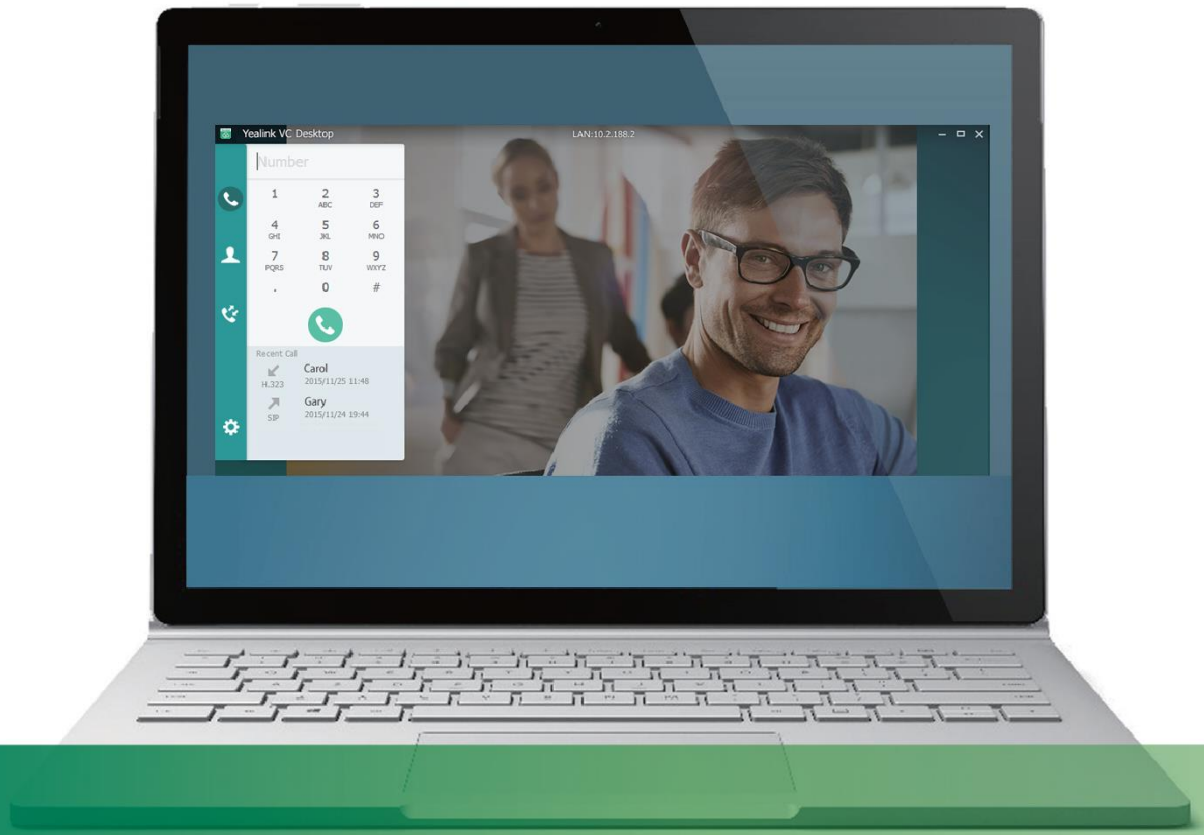

Yealink VC Desktop User Guide

Version 1.3
Feb. 2016

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About This Guide

Yealink VC Desktop is an easy-to-use video conferencing application that lets you see and hear the people you call. With Yealink VC Desktop, you can connect to anyone else who is using Yealink VC Desktop or other types of video conferencing system. You can show your Windows desktop to participants in video calls. Yealink VC Desktop contacts who don't have cameras can still participate in calls. Yealink VC Desktop supports the point to point single call.

This guide provides everything you need to start to use your Yealink VC Desktop quickly. First, verify with your system administrator that the computer and IP network are ready for VC Desktop configuration. Also be sure to read the **Getting Started** sections in this guide before you set up and use the Yealink VC Desktop.

Software

When the Yealink VC Desktop is installed for the first time, you can download the latest software.

If you have installed the Yealink VC Desktop, you can upgrade the Yealink VC Desktop in order to use the latest software. For more information on how to upgrade the Yealink VC Desktop, please refer to Updating Yealink VC Desktop on page 15.

Hardware and Software Requirements for Windows

These hardware and software requirements have been determined based on test scenarios. Your system's actual performance may vary based on software or hardware configuration.

Windows	Windows 7 or later, both 32 bit and 64 bit
Processor	Dual cores and four threads, 1.7GHz or higher
RAM	4GB
Video Memory	Minimum: 512MB
Hard Drive Space	150MB
Cameras	Integrated or external cameras
Audio Devices	Integrated or external microphones and speakers
Monitor	XGA, 16-bit color or higher
Network Access	Network 128 kbps and above. (Cable, ADSL, or LAN)

Microsoft Software	DirectX 9.0 or later

Icon Instruction

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

Icon	Description
	Contacts
	Dial
	Local directory
	Call history
	Settings
	Missed calls
	Outgoing calls
	Ingoing calls
	Call statistics
	Non-current page
	Current page
	The microphone is unmuted
	The speaker is unmuted
	The microphone is muted (in-call toolbar)
	The microphone is muted (near-site video image)
	The speaker is muted (in-call toolbar)
	The speaker is muted (near-site video image)
	Initiate presentation
	Full screen
	Exit full screen mode
	Hang up a call
	Unfold the in-call toolbar

Icon	Description
	Fold the in-call toolbar
	Turn off video
	Change the video layout
	Change audio and video devices
	DTMF keypad
	The sharing toolbar is unlocked
	The sharing toolbar is locked
	Change the sharing content
	Share full screen
	Exit presentation
	Minimize the window
	Maximize the window
	Restore the window
	Close the window

In This Guide

Topics provided in this guide include:

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

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Getting Started

This chapter contains the following information about Yealink VC Desktop:

- Installing Yealink VC Desktop
- Uninstalling Yealink VC Desktop
- Login Interface
- License Activation
- About
- User Interface Overview
- Updating Yealink VC Desktop
- Audio and Video Device
- Network

If you require additional information, or assistance to help you use your VC Desktop, contact your system administrator.

Installing Yealink VC Desktop

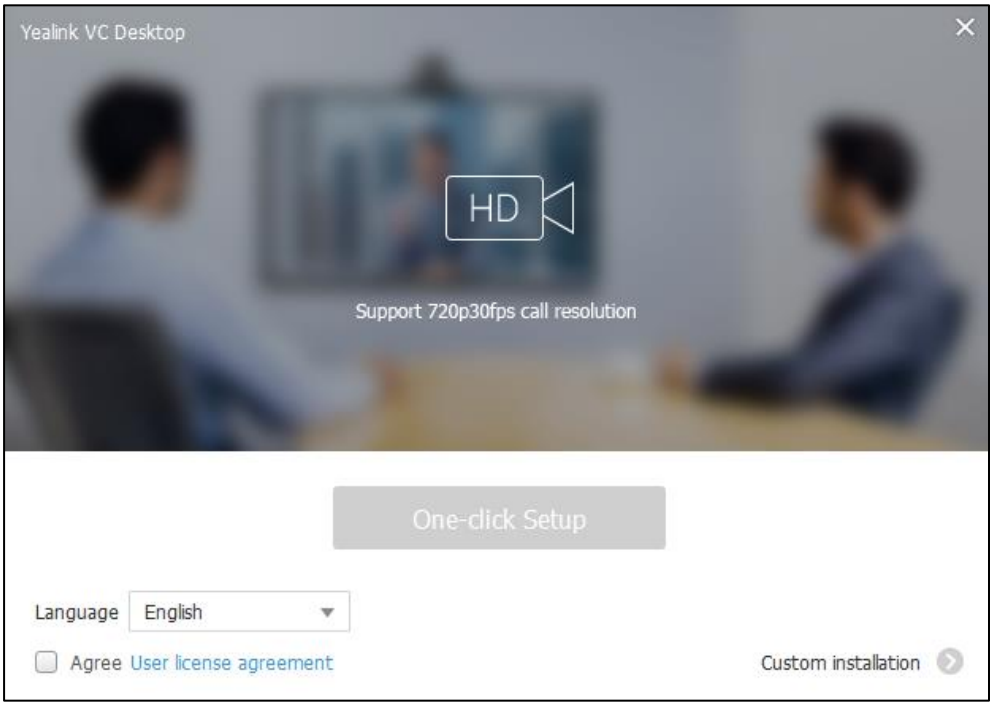
After you have downloaded the Yealink VC Desktop application, you can install it on your computer.

To install the Yealink VC Desktop:

1. Double-click Yealink VC Desktop application.

   The data extraction process is displayed as below:

2. Select the desired language from the pull-down list of **Language**. After you select, the Yealink VC Desktop Setup dialog box will be displayed in the corresponding language.

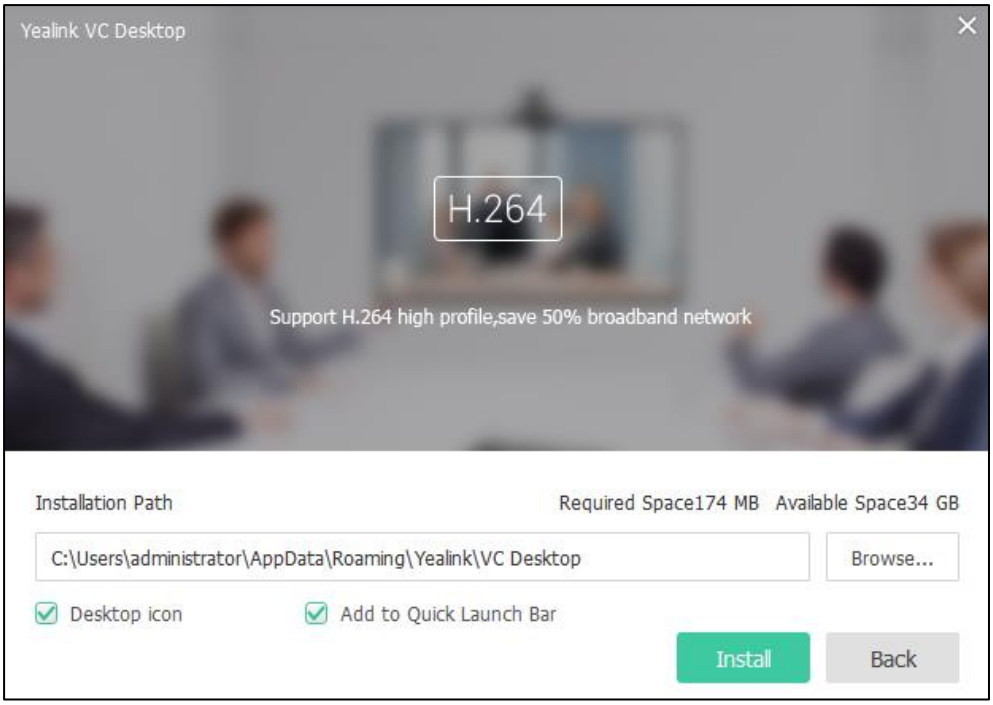


3. Check **Agree User license agreement** checkbox to continue installing the Yealink VC Desktop.
4. Do one of the following to install the Yealink VC Desktop:
   - Click **One-click Setup** to install it immediately.

     Yealink VC Desktop is installed in the destination site "C:\Users\administrator\AppData\Roaming\Yealink\VC Desktop" by default.
   - Click to proceed with **Custom installation**.

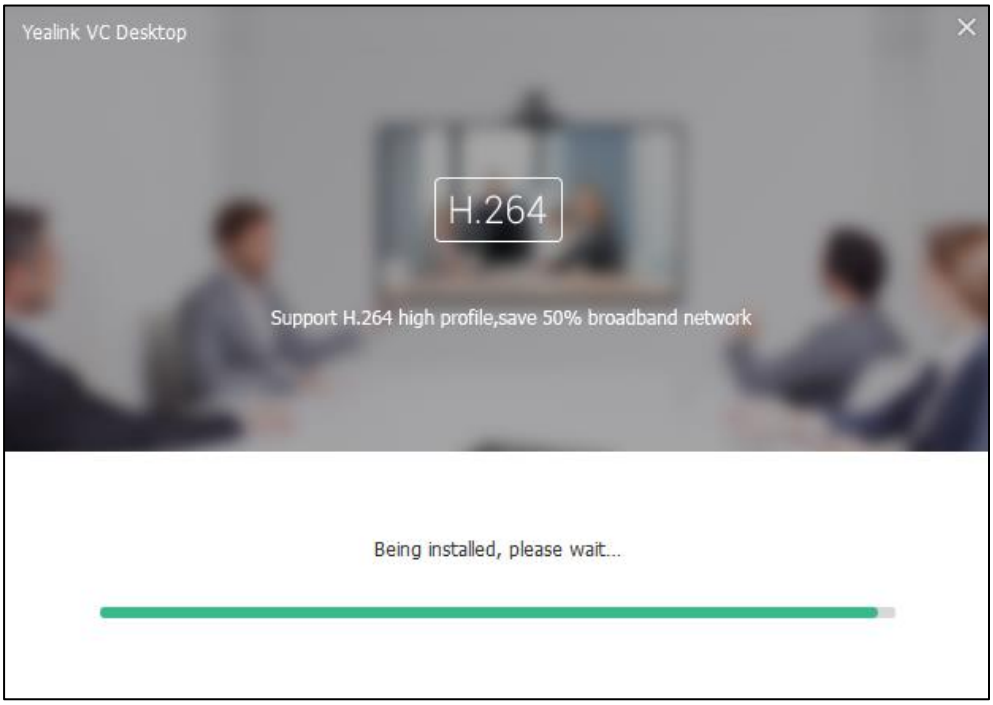
     Click **Browse...** to locate the destination site and click **Install** to begin the installation.

The Yealink VC Desktop Setup dialog box will prompt:



The **Desktop icon** checkbox and **Add to Quick Launch Bar** checkbox are checked by default. Then, you can launch the application from the desktop icon or quick launch bar.

A dialog box pops up to show the Yealink VC Desktop installation's progress, shown as below:

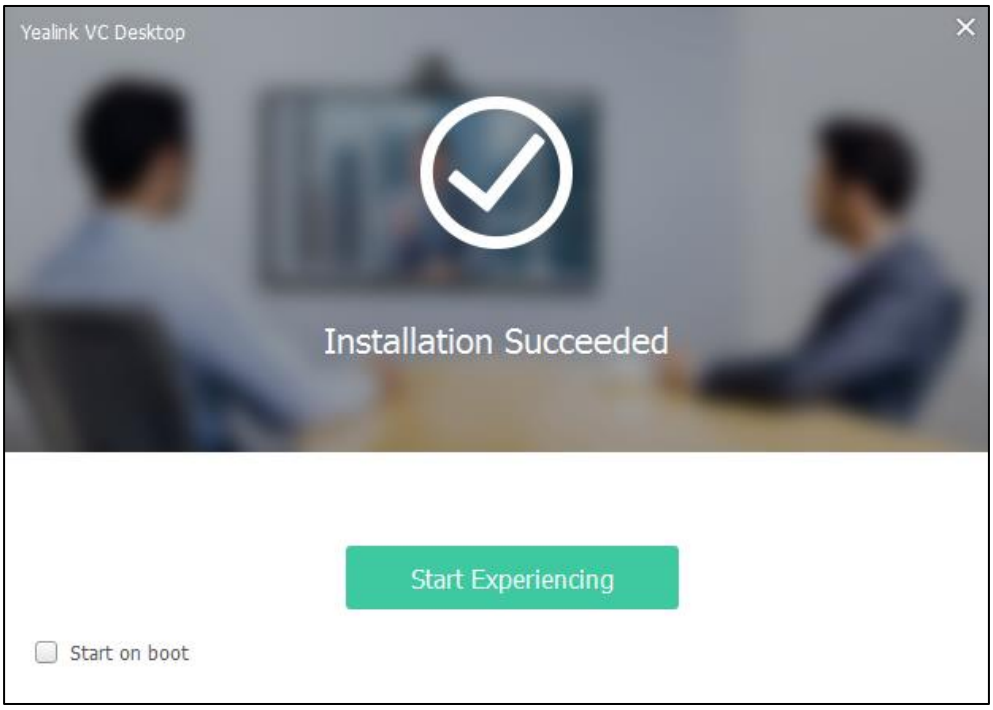


5. After the software has finished installing, click **Start Experiencing**.

   You can check **Start on boot** checkbox, the Yealink VC Desktop will start

automatically when your computer starts.

The Yealink VC Desktop Setup dialog box will prompt:



After you click **Start Experiencing**, the Yealink VC Desktop application starts on your computer automatically and the icon is displayed in notification area of your system tray.

To start the Yealink VC Desktop manually:

Do one of the following:

- On your Windows desktop, double-click to start the Yealink VC Desktop.
- Click in the quick launch bar.

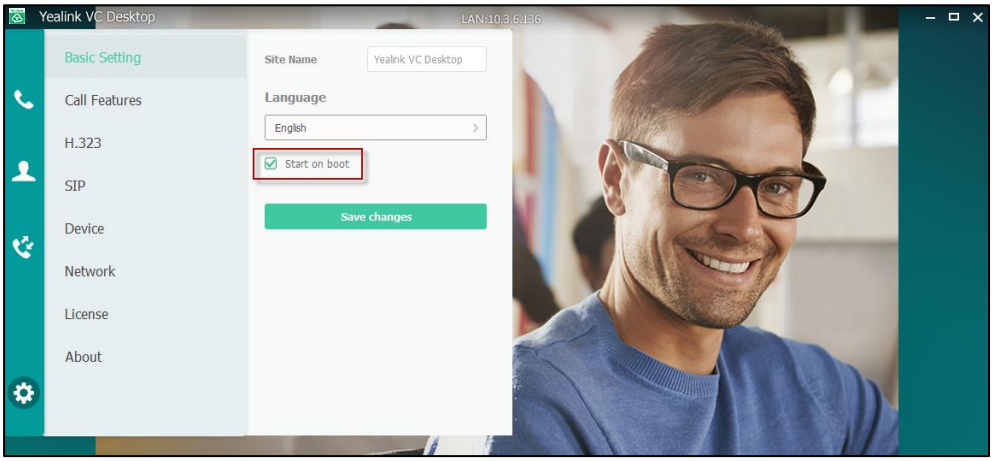
To exit the Yealink VC Desktop:

1. Right-click in the system tray.
2. Select **Exit**.

To configure start on boot via the Yealink VC Desktop:

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

The Yealink VC Desktop will start automatically when your computer starts.



3. Click **Save changes**.

   These settings take effect the next time you restart.

Uninstalling Yealink VC Desktop

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

Do one of the following to uninstall the Yealink VC Desktop:

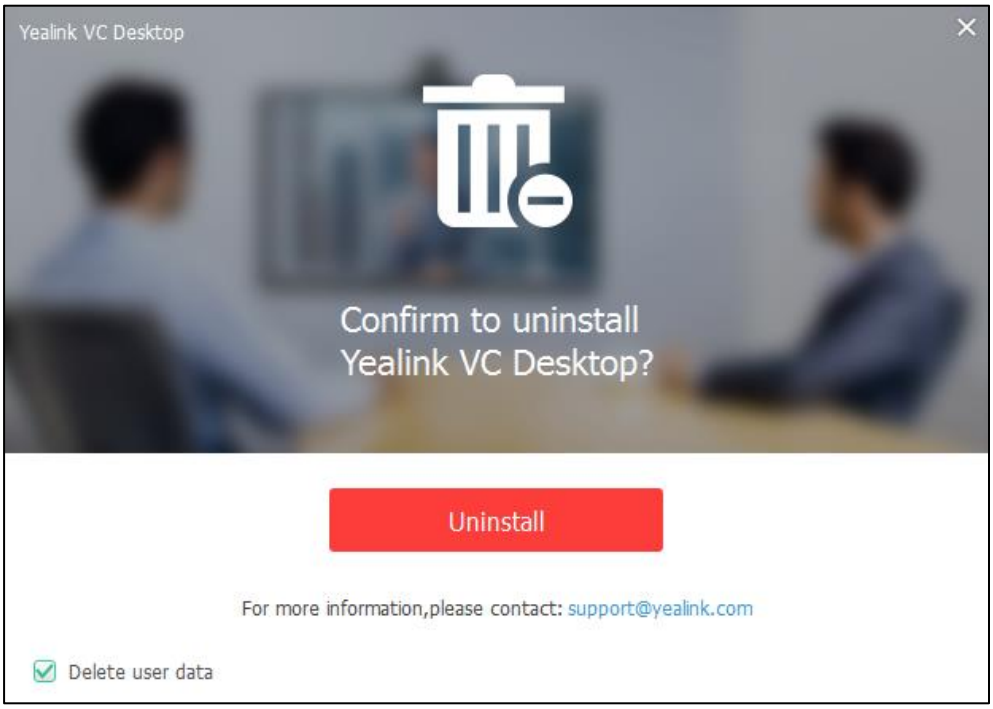
- Click **Uninstall** setup executable file (.exe) in the installation folder.
- Click in the quick launch bar of your computer.
- Use system uninstall program (control panel).
- Use the third-party software (e.g., 360 Security Guard).

The way of clicking **Uninstall** setup executable file (.exe) in the installation folder is introduced for an example. For more information on how to uninstall the Yealink VC Desktop by other ways, please refer to network resources. Before you start to uninstall the Yealink VC Desktop, please exit the Yealink VC Desktop.

To uninstall the Yealink VC Desktop:

1. Enter the installation folder of Yealink VC Desktop.
2. Double-click **Uninstall** setup executable file (.exe) in the installation folder.

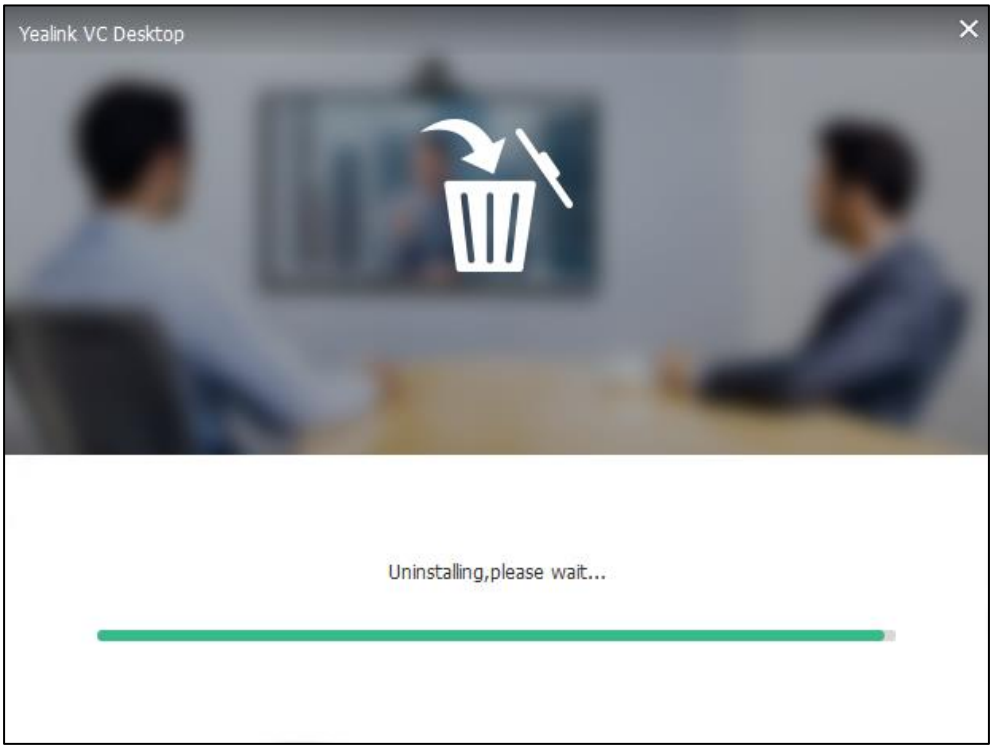
A dialog box pops up to ask if you confirm to uninstall the Yealink VC Desktop, shown as below:



The **Delete user data** checkbox is checked by default. If you want to keep your call history, local directory or the configuration information after uninstallation, uncheck **Delete user data** checkbox.

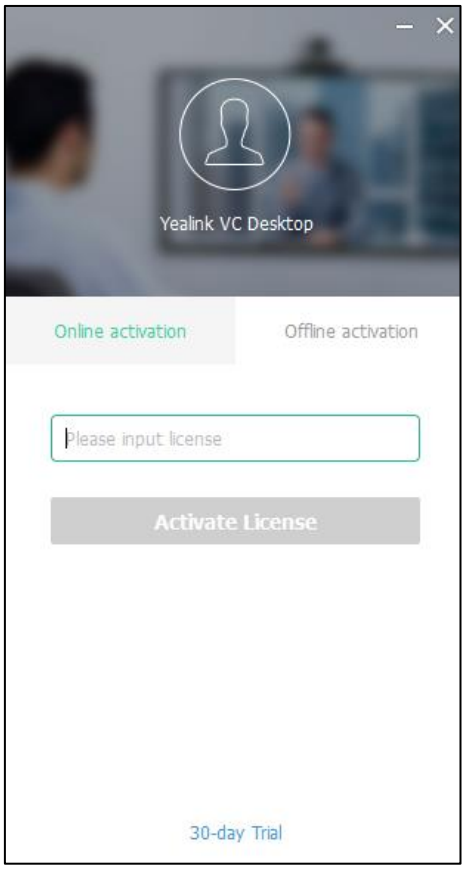
3. Click **Uninstall**.

A dialog box pops up to show the Yealink VC Desktop uninstallation's progress, shown as below:



Login Interface

When the Yealink VC Desktop starts for the first time, the login interface is displayed as below:



License Activation

When you first start Yealink VC Desktop, the application prompts you to activate the software. You can either activate it with a license or simply click **30 days trial** if you prefer to use the trial version.

You can obtain a license number from Yealink resellers before activation.

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

The Yealink VC Desktop supports two ways to activate:

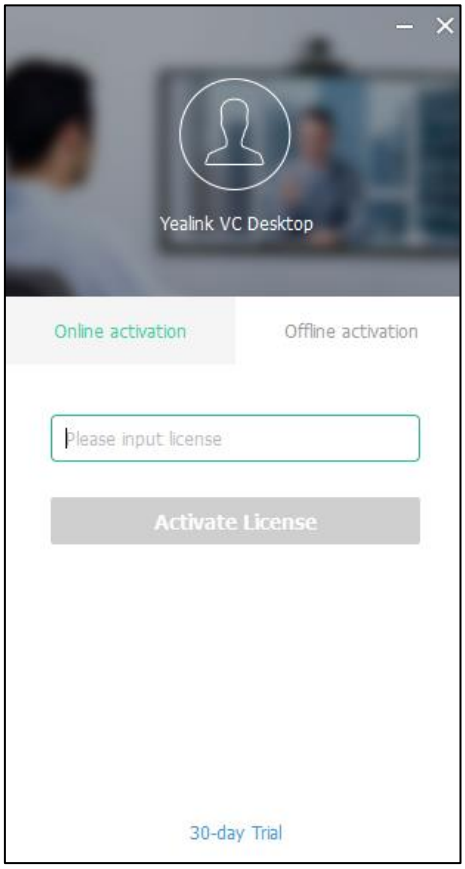
- Online activation
- Offline activation

Online Activation

If your computer can access to the license server, you can activate the Yealink VC Desktop online.

To activate the Yealink VC Desktop in the login interface:

1. Click **Online activation**.
2. Enter the license number.

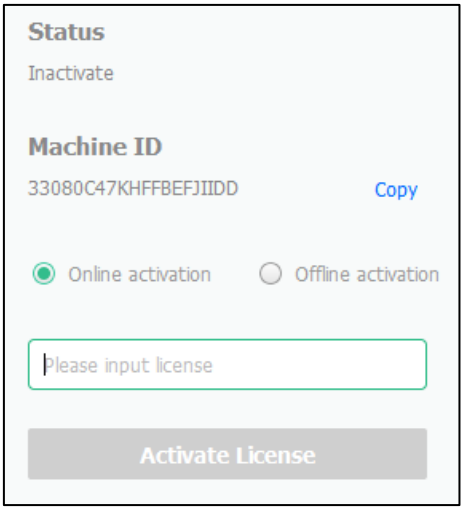


3. Click **Activate License**.

To activate the Yealink VC Desktop in the settings menu:

1. Click -> **License**.

The current software activation state and machine ID are shown as below:



2. Mark the radio box of **Online activation**.
3. Refer to the steps 2 to 3 introduced in the login interface to continue the online activation.

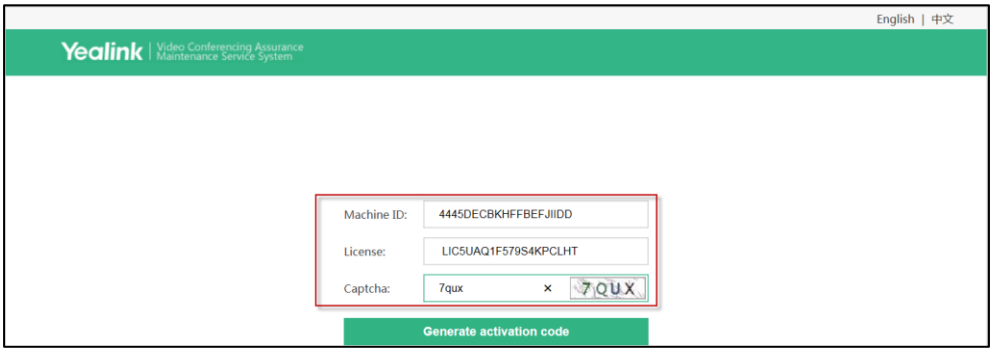
Offline Activation

If your computer cannot access to the license server, you can activate the Yealink VC Desktop offline.

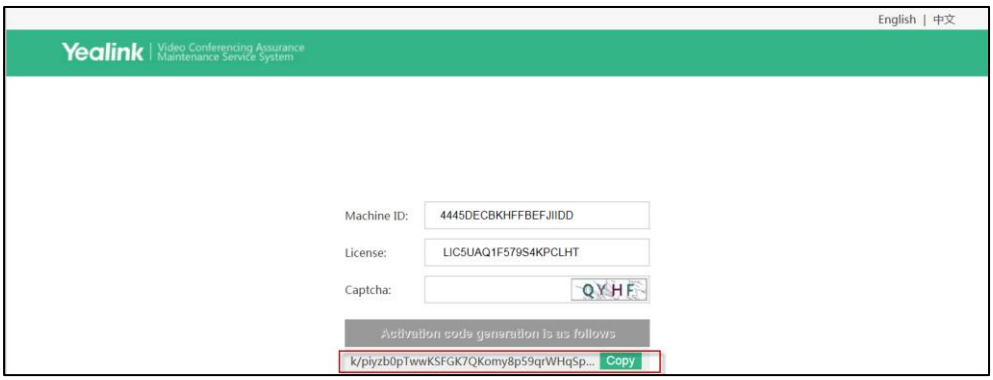
To activate the Yealink VC Desktop in login interface:

1. Click **Offline activation**.
2. Click **Copy** to copy your machine ID, Yealink VC Desktop prompts you that you have copied the machine ID successfully.
3. Log in at http://License.yealink.com/VCD to obtain activation code for your Yealink VC Desktop.

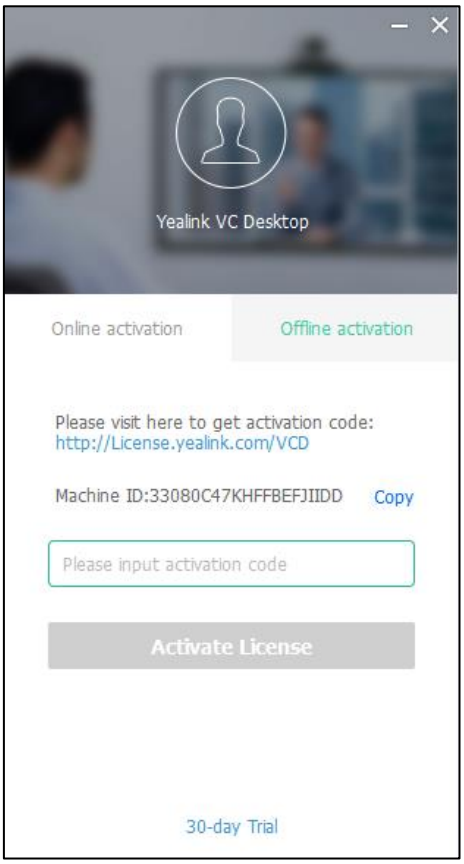
4. Paste the machine ID which you've copied in step 2, and then enter the license number, captcha in the corresponding filed.



5. Click **Generate activation code**.
6. Click **Copy** to copy your activation code.



7. Paste the activation code of your Yealink VC Desktop in the corresponding filed.

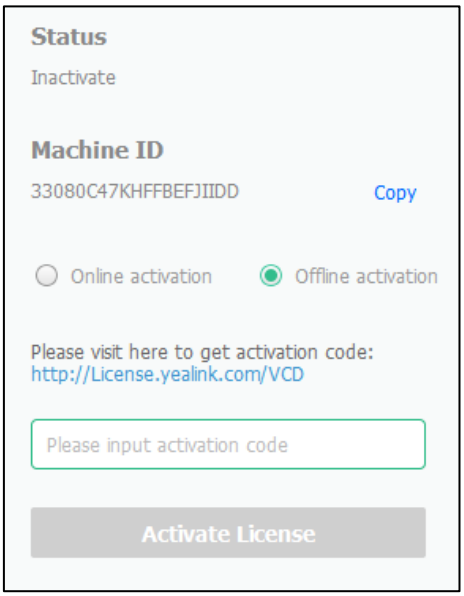


8. Click **Activate License**.

To activate the Yealink VC Desktop in settings menu:

1. Click -> **License**.

   The current software activation state and machine ID are shown as below:



2. Mark the radio box of **Offline activation**
3. Refer to the steps 2 to 8 introduced in the login interface to continue the offline activation.

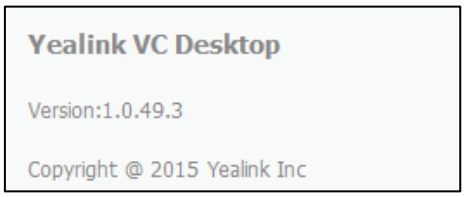
About

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

Do the following:

1. Click -> **About**.

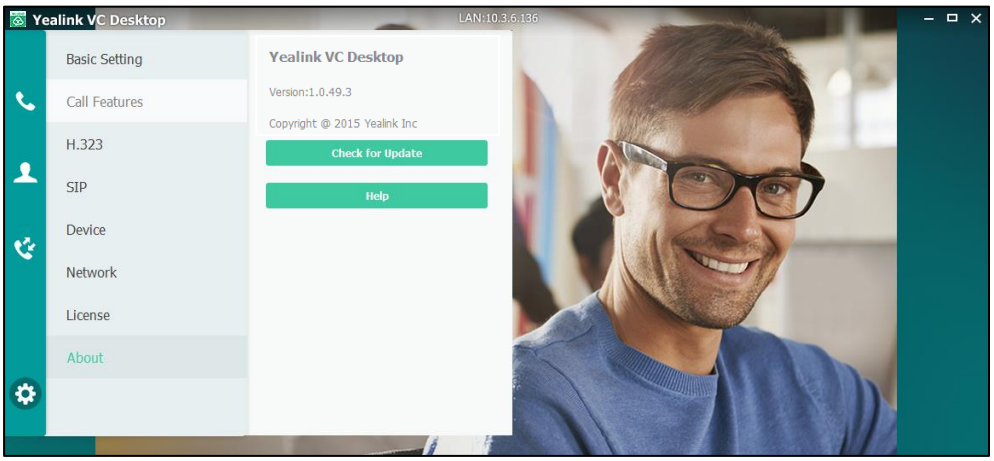
   You can view the current the Yealink VC Desktop version number and copyright information.



   You can do one of the following:

   - Click **Check for Update**.

     The Yealink VC Desktop will detect the new software version and prompt you whether you want to update to the latest software.



     For more information, please refer to Updating Yealink VC Desktop on page 19.

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

User Interface Overview

Main Window

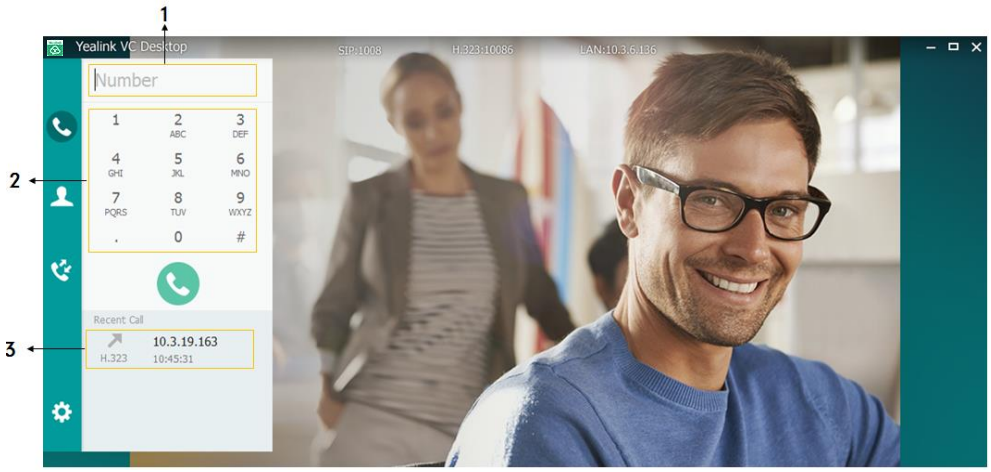
The main window appears when Yealink VC Desktop launches. From the main window, you can place a call, manage contacts, view history and change settings.

No.	Name	Description
1	Site name	Displays the site name of Yealink VC Desktop. For more information on how to change the site name, refer to Site Name on page 49.
2	Registered account	Displays the registered accounts of Yealink VC Desktop.
3	IP Address	Displays the IP address of your computer.
4	Window control area	Provides the control of the main window. You can minimize the window, maximize the window, restore the window and close the window.
5	Video image	Provides near-site video.
6	Dial	Places a call by dialing.
7	Local directory	Manages the local directory. For more information on how to manage the local directory, refer to Local Directory on page 52.
8	Call history	Contains call history lists of incoming, outgoing and missed calls. For more information on how to manage the call history, refer to Call History Management on page 56.
9	Settings	Provide the basic settings and advanced settings. For more information, refer to Basic Settings on

No.	Name	Description
		page 49 and Network on page 26.

Dial Window

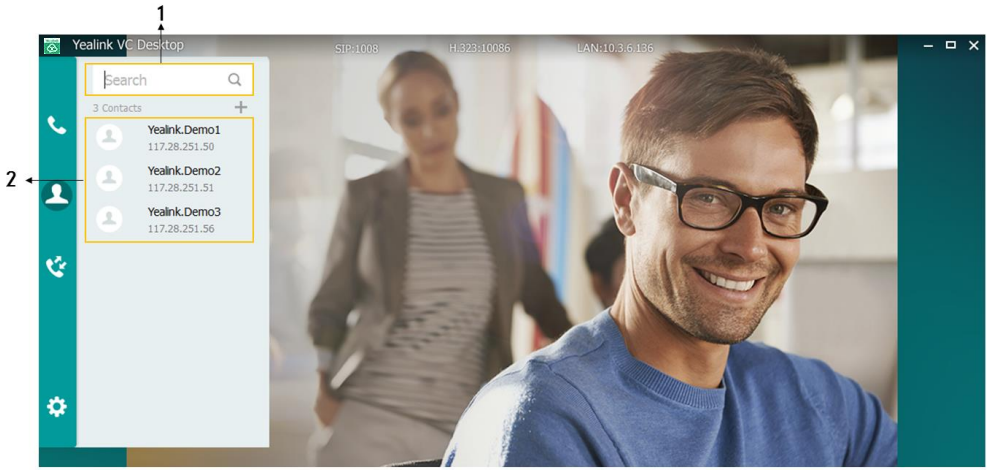
Click to enter the dial window. Dial window is in unfolded status by default.



No.	Name	Description
1	Input box/Search box	Displays the calling information you entered.
2	Keypad	Provides numbers, "#" and ".".
3	Recent calls/Search results	Displays the recent calls or the search results. When you don't enter any character in the search box, the recent calls are displayed. As soon as you start entering in the search box, a search is performed in the contacts and history lists, the search results are displayed.

Directory Window

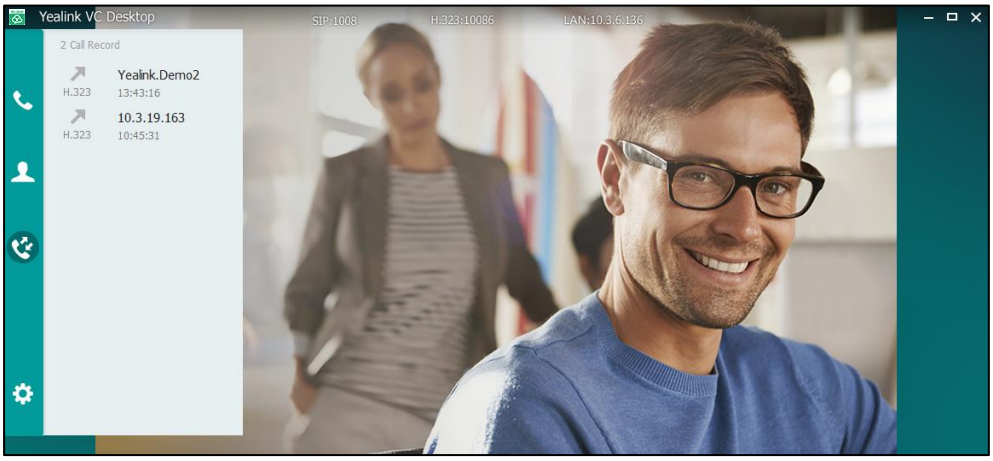
Click to enter the directory window. Use this local directory to place a call. Customize the directory by adding, editing, deleting contacts or searching for contacts.



No.	Name	Description
1	Search box	Displays the searching information you entered.
2	Local contact list/Search results	Displays the list of contacts or the search results. As soon as you start entering in the search box, a search is performed in the contacts list.

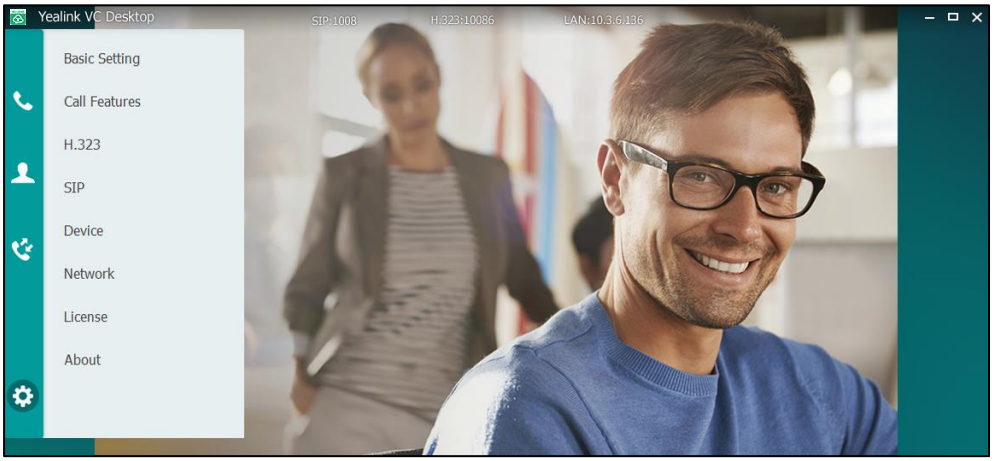
History Window

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.

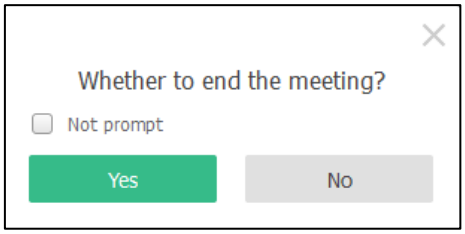


Call Window

The call window is the main work area during calls. You can use the call window to perform operations on currently active 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 call, shown as below:



2. Click **Yes** to end the call. The call window is closed and Yealink VC Desktop application is hidden in the system tray.
   Click **No** to continue the call. The call window will be zoomed out and displayed in the bottom-right of the computer and will bring to front.
   You can check the **Not prompt** checkbox to turn off the prompt. This setting takes effect immediately.

To minimize the call window during a call:

1. Click .
   The far-site video image will be zoomed out and displayed in the bottom-right of the computer and will bring to front.

2. Do one of the following to restore the call window:
   - Double-click the any area of small window to restore call window.
   - Click in the top-right of the call window.

Video Call Window

If the far site supports video, Yealink VC Desktop enters the video call window.

No.	Name	Description
1	Far-site name	Displays the site name of the far site.
2	Call duration	Displays the duration time of the current call.
3	Video image	Provides near-site video by default.
4	Window control area	Provides the control of the call window. You can minimize the window, maximize the window, restore the window and close the window.
5	In-call toolbar	Provides the basic operations on currently active calls. For more information on the icons, refer to Icon Instruction on page vi.
6	Video image	Provides far-site video by default.
7	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 66.

Note The layout list might vary, depending on whether the near or far site initiates presentation.

Adaptive Audio Call Window

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

No.	Name	Description
1	Far-site name	Displays the site name of the far site.
2	Window control area	Provides the control of windows. You can minimize the window, maximize the window, restore the window and close the window.
3	Call duration	Displays the duration time of the current call.
4	In-call toolbar	Provides the basic operations on currently active calls. The icons in gray means the audio call does not support to initiate presentation, turn off video and change the video layout. For more information on the icons, refer to Icon Instruction on page vi.
5	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 66.

Updating Yealink VC Desktop

You can update the software on your computer when a new software version is

available. When new software is available, a notification is displayed on your computer, and you have the option to update your software or ignore the notification.

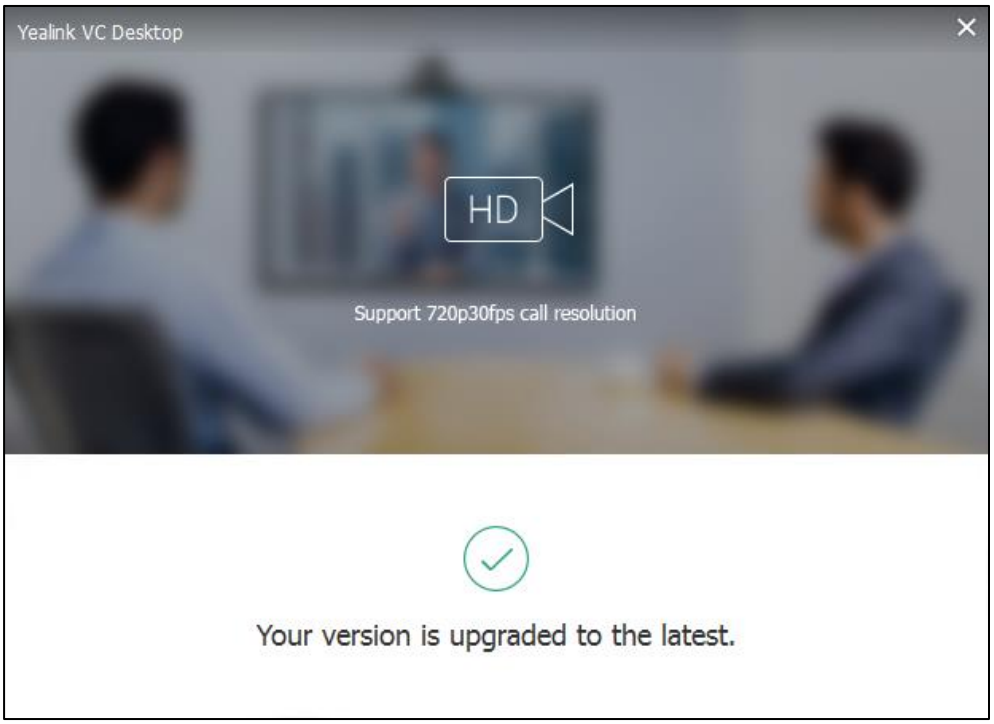
You can do one of the following:

- One-click Update
- Installation Package Update

One-click Update

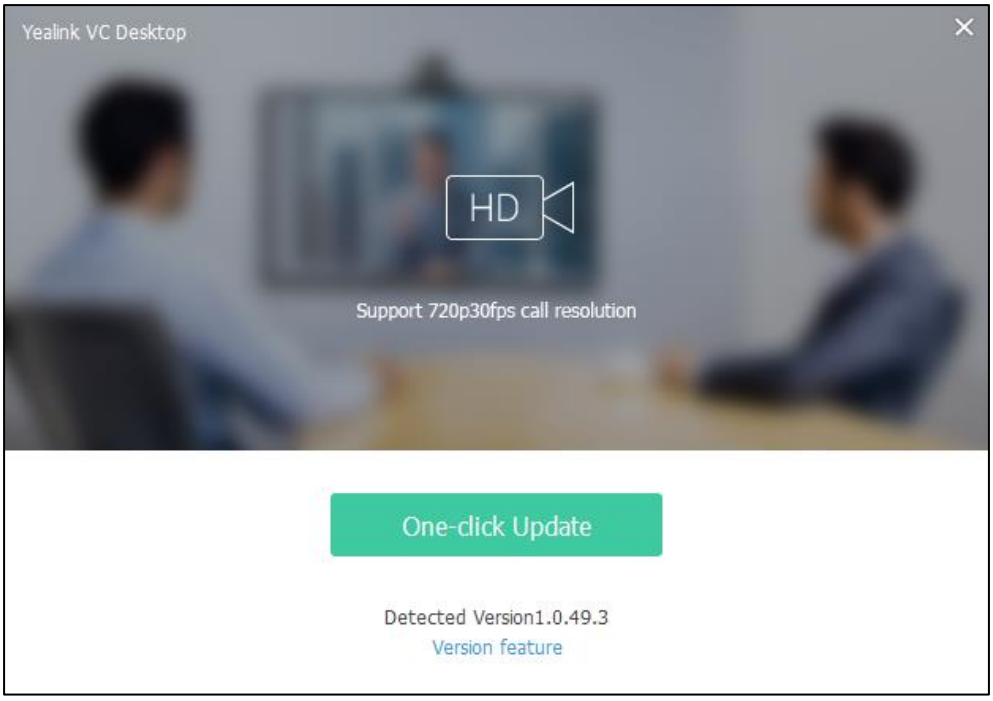
To update the Yealink VC Desktop using one-click update:

1. Click ->**About**->**Check for Update**.
   - If the current version is the latest, you do not need to update.

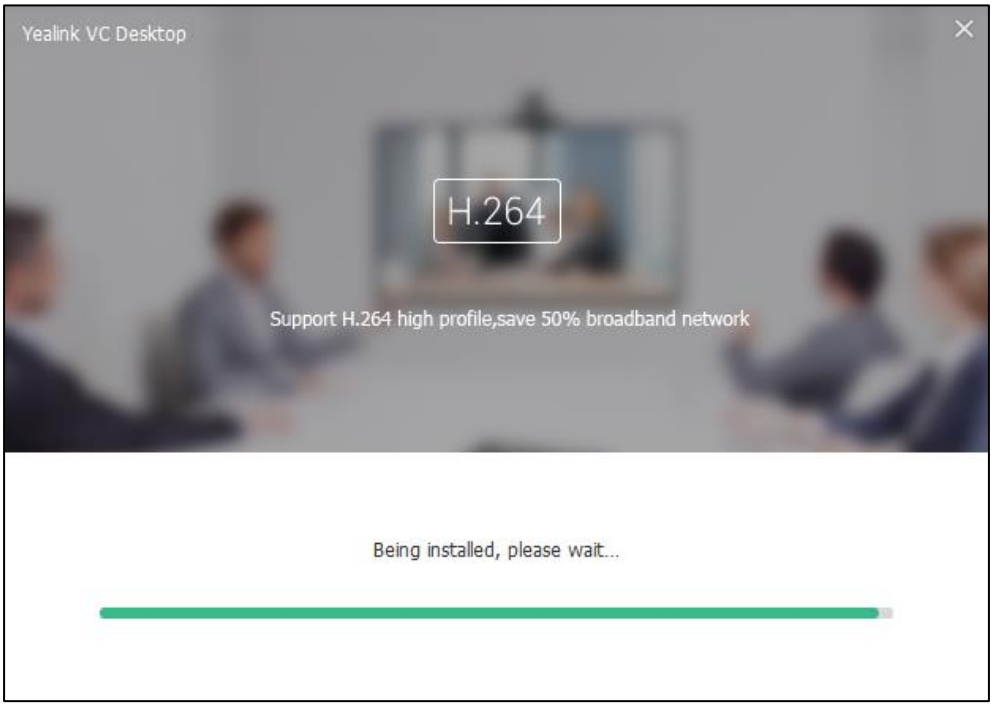


   - If a new software version is detected:

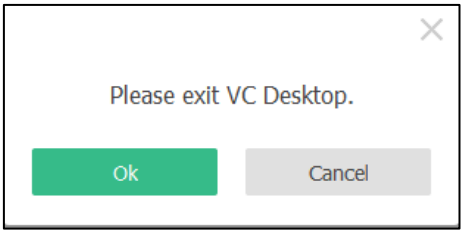
Click **One-click Update**.



A dialog box pops up to show the Yealink VC Desktop update's progress, shown as below:

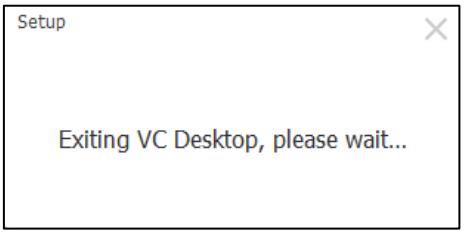


A dialog box pops up to prompt that you need to exit the Yealink VC Desktop, shown as below:



Click **OK** to continue updating. You can also click **Cancel** to stop upgrading.

The Yealink VC Desktop Setup dialog box will prompt:



After a few seconds, you can enter the new version interface.

If the Yealink VC Desktop fails to update, fail reason will be displayed in the dialog box. For information about the fail reason, please refer to General Issues on page 74.

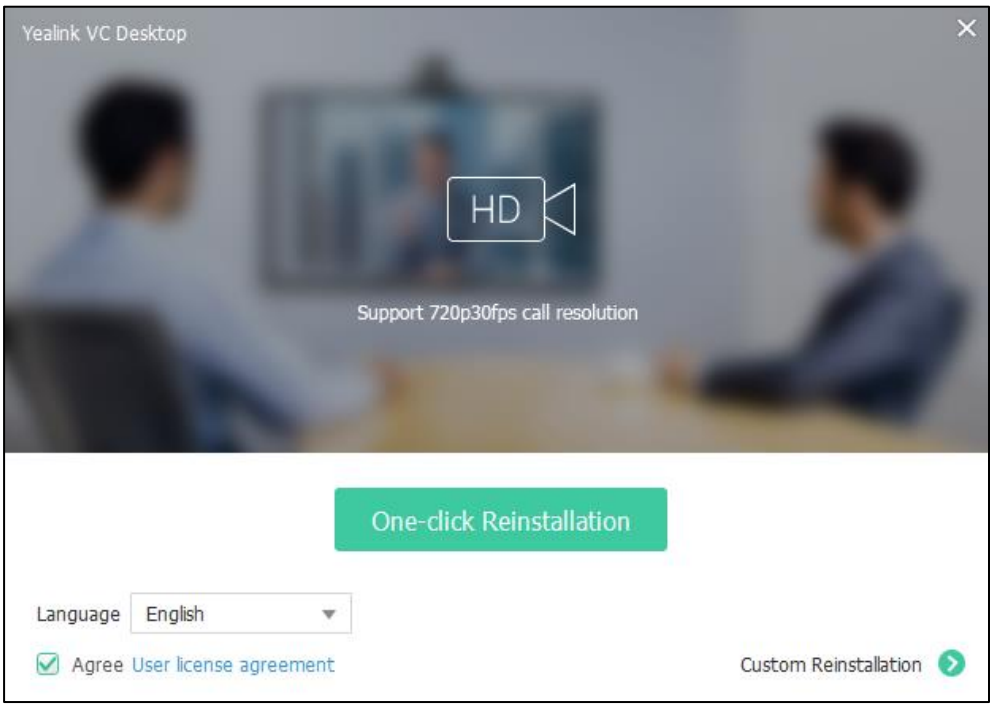
Installation Package Update

When you update the Yealink VC Desktop by using the installation package, the software will identify whether the software has already been installed on your computer.

To update the Yealink VC Desktop using installation package update:

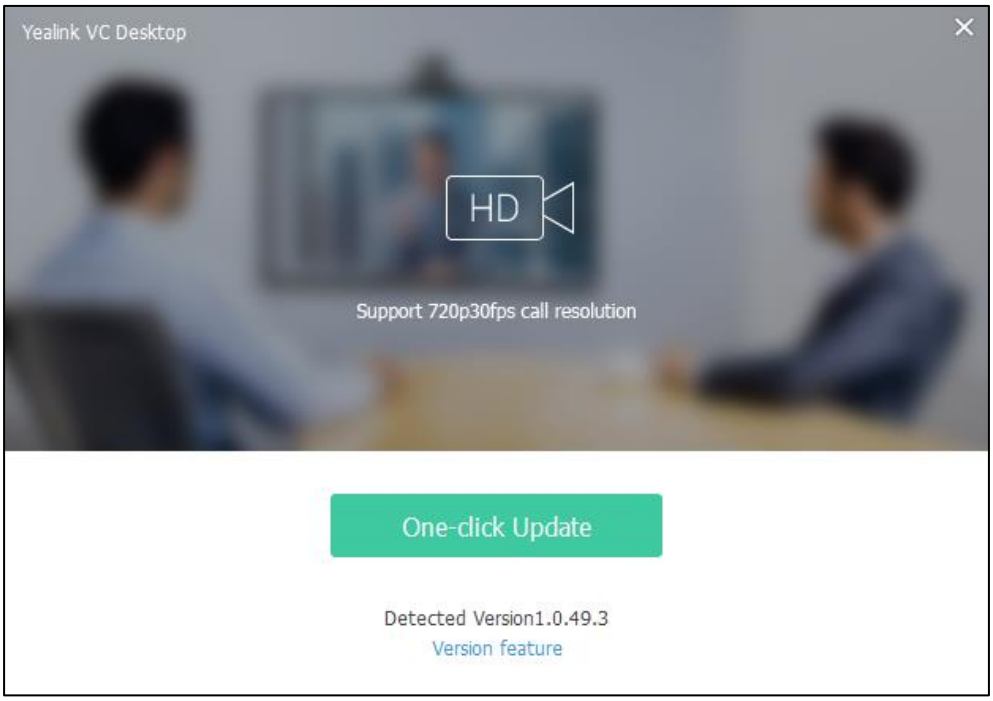
1. Double-click Yealink VC Desktop application.
2. Do one of the following:
   - When the installation package version is the same as the one installed on the computer:

If the Yealink VC Desktop needed to repair, you can click **One-click Reinstallation** and follow the installation steps.



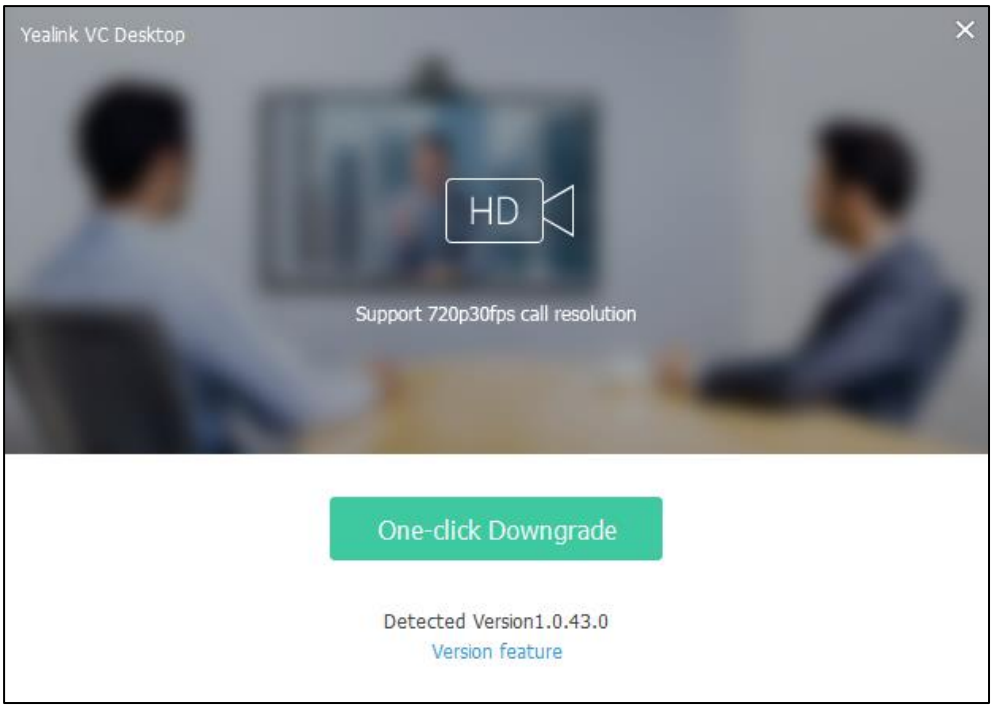
- When the installation package version is higher than the one installed on the computer:

  Click **One-click Update** and follow the update steps.



- When the installation package version is lower than the one installed on the computer:

Click **One-click Downgrade** and follow the downgrade steps.



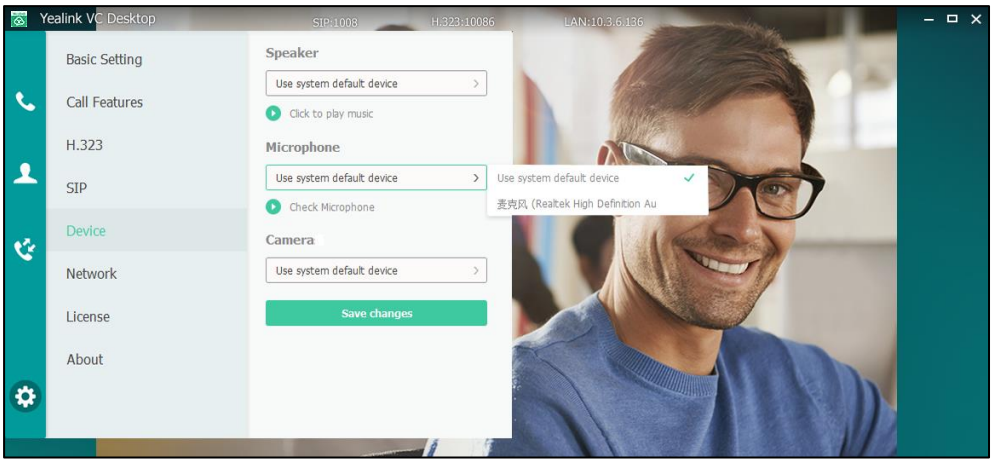
Audio and Video Device

If you do not install new audio or video device, the Yealink VC Desktop will select a system default device for audio or video capture. If you install new audio or video device, you can select the audio or video device manually.

Audio device selection:

To configure audio input device via the Yealink VC Desktop:

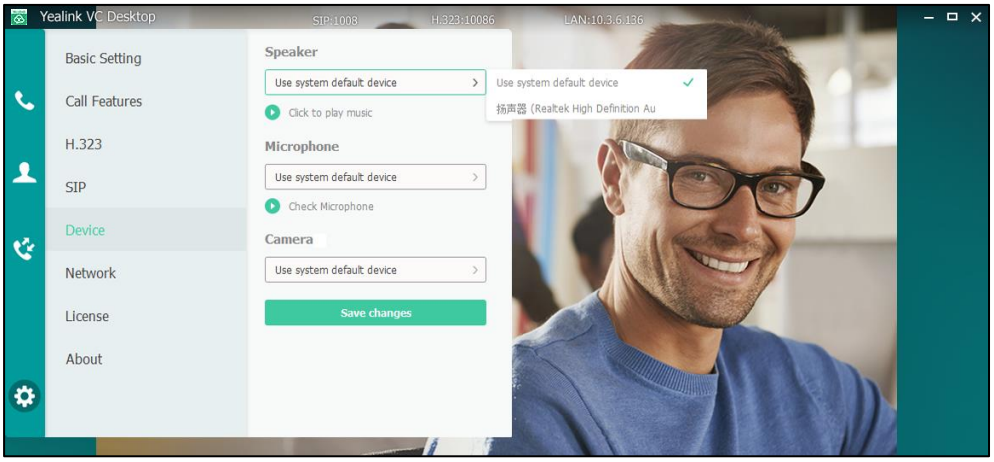
1. Click **->Device.**
2. Select the microphone from a list of installed microphones.
3. Click to test the input volume.



4. Click **Save changes**.

To configure audio output device via the Yealink VC Desktop:

1. Click **->Device.**
2. Select the speaker from a list of installed speakers.
3. Click to test the output volume.

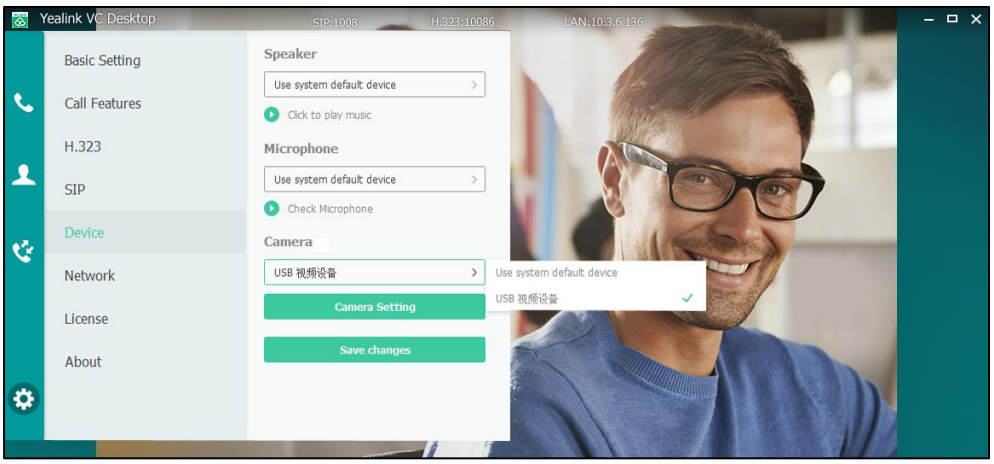


4. Click **Save changes**.

Video device selection:

To configure video device via the Yealink VC Desktop:

1. Click **->Device.**
2. Select the camera from a list of installed cameras.
3. Click **Camera Setting** to configure camera settings.



4. Click **Save changes**.

Note Camera settings are provided by the device driver and depend on the manufacturer, model, and driver version. Some devices might not retain their settings after a system reboot. Refer to the documentation included with your device for more information.

If the Yealink VC Desktop does not have available devices or has plugged a bad device, the user interface prompts the error.

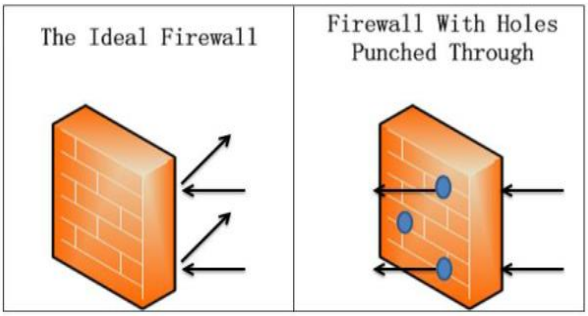
Click the links in blue to enter the settings window directly. And then the error prompt will disappear.

For more information on the error, please refer to Camera Issues on page 75 and Video & Audio Issues on page 75.

Network

Configuring Yealink VC Desktop for use with a Firewall or NAT

A firewall protects an 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 through the reserved ports. Users placing calls through a firewall to the Yealink VC Desktop 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

Description	Port Range	Port Type
SIP (when selecting the TLS transport protocol)	5061	TCP
Reserved ports of the Yealink VC Desktop. For more information, refer to Reserved Ports on page 27.	50000-50499 (default range)	TCP/UDP

Reserved Ports

By default, the Yealink VC Desktop communicates through TCP and UDP ports in the 50000 - 54999 range for video, voice and presentations. The Yealink VC Desktop uses only a small number of these ports during a call. The exact number depends on the number of participants in the call, the protocol used, and the number of ports required for the type of call: video or voice.

The following tables identify the number of ports required per connection by protocol and the type of call.

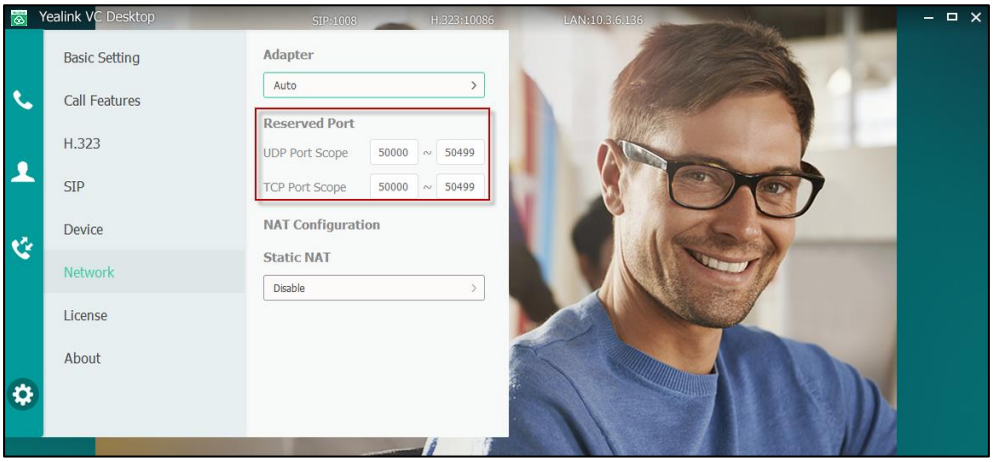
Parameters for reserved ports on the Yealink VC Desktop are described below:

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:

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.



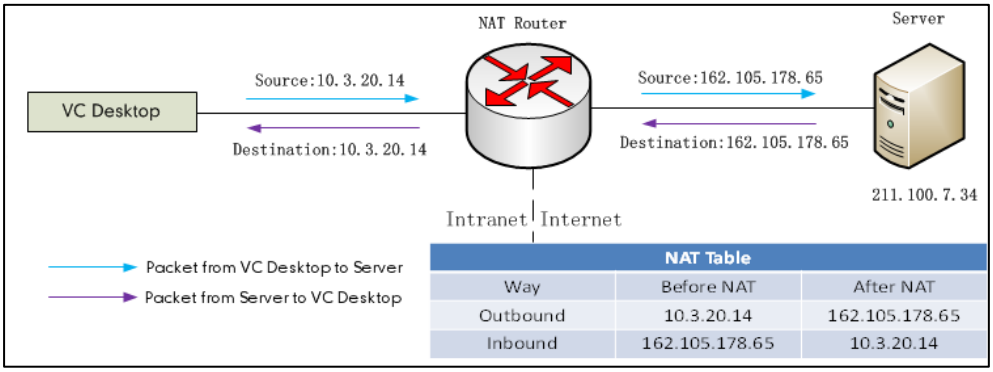
4. Click **Save changes.**

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

Network Address Translation

NAT device usually connects two networks together, and translates the private (not globally unique) addresses in the internal network into legal addresses. NAT can be configured to advertise only one address for the entire network to the outside world. This provides additional security by effectively hiding the entire internal network behind that address.

Multiple solutions for NAT traversal are available, for example, simple traversal of UDP through NAT (STUN), ICE (Interactive Connectivity Establishment), TURN (Traversal Using Relay around NAT) and H.460 firewall traversal.



Static NAT

Network Address Translation (NAT) network environments use private internal IP addresses for devices within the network, while using one external IP address to allow devices on the LAN to communicate with other devices outside the LAN. If the Yealink VC Desktop is connected to a LAN that uses a NAT, you need to configure NAT Public (WAN) Address so that the Yealink VC Desktop can communicate outside the LAN.

Note If H.460 Firewall Traversal is enabled on the Yealink VC Desktop, H.323 calls will automatically ignore the static NAT settings. For more information on H.460 Firewall Traversal, refer to H.460 Firewall Traversal on page 34.

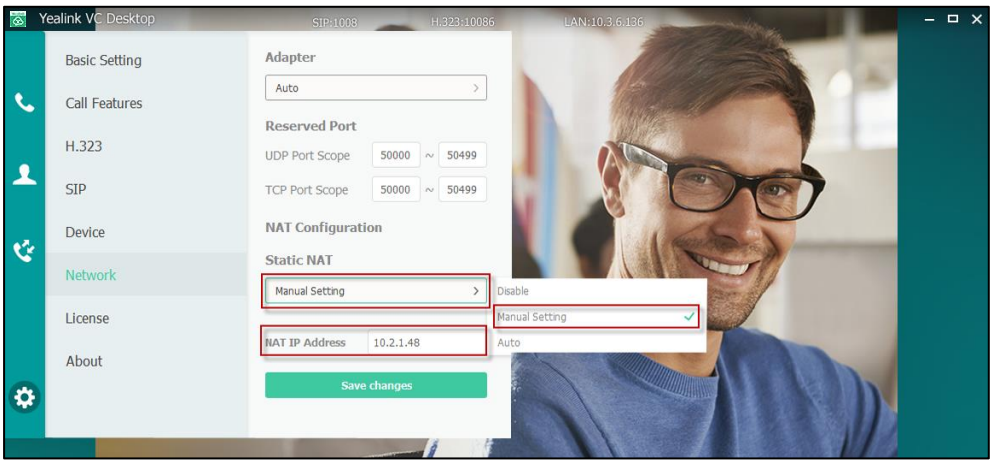
NAT feature parameters on the Yealink VC Desktop are described below:

Parameter	Description
Static NAT	Specifies whether Yealink VC Desktop should determine the NAT public address automatically. • **Disable**—the Yealink VC Desktop does not use the NAT feature. • **Manual Setting**—the Yealink VC Desktop uses the manually configured NAT public address. • **Auto**—the Yealink VC Desktop obtains the NAT public address from the specified Yealink server. **Default:** Disable
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 if the static NAT is set to **Manual Setting**.
NAT Type	Configures the NAT traversal type. • **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:

1. Click ->**Network**.

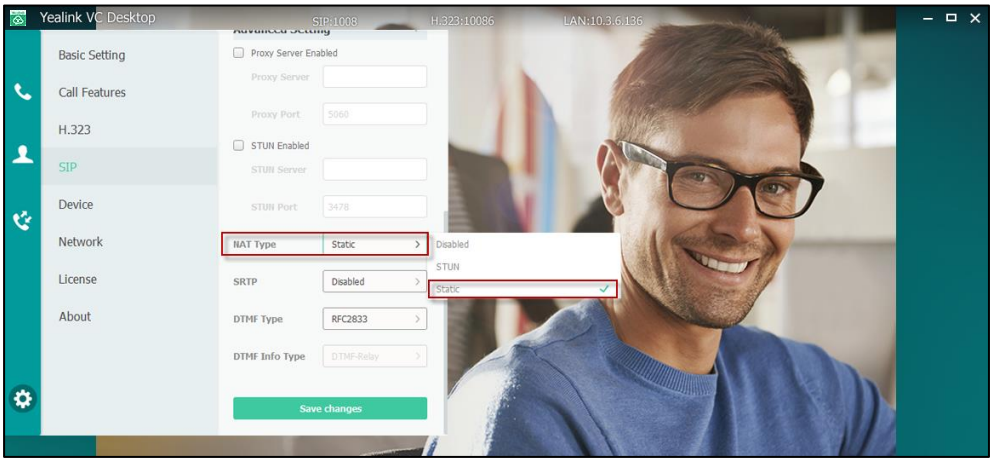
2. Select the desired value from the pull-down list of **Static NAT**.
3. Configure the NAT public address in the **NAT IP Address** field if **Manual Setting** is selected from the pull-down list of **Static NAT**.



4. Click **Save changes**.

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

1. Click ->**SIP**->**Advanced Setting**.
2. Select **Static** from the pull-down list of **NAT Type**.

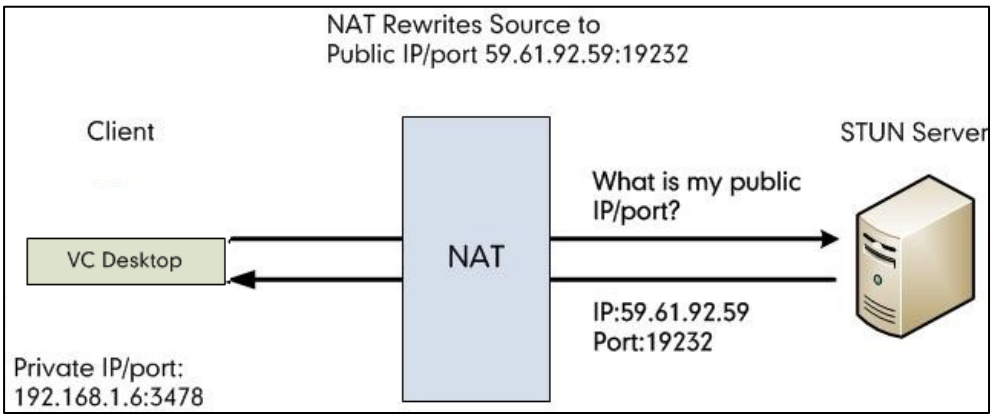


3. Click **Save changes**.

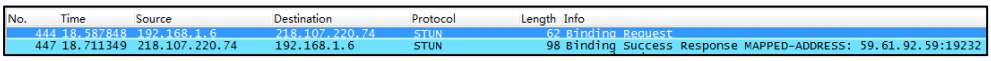
STUN

STUN 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 32.) 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

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 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.

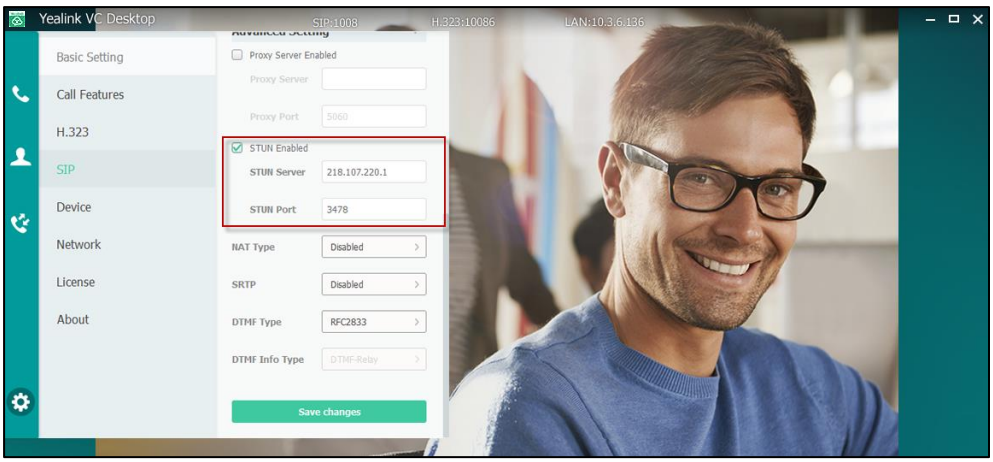


STUN feature parameters on the Yealink VC Desktop are described below:

Parameter	Description
STUN Enabled	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
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:

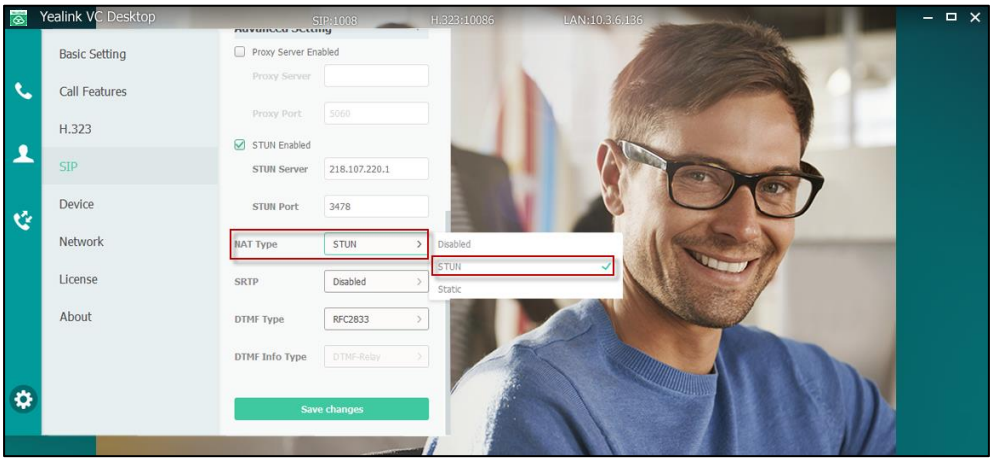
1. Click -> **SIP**-> **Advanced Setting**.
2. Check **STUN Enabled** checkbox.
3. Enter the IP address or the domain name of the STUN server in the **STUN Server** field.



4. Enter the port of the STUN server in the **STUN Port** field.
5. Click **Save changes**.

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

1. Click -> **SIP**-> **Advanced Setting**.
2. Select **STUN** from the pull-down list of **NAT Type**.



3. Click **Save changes**.

NAT Types

Full Cone:

A full cone NAT is 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 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. Specifically, 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 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) uses STUN, TURN and other methods to solve the NAT traversal issue. ICE allows Yealink VC Desktop to discover other peers and then establish a connection. ICE essentially incorporates all of the methods proposed for NAT traversal of SIP that do not rely on the firewall or NAT device. ICE is a complex solution to the problem of NAT traversal, but since it encompasses multiple solutions it is regarded as one that will always enable the connection, regardless of the number of NATs involved.

On the one hand, ICE has an advantage that the client does not need to judge the NAT types. On the other hand, STUN and TURN are totally dependent on an additional server. However, ICE use server to allocate unilateral address at the same time and also allows to be connected with the client directly. So either of the STUN server and the TURN server have failed, ICE can continue the call process. In addition, the most serious disadvantage of the traditional STUN is that it does not guarantee the normal work of a network topology, the most typical problem is symmetric NAT (for more information on the NAT types, refer to NAT Types on page 32). For TURN protocol, due to the burden of server is overweight, packet loss or delay is easy to happen. ICE provides a solution of load balances, it will turn the transmitted service to the lowest priority service. So it can ensure the reliability and flexibility of service. ICE is not configurable on the Yealink VC Desktop.

TURN

TURN (Traversal Using Relay around NAT) is the relay extensions to session traversal utilities for NAT. To put it simply, the similarities of TURN and STUN are that they both achieve NAT traversal by changing the private network address in the application layer. And the differences of them are that TURN achieves NAT traversal by the relay.

If a host is located in the back of the NAT, it may not be point-to-point connected with the other host directly. In this case, it needs to use the middle node to provide services. TURN protocol is used to allow the host to control the operation of the relay and use relay to exchange data with the terminal. The differences between TURN and other relays are that it can allow a client to be connected with multiple terminals by using a relay address. TURN is not configurable on the Yealink VC Desktop.

H.460 Firewall Traversal

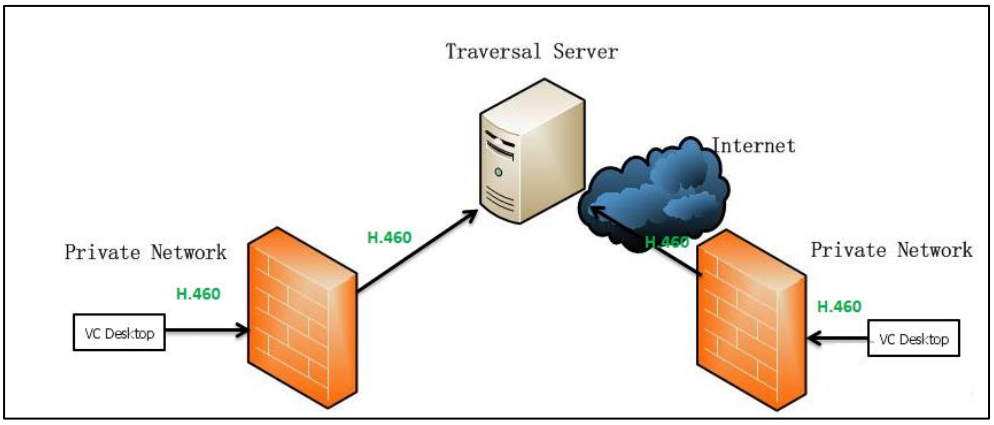
H. 323 includes signal based on TCP, while the STUN solution cannot realize the NAT traversal of TCP. Before the emergence of H.460, Enterprises have their own firewall/NAT traversal solutions, which are incompatible with each other. Therefore, IP communication between enterprises is difficult. H.460 resolves the compatibility problem.

H.460 enables H.323 signaling and media to traverse firewall. H.460 is a set of extensions to the ITU H.323 standard that include methods to traverse firewalls. Devices that use H.460, implement a set of security policies that a firewall is configurable to accept. Therefore using H.460, the Yealink VC Desktop can communicate across a firewall. You can configure the Yealink VC Desktop to use standard-based H.460.18 and H.460.19 firewall traversal, which allows the Yealink VC Desktop establish IP connections across firewalls more easily.

The H.460.18 deals with signaling. The H.460.18 solution perpetually hunts in order to open pinholes from the internal network to the external one. Without using the H.460.18 solution, which permits the gatekeeper to open a connection, the external device could not communicate with internal device, because the firewall would obstruct its attempt to setup a call. H.460.19 extends H.323 by defining the NAT/firewall mechanism for media. In addition, H.460.19 provides a solution for opening RTP and RTCP pinholes and a method for maintaining them using a keep-alive mechanism.

To use H.460, you need to deploy a Traversal Server (TS) at public network.

The following illustration shows how a H.460 traversal server works between two enterprise locations.

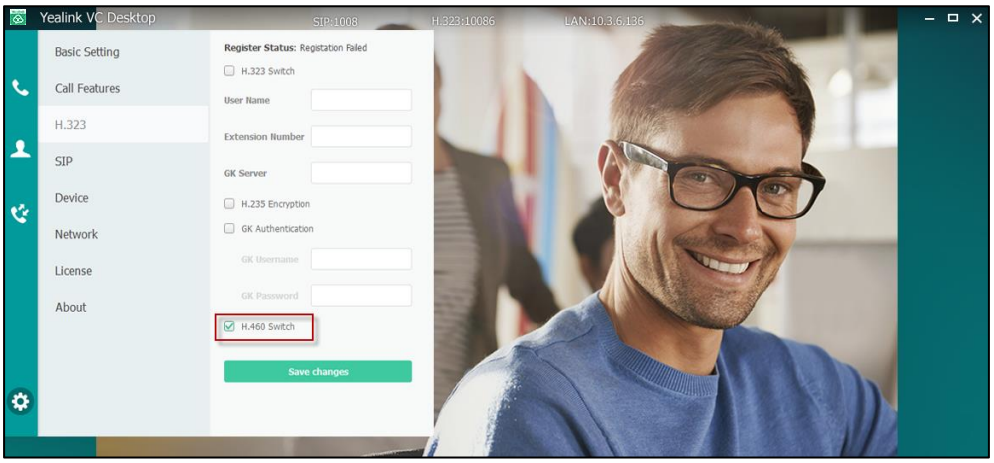


The H.460 firewall traversal parameter is described below:

Parameter	Description
H.460 Switch	Enables or disables H.460 firewall traversal feature on the Yealink VC Desktop. **Default:** Disabled

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

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



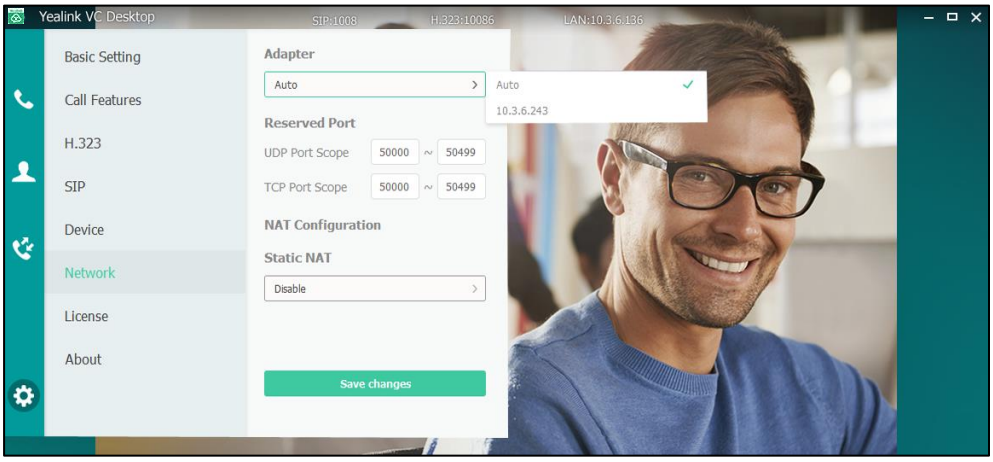
3. Click **Save changes**.

Adapter

If your network features more than one adapter, you can choose the IP address that Yealink VC Desktop uses. Leave this value set to **Auto** unless Yealink VC Desktop auto detection is not working or you want to specify a different IP address.

To select the adapter via the Yealink VC Desktop:

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



3. Click **Save changes**.

Account Registration

Configuring H.323 Settings

Yealink VC Desktop supports H.323 protocol. If your network uses a gatekeeper, you can register an H.323 account for the Yealink VC Desktop, and specify its H.323 name and extension. This allows others to call the Yealink VC Desktop by entering the H.323 name or extension instead of the IP address.

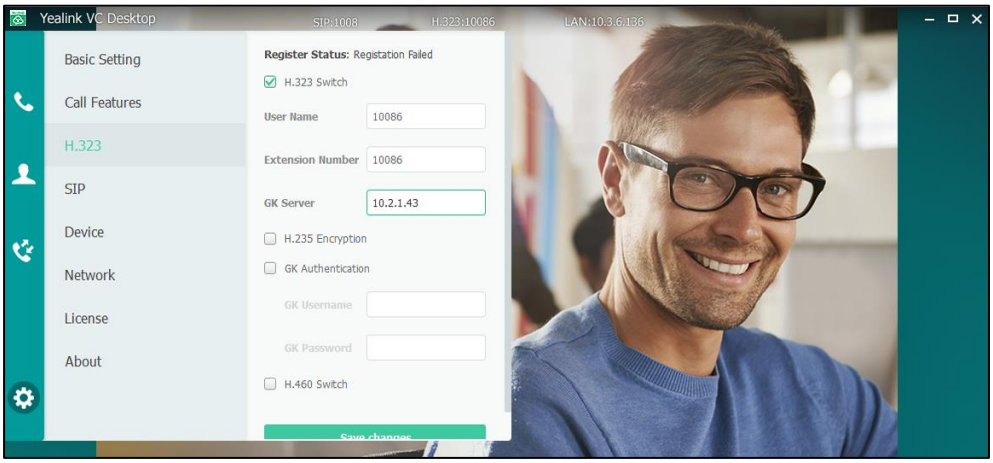
H.323 settings parameters on the Yealink VC Desktop are described below:

Parameter	Description
H.323 Switch	Enables or disables the H.323 account. **Note:** Check H.323 checkbox. If it is set to disabled, the Yealink VC Desktop cannot place or receive calls with the H.323 protocol.
User Name	Specifies the name that gatekeepers and gateways use to identify this Yealink VC Desktop. You can make point-to-point calls using H.323 names if both Yealink VC Desktop are registered to a gatekeeper. **Default**: Blank
Extension Number	Specifies the extension that gatekeepers and gateways use to identify this Yealink VC Desktop.

Parameter	Description
	Default: Blank **Note:** Users can place point-to-point calls using the extension if both Yealink VC Desktop are registered with a gatekeeper,
GK Server	Configures the IP address of the primary gatekeeper.
H.235 Encryption	Specifies the H.235 type for the H.323 account. **Note:** Check H.235 checkbox, the Yealink VC Desktop negotiates with the far site whether to use H.235 for media encryption in H.323 calls. If it is not checked, the Yealink VC Desktop does not use H.235 in H.235 calls.
GK Authentication	Enables or disables support for gatekeeper authentication. **Default:** Disabled **Note:** When Gatekeeper Authentication is enabled, the gatekeeper ensures that only trusted Yealink VC Desktop 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 Switch	Enables or disables H.460 firewall traversal feature on the Yealink VC Desktop. **Default:** Disabled

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

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



3. Click **Save changes**.

   After successfully registration, the H.323 name is displayed in the status bar.

Configuring SIP Settings

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

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

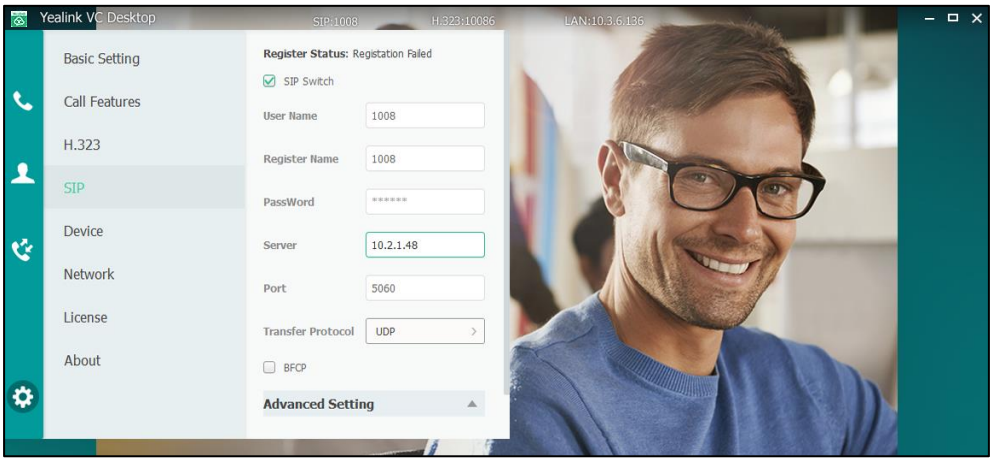
SIP account parameters on the Yealink VC Desktop are described below:

Parameter	Description
SIP Switch	Enables or disables the SIP account. **Default:** Enabled **Note**: Check **SIP Switch** checkbox. If it is set to disabled, the Yealink VC Desktop cannot place or receive calls with the SIP protocol.
User Name	Specifies the user name to use for authentication when registering with a SIP server. **Default**: Blank
Register Name	Configures the user name of the SIP account for register authentication. **Default**: Blank
Password	Specifies the password associated with the user name used to authenticate the Yealink VC Desktop to the SIP server. **Default**: Blank
Server	Configures the IP address or domain name of the SIP server for the SIP account. **Default**: Blank
Port	Configures the port for the SIP account. **Default:** 5060 **Note**: Integer from 1 to 65535.
Proxy Server Enabled	Enables or disables the proxy server. **Default:** Disabled
Proxy Server	Configures the IP address or domain name of the proxy server for the SIP account. **Valid values:** Integer from 1 to 65535. **Default:** it is configurable only when the Proxy Server is

Parameter	Description
	enabled.
Proxy Port	Configures the port for the proxy server port. **Default:** 5060 **Note**: Integer from 1 to 65535.
Transfer Protocol	Configures the type of transport protocol for the SIP account. • **UDP**—provides best-effort transport for SIP signaling. • **TCP**—provides reliable transport for SIP signaling. • **TLS**—provides encrypted transport of SIP signaling. • **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 is registered with a SIP server that supports TLS.

To configure SIP account via the Yealink VC Desktop:

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



3. Click **Save changes**.

   After successfully registration, the SIP name is displayed in the status bar.

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 Yealink VC Desktop to the network, which is generated when clicking the keypad during a call. Each key clicked on the Yealink VC Desktop

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. Clicking 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	1447 Hz	1633 Hz
697 Hz	1	2	3	A
770 Hz	4	5	6	B
852 Hz	7	8	9	C
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 for. The payload type for RTP Event packets is configurable. The Yealink VC Desktop default to 101 for the payload type, which use the definition to negotiate with the other end during call establishment.

The RTP Event packet contains 4 bytes. The 4 bytes 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 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. The SIP INFO message can transmit DTMF digits in three ways: DTMF, DTMF-Relay and Telephone-Event.

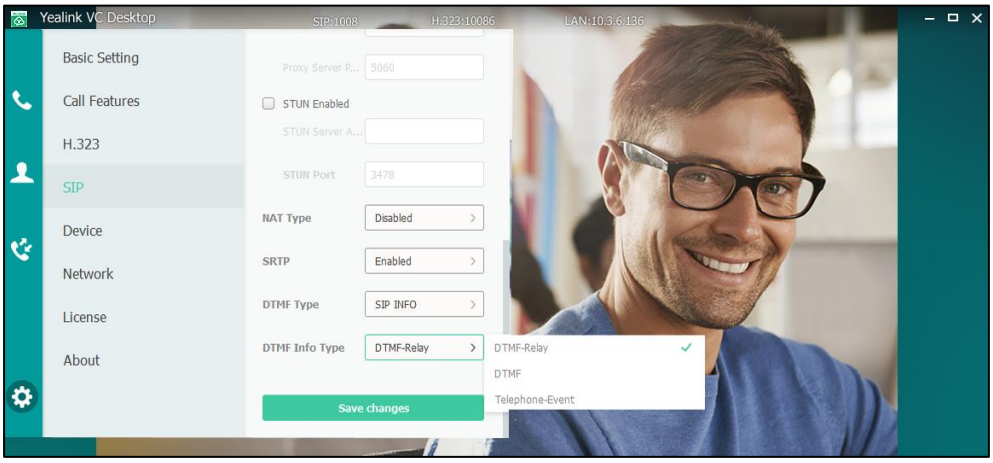
DTMF parameters on the Yealink VC Desktop are described below:

Parameter	Description
DTMF Type	Configures the DTMF type. • **INBAND**—DTMF digits are transmitted in the voice band. • **RFC2833**—DTMF digits are transmitted by RTP Events compliant 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. • **DTMF-Relay** • **DTMF** • **Telephone-Event** **Default:** DTMT-Relay

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

1. Click -> **SIP** -> **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. Click **Save changes**.

Dual-Stream Protocol

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

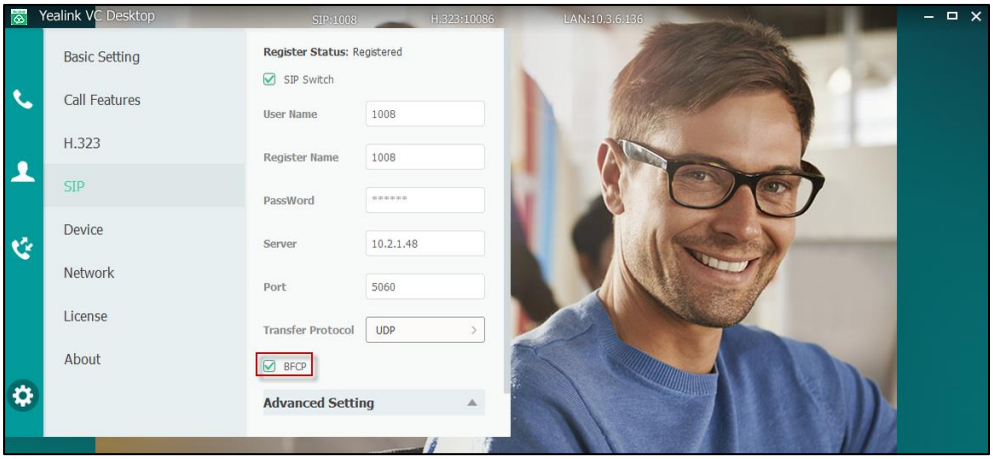
The Yealink VC Desktop supports the standard H.239 protocol and BFCP (Binary Floor Control Protocol). H.239 protocol is used when sharing content with the far site in H.323 calls. H.239 protocol is not configurable. BFCP protocol is used when sharing content with the far site in SIP calls. Before enabling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

BFCP parameters on the Yealink VC Desktop are described below.

Parameter	Description
BFCP	Enables or disables the BFCP protocol for sharing content in SIP calls. **Default:** Disabled

To configure BFCP via the Yealink VC Desktop:

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



3. Click **Save changes**.

Transport Layer Security

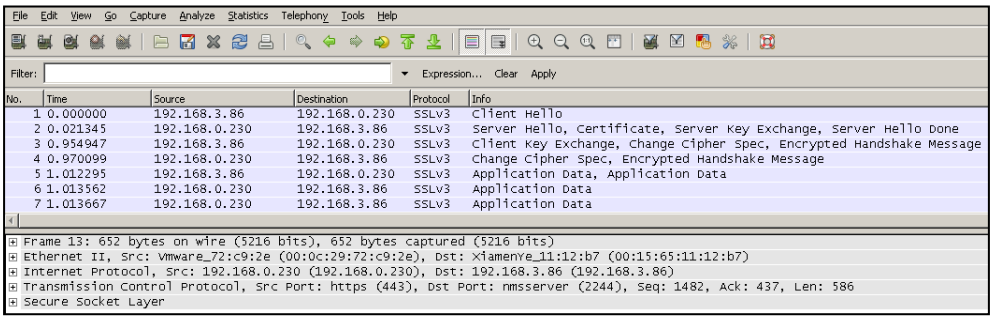
TLS is a commonly-used protocol for providing communications privacy and managing the security of message transmission, allowing the Yealink VC Desktop to communicate with other remote parties and connect to the HTTPS URL for provisioning in a way that is designed to prevent eavesdropping and tampering.

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. The TLS Handshake Protocol allows the server and client to authenticate each other and negotiate an encryption algorithm and cryptographic keys before data is exchanged.

Yealink VC Desktop 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 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 and TLS server to establish an encrypted communication channel:



Step1: The Yealink VC Desktop 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 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 it will send.

The Yealink VC Desktop 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

During a confidential call, 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. Only the receiver knows the key to restore the data. To use SRTP encryption for SIP calls, the participants in the call must enable SRTP simultaneously. When this feature is enabled on both devices, the encryption algorithm utilized for the session is negotiated between the Yealink VC Desktop and far-site device. This negotiation process is compliant with RFC 4568.

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

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

```
m=audio 11780 RTP/SAVP 0 8 18 9 101
a=crypto:1 AES_CM_128_HMAC_SHA1_80
inline:NzFINTUwZDk2OGVlOTc3YzNkYTkwZWVkMTM1YWFj
```

```
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 on the Yealink VC Desktop is described below:

Parameter	Description
SRTP	Specifies the SRTP type. • **Disabled**—do not use SRTP in SIP calls. • **Enabled**—negotiate with the far site whether to use SRTP for media encryption in SIP calls. • **Limit**—compulsively use SRTP for media encryption in SIP calls. **Default:** Disabled

Rules of SRTP for media encryption in SIP calls:

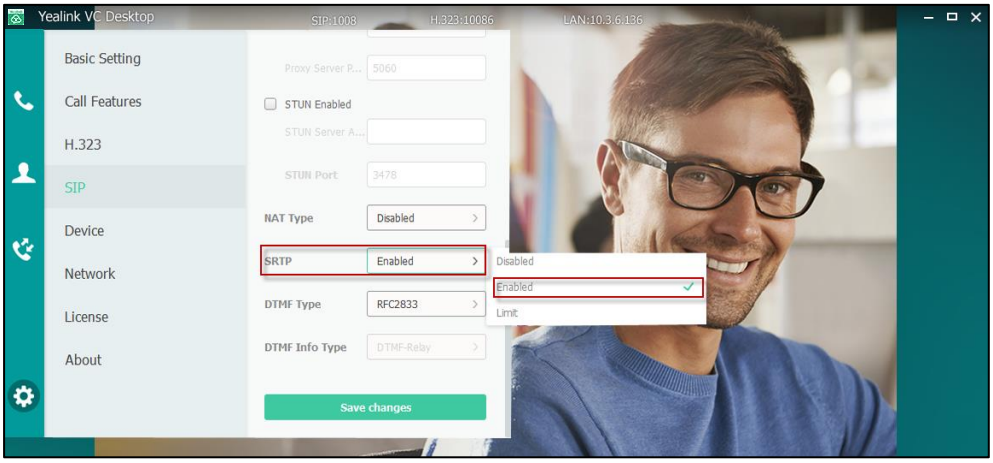
Far / Near	Limit	Enabled	Disabled
Limit	SRTP Call	SRTP Call	Fail to establish call
Enabled	SRTP Call	SRTP Call	RTP Call
Disabled	Fail to establish call	RTP Call	RTP Call

When SRTP is enabled on both devices, calls will be encrypted, and the lock icon appears 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. This ensures the security of SRTP encryption. For more information on TLS, refer to Transport Layer Security on page 42.

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

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



3. Click **Save changes**.

H.235

Yealink VC Desktop 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. When a site places a call on the H.235 feature enabled the Yealink VC Desktop, the Yealink VC Desktop negotiates the encryption algorithm with the destination devices.

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

Parameter	Description
H.235 Encryption	Specifies the H.235 type for the H.323 account. **Note:** Check **H.235 Encryption** checkbox, the Yealink VC Desktop negotiates with the far site whether to use H.235 for media encryption in H.323 calls. If it is not checked, the Yealink VC Desktop does not use H.235 in H.235 calls.

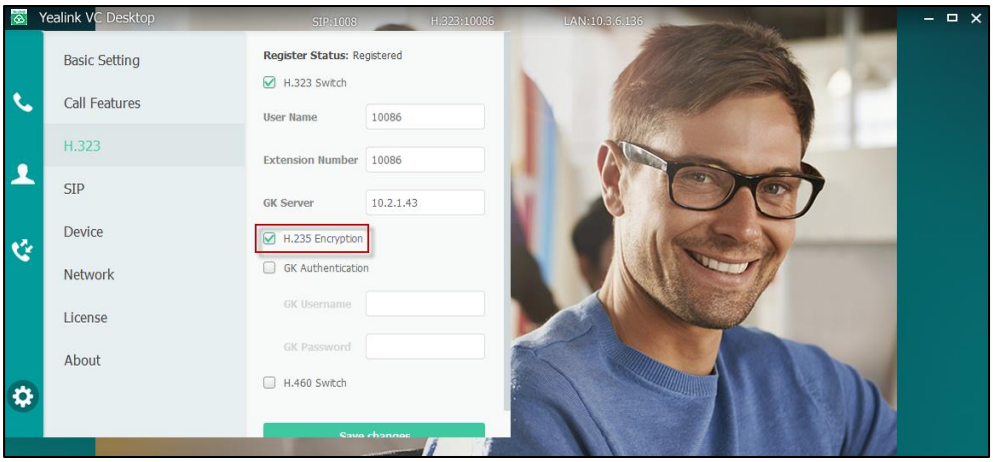
Rules of H.235 security in H.323 calls:

Far / Near	Enabled	Disabled
Enabled	H.235 Call	Unencrypted Call
Disabled	RTP Call	RTP Call

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

To configure H.235 via the Yealink VC Desktop:

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



3. Click **Save changes**.

Customizing Yealink VC Desktop

You can customize your Yealink VC Desktop 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
- Local Directory
- Call History Management
- Call Type
- Bandwidth Settings

If you require additional information or assistance with your VC Desktop, contact your system administrator.

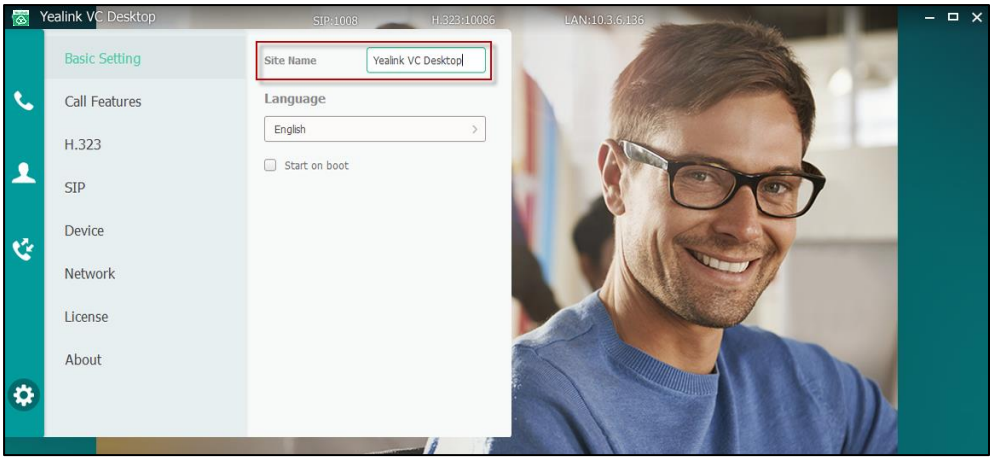
Basic Settings

Site Name

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

To modify site name via the Yealink VC Desktop:

1. Click ->**Basic Setting**.
2. Edit the site name in the **Site Name** field.



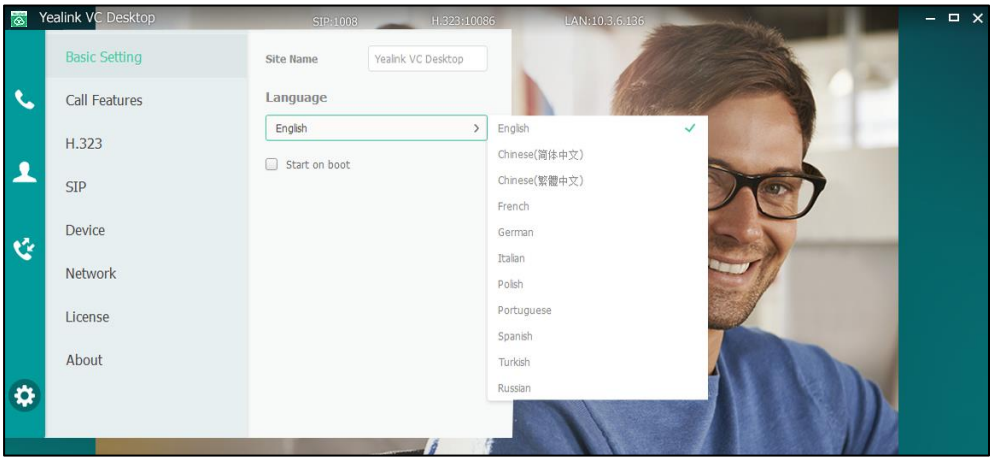
3. Click **Save changes**.

Language

The available languages for Yealink VC Desktop are English, Chinese Simplified, Chinese Traditional, French, German, Italian, Polish, Portuguese, Spanish, Turkish and Russian.

To specify the language for the Yealink VC Desktop:

1. Click -> **Basic Setting**.
2. Select the desired language from the pull-down list of **Language**.



3. Click **Save changes**.

Adjusting the Volume

Yealink VC Desktop lets you adjust volume in a number of ways. For example, you can adjust the ringer volume of the Yealink VC Desktop. You can also adjust the output volume of audio devices when the Yealink VC Desktop is in a call.

For best result, set the volume level of your computer to one-half the maximum volume before adjusting the volume.

To adjust the ringer volume:

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

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

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

Use the volume slider to adjust the output level of the selected device.

3. To mute the speaker, click .

   When your speaker is muted during a call, the icon changes to the icon on the in-call toolbar, and the icon appears on the bottom-right of the near-site video image. The near-site cannot hear the far-site voice, but the far site can hear the near-site voice.

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

1. Click .

When your microphone is muted during a call, the icon changes to the icon on the in-call toolbar, and the icon appears on the bottom-right of the video image. The near site can hear the far-site voice, but the far site cannot hear the near-site voice.

Local Directory

You can add local contact information to the Yealink VC Desktop. The Yealink VC Desktop can store up to 100 local contacts. You can manage the local directory via the Yealink VC Desktop.

This chapter provides operating instructions for the local directory. Topics include:

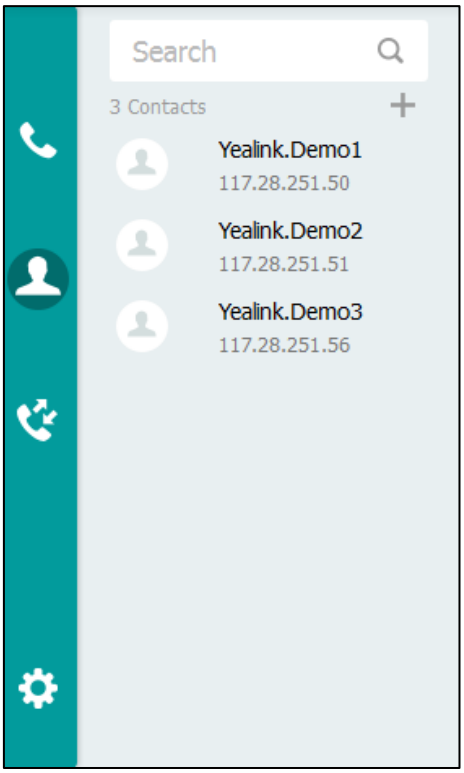
- Adding Contacts
- Placing Calls to Contacts
- Editing Contacts
- Deleting Contacts
- Searching for Contacts

Adding Contacts

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

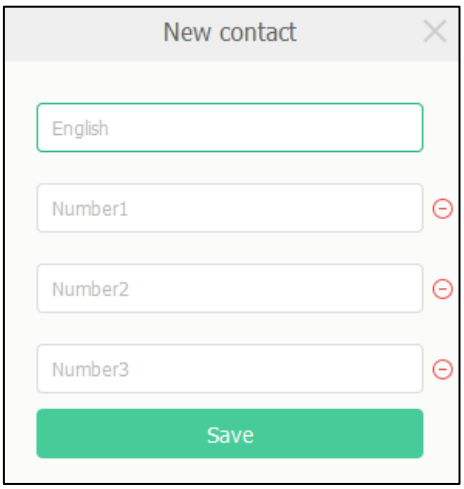
To add a local contact via the Yealink VC Desktop:

1. Click -> .



2. Enter the display name in the **Name** field.
3. Enter numbers or IP addresses 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, and enter the third number in the **Number 3** field.



7. Click **Save**.

Note If the contact already exists in the directory, the user interface will prompt "Contact already exists!".

Placing Calls to Contacts

You can place a call by selecting a name from your contacts list. Depending on the type of system you're using and the type of system you're calling, you can place a video call, or place an audio call.

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

1. Click .
   If the contact's system does not support video, an adaptive audio call starts.
2. Hover the mouse over a contact, select the number you want to dial.

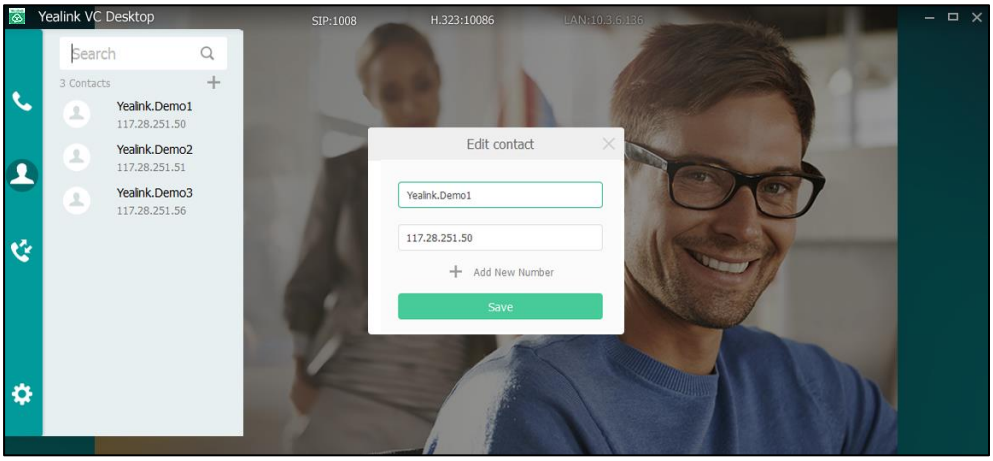
Editing Contacts

You can edit the contact's information.

To edit contacts via the Yealink VC Desktop:

1. Click .
2. Hover the mouse over a contact. The contact details are displayed.
3. Click to edit a contact.

4. Enter the new name in the **Name** field or enter the new number in **Number** field.



You can add more than one number for the contact. For more information, refer to Adding Contacts on page 52.

5. Click **Save**.

Deleting Contacts

You can delete contacts from the local directory.

To delete contacts via the Yealink VC Desktop:

1. Click .
2. Hover the mouse over the local contact you want to delete. The contact details are displayed.
3. Click to delete the local contact.

Searching for Contacts

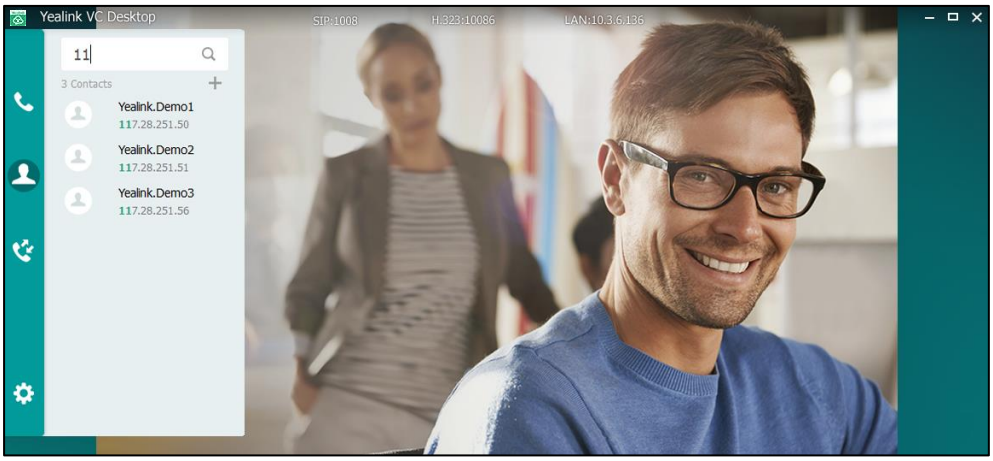
You can quickly find someone in your contacts list, even when these lists contain many names. Once you find the person you want, click it to place a call.

To search for contacts via the Yealink VC Desktop:

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

   The Yealink VC Desktop performs a T9 search (e.g., tap the digit key 5 to search the letters "5, j, k and l").

As soon as you start entering in the search box, a search is performed in the contacts list.



3. Select the desired contact, and then call or edit the contact.

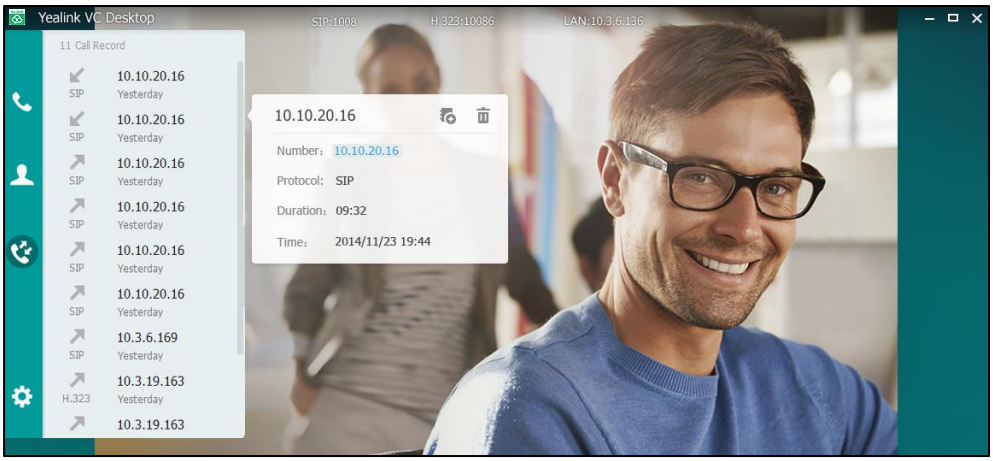
Call History Management

The history list contains the call history of your Yealink VC Desktop. History includes incoming, outgoing and missed calls. The Yealink VC Desktop supports up to 100 history lists.

Viewing Call History

To view call history via the Yealink VC Desktop:

1. Click .
2. Hover the 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 protocol, including SIP and H.323.
- The call duration.
- Date and time of the call.

Note When the Yealink VC Desktop missed calls, a number icon (indicating the number of missed calls) will appear on .If you click (indicating 1 missed call), the number Icon will disappear.

Placing Calls from the Call History List

You can place a call by selecting an entry from your history list. Depending on the type of system you're using and the type of system you're calling, you can place a video call, or place an audio call.

To place a call from the call history list:

1. Click .
   If the contact's system does not support video, an adaptive audio call starts.
2. Hover the mouse over the entry, select the number you want to dial.

Deleting Entries from the Call History List

You can delete entries from the history list.

To delete an entry from the call history list:

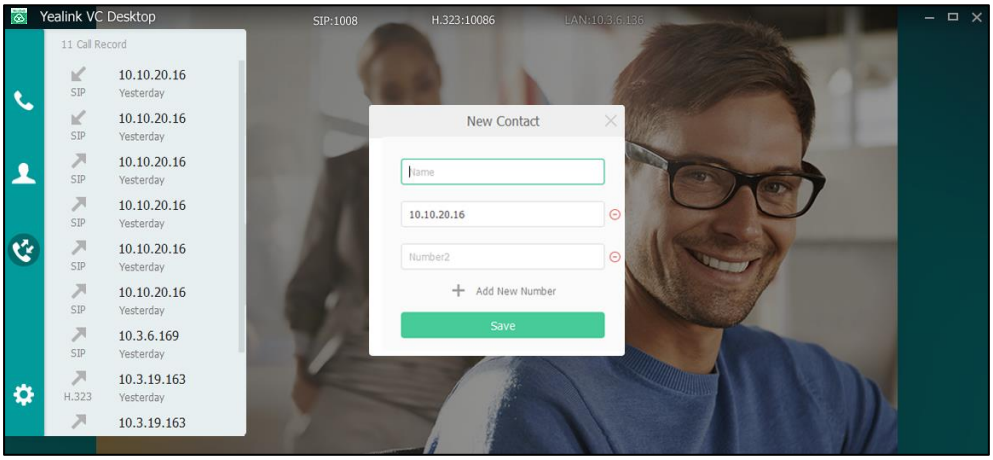
1. Click .
2. Hover the mouse over the entry. The entry details are displayed.
3. Click to delete the entry.

Adding Contacts 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 52.

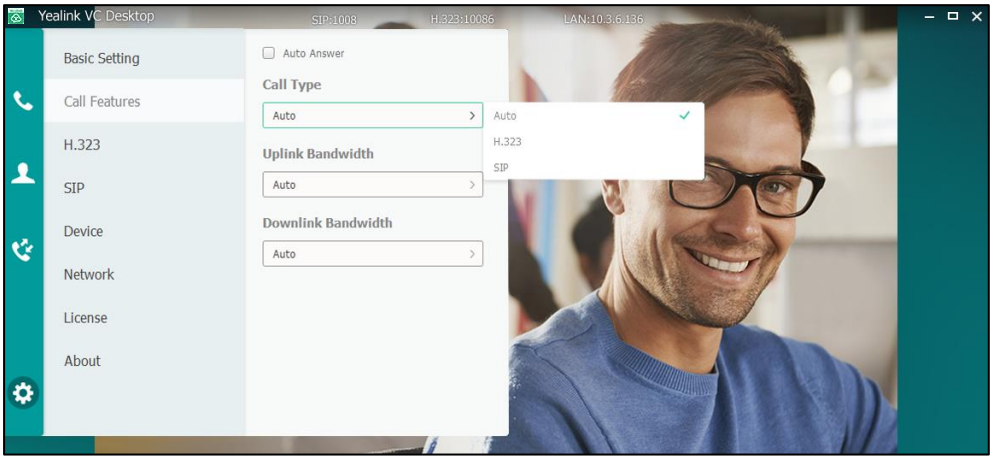
5. Click **Save**.

Call Type

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

To configure call type via the Yealink VC Desktop:

1. Click ->**Call Features**.
2. Select desired type or **Auto** from the pull-down list of **Call Type**.



3. Click **Save changes**.

Bandwidth Settings

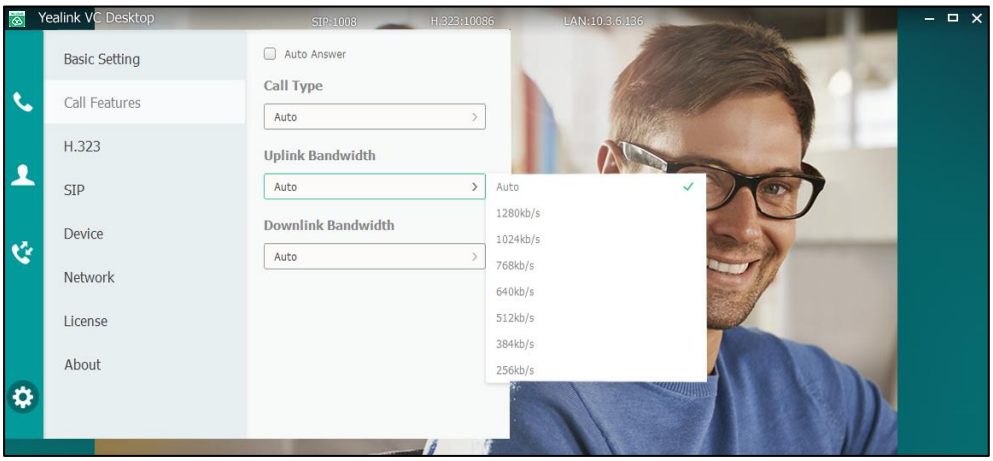
By default, the Yealink VC Desktop automatically detects the available bandwidth and uses it to connect other devices. You can specify the uplink and downlink bandwidths for the Yealink VC Desktop to achieve the best result. The uplink bandwidth refers to the max bandwidth of outgoing calls. The downlink bandwidth refers to the max bandwidth of incoming calls.

Available bandwidths for the Yealink VC Desktop 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 uplink and downlink bandwidth via the Yealink VC Desktop:

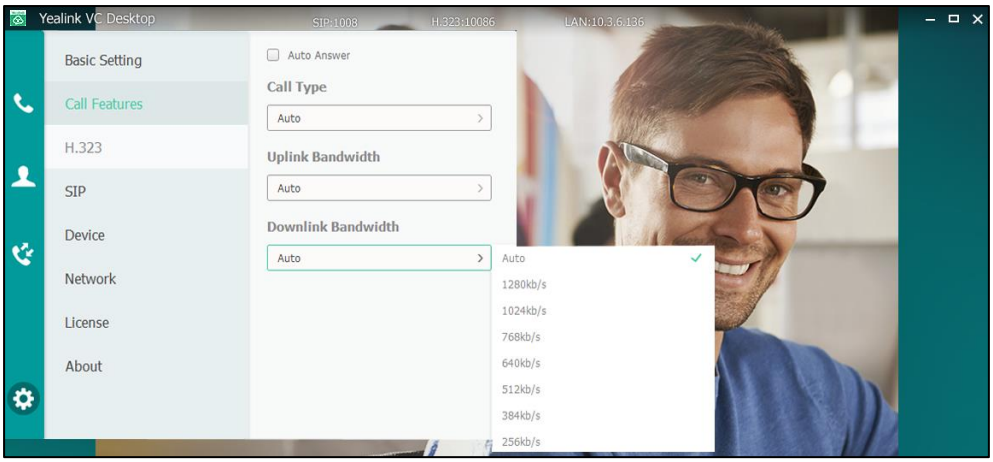
1. Click -> **Call Features**.
2. Select the desired bandwidth from the pull-down list of **Uplink Bandwidth**.

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



3. Select the desired bandwidth from the pull-down list of **Downlink Bandwidth**.

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



4. Click **Save changes**.

Using Yealink VC Desktop

You can use the Yealink VC Desktop to place calls, answer calls or reject calls. You can also change video layout, turn off video, change device or share contents during a call.

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

- Placing Calls
- Answering or Rejecting Calls
- Answering Calls Automatically
- Showing and Hiding In-call Toolbar
- Ending Calls
- Full Screen
- Call Statistics
- Turning off Video
- Changing Audio and Video Devices
- Changing the Video Layout
- Initiating Presentations
- Sending DTMF Tones

If you require additional information or assistance with your new Yealink VC Desktop, contact your system administrator.

Placing Calls

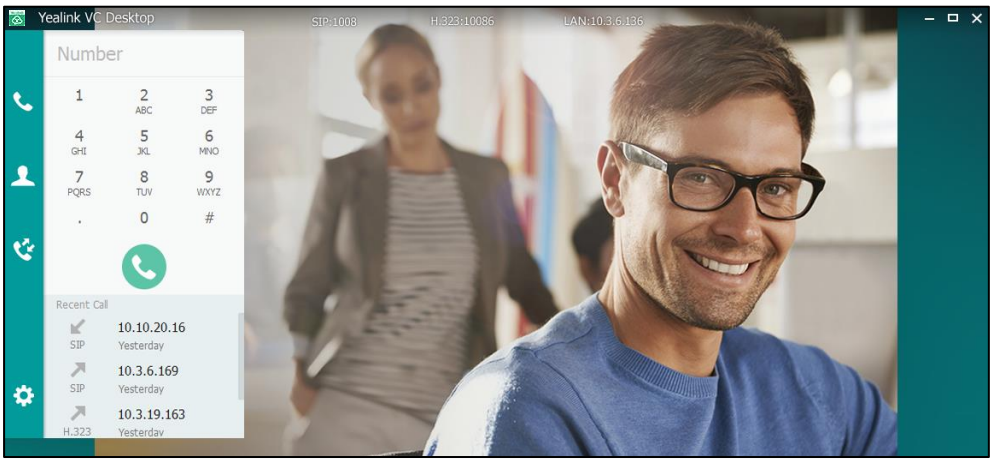
The Yealink VC Desktop supports two kinds of call types:

- Adaptive audio call
- Video call

If the far site does not support video, an adaptive audio call starts. You can search and dial a contact from the call history or local directory. For more information, refer to Local Directory on page 52 and Call History Management on page 56.

To place a call via dialing:

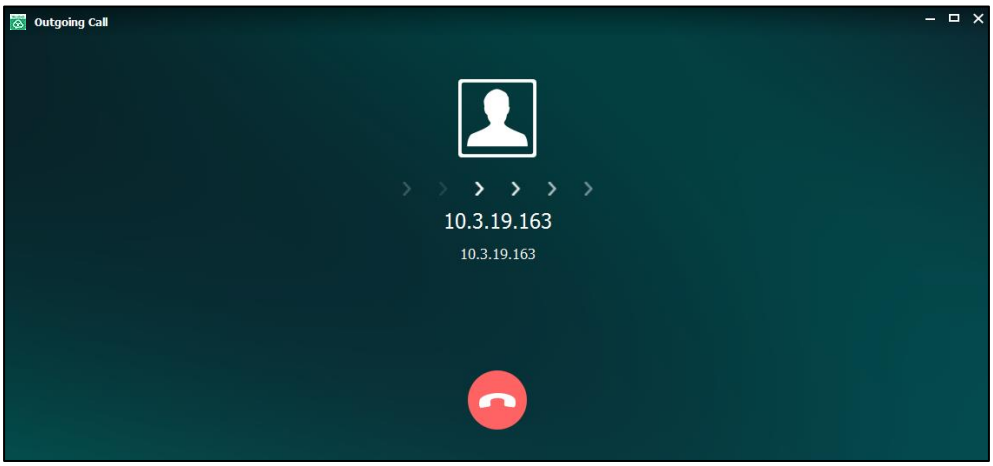
1. Click .



2. Enter the calling information in the search box and click .

   You can also enter the few continuous characters of the contact name, phone number or the contact. As soon as you start entering in the search box, a search is performed in the contacts and history lists.

   The outgoing call will be displayed as below:



Answering or Rejecting Calls

When you receive a call, you see a call notification that tells you who is calling. You can configure Yealink VC Desktop to let you answer or reject calls manually.

To answer a call manually:

1. Click to answer the call.

To reject a call manually:

1. Click to reject the call.

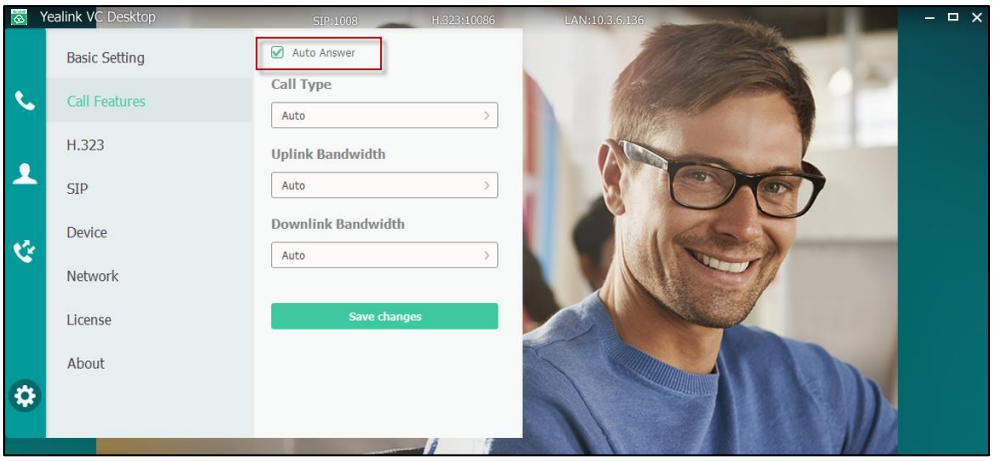
   The Yealink VC Desktop comes back to the main window.

Answering Calls Automatically

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

To configure auto answer via the Yealink VC Desktop:

1. Click ->**Call Features**.
2. Check **Auto Answer** checkbox to enable the auto answer feature.



3. Click **Save changes**.

Showing and Hiding 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.
2. To show or hide , , and icons, click or .

Ending Calls

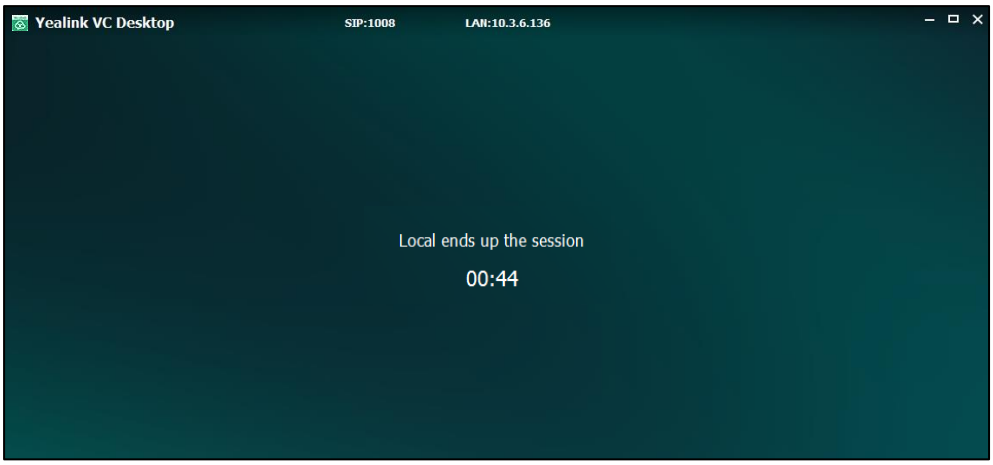
Either participant can end a call. When the call ends, the call window closes automatically.

To end a call:

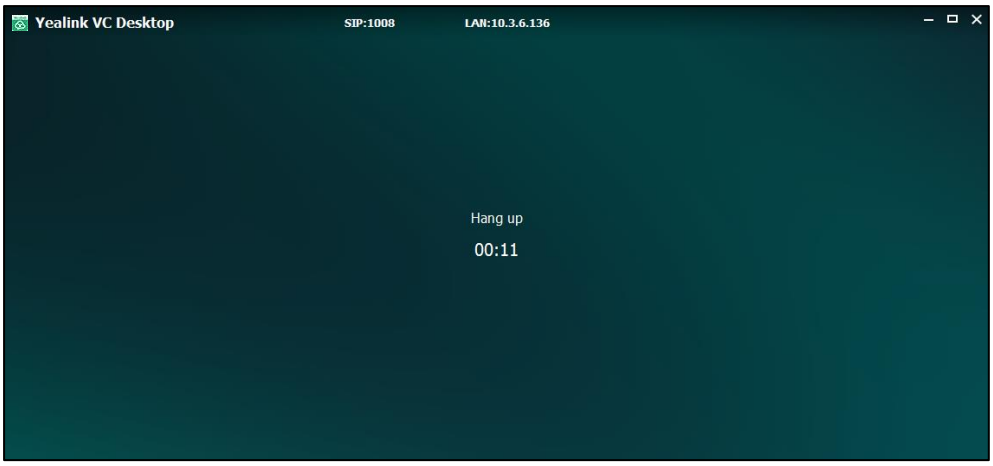
1. Hover your mouse over the bottom of the far-site video image to show the in-call toolbar.

2. Click to hang up.

   After you hang up a call, "Local ends up the session" and call duration pop up.



After the remote part hangs up the call, "Hang up" and call duration pop up.



Full Screen

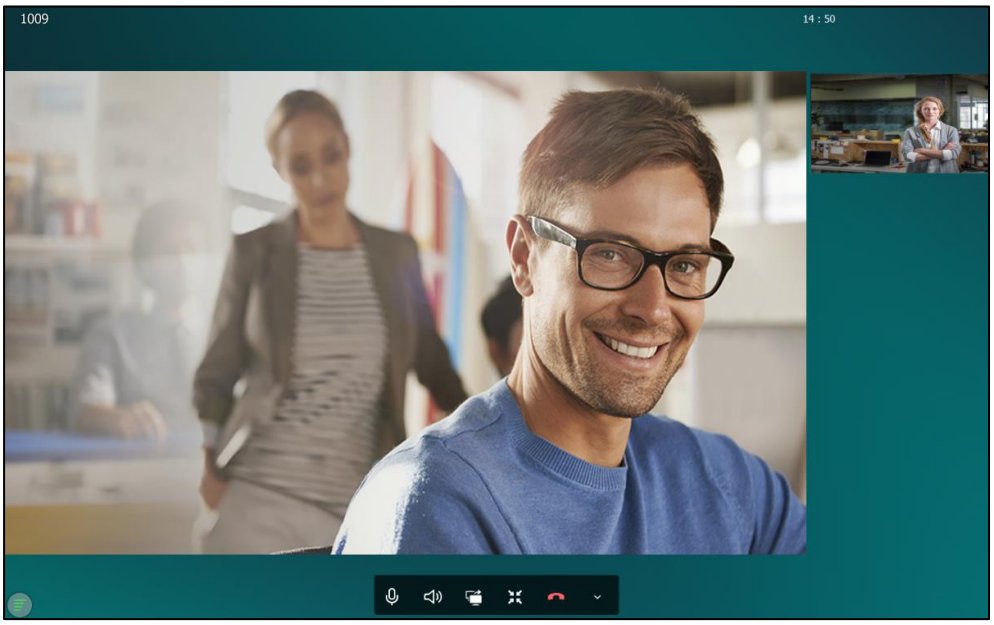
During a video call, you can see the video image on the full screen. This gives you a better view of the person you're talking to. You may decide to use a smaller video window when you want to refer to content on your computer during a call. You can also switch back and forth between the two views during a call.

To display the video image on the full screen during a call:

Do one of the following to enter the full screen:

- Hover your mouse over the bottom of the far-site video image to show the in-call toolbar. And then click on the in-call toolbar.
- Click on the top-right of the call window.
- Double-click the video image in a large window.

The video image is displayed on the full screen.



To exit the full screen during a call:

Do one of the following to exit full screen :

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

Call Statistics

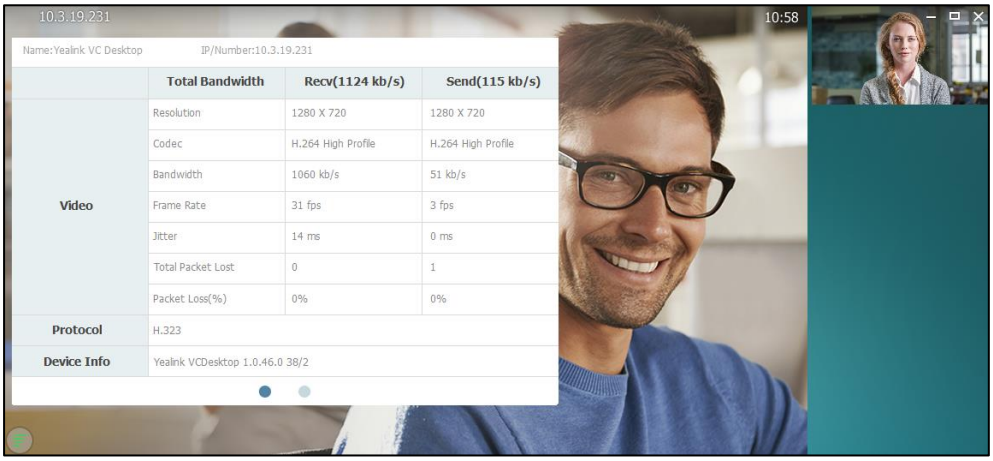
If voice quality is poor during a call, you can enter the Call Statistics screen to view the current status of the call to find out why.

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. Hover the mouse over .

2. Click to turn to the next page.



Turning off Video

To turn off video 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. You may need click to see the icon.
   The far site will no longer see you, and replaces the video image.

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 to change audio and video devices. You may need click to see the icon.

You can select speakers, microphones and cameras. For more information on how to change devices, refer to Audio and Video Device on page 24.

Note During a call, the Yealink VC Desktop will switch to the latest device (speakers, microphones and cameras).

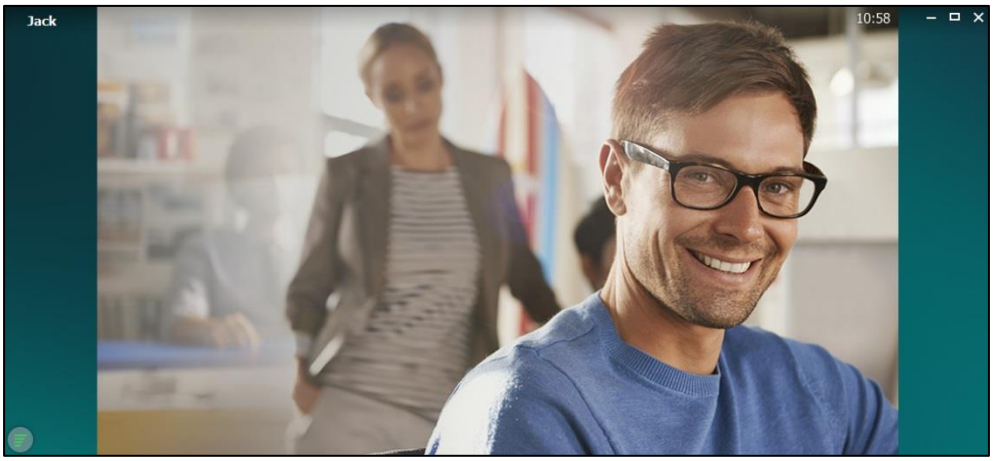
Changing the Video Layout

During a call, near and far-site video images are displayed on the user interface. The far-site video image displays in a large window, the near site displays in a small window in the top-right corner of the interface by default.

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 far-site video image to show the in-call toolbar.
2. Click to hide or display the video image in the small window. You may need click to see the icon.



Swapping the Video Images

To swapping the video image:

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

Initiating Presentations

When you initiate presentations, all participants see the same content at the same time.

You can show slides, spreadsheets, or any other type of file. Everyone sees the contents you selected on your Windows desktop, including the cursor. The far site cannot control the cursor or edit the file. Only one participant at a time can show content, a presentation started later will replace the previous presentation.

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 42.

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

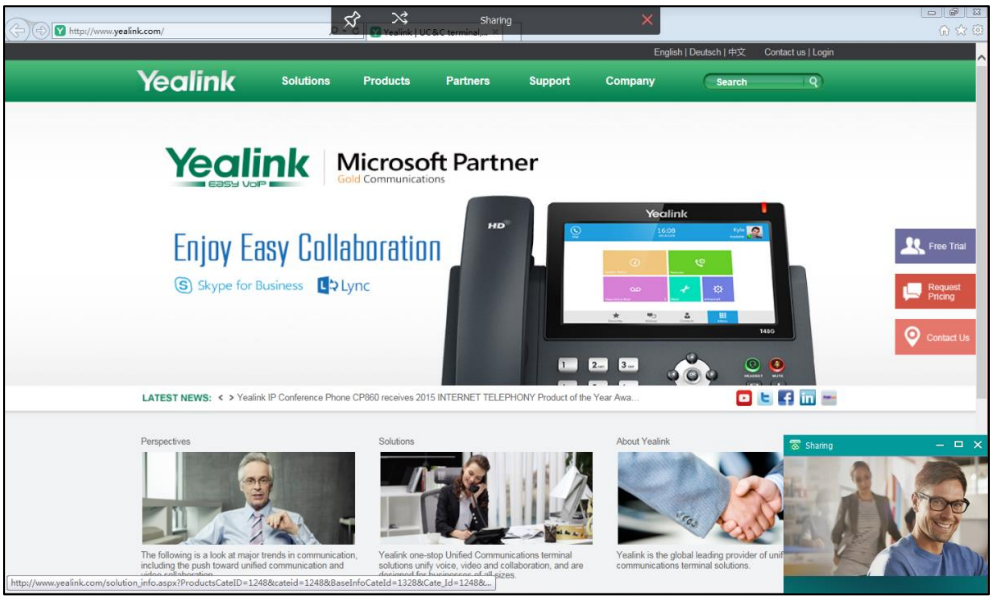
To initiate presentation during a call:

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

   - To share your windows desktop, select in the Screen Share menu.

     When your computer uses multiple monitors, you can also select any one of monitors to share the content.

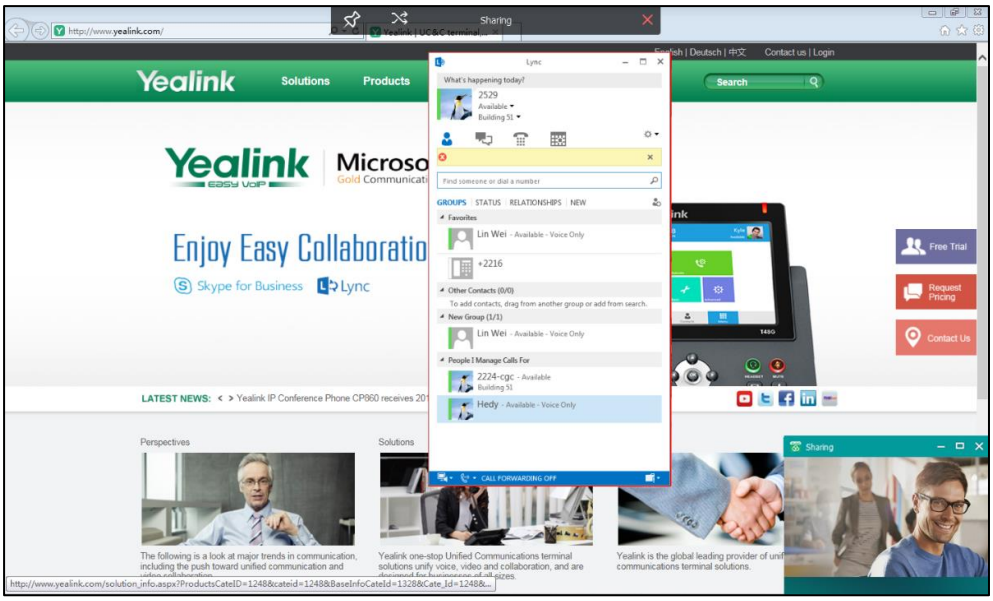
     You can present the full screen on your windows desktop. The far-site video image will be in a small window and displayed in the bottom-right window.



     If you close the far-site video image in the process of presentation, you can click in the taskbar to restore.

   - To share a running application, select a running application in the Screen Share menu.

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

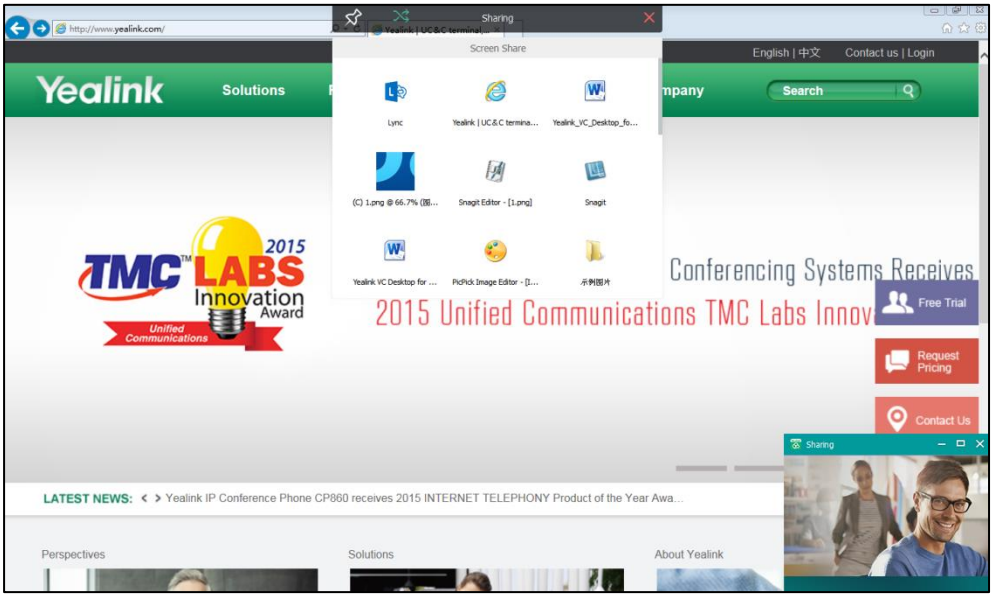


The sharing toolbar appears in the top of the windows desktop.

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

- Click to lock the sharing toolbar to avoid hiding automatically.
- Hover your mouse over .

  Change the content to present in the Screen Share menu. The content includes other monitors' windows desktop or a running application.



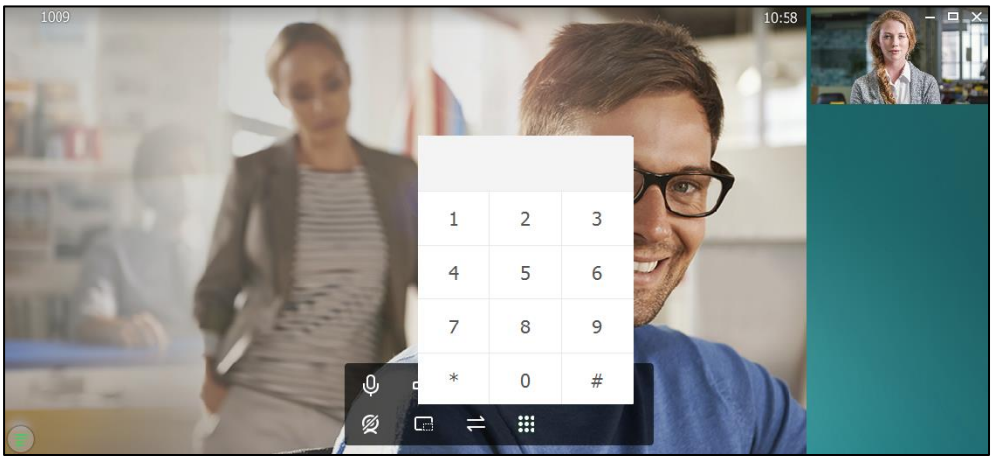
4. Click to exit presentation.

Sending DTMF Tones

When you participate in a call, the Yealink VC Desktop allows you to use the dial pad of the near-site video window to forward DTMF tones. The DTMF tones are sent using the configured method. For more information, please refer to DTMF on page 39.

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. Hover your mouse over to open the keypad. You may need click to see the icon.
3. Click the buttons to send the DTMF tones.



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 can provide feedback in two forms, they are packets and call statistics, which can help an administrator to find the Yealink VC Desktop problem more easily and resolve it.

The following sections will help you to better understand and resolve the working status of the Yealink VC Desktop.

- Capturing Packets
- Viewing Call Statistics

Capturing Packets

The administrator can capture packets using the Ethernet software. Engineers can analyze the packets to troubleshoot problems.

To capture packets using the Ethernet software:

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

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.

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 fail to call the far site?

- Check whether the network of the near site is available.
- Check whether the network of the far site is available.
- Check whether the accounts have been registered correctly, and the Yealink VC Desktop uses the appropriate account to call the far site.
- Ensure that the number you are calling is correct.
- Check whether the far site rejects your call.
- Check whether the firewall blocks the inbound traffics from the other site.
- If the near site is forced to use encryption, ensure that the far site enables encryption too. For more information on call encryption, refer to Secure Real-Time Transport Protocol on page 44 and H.235 on page 46.
- Ensure that the far site supports the same call protocol as the near site. For more information on call types, refer to Call Type on page 58.

Why does not my online help display correctly?

- Ensure that your computer's web browser is configured to allow active content. Refer to your browser's documentation for information about how to adjust this setting.

Why is online activation unsuccessful?

- Check whether the network of the near site is available.
- Check whether the license number you entered is wrong.
- Check whether the license number usage exhausted. A license number can activate 3 computers at most.

Why can not you obtain an Activation Key Code successfully?

- Check whether the license number you entered is wrong.

- Check whether the license number usage exhausted. A license number can activate 3 computers at most.

Why is the Yealink VC Desktop update fail?

- Check whether the network of the near site is available.
- Check whether the update file is wrong.
- Check whether the update file is limited by the antivirus software.
- In one-click update, check whether the server is available.

Camera Issues

Why is the video quality bad?

- Ensure that the video device and the computer monitor have suitable resolution.
- Check whether the packet has been lost. For more information on packet loss, refer to Viewing Call Statistics on page 73.
- Avoid high-intensity indoor light or direct sunlight on the camera.

Video & Audio Issues

Why cannot I hear the audio during a call?

- Ensure that the local audio output device is connected correctly.
- Ensure that the ringer volume is not set to the minimum.
- Check whether the far site is muted.

Why cannot the far site hear the local audio?

- Ensure that the local audio input device is connected correctly.
- Check whether the near site is muted.

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. It is difficulty to diagnosis the root causes of the voice anomalies. The possible reasons are:

- Users sit too far from or near to the microphone.
- The audio pickup device is moved frequently.
- Intermittent voice is probably caused by voice packet loss or jitter. Voice packet loss may occur due to network congestion. 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's voices clearly.

Why cannot I view the local video image?

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

Why cannot I start presentation?

- Check whether the PC is sending a signal.
- Check the call statistics to see whether the Yealink VC Desktop is sharing content.
- Ensure that dual-stream protocol is configured correctly. For more information, refer to Dual-Stream Protocol on page 42.

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