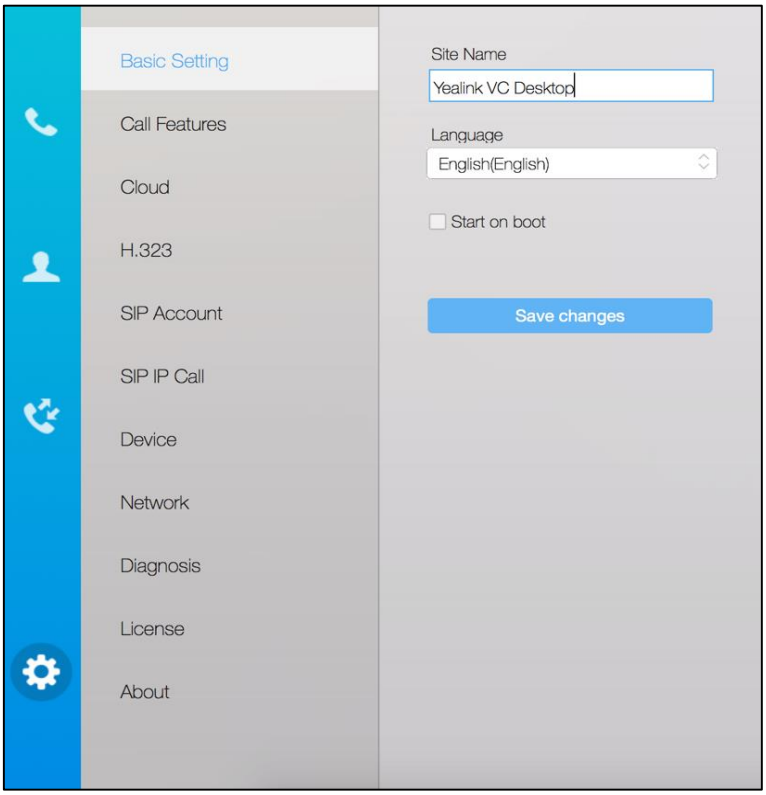
Site Name

Site name, consisting of letters, numbers or special characters, is displayed on the status bar of the Yealink VC Desktop for Mac. You can modify the site name via the Yealink VC Desktop for Mac.

To modify site name via the Yealink VC Desktop for Mac:

1. Click  ->**Basic Setting**.

2. Edit the site name in the **Site Name** field.



3. Click **Save changes**.

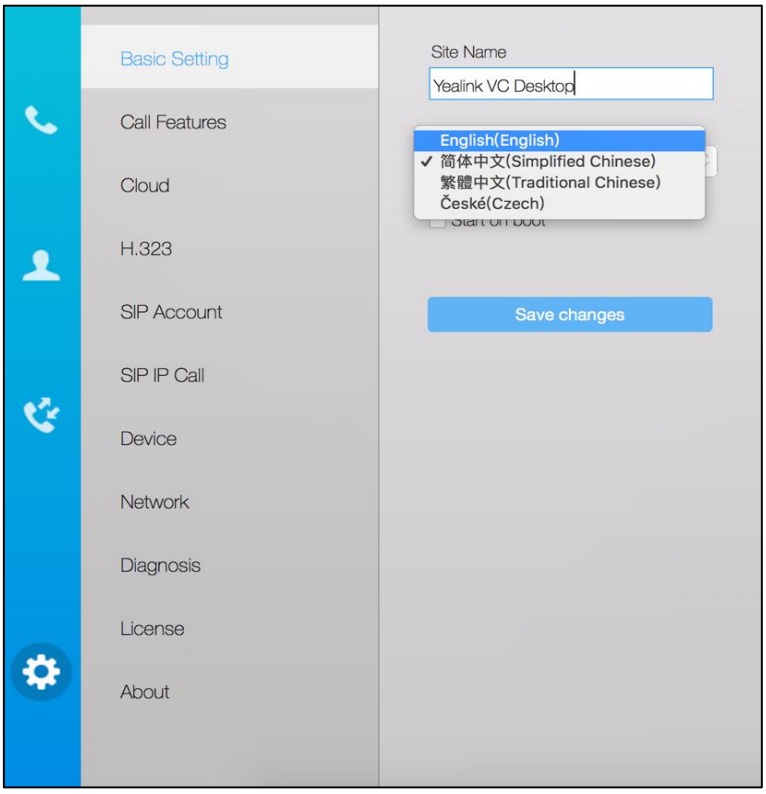
Language

The languages supported in Yealink VC Desktop for Mac are English, Chinese Simplified, Chinese Traditional and Czech.

To specify the language for the Yealink VC Desktop for Mac:

1. Click -> **Basic Setting**.

2. Select the desired language from the pull-down list of **Language**.



3. Click **Save changes**.

Volume Settings

The ringer volume is adjustable when Yealink VC Desktop for Mac is idle. Besides, during a call, you can adjust the volume of audio output devices for Yealink VC Desktop for Mac. For more information, please refer to Adjusting Your Speaker Volume on page v. And the volume of speaker and microphone is also adjustable by your Mac itself.

To adjust the ringer volume:

You can adjust the ringer volume of the Yealink VC Desktop for Mac by adjusting the speaker volume of your Mac.

Directory

Yealink VC Desktop for Mac displays: local contacts and Yealink Cloud contacts.

- **Local contacts**: You can add local contact information to the Yealink VC Desktop for Mac. The Yealink VC Desktop for Mac can store up to 100 local contacts. You can manage the local directory via Yealink VC Desktop for Mac.
- **Yealink Cloud contacts**: If you log into the Yealink VC Desktop for Mac using Yealink Cloud account, Yealink Cloud directory which are created by your administrator, appear in your directory. Note that only the administrator can add, edit and delete Yealink Cloud contacts

on the Yealink VC Cloud management service. On your Yealink VC Desktop for Mac, you can only search and place calls to the Yealink Cloud contacts. For more information on Yealink VC Cloud management service, refer to *Yealink VC Cloud Management Service Administrator Guide*.

This chapter provides operating instructions for directory. Topics include:

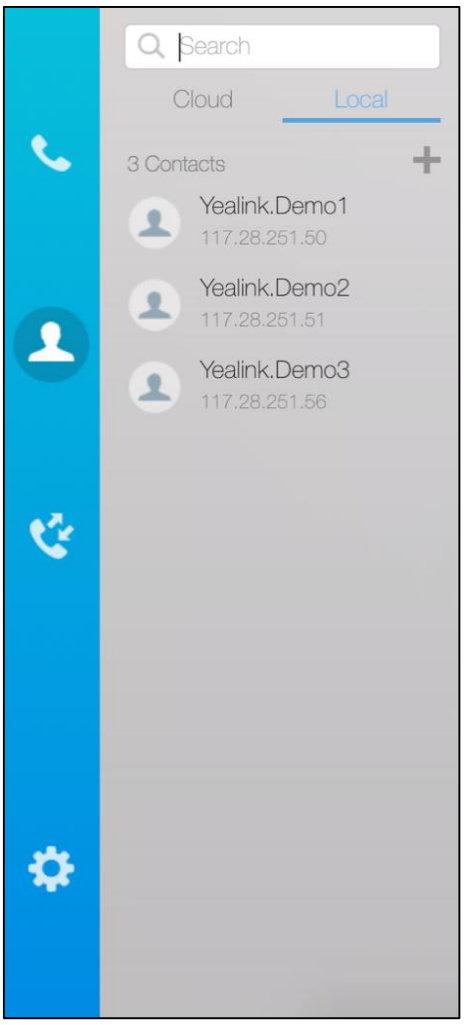
- Adding Contacts to Local Directory
- Placing Calls to Contacts
- Editing Contacts in Local Directory
- Deleting Contacts in Local Directory
- Searching for Contacts

Adding Contacts to Local Directory

When you add a contact to your local directory, only a contact name and number are required to enter for each new contact.

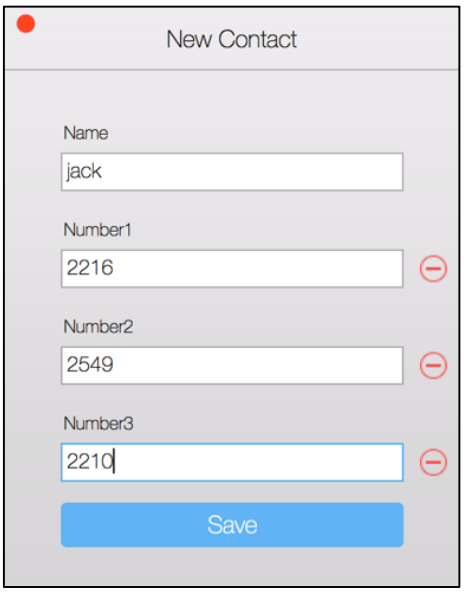
To add a local contact via the Yealink VC Desktop for Mac:

1. Click ->**Local**-> .



2. Enter the display name in the **Name** field.
3. Enter the numbers or IP address in the **Number 1** field.
4. Click **Add New Number** to add more numbers. Up to 3 numbers can be added to a contact.
5. Enter the second number of the contact in the **Number 2** field.

6. Repeat the step 4 to add the third number to the contact in the **Number 3** field.



7. Click **Save**.

Placing Calls to Contacts

You can place a call to local contacts from the local directory. If you log into Yealink VC Desktop for Mac using Yealink Cloud accounts, you can place calls to Yealink Cloud contacts.

To place a call to the contact via the Yealink VC Desktop for Mac:

1. Click .
2. Select **Cloud** or **Local**.
3. Hover your mouse over a contact, select the number you want to dial.

   If the contact's system does not support video, an audio call starts.

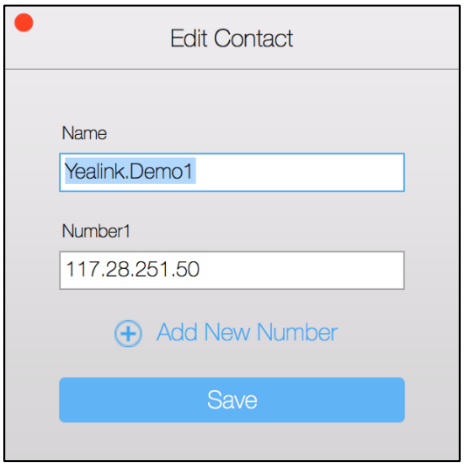
Editing Contacts in Local Directory

You can edit the contact's information after you create it.

To edit contacts via the Yealink VC Desktop for Mac:

1. Click ->**Local**.
2. Hover your mouse over a contact. The contact details are displayed.
3. Click to edit a contact.

4. Edit the contact's name and number.



5. Click **Save**.

Deleting Contacts in Local Directory

You can delete contacts from the local directory.

To delete contacts via the Yealink VC Desktop for Mac:

1. Click ->**Local**.
2. Hover your mouse over the local contact you want to delete. The contact details are displayed.
3. Click to delete the local contact.

   A dialog box pops up to ask if you confirm to delete the contact, shown as below:

4. Click **Yes** to delete the contact.

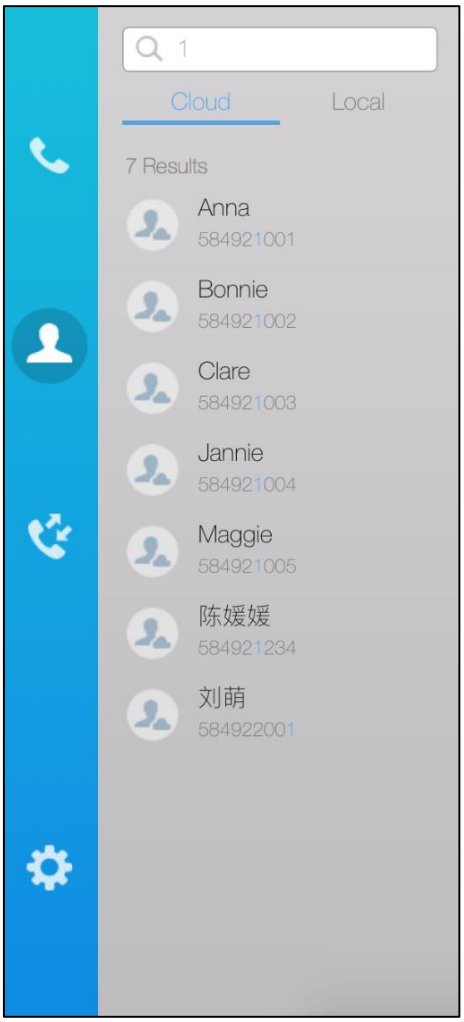
Searching for Contacts

You can enter a part of a key word to do the search to quickly find someone in your local directory and Yealink Cloud directory.

To search for contacts via the Yealink VC Desktop for Mac:

1. Click .
2. Enter a few or all characters of the contact name or numbers in the Search box.

As soon as you start entering in the search box, a search is performed in local directory and Yealink Cloud directory.



Call History Management

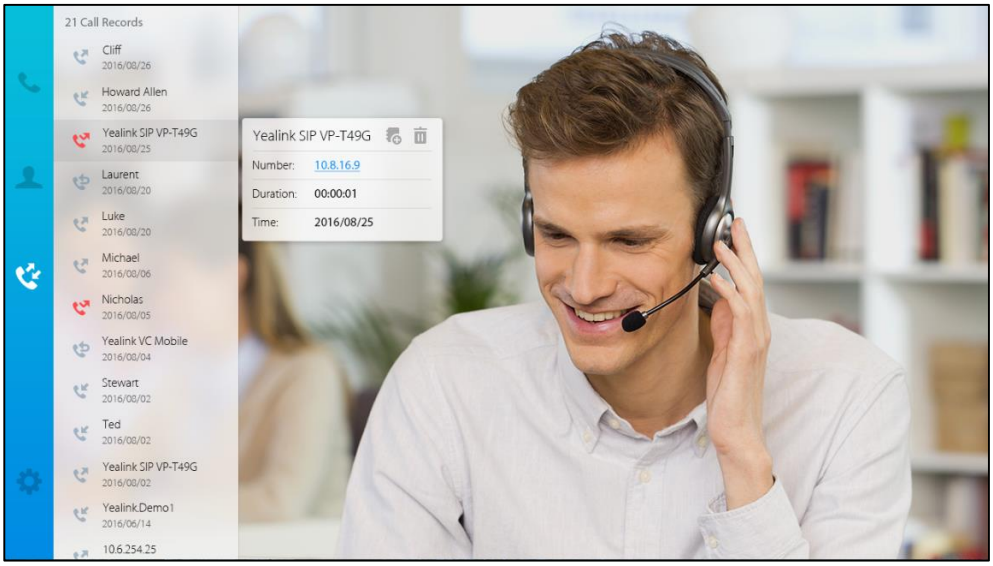
Call history includes incoming, outgoing and missed calls. The Yealink VC Desktop for Mac supports up to 100 history entries, including local entries and Cloud history entries.

Viewing Call History

To view call history via the Yealink VC Desktop for Mac:

1. Click  .

2. Hover your mouse over the entry. The entry details are displayed as below:



Each entry in history list reports the following information:

- Remote party of the call. The display name appears, if available.
- Number.
- Call duration.
- Date and time of the call.

Note When the Yealink VC Desktop for Mac missed calls, a number icon (indicating the number of missed calls) will appear on . .If you click (indicating 3 missed call), the number icon

Placing Calls from the Call History List

You can place a call by selecting an entry from your history list. If the far site supports video calls, a video call will start automatically. Otherwise, an audio call starts.

To place a call from the call history list:

1. Click .
2. Hover your mouse over the entry, select the number you want to dial.

   If the contact's system does not support video, an audio call starts.

Deleting Entries from the Call History List

You can delete entries from the history list.

To delete an entry from the call history list:

1. Click .

2. Hover your mouse over the entry. The entry details are displayed.
3. Click to delete the entry.

Adding Contacts to Local Directory from the Call History List

To add a contact from the call history list:

1. Click .
2. Hover the mouse over the entry you want to add. The entry details are displayed.
3. Click .
4. Enter contact name in the **Name** field.

You can add more than one number for the contact. For more information, refer to Adding Contacts on page 56.

5. Click **Save**.

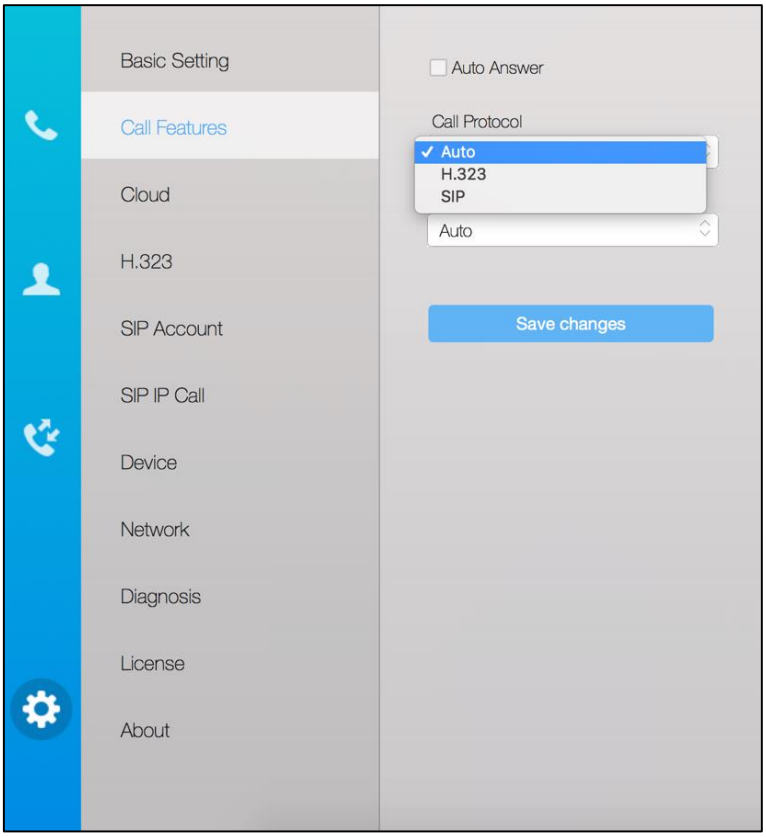
Call Protocol

The Yealink VC Desktop for Mac supports SIP and H.323 call protocols. You can configure which type is to be used when the Yealink VC Desktop for Mac is making calls. When the **Auto** call protocol is chosen, the Yealink VC Desktop for Mac preferentially uses the H.323 protocol to place calls. But if there is no available H.323 account on the Yealink VC Desktop for Mac, the Yealink VC Desktop for Mac will switch to use the SIP protocol.

To configure call protocol via the Yealink VC Desktop for Mac:

1. Click ->**Call Features**.

2. Select desired type or **Auto** from the pull-down list of **Call Protocol**.



3. Click **Save changes**.

Call Bandwidth

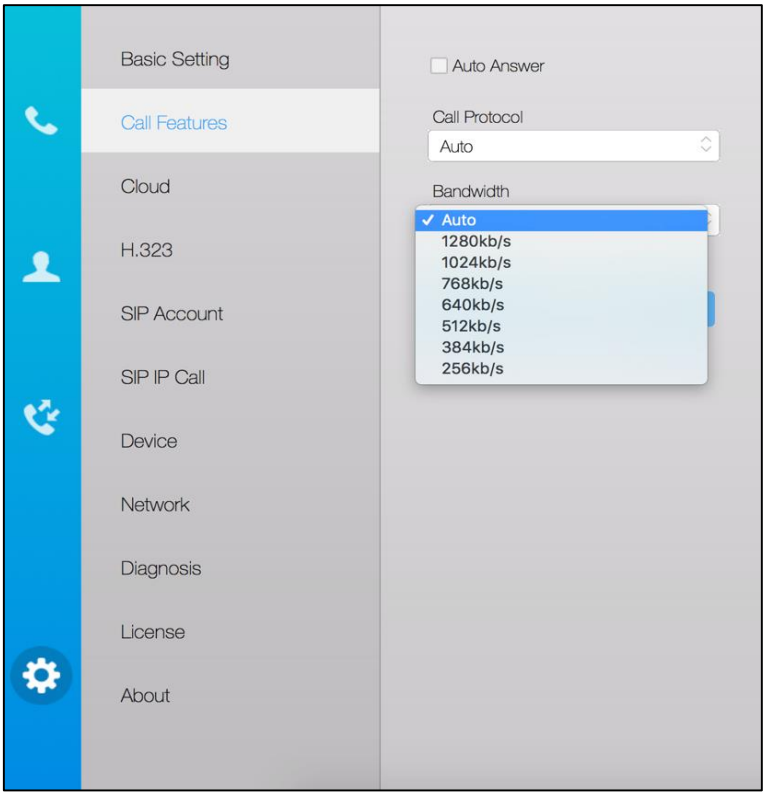
By default, the Yealink VC Desktop for Mac automatically detects the available bandwidth and uses it to connect other devices. To achieve the best result, you can specify the call bandwidths for the Yealink VC Desktop for Mac.

Available bandwidths for the Yealink VC Desktop for Mac are: Auto, 1280 kb/s, 1024 kb/s, 768 kb/s, 640 kb/s, 512 kb/s, 384 kb/s, 256 kb/s.

To configure the bandwidth via the Yealink VC Desktop for Mac:

1. Click  ->**Call Features**.
2. Select the desired bandwidth from the pull-down list of **Bandwidth**.

If **Auto** is selected, the Yealink VC Desktop for Mac will negotiate the appropriate bandwidth automatically.



3. Click **Save changes**.

Using Yealink VC Desktop for Mac

You can use the Yealink VC Desktop for Mac to place calls, answer calls or reject calls and use the in-call toolbar to change audio and video devices or change the video layout.

This chapter provides basic operating instructions for the Yealink VC Desktop for Mac. Topics include:

Placing Calls

The Yealink VC Desktop for Mac supports two kinds of call types:

- Audio call
- Video call

To get a better sound quality, it is recommended that you should connect a headset as the audio device.

If the far site does not support video, an adaptive audio call starts. You can search and dial a contact from the call history and directory. For more information, refer to Directory on page 55 and Call History Management on page 60.

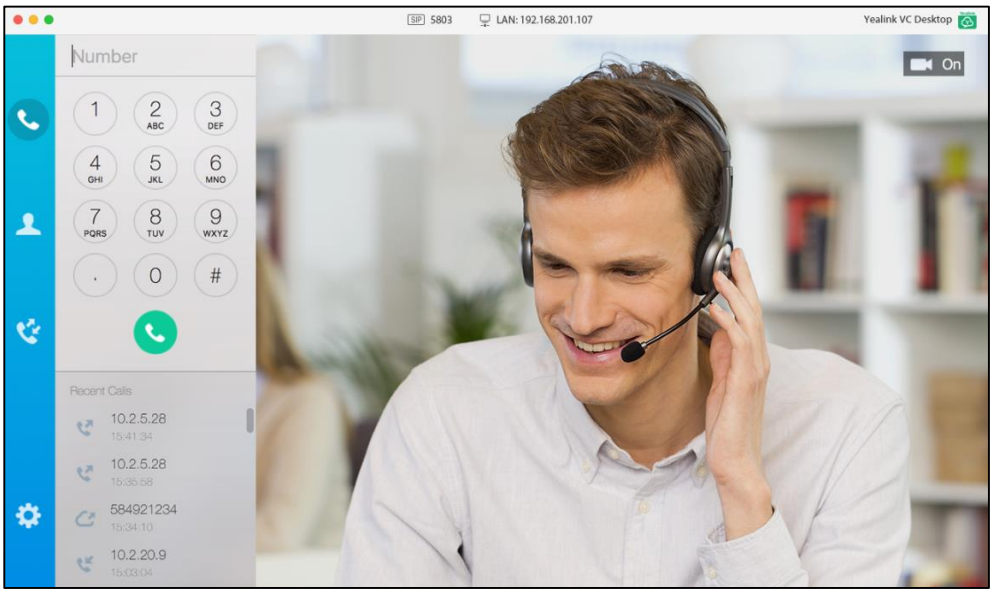
If the Yealink VC Desktop for Mac establish the call, you can troubleshoot the problems according to the following prompts:

Prompts	Description
Remote endpoint application cleared call	• Remote endpoint rejects your SIP call. • Remote endpoint does not answer your SIP call. • Remote endpoint has reached its maximum sessions when you place a SIP call. • Remote endpoint rejects your H.323 call • Remote endpoint does not answer your H.323 call. • Remote endpoint has reached its maximum sessions when you place an H.323 call. • Remote endpoint network anomaly. • Remote endpoint is powered off.
The network is not available	Local network is disconnected. For more information，please refer to General Issues on page 83.

To place a call via dialing:

1. Click  .
2. Enter the calling information in the input box. You can use any of the following phone number formats:
   - 1008 (SIP user name, H.323 user name and Yealink Cloud account)
   - www.yealink.com (FQDN name)
   - 1008@yealink.com (<SIP_username>@<domain.com>)
   - 1234@10.2.1.171 (conference ID@IP address)
   - 10.2.1.171##1071（IP address## conference ID）
   - 10.11.12.13 (IP address)

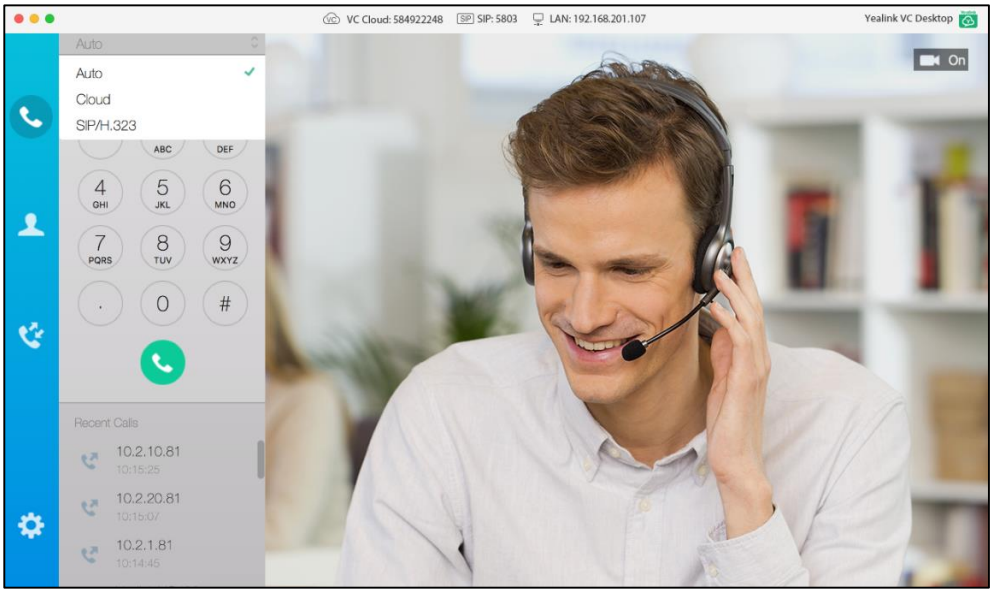
- 1234@10.11.12.13 (<SIP user name>@<IP address>)



You can also enter the few continuous characters of the contact name, phone number to perform search. Then, a search is performing in the directory and history lists.

If you log into the Yealink VC Desktop for Mac using the Yealink Cloud account or YMS account and register SIP/H.323 account, the pull-down list of **Auto** appears. You can select the contact in desired directory to place a call in the pull-down list of **Auto**.

If you set the type of contact to **Auto**, the system priority of selection is as follows: Cloud>H.323>SIP. For example, if a contact is saved in both Yealink Cloud directory and local directory, Yealink VC Desktop for Mac will dial the number from Yealink Cloud directory preferentially.



3. Click  .

Note If a Yealink Cloud contact is in a same enterprise directory as you, you can only enter an extension number (the last four Cloud number) to place a call. Otherwise, a full 9-digit Cloud number is required to place a call to.

Answering or Rejecting Calls

If there is an incoming call, a call notification will pop up to tell you who is calling you, and you can choose to answer or reject it.

To answer a call:

1. Click  to answer the call.

To reject a call:

1. Click  to reject the call.

   The Yealink VC Desktop for Mac comes back to the main window.

Note If you receive a call from the one who is both your Cloud contact and your local contact, the name priority of the call notification is as follows: Local contacts >Yealink Cloud contacts>YMS contacts.

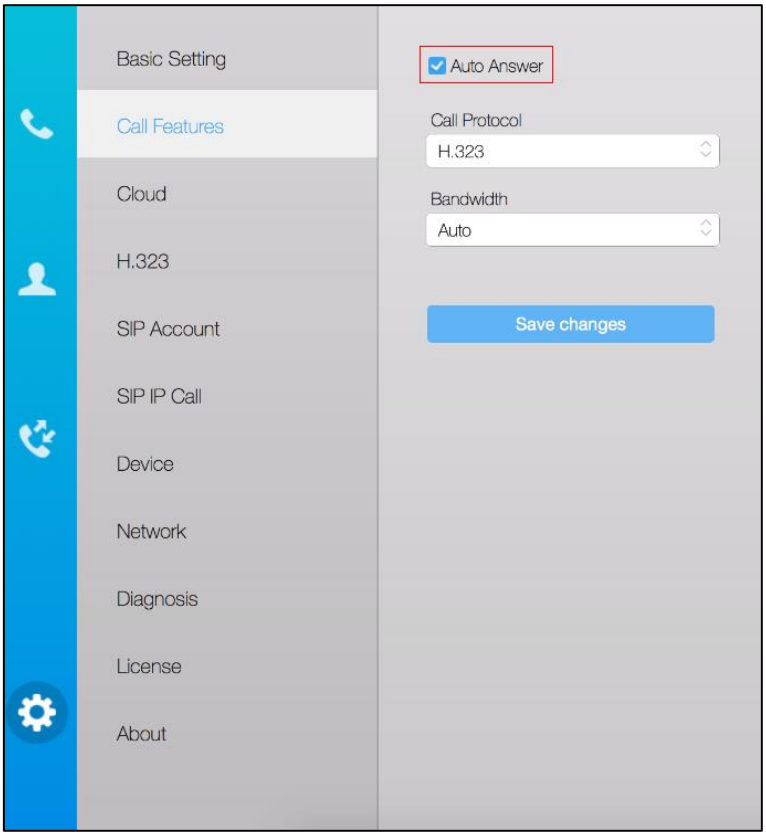
Auto Answer

You can enable the auto answer feature for the Yealink VC Desktop for Mac to answer the incoming call automatically.

To configure auto answer via the Yealink VC Desktop for Mac:

1. Click  ->**Call Features**.

2. Check the **Auto Answer** checkbox to enable the auto answer feature.



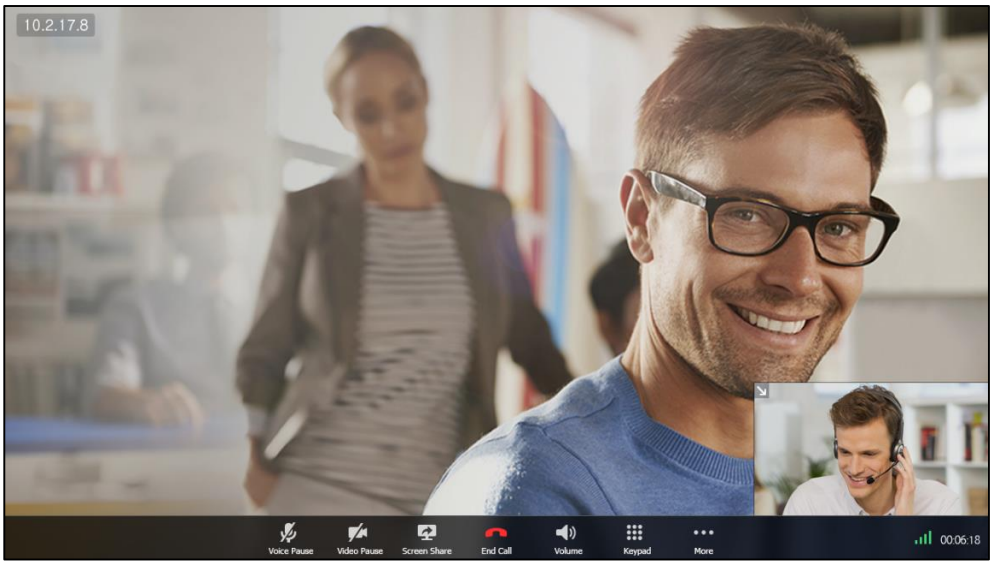
3. Click **Save changes**.

Ending Calls

Either participant can end a call. When the call ends, the call window will close automatically.

To end a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.



2. Click to hang up.

Turning off Your Camera

You can turn off your camera in idle, click on the top-right of the application window, you cannot view local self-view.

Turning on Your Camera

You can turn on your camera in idle, click on the top-right of the application window, you can view local self-view.

Using the In-call Toolbar

During a call, you will see the in-call toolbar on the bottom of the call window. The in-call toolbar is temporarily showed when you establish a call. To display the in-call toolbar again, move your mouse.

To show in-call toolbar during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.

Muting Your Microphone

You can mute your microphone when you don't want to speak in a call.

To mute the microphone when the Yealink VC Desktop for Mac is during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click .
   When your microphone is muted during a call, the icon changes to the icon on the in-call toolbar. You can hear the far-site voice, but the far site cannot hear you.

Unmuting Your Microphone

You can unmute your microphone after you mute it.

To unmute the microphone when the Yealink VC Desktop for Mac is during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click .
   When you unmute your microphone, the icon disappears on the top-right of the video image. The far site can hear you.

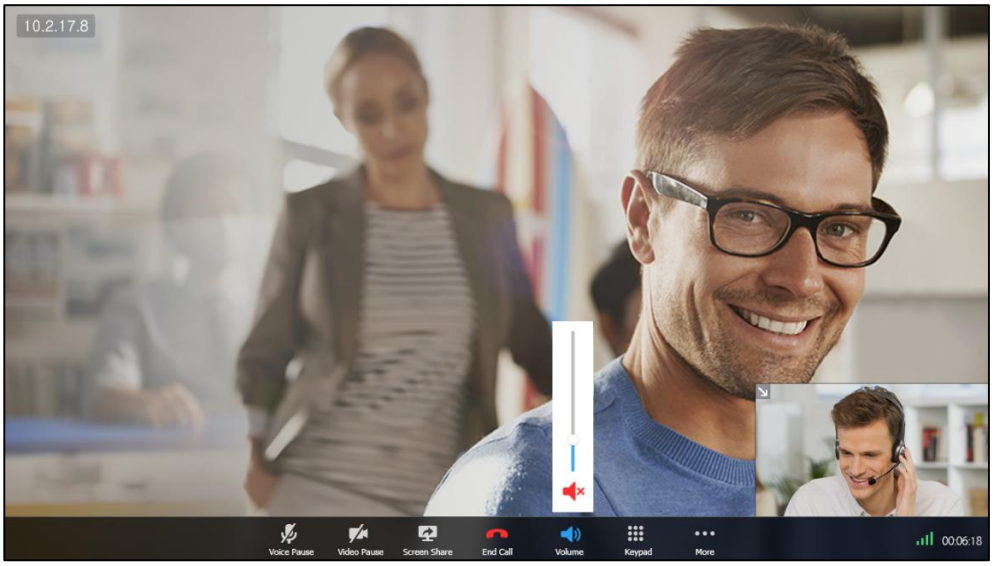
Adjusting Your Speaker Volume

You can adjust your speaker volume or mute it.

To adjust the speaker volume when the Yealink VC Desktop for Mac is during a video call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click .
   Use the volume slider to adjust the input level of the selected device.
3. To mute the speaker, click on the volume slider.

When your speaker is muted during a call, the icon changes to the icon on the volume slider. The local site can't hear the far-site voice, but the far site can hear you.



Changing Audio and Video Devices

To change devices during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click ooo to show the hidden in-call controls.
3. Hover your mouse over to change audio and video devices.

   You can select speakers, microphones and cameras. For more information on how to change devices, refer to Audio and Video Device on page 14.

Note During a call, if you connect new devices, the Yealink VC Desktop for Mac will switch to the latest device (speakers, microphones and cameras) automatically.

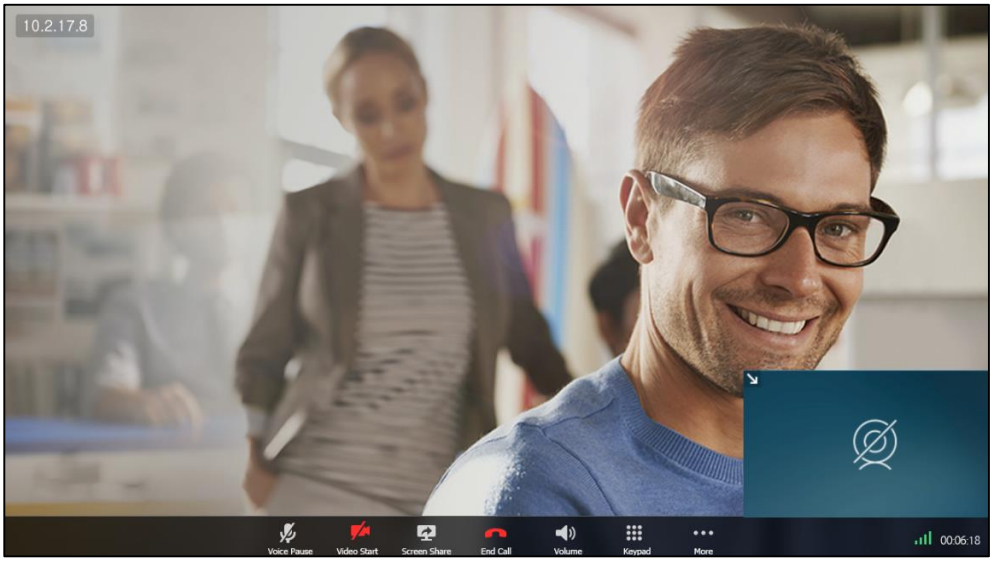
Turning off Your Video

You can stop your Yealink VC Desktop for Mac from automatically transmitting video image in the small window during a video call. However, you cannot turn off video image in the large window.

To turn off video image in the small window during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.

2. Click to turn off video image in the small window.
   The icon changes to the icon on the in-call toolbar.



Turning on Your Video

You can turn on your video to resume showing video image in the small window.

To turn on video image in the small window during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click to turn on video in the small window.

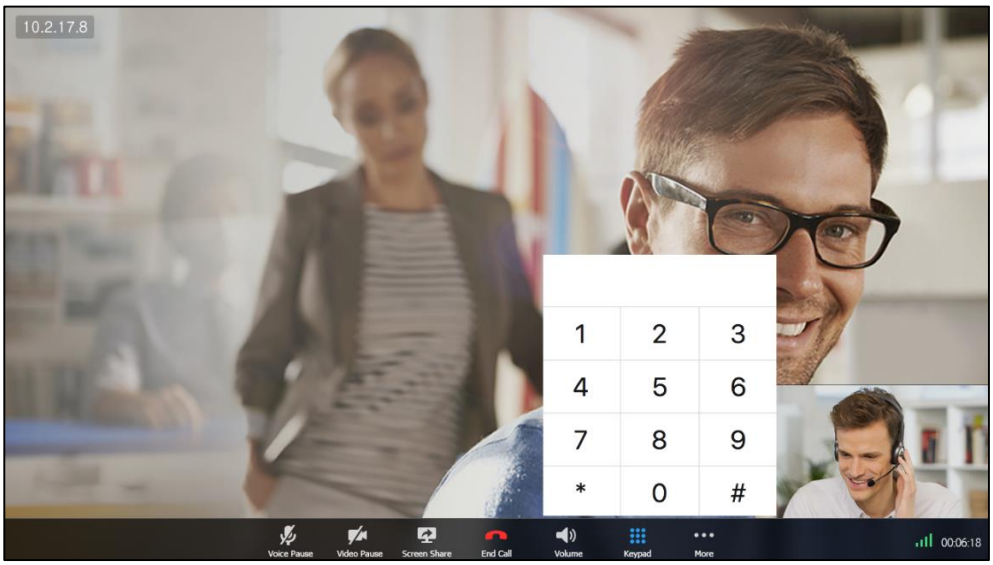
Sending DTMF Tones

During a call, the Yealink VC Desktop for Mac allows you to use the local dial pad to send DTMF tones. The DTMF tones are sent using the configured method. For more information, please refer to DTMF on page 40.

To send DTMF tones during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click to open the dial pad.

3. Click the buttons to send the DTMF tones.



Showing More In-call Controls

Some in-call controls, such as change audio and video devices, show or hide the video image in small window and maximize or restore the video image in small window are hidden by default. You can show these hidden in-call controls.

To show more in-call controls:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click ooo to show the hidden in-call controls.

Hiding More In-call Controls

You can hide the in-call controls.

To hide more in-call controls:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click ooo to hide the in-call controls.

Changing the Video Layout

During a video call, the far-site video image displays in a large window, the local site displays in a small window in the bottom-right corner of the window by default.

Swapping the Video Images

To swap the video image:

1. Double-click the video image in small window to swap the windows that the two sites display in.

   The local video image appears in a large window. While the far-site video image appears in a small window in the bottom-right corner of the window.

Showing or Hiding the Video Image in Small Window

To show or hide the video image in the small window:

1. Hover your mouse over the bottom of the video image in a large window to show the in-call toolbar.
2. Click ooo to show the hidden in-call controls.
3. Click to hide or display the video image in small window.

   You can also click to hide display the video image in small window or click display the video image in small window.

Maximizing Application Window

During a video call, you can maximize the Yealink VC Desktop for Mac application window.

To maximize Yealink VC Desktop for Mac application window during a call:

Do one of the following to maximize application window:

- Hover your mouse over the bottom of the far-site video image to show the in-call toolbar. And then click ooo to show the hidden in-call controls.

  click on the in-call toolbar.

- Click  on the top-left of the call window.
- Double-click the video image in a large window.

Restoring Application Window

During a video call, you can restore the Yealink VC Desktop for Mac application window.

To restore Yealink VC Desktop for Mac application window during a call:

Do one of the following to restore application window:

- Hover your mouse over the bottom of the far-site video image to show the in-call toolbar. And then click to show the hidden in-call controls.

  Click  on the in-call toolbar.
- Double-click the video image in a large window.

Call Statistics

If voice quality is poor during a call, you can enter the Call Statistics screen to view the current status of the call to find out the reason.

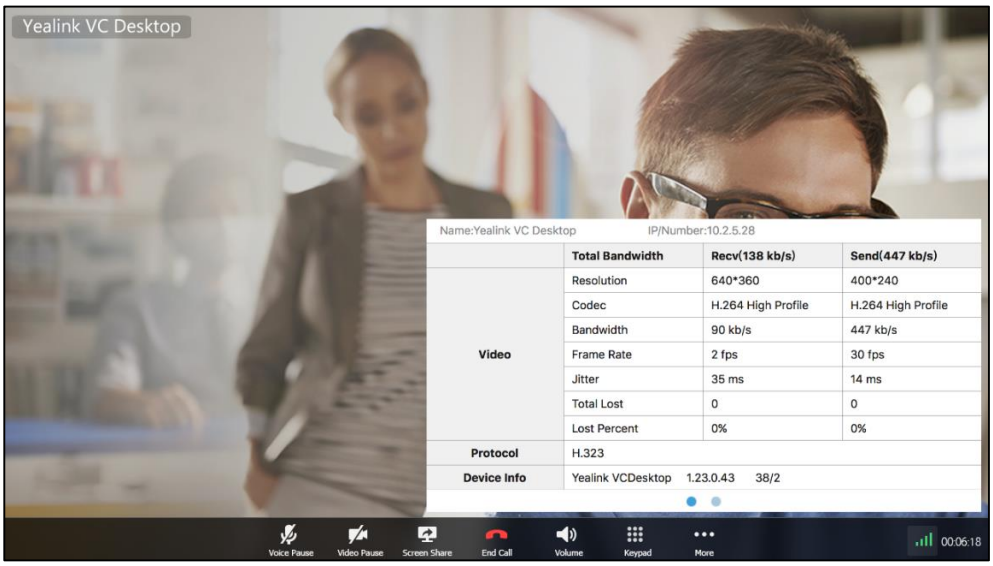
The call statistics mainly contain the parameters about audio, video and share. You can know about the call quality by viewing codec, bandwidth, total packet lost and other parameters. For example, when a delay occurs or the video has a 'mosaic' look, you can view the total packet loss to check whether the packet has been lost.

To view call statistics during a call:

1. On the bottom-right of your screen, click  .

   The  icon changes according to your network signal strength.

2. (Optional.) Click to turn to the next page.



Initiating Presentations

When you initiate presentations, the far site can see the contents (including slides, spreadsheets, or any other types of files) you selected on your Windows desktop at the same time, including the cursor. But the far site cannot control the cursor or edit the file. Note that only one presentation can be initiated at a time and a presentation initiated later will replace the previous one.

Before you initiate presentations, make sure that your content is ready and dual-stream protocol is enabled on both devices. For more information, please refer to Dual-Stream Protocol on page 44.

If you want to initiate presentations using multiple monitors, make sure that your computer supports multiple monitors and you have configured it properly. For more information, please refer to network resources.

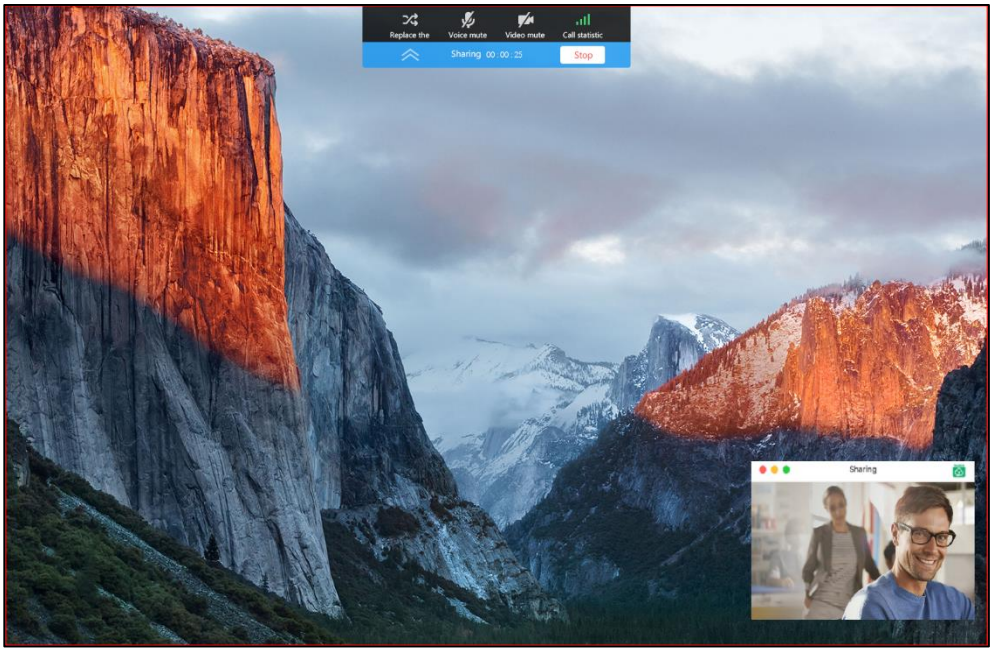
To initiate presentation during a call:

1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.
2. Click .
3. Do one of the following:

- To share your windows desktop, select **The main screen**.

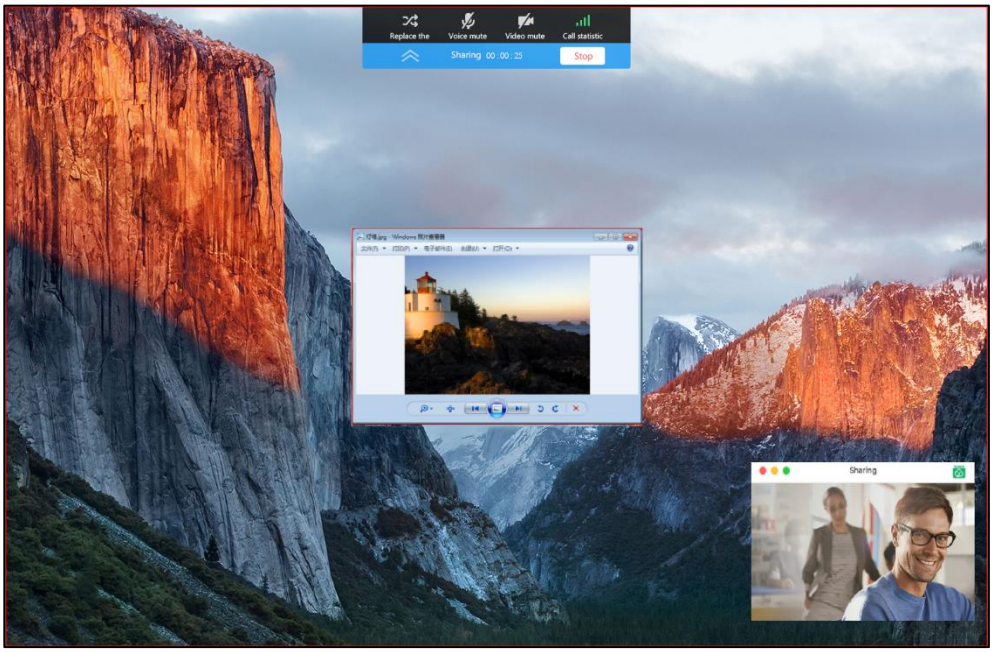
  When your Mac uses multiple monitors, you can also select any one of the monitors to share the windows desktop.

The far-site video image will be in a small window and appear in the bottom-right of the window.



- To share a running application, select a running application.

  You can share a running application. The far-site video image will be in a small window and appear in the bottom-right of the window.



The sharing toolbar appears in the top of the Mac desktop.

In the process of presentation, you can do the following:

- Hover your mouse over , and then change the shared content in the Screen Share menu.

The content includes other monitors' windows desktop or a running application.

- Click  to mute microphone.
- Click  to turn off video image in the small window.
- Click  to view the call statistics.

4. Click **Stop** to exit presentation.

Troubleshooting

This chapter provides general troubleshooting information to help you solve problems you might encounter when using your VC Desktop.

Troubleshooting Methods

The Yealink VC Desktop for Mac can provide feedback in three forms, they are packet, view log files and view call statistics, which can help an administrator to find the problem more easily and then solve it.

The administrator can check the working status in the following two ways and find the fault cause quickly:

- Capturing Packets
- Viewing Log Files
- Viewing Call Statistics

Capturing Packets

The administrator can capture packets using the Ethernet software, and then analyze it to troubleshoot problems.

To capture packets using the Ethernet software:

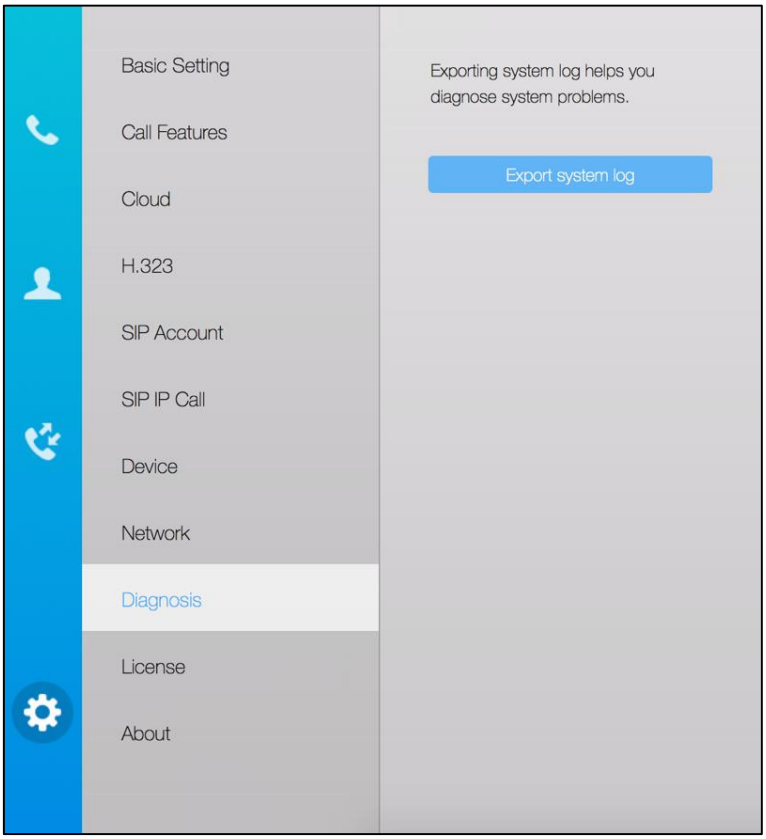
Use Sniffer, Ethereal or Wireshark software to capture the signal traffic.

Viewing Log Files

The log files are Yealink specific debug files which may be requested by the Yealink support organization if you need technical support. The current log files are time stamped event log files. You can export the log files to the local system.

To export system log via the Yealink VC Desktop for Mac:

1. Click ->**Diagnosis**->**Export system log**.
   You can save the system log in the local system.



Viewing Call Statistics

You can enter the view call statistics screen during an active call. Information includes:

- **Total Bandwidth**: Receive Bandwidth and Send Bandwidth.
- **Video:** Resolution, Codec, Bandwidth, Frame Rate, Jitter, Total Packet Lost, Packet Lost (%).
- **Audio**: Codec, Bandwidth, Sample Rate, Jitter, Total Packet Lost, Packet Lost (%).
- Protocol used during a call.
- Device information of the far site.
- **Share**: Resolution, Codec, Bandwidth, Frame Rate.

Troubleshooting Solutions

This chapter provides general troubleshooting solutions to help you solve the problems you might encounter when using your VC Desktop for Mac.

If problems you encounter are not mentioned in this chapter, you can contact your distributor

or Yealink FAE.

General Issues

Why does the Yealink VC Desktop for Mac fail to call the far site?

- Check whether the local network is available.
- Check whether the far-site network is available.
- Check whether the accounts have been registered correctly, and the Yealink VC Desktop for Mac uses the appropriate account to call the far site.
- Ensure that the number you are calling is correct.
- If Yealink VC Desktop for Mac is registered with Yealink Cloud account and SIP/H.323 account, ensure that you select the right type of contact to place a call.
- Check whether the far site rejects your call.
- Check whether the firewall blocks the inbound traffics from the other site.
- Check whether the far site has already up to maximum call-in limitation.
- If you are forced to use encryption, ensure that the far site also enables encryption too. For more information on call encryption, refer to Secure Real-Time Transport Protocol on page 48.
- Ensure that the call protocol is supported by both sites. For more information on call types, refer to Call Protocol on page 62.

Why is activation unsuccessful?

- Check whether the local network is available.
- Check whether the activation code you entered is wrong.
- Check whether the activation code has been activated on 3 computers.

Why does the Yealink VC Desktop for Mac fail to update?

- Check whether the local network is available.
- Check whether the file for updating is wrong.
- Check whether the file for updating is limited by the antivirus software.

Camera Issues

Why is the video quality bad?

- Ensure that the resolution of the video device and the computer have been configured appropriately.

- Check whether the packet has been lost. For more information on packet loss, refer to Call Statistics on page 81.
- Avoid high-intensity indoor light or direct sunlight on the camera.

Video & Audio Issues

Why cannot I hear the voice during a call?

- Ensure that an available audio output device is selected.
- Ensure that the volume is set to the proper level.

Why cannot I hear the other site clearly during a call?

- Ensure that the speaker volume of the far site is not set too low.
- Muffled audio reception from the far side may be caused by highly reverberant rooms. Speak in close proximity to the microphone.

Why is the voice quality poor?

Users may receive poor voice quality during a call, such as intermittent voice, low volume, echo or other noise. But it is difficult to diagnosis the root causes of poor voice quality. The possible reasons are:

- Users sit too far from or too near to the microphone.
- The audio pickup device is moved round frequently.
- Intermittent voice is probably caused by voice packet loss or jitter. Voice packet loss may occur due to network congestion, while jitter may occur due to information reorganization of the transmission or receiving equipment, such as, delay processing, retransmission mechanism or buffer overflow.
- Noise devices, such as computers or fans, may make it difficult to hear each other clearly.

Why cannot I view the local video image?

- Check the screen layout to see whether the remote video image is shown in full size.

Why cannot I initiate presentation?

- Check whether the Mac is sending a signal.
- Check the call statistics to see whether the Yealink VC Desktop for Mac is sharing content.
- Ensure that dual-stream protocol is configured correctly. For more information, refer to Dual-Stream Protocol on page 44.

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