Yealink

Deploying Yealink IP Phones for Use with Microsoft® Skype for Business™ Server

Copyright

Warranty

Declaration of Conformity

CE Mark Warning

Part 15 FCC Rules

This device is compliant with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Class B Digital Device or Peripheral

Note: This device is tested and complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experience radio/TV technician for help.

WEEE Warning

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Customer Feedback

We are striving to improve our documentation quality and we appreciate your feedback. Email your opinions and comments to DocsFeedback@yealink.com.

GNU GPL INFORMATION

Yealink IP phone firmware contains third-party software under the GNU General Public License (GPL). Yealink uses software under the specific terms of the GPL. Please refer to the GPL for the exact terms and conditions of the license.

The original GPL license, source code of components licensed under GPL and used in Yealink products can be downloaded from Yealink web site:

http://www.yealink.com/GPLOpenSource.aspx?BaseInfoCateId=293&NewsCateId=293&CateId=293.

About This Guide

Yealink IP phones can work with Microsoft® Skype for Business Client. They are designed for today's busy executives and professionals. This deployment guide provides system administrators information on how to deploy Yealink SIP phones in a Microsoft® Skype for Business Server™ environment.

Deploying and registering phones to Skype for Business Server enables users to use Skype for Business Server features on the phones.

In This Guide

The information detailed in this guide is applicable to SIP-T48G, SIP-T46G, SIP-T42G, SIP-T41P, SIP-T40P IP phones running Skype for Business firmware version 8 or later. The firmware format is like x.x.x.x.rom. The second x from left must be greater than or equal to 8 (e.g., the firmware version of SIP-T46G IP phone: 28.8.0.21.rom). This deployment guide includes the following chapters:

- Chapter 1, "Getting Started" describes introductory information on available phone features.

- Chapter 2, "Deploying Phones with Skype for Business Server" describes information on setting up network and provisioning methods.

- Chapter 3, "Configuring Phones with Skype for Business Server" describes how to configure and use the phone features.

- Chapter 4, "Troubleshooting" describes how to troubleshoot IP phones and provides some common troubleshooting solutions.

Documentations

The following related documents are available. You can get them from *Yealink Website*:

- Quick Start Guides, which describe how to assemble IP phones and configure the most basic features available on IP phones.

- User Guides, which describe the basic and advanced features available on IP phones.

- Auto Provisioning Guide, which describes how to provision IP phones using the configuration files.

- Description of Configuration Parameters in CFG Files, which describes all configuration parameters in configuration files.

- <y0000000000xx>.cfg and <MAC>.cfg template configuration files.

- Updating Phone Firmware from Microsoft Skype for Business Server Guide, which describes how to upgrade firmware via Skype for Business Server.

For support or service, please contact your Yealink reseller or go to Yealink Technical Support online: *http://support.yealink.com/*.

Conventions Used in Yealink Documentations

Yealink documentations contain a few typographic conventions.

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

Convention	Description
Bold	Highlights the web/phone user interface items such as menus, menu selections, soft keys, or directory names when they are involved in a procedure or user action (e.g., Click on **Security**->**License**). Also used to emphasize text (e.g., **Configuration File**).
Italics	Used to show the format of examples (e.g., *http(s)://[IPv6 address]*), or to show the title of a section in the reference documentations available on the Yealink Technical Support Website (e.g., *Triggering the IP phone to Perform the Auto Provisioning*).
Blue Text	Used for cross references to other sections within this documentation (e.g., refer to Installing a Skype for Business Server Feature License).
Blue Text in Italics	Used for hyperlinks to Yealink resources outside of this documentation such as the Yealink documentations (e.g., *Yealink_Microsoft_Skype_for_Business_Edition_IP_Phones_Auto_Provisioning_Guide*.

Table of Contents

Getting Started

This chapter describes the available phone features, and something you need to know before deploying your phone with Skype for Business Server. Topics include:

- Available Phone Features

- Before You Begin

Available Phone Features

Phone features available on all Yealink phones registered to Skype for Business Server are listed in the following table:

Feature	Function
Auto root certificate fetch	Available using DHCP option 43
Auto root certificate retrieval	Lightweight Directory Access Protocol (LDAP) Domain Name System (DNS) query
Sign in	PIN Sign in, User Sign in, Device Pairing for Online, BToE Sign in
Audio Codec	**For SIP-T48G/T46G/T42G/T41P:** G722, PCMA, PCMU, G729, G726-16, G726-24, G726-32, G726-40, iLBC, G723_53, G723_63 **For SIP-T40P:** G722, PCMA, PCMU, G729, G726-16, G726-24, G726-32, G726-40, iLBC
Call forward, transfer, hold, mute	Phone functions
Full-duplex echo cancellation(FDX)	
Media encryption	SRTP
Direct SIP registration to Skype for Business Server	Microsoft SIP, TLS for SIP Signaling
Peer-to-peer audio calling	Initiate and receive two-party call
Message Waiting Indicator (MWI)	Illumination of MWI lamp indicates new messages
Voice mail retrieval	Connect to voice mail center
Presence publication	Indicates the status of your contacts

Feature	Function
Presence state control	Choose from a menu of presence states
Calls logs	Local call history for missed, placed, received and placed calls
Log access	Local phone access to diagnostic logging
Device updates	Centralized phone updates from an out-of-band server
VLAN assignment	LLDP-MED VLAN assignment
Remote worker scenarios	Edge Server registration for off-location users
Firewall traversal	A/V Edge Server support using the ICE, STUN, and TURN protocols
Federation	Connect people across organizations and domains
Provisioning	Support for in-band provisioning from Skype for Business Server
Media bypass	Bypass the Skype for Business Server mediation server to send media directly to a PSTN gateway
Dial now	When the dialed number matches the dial-now rules, the number will be dialed out automatically.
Call forwarding to contacts	Forward incoming calls to another contact
Call forwarding to voicemail	Forward incoming calls directly to voicemail
Response Groups	
Team-Call	
Delegates	
Private Lines	Alternate call-forwarding identity for a Skype for Business Server user's secondary line.
Data Center Resiliency	Ensures basic call functions during a shutdown or outage.
E911	Supports in-band provisioning information for Emergency 911
Centralized Conference Control Protocol (CCCP)	Manage conference calls
Skype for Business Server Exchange Integration	Skype for Business Server directory search, Outlook contact search, visual voicemail, call log, synchronization between phone, Outlook, Skype for Business Server client.
Skype for Business Server Boss-Admin	Assign administrative delegates to answer, hold, and transfer calls and make calls on behalf of boss lines

Feature	Function
Location Services	LLDP-MED location based information support
Contacts List	Display Skype for Business Server contacts and their current presence status
TCP Media	RTP Media and ICE negotiation supported over TCP when UDP is unavailable
Contact Groups	Display and expand groups in the Skype for Business Server user's contact list
Better Together over Ethernet (BToE)	Use Skype for Business Server client on your computer to control calls on your phone
Link Layer Discovery Protocol (LLDP)	Support for LLDP
Skype for Business Server Automatic Firmware Update	Receive firmware updates automatically when registered with Skype for Business Server
Call Park	Place a call on a separate call orbit where anyone can retrieve the call
Directory	View detailed contact information for local or Skype for Business contacts and make direct calls from the Local directory and Skype for Business directory

Before You Begin

Before registering your phones with Skype for Business Server, you need to know the following points:

- If you are provisioning your phones, we strongly recommend using Auto Provisioning when deploying multiple phones. In this method, you need to set up a provisioning server and use configuration files to configure phone features.

- If user purchases a phone with Skype for Business Server firmware (also called Skype for Business Server phone), the phone has a built-in Skype for Business Server feature license which allows user to use the phone in a Skype for Business Server environment.

  If users purchase Yealink phones that aren't running Skype for Business Server firmware, but want to upgrade to the Skype for Business Server firmware, the user must purchase a Skype for Business Server feature license to use Yealink phones in a Skype for Business Server environment. Contact Yealink resellers for more information. You can also use Yealink phones in a Skype for Business Server environment for trial purposes, without purchasing a license, for a maximum of 180 days.

- Yealink releases firmware in two file formats:

  a) **Cabinet (CAB) file:** CAB file format is a Microsoft Windows archive file that

supports lossless data compression and embedded digital certificates that maintain archive integrity. Yealink offers firmware in CAB file format so that user can update firmware from Skype for Business Server and enable the automatic firmware update feature.

b) **Rom file:** Yealink also offers Skype for Business Server firmware in ROM file format. And the file is compressed in zip file format on *Yealink Website*, you need to download the compressed file, and then extract it into local directory.

Deploying Phones with Skype for Business Server

This chapter provides the information about deploying your phone in Skype for Business Server environment. Provisioning methods are also introduced. Topics include:

- Setting up the Network
- Provisioning Methods
- Installing a Skype for Business Server Feature License

After your phone is powered on and connected to the network, the phone performs a boot-up sequence, as shown next.
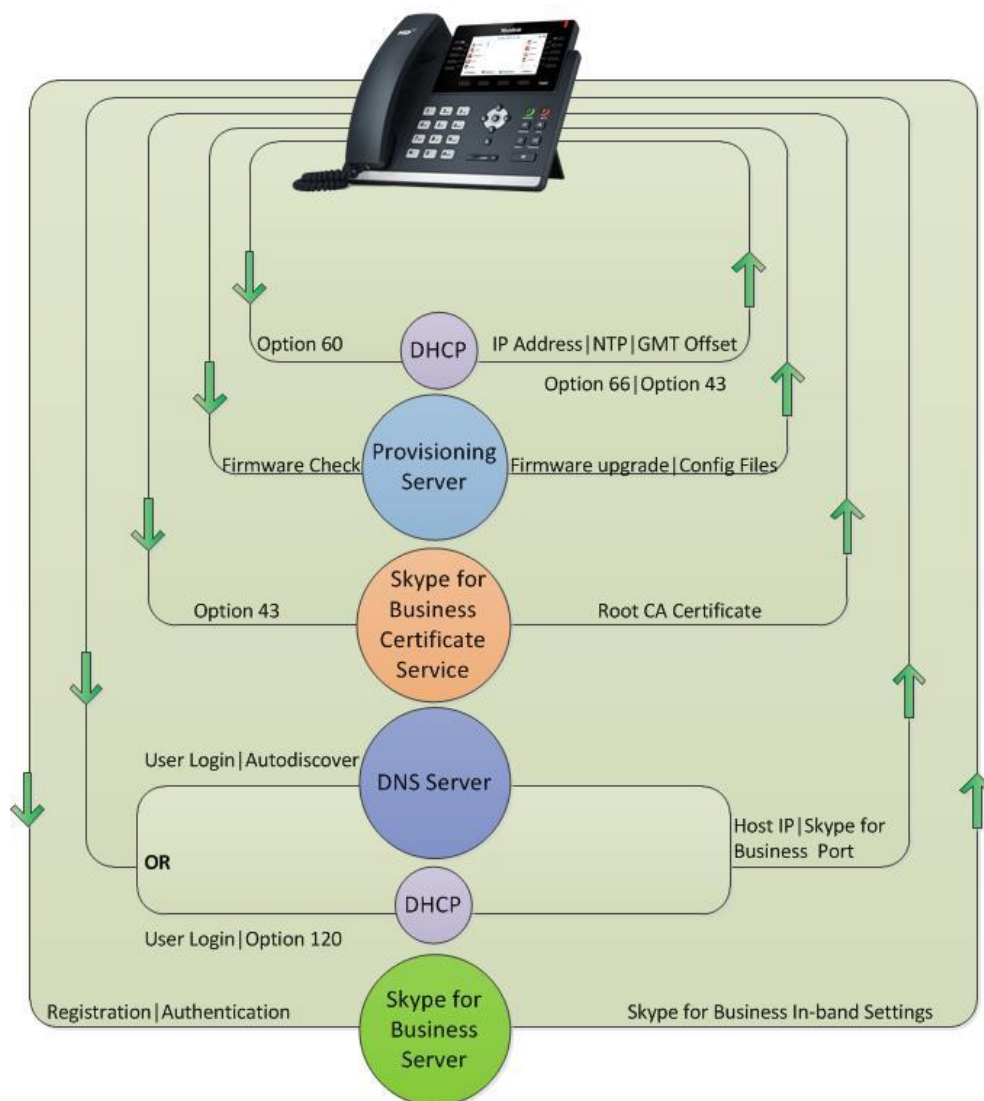
Setting up the Network

Setting up a network to connect your phones to Skype for Business Server involves four steps:

1. The IP phone can discover Skype for Business Server automatically via DHCP Option 120, Autodiscover Service or Domain Name System (DNS) service (SRV) records. The priority is in this order: DHCP Option 120>Autodiscover Service>Domain Name System (DNS) service (SRV) records.

   - Obtaining Server address via DHCP option 120 is disabled by default. To enable this feature, add and set the value of the configuration parameter "sip.option120_get_lync_server.enable" to 1 (Enabled), and then perform Auto Provisioning.

   - For information on Autodiscover Service, refer to *Understanding Autodiscover* on Microsoft TechNet.

   - For information on creating and verifying DNS SRV records, refer to *Required DNS Records for Automatic Client Sign-In* on Microsoft TechNet.

2. Obtain a root certificate authority (CA) security certificate in one of the following three ways:

   - Yealink Skype for Business phones automatically fetch the root certificate using a Lightweight Directory Access Protocol (LDAP) Domain Name System (DNS) query. This feature is disabled by default. To enable this feature, add and set the value of the configuration parameter "sip.ldap_download_rootca.enable" to 1 (Enabled), and then perform Auto Provisioning.

   - You can use Dynamic Host Configuration Protocol (DHCP) Option 43 to download a private CA root security certificate used by Skype for Business Server. The security certificate is required to support secure HTTPS and TLS. In conjunction with DHCP Option 43, ensure that your devices can access Skype for Business Server Certificate Provisioning Web service over HTTP (TCP 80) and HTTPS (TCP 443). For information on configuring DHCP Option 43, see *Set Up DHCP for Devices* on Microsoft TechNet.

   - You can manually install certificates on the phones. The phone will verify the certificate sent by the server to decide whether it is trusted based on the trusted certificates list. For more information, refer to Uploading a Trusted Certificate.

3. (Optional) If you are using auto provisioning to deploy your phones, place the configuration files on the provisioning server, and use DHCP option 66 or other methods to make the phones obtain the provisioning server address.

4. System administrator should set up accounts on the Skype for Business Server that can be used on the phones to sign in.

Provisioning Methods

Yealink provides three provisioning methods to configure phones.

The following sections describe how to configure IP phones using each method.

- Phone User Interface

- Web User Interface

- Centralized Provisioning
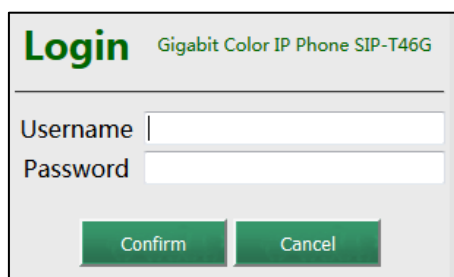
Phone User Interface

An administrator or a user can configure and use IP phones via phone user interface. Access to specific features is restricted to the administrator. The default password is "admin"(case-sensitive). Not all features are available on phone user interface. For more information, refer to *Yealink phone-specific user guide*.

Web User Interface

An administrator or a user can configure IP phones via web user interface. The default user name and password for the administrator to log into the web user interface are both "admin" (case-sensitive). Most features are available for configuring via web user interface. IP phones support both HTTP and HTTPS protocols for accessing the web user interface.

To access the web user interface from your PC:

1. Press the **OK** key on the phone when the phone is idle to obtain its IP address.

2. Open a web browser on your computer, and enter the IP address in the address bar (e.g., http://192.168.0.10 or 192.168.0.10).

3. Press the **Enter** key on your keyboard.

4. Enter the user name (default: admin) and password (default: admin) in the login page and click **Confirm**.

Centralized Provisioning Method

You can provision multiple phones in two ways:

- **Provisioning Server**: Set up your own provisioning server and customize feature settings using the template configuration files.

- **Skype for Business Server**: Provision multiple phones with firmware from Skype for Business Server and apply default feature settings.

The next figure illustrates how your phone interoperates with provisioning Server and Skype for Business Server.

Auto Provisioning

Before beginning provisioning, you need to obtain configuration files. There are two configuration files both of which are CFG-formatted. We call these two files Common CFG file and MAC-Oriented CFG file. The IP phone tries to download these CFG files from the provisioning server during auto provisioning.

You can ask Yealink reseller or Yealink FAE for Common CFG and MAC-Oriented files. You can also obtain the Common CFG file and MAC-Oriented file online:

http://www.yealink.com/solution_info.aspx?ProductsCateID=1248&cateid=1248&BaseInfoCateId=1328&Cate_Id=1248&parentcateid=1328.

The Common CFG file is effectual for all phones of the same model. It uses a fixed name "y0000000000XX.cfg" as the file name, where "XX" equals to the first two digits of the hardware version of the IP phone model.

The names of the Common CFG file requirements for the phone model are:

Phone Model	Common CFG File
SIP-T48G	y000000000035.cfg
SIP-T46G	y000000000028.cfg
SIP-T42G	y000000000029.cfg
SIP-T41P	y000000000036.cfg
SIP-T40P	Y000000000054.cfg

The MAC-Oriented CFG files are only effectual for the specific phone. They use the 12-digit MAC address of the IP phone as the file name. For example, if the MAC address of the IP phone is 0015651130F9, the MAC-Oriented CFG file has to be named as

0015651130f9.cfg (case-sensitive) respectively.

After you edit the configuration files, place them in the provisioning server directory. Yealink IP phones support using FTP, TFTP, HTTP and HTTPS protocols to download configuration files to the phone. You can use one of these protocols for provisioning.

The following figure shows how the IP phone interoperates with the provisioning server:

Major Tasks for Auto Provisioning

You need to complete four major tasks to provision Yealink IP phones via auto provisioning.

1. Editing the configuration files (Common CFG files or MAC-Oriented files).

2. Configure a provisioning server supporting FTP, TFTP, HTTP or HTTPS protocols. And store configuration files in a location on the provisioning server.

3. Make the phones obtain the provisioning server address

4. Trigger the phones to download and update the configuration files from the provisioning server.

The following figure shows an overview of these tasks:
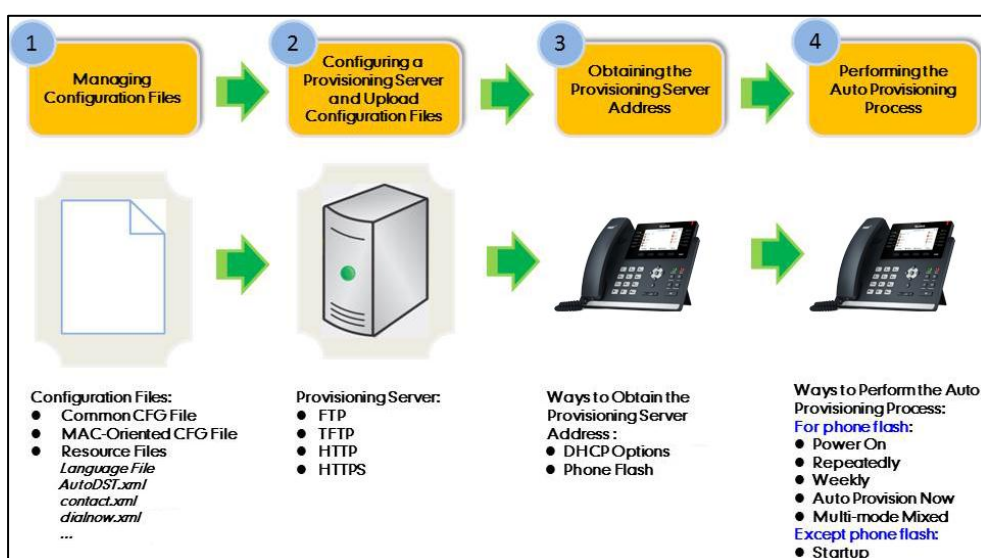
For more information on how to perform these four provisioning tasks, refer

to*Yealink_Microsoft_Skype_for_Business_Edition_IP_Phones_Auto_Provisioning_Guide*.

Skype for Business Server

Download firmware in CAB file format and place it on Skype for Business Server. Default feature settings are applied to all your phones.

For more information, refer to Upgrading Firmware from Skype for Business Server on page 44.

Installing a Skype for Business Server Feature License

Skype for Business Server phone has a built-in Skype for Business Server feature license, which allows user to use Skype for Business Server features on the phone.

If users purchase phones which aren't running Skype for Business Server firmware, while the users want to upgrade it to a Skype for Business Server firmware, then a Skype for Business Server feature license is needed to be uploaded to the phone after the upgrade. Contact Yealink resellers to purchase the license. The following introduces how to install the licence.

Procedure

Skype for Business Server feature license can be configured using the configuration files or locally.

|		
Configuration File	<y0000000000xx>.cfg	Specify the access URL of the Skype for Business Server feature license. **Parameter:** lync_license_dat.url
Local	Web User Interface	Specify the access URL of Skype for Business Server feature license. **Navigate to:** http://<phoneIPAddress>/servlet?p=security-license&q=load

Details of the Configuration Parameter:

Parameter	Permitted Values	Default
lync_license_dat.url	**String within 99 characters**	**Blank**

Parameter	Permitted Values	Default
Description: Configures the access URL of the Skype for Business Server feature license. **Example:** lync_license_dat.url = http://192.168.1.20/License_$MAC.dat The IP phones will replace the characters "$MAC" with its MAC addresses during auto provisioning. For example, the MAC address of one SIP-T46G IP phone is 00156543EC97. When performing auto provisioning, the IP phone will request to download the License_00156543ec97.dat file from the provisioning server address "http://192.168.1.20". **Web User Interface:** Security->License **Phone User Interface:** None **Note:** If you change this parameter, the IP phone will reboot to make the change take effect.		

To upload the Skype for Business Server feature license via web user interface:

1. Click on **Security**->**License**.

2. Click **Browse** to locate the Skype for Business Server feature license from your local system.
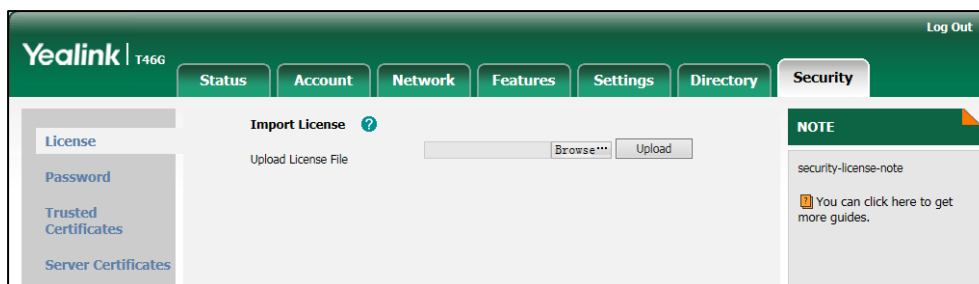
3. Click **Upload** to upload the certificate.

Checking License Installaiton Status

You can check Skype for Business Server feature license installation status via phone user interface or web user interface.

To check installation status of Skype for Business Server feature license via web user interface:

1. Click on **Status**->**SFB Status**.
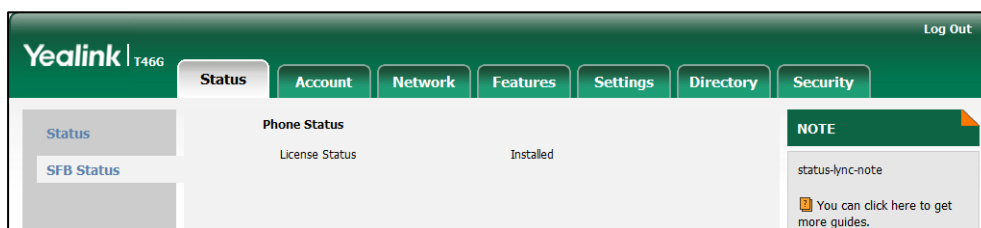
To check installation status of Skype for Business Server feature license via phone user interface:

1. Press **Menu**->**Status**->**License**.

Note	Resetting the phone to factory configurations will not clear the Skype for Business feature license.

Configuring Phones with Skype for Business Server

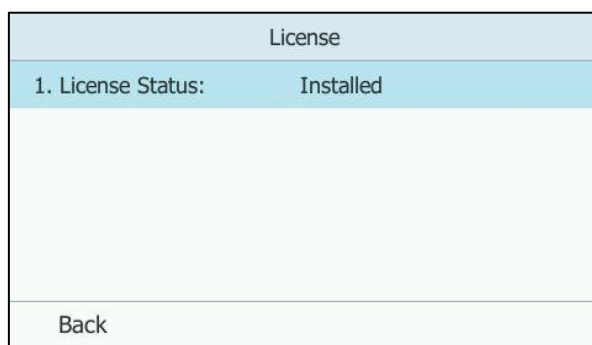This chapter provides basic operating instructions for the Skype for Business Server phones. Topics include:

- Sign in
- Sign out
- Calendar
- User Password
- Administrator Password
- Configuring Boss-Admin Feature
- Uploading a Trusted Certificate
- Upgrading Phone Firmware
- Resetting the Phone to Factory Default Settings
- Branch Office Resiliency

Sign in

Yealink provides four ways to sign in the phone:

- **User Sign in**: This method uses the user's credentials (sign-in address, user name, and password) to sign into Skype for Business Server. This sign-in method applies to Online account and Oprem account.

- **PIN Sign in**: This method uses the user's phone number (or extension) and personal identification number (PIN) to sign into Skype for Business Server. This sign-in method only applies to Onprem account.

- **Device Pairing for Online:** This method uses the user's Online account and pairing code to sign into Skype for Business Server. This sign-in method only applies to Online account.

- **BToE Sign In:** This method uses the BToE software to sign in to the phone from your computer.

User Sign in

Procedure

User sign-in method can be configured using the configuration files or locally.

|		
Configuration File	<MAC>.cfg	Configure User Sign-in (User Credentials) method. **Parameters:** account.sign_in.server_address account.sign_in.user_name account.sign_in.password
Local	Web User Interface	Configure User Sign-in (User Credentials) method. **Navigate to**: http://<phoneIPAddress>/servlet?p=account-register-lync&q=load&acc=0
	Phone User Interface	Configure User Sign-in (User Credentials) method.

Details of Configuration Parameters:

Parameters	Permitted Values	Default
account.sign_in.server_address	**SIP URI**	**Blank**
Description: Configures the sign-in address for the User Sign-in (User Credentials) method. The value format is username@domain.com. **Example:** account.sign_in.server_address= 2216@yealinkuc.com **Web User Interface:** Account->Register->Login address **Phone User Interface:** Sign in->User Sign in->Address		
account.sign_in.user_name	**String within 128 characters**	**Blank**
Description:		

Parameters	Permitted Values	Default
Configures the user name for the User Sign-in (User Credentials) method. The value format is username@domain.com or username@domain, domain.com\username or domain\username. **Example:** account.sign_in.user_name= 2216@yealinkuc.com **Web User Interface:** Account->Register->Register Name **Phone User Interface:** Sign in->User Sign in->UserName		
account.sign_in.password	**String within 99 characters**	**Blank**
Description: Configures the password for the User Sign-in (User Credentials) method. **Web User Interface:** Account->Register->Password **Phone User Interface:** Sign in->User Sign in->Password		

To sign into the Skype for Business Server using User Sign in method via web user interface:

1. Click on **Account**->**Register**.

2. Select **User Sign in** from the pull-down list of **Mode**.

3. Enter your Skype for Business user's sign-in address (e.g., 2216@yealinkuc.com) in the **Login address** field.

4. Enter your Skype for Business user name (e.g., 2216@yealinkuc.com) in the **Register Name** field.

5. Enter the sign-in password in the **Password** field.
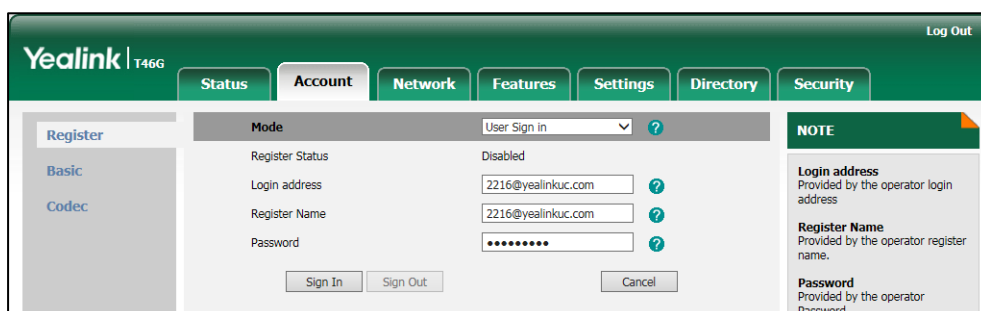
6. Click **Sign In** to accept the change.

To sign into the Skype for Business Server using User Sign in method via phone user interface:

1. Press the **Sign in** soft key.

2. Press $($ ‹ $)$ or $($ › $)$, or the **Switch** soft key to select **User Sign in**.

3. Enter your Skype for Business user's sign-in address (e.g., 2216@yealinkuc.com) in the **Address** field.

4. Enter your Skype for Business user name (e.g., 2216@yealinkuc.com) in the **UserName** field.

5. Enter the sign-in password in the **Password** field.

6. Press $($ ‹ $)$, $($ › $)$ or the **Switch** soft key to select the desired value from the **Remember Password** filed.

    If it is on, the user name and password will be filled automatically when you enter the sign-in address next time.

7. Press the **Sign in** soft key.

PIN Sign in

Procedure

PIN sign-in method be configured using the configuration files or locally.

Configuration File	<MAC>.cfg	Configure Pin Sign-in (PIN Authentication) method. **Parameters:** account.sign_in.pin_number
	<y0000000000xx>.cfg	Configures the PIN for the Pin Sign-in (PIN Authentication) method. account.sign_in.pin_password
Local	Web User Interface	Configure Pin Sign-in (PIN Authentication) method.

		Navigate to:
		http://<phoneIPAddress>/servlet?p=account-register-lync&q=load&acc=0
		Configure the Skype for Business Server address.
		Navigate to:
		http://<phoneIPAddress>/servlet?p=features-general&q=load
	Phone User Interface	Configure Pin Sign-in (PIN Authentication) method.

Details of Configuration Parameters:

Parameters	Permitted Values	Default
account.sign_in.pin_number	**String within 128 characters**	**Blank**
Description: Configures the IP phone's extension for thePin Sign-in (PIN Authentication) method. **Web User Interface:** Account->Register->Extension **Phone User Interface:** Sign in->PIN Sign in->extension		
account.sign_in.pin_password	**String within 99 characters**	**Blank**
Description: Configures the PIN for thePin Sign-in (PIN Authentication) method. **Web User Interface:** Account->Register->Pin **Phone User Interface:** Sign in->PIN Sign in->PIN		

To sign into the Skype for Business Server using PIN Sign in method via web user interface:

1. Click on **Account**->**Register**.

2. Select **User Sign in** from the pull-down list of **Mode**.

3. Enter your Skype for Business user's phone number or extension (e.g., 2216) in the **Extension** field.

**4.**   Enter your personal identification number (e.g., user2216) in the **Pin** field.
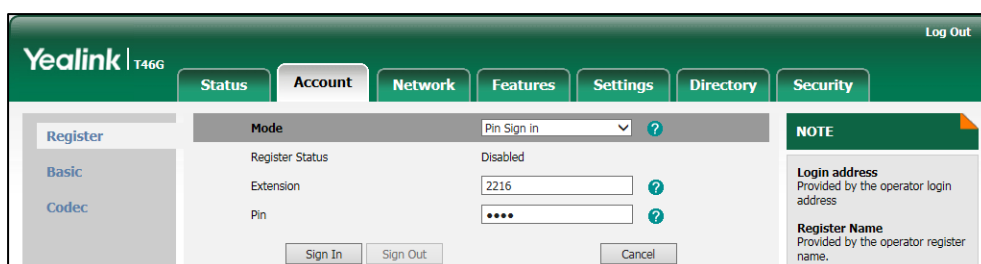
5.   Click **Sign In** to accept the change.

If there is no DHCP Server in your environment, you may fail to sign in phone using PIN Sign-in (PIN Authentication) method, you can manually configure the certificate address of Skype for Business Server to make the phone sign in successfully.

To manually configure the certificate address of Skype for Business Server via web user interface:

1.   Click on **Features->General Information**.

2.   Enter the certificate address of Skype for Business Server in the **SFB Cert Service URL** field.
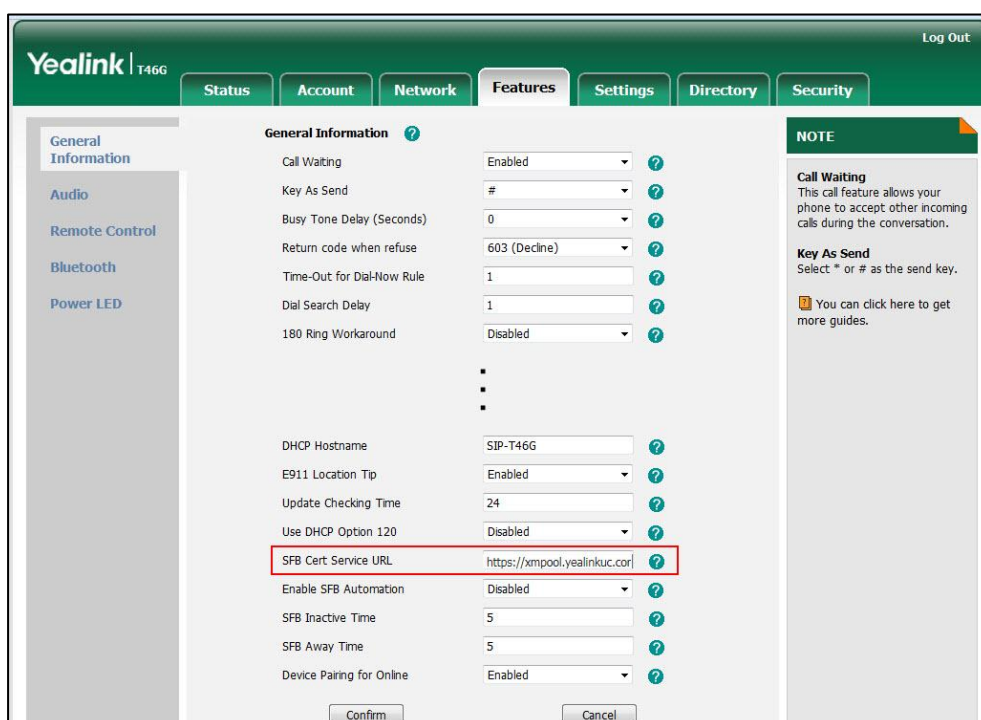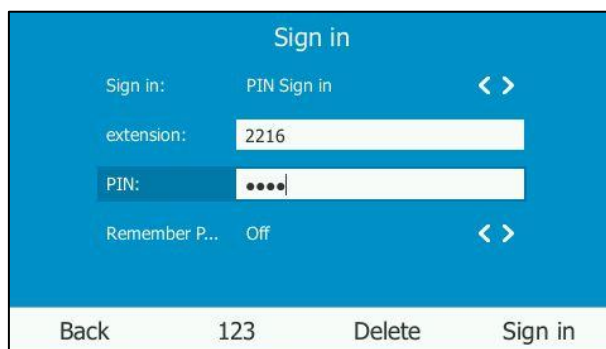

3.   Click **Confirm** to accept the change.

To sign into Skype for Business Server using PIN Sign in method via phone user interface:

1.   Press the **Sign in** soft key.

2.   Press (◀) or (▶), or the **Switch** soft key to select **PIN Sign in**.

3.   Enter your phone number or extension (e.g., 2216) in the **extension** field.

4. Enter your Pin in the **PIN** field.

5. Press ◀ , ▶ or the **Switch** soft key to select the desired value from the **Remember Password** filed.

If it is on, the PIN will be filled automatically when you enter the phone number or extension next time.

6. Press the **Sign in** soft key.

Device Pairing for Online

Device Pairing for Online is used to establish the connection between your phone and PC, so that you can sign into phone by web browser. This sign-in method is only applicable to Online account.

Procedure

Device Pairing for Online can be configured locally.

Local	Web User Interface	Configure Device Pairing for Online method. **Navigate to**: http://<phoneIPAddress>/servlet?p=account-register-lync&q=load&acc=0
	Phone User Interface	Configure Device Pairing for Online method.

To configure Device Pairing for Online method via web user interface:

1. Click on **Features**->**General Information**.

2. Select the desired value from the pull-down list of **Device Pairing for Online**.

– If it is enabled, you can sign into the Skype for Business Server using Device Pairing for Online method.

– If it is disabled, you cannot sign into the Skype for Business Server using Device
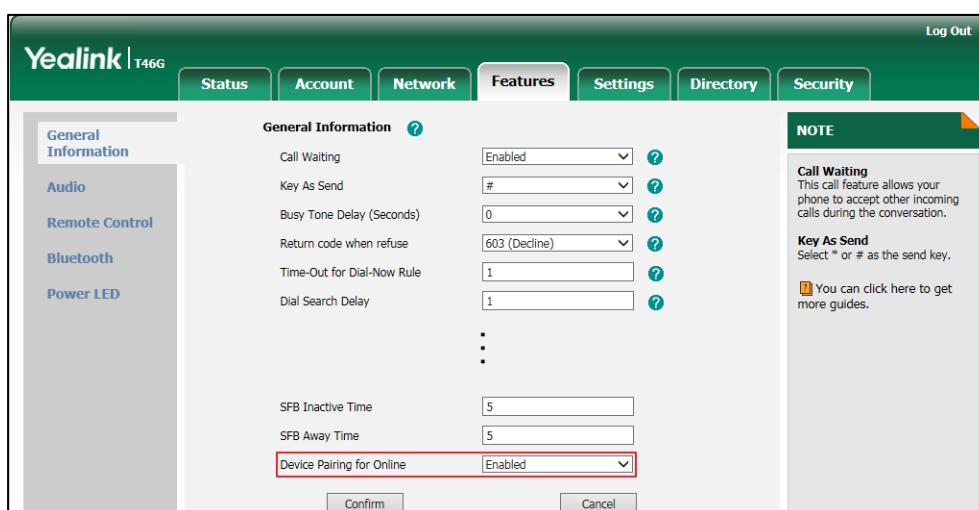
Pairing for Online method.


3. Click **Confirm** to accept the change.

To sign into Skype for Business Server using Device Pairing for Online method via phone user interface:

1. Press the **Sign in** soft key.

2. Press (◀), (▶) or the **Switch** soft key to select **Device Pairing for Online**.

3. Press (◀), (▶) or the **Switch** soft key to select the corresponding country from the **Select site** field.

**4.** Press the **Sign in** soft key.

The screen will show the pairing code and URL.
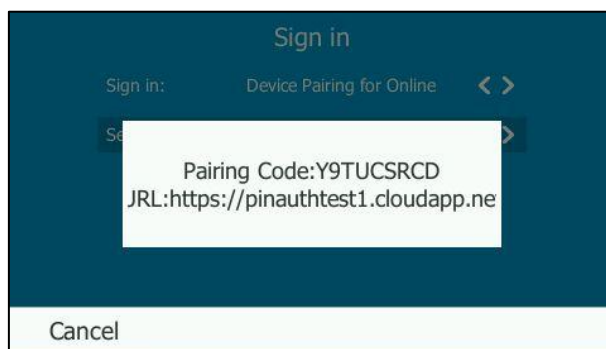
5. Enter the URL (e.g., https://pinauthtest1.cloudapp.net) in the address bar of the web browser on your PC, and then press **Enter**.

6. Enter your email address (e.g., yealink1@lyosbpsmds.ccsctp.net) in the **Email address** field.
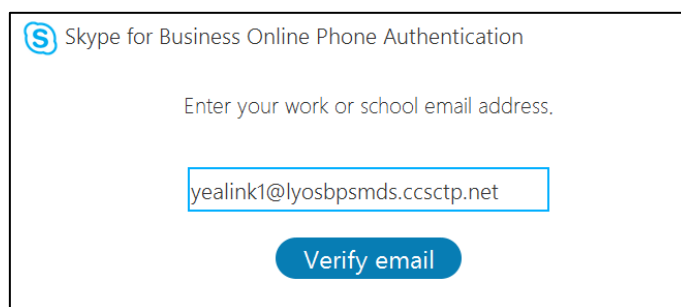
7. Click **Verify email** to check the validity of the email address.

8. Enter your Online account and password.

9. (Optional) Check the **Keep me signed in** check box, so that you don't need to enter a password next time.
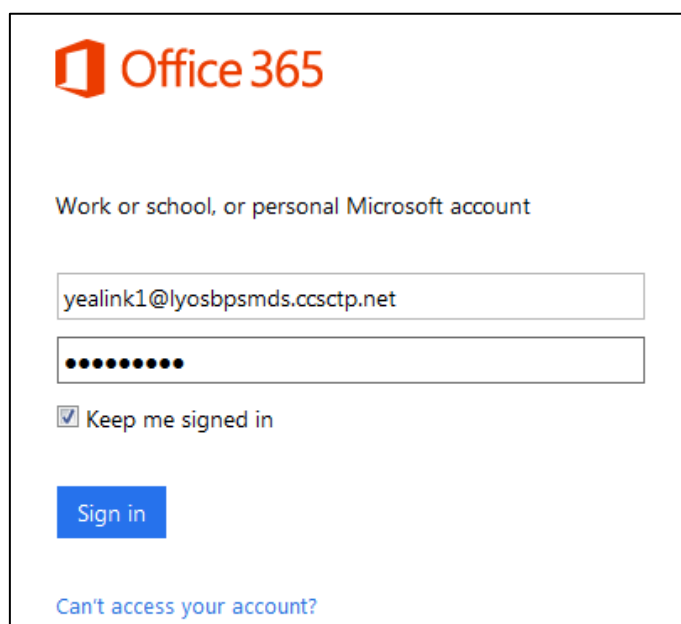
10. Click **Sign in**.

11. Enter the pairing code (e.g., YT4DYBCKL) in the **Code** field.
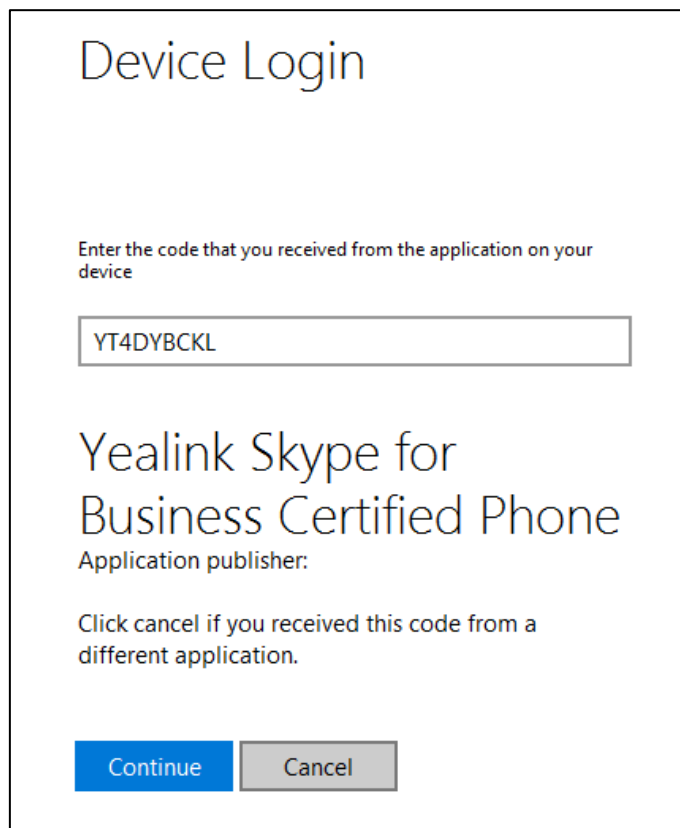
12. Click **Continue**.
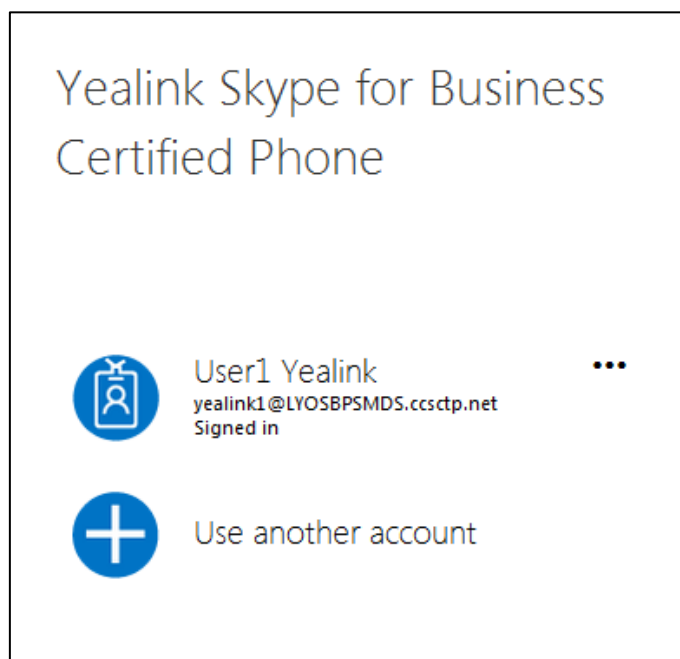
13. Click the account to sign in.

If you click **Use another account**, enter another Online account and password,

and then click **Sign in**. The phone will sign into the Skype for Business Server automatically.

BToE Sign In

You can use this sign-in method when using the Better Together over Ethernet (BToE) feature. The BToE feature enables you to place, answer, and hold audio calls from your phone and the Skype for Business client simultaneously. Note that this method is available after you download the BToE Connector application and pair your computer and phone. For more information, refer to *Better Together over Ethernet* chapter in*Yealink phone-specific user guide*.

Procedure

BToE can be configured using the configuration files.

Configuration File	<y0000000000xx>.cfg	Configure BToE feature. **Parameters:** sip.btoe.enable Configures the BToE paring PIN. **Parameters:** sip.btoe.secure_pin
Local	Web User Interface	Configure BToE feature. Configures the BToE paring PIN. **Navigate to**: http://<phoneIPAddress>/servlet?p=settings-btoe&q=load
	Phone User Interface	Configure BToE feature. Configures the BToE paring PIN.

Details of Configuration Parameters:

Parameters	Permitted Values	Default
sip.btoe.enable	**0 or 1**	**1**
Description: Enables or disables the BToE (Better Together over Ethernet) feature. **0**-Disabled **1**-Enabled If it is set to 1 (Enabled), BToE is enabled on the phone. Your phone can pair with		

Parameters	Permitted Values	Default
Skype for Business Client. If it is set to 1 (Disabled), BToE is disabled on the phone. Your phone cannot pair with Skype for Business Client. **Web User Interface:** Settings->BToE->BToE **Phone User Interface:** Menu->Advanced->BToE->BToE		
sip.btoe.secure_pin	**String**	**0000**
Description: Configures the BToE paring PIN. Your phone can pair with Skype for Business Client when you enter the correct BToE paring PIN on PC. **Note:** It works only if the value of the parameter "sip.btoe.enable" is set to 1 (Enabled). **Web User Interface:** Settings->BToE->BToE paring PIN **Phone User Interface:** Menu->Advanced->BToE->BTOE Paring Pin		

To configure BToE feature via web user interface:

1. Click on **Settings**->**BToE**.

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

3. Enter the desired PIN in the **BToE pairing PIN** field.
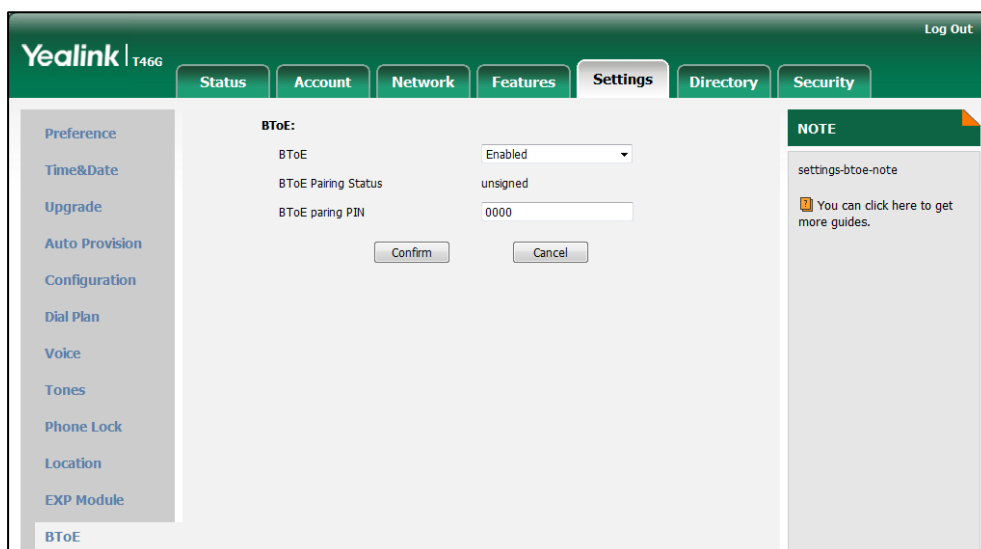
4. Click **Confirm** to accept the change.

To configure BToE feature via phone user interface:

1. Press **Menu** ->**Advanced** (default password: admin) ->**BToE**.

2. Press $\left(\cdot\right)$, $\left(\cdot\right)$ or the **Switch** soft key to select **Enabled** from the **BToE** field.

3. Enter the pairing PIN in the **BToE Pairing Pin** filed.

   The pairing PIN consists of 4-6 digits, the default PIN is "0000".

BToE		
1. BToE:	Enabled	< >
2. BTOE Paring Status:	Unpaired(Not signed in)	
3. BTOE Pairing Pin:	0000	
Back	123	Delete	Save

4. Press **Save** soft key to accept the change or the **Back** soft key to cancel.

To sign into Skype for Business Server using the BToE sign-in method:

1. Download and install the Yealink BToE Connector application to your computer.

2. Sign into the Skype for Business client.

3. Enable BToE feature and enter the correct pair PIN to pair the phone with your computer.

   When no user signs into the phone, a logon dialog will pop up on your PC to prompt you to enter the password.

4. Enter the password on your computer.

5. Click **OK**.

   You can sign into the phone with the same account on your client. Now you can manage calls on your phone using the Skype for Business client.

If the Skype for Business Server is configured to forcibly lock the phone. You need to configure an unlock PIN at the initial sign-in.
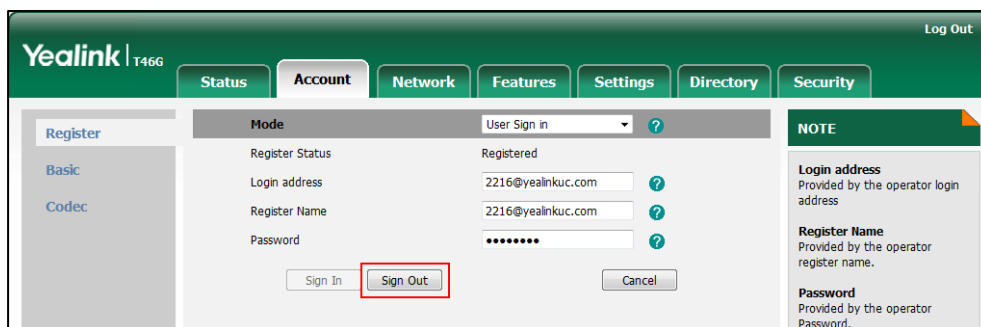
Sign out

Procedure

Sign-out can be configured locally.

Local	Web User Interface	Sign out of Skype for Business Server. **Navigate to**:

		http://<phoneIPAddress>/servlet?p=account-register-lync&q=load&acc=0
	Phone User Interface	Sign out of Skype for Business Server.

To sign out of Skype for Business Server via web user interface:
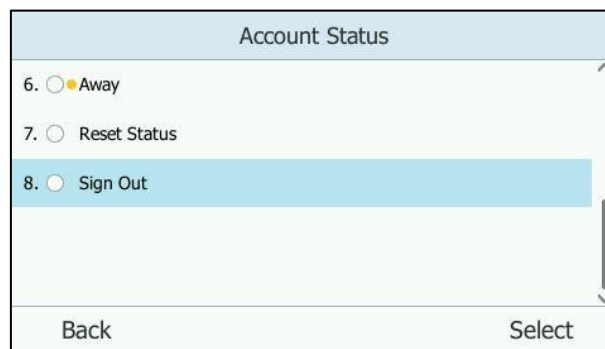
1. Click on **Account**->**Register**.

2. Click **Sign Out** to accept the change.

To sign out of Skype for Business Server:

1. Press the **Status** soft key.

2. Press ⌃ or ⌄ to select **Sign Out**.

    The phone signs out of Skype for Business server.

After you sign out of Skype for Business, the account-related features (calling, viewing Skype for Business contacts, calendar, etc.) are not available. However, you can still use other phone features.

Calendar

Yealink Skype for Business phones integrates with the Microsoft Exchange calendar feature. If your phone is configured to connect to the Microsoft Exchange Server, and the Microsoft® Outlook® application is installed at your site, the Skype conference, appointment, meeting and event scheduled on Microsoft Outlook application will

appear on your phone.

To use the calendar feature on your phone, you must sign into the phone using User Sign in, Device Pairing for Online or BToE Sign In method.

Procedure

Calendar can be configured using the configuration files.

Configuration File	<y0000000000xx>.cfg	Configure calendar feature. **Parameters:** sfb.calendar.enable

Details of Configuration Parameters:

Parameters	Permitted Values	Default
sfb.calendar.enable	0 or 1	1
Description: Enables or disables the calendar feature. **0**-Disabled **1**-Enabled If it is set to 1 (Enabled), user can use calendar feature on the phone. If it is set to 0 (Disabled), user cannot use calendar feature on the phone. **Web User Interface:** None **Phone User Interface:** Menu->Calendar		

User Password

Some menu options are protected by two privilege levels, user and administrator, each with its own password. When signing into the web user interface, you need to enter the user name and password to access various menu options.

A user or an administrator can change the user password. The default user password is "user". For security reasons, the user or administrator should change the default user password as soon as possible.

Procedure

User password can be changed using the configuration files or locally.

Configuration File	<y0000000000xx>.cfg	Change the user password of the

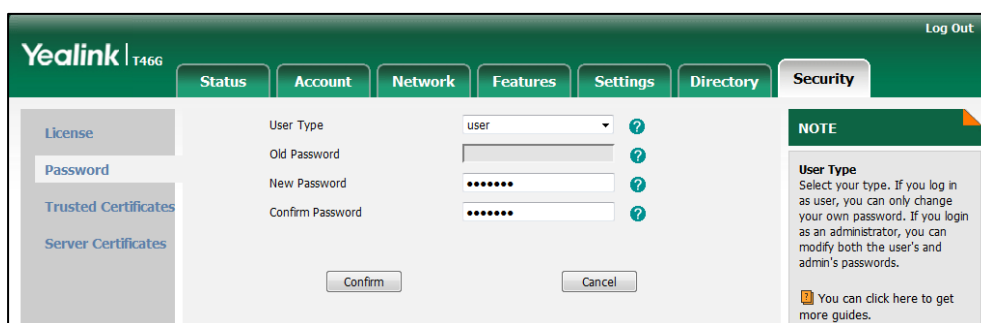|		
		IP phone. **Parameter:** security.user_password
Local	Web User Interface	Change the user password of the IP phone. **Navigate to**: http://\<phoneIPAddress\>/servlet?p=security&q=load

Details of the Configuration Parameter:

Parameter	Permitted Values	Default
security.user_password	**String within 32 characters**	**user**

Description:

Configures the password of the user for phone's web user interface access.

The IP phone uses "user" as the default user password.

The valid value format is username:new password.

Example:

security.user_password = user:123 means setting the password of user (current user name is "user") to password 123.

Note: IP phones support ASCII characters 32-126(0x20-0x7E) in passwords. You can set the password to be empty via web user interface only.

Web User Interface:

Security->Password

Phone User Interface:

None

To change the user password via web user interface:

1. Click on **Security**->**Password**.

2. Select **user** from the pull-down list of **User Type**.

3. Enter new password in the **New Password** and **Confirm Password** fields.

Valid characters are ASCII characters 32-126(0x20-0x7E) except 58(3A).

4. Click **Confirm** to accept the change.

Administrator Password

Advanced menu options are strictly used by administrators. Users can configure them only if they have administrator privileges. The administrator password can only be changed by an administrator. The default administrator password is "admin". For security reasons, the administrator should change the default administrator password as soon as possible.

Procedure

Administrator password can be changed using the configuration files or locally.

Configuration File	<y0000000000xx>.cfg	Change the administrator password. **Parameter**: security.user_password
Local	Web User Interface	Change the administrator password. **Navigate to**: http://<phoneIPAddress>/servlet?p=security&q=load
	Phone User Interface	Change the administrator password.

Details of the Configuration Parameter:

Parameter	Permitted Values	Default
security.user_password	**String within 32 characters**	**admin**

Description:

Configures the password of the administrator for phone's web user interface access. The IP phone uses "admin" as the default administrator password.

Example:

security.user_password = admin:123 means setting the password of administrator (current user name is "admin") to password 123.

Note: IP phones support ASCII characters 32-126(0x20-0x7E) in passwords. You can set the password to be empty via web user interface only.

Web User Interface:

Security->Password

Phone User Interface:

Menu->Advanced->Set Password

To change the administrator password via web user interface:

1. Click on **Security**->**Password**.

2. Select **admin** from the pull-down list of **User Type**.

3. Enter the current administrator password in the **Old Password** field.

4. Enter new password in the **New Password** and **Confirm Password** fields.

   Valid characters are ASCII characters 32-126(0x20-0x7E) except 58(3A).
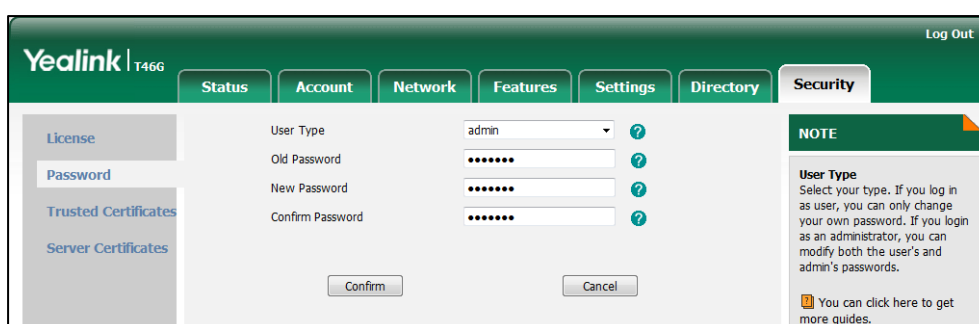
5. Click **Confirm** to accept the change.

To change the administrator password via phone user interface:

1. Press **Menu**->**Advanced** (default password: admin) ->**Set Password**.

2. Enter the current administrator password in the **Current PWD** field.

3. Enter new password in the **New PWD** field and **Confirm PWD** field.

Valid characters are ASCII characters 32-126(0x20-0x7E).



4. Press the **Save** soft key to accept the change.

Configuring Boss-Admin Feature

The boss-admin feature, which is also called boss-delegate feature, enables a "boss" phone and delegates' phones to ring simultaneously when a user calls the boss. When one party answers the call, the other phone will stop ringing. A boss can assign delegates and delegates can manage calls on behalf of the boss's line. For more information, refer to *Yealink phone-specific user guide*.
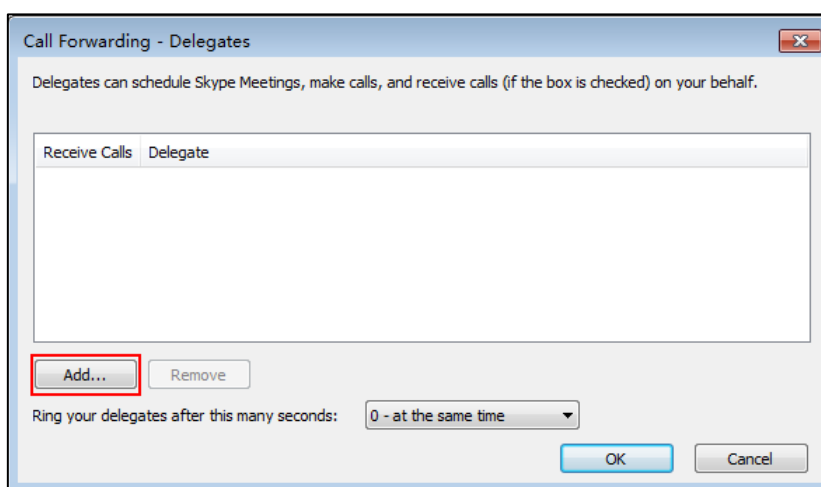
To assign delegates using Skype for Business client:

1. Open Skype for Business client.

2. Sign into Skype for Business client as the person who wants to assign a delegate.

3. Click the button, and then click **Call Forwarding Settings**.

4. Mark the radio box in **Simultaneously ring** field.

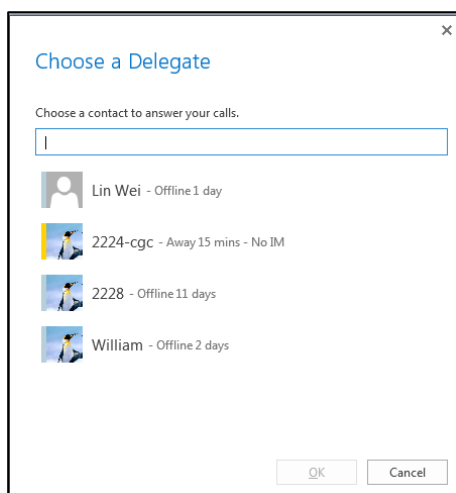**5.** Select **My Delegates** from the pull-down list of **Simultaneously ring**.
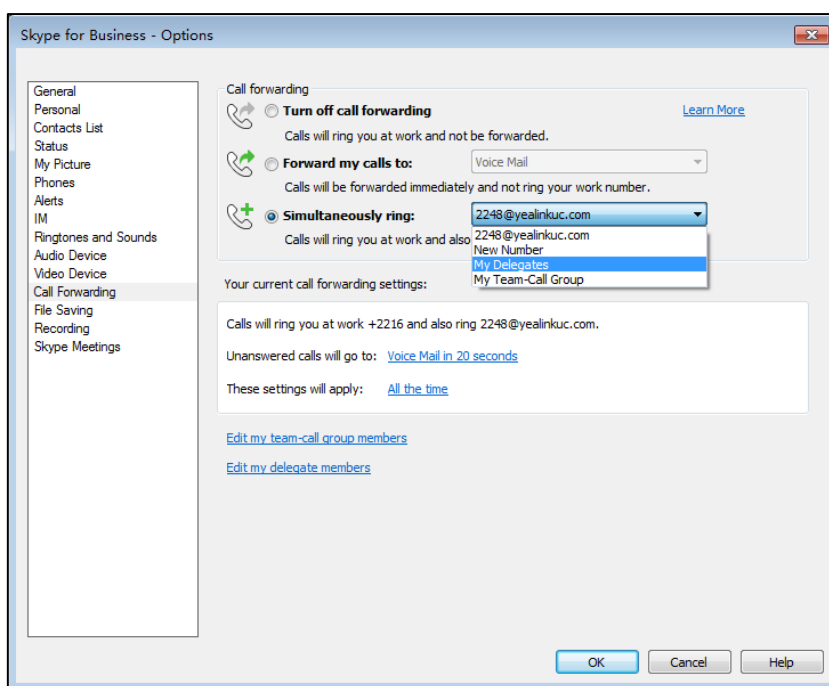
6. In the **Delegate**s dialog box, click **Add**. Each delegate must be a Skype for Business contact.

**7.** Select the desired delegates from the **Choose a Delegate** dialog box.

8. Click **OK**.

9. Click **OK** in the **Delegates** dialog box.

10. Click **OK** in the **Options** dialog box.

To view your delegates when you are a boss:

Once you assign delegates on the Skype for Business Server client, a Delegates group will be added your phone automatically.

1. Press the **Directory** soft key.

2. Press ⏶ or ⏷ to select **Delegates**, and then presss the **Enter** soft key.
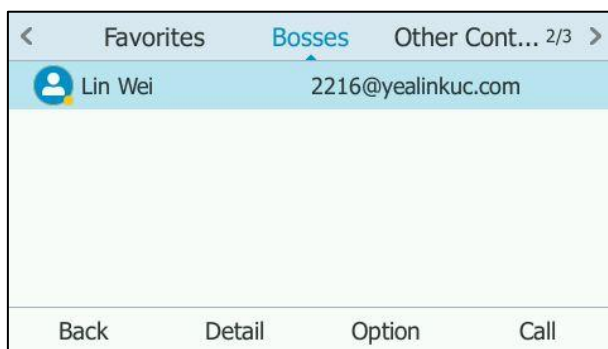
Your delegate(s) will be displayed.
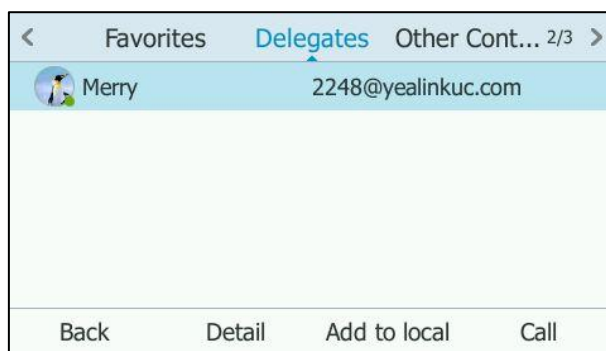
To view your bosses when you are a delegate:

Once you are assigned to be a delegate on the Skype for Business Server client, a Bosses group will be added to your phone automatically.

1. Press the **Directory** soft key.

2. Press ⏶ or ⏷ to select **Bosses**, and then presss the **Enter** soft key.

Your boss(es) will be displayed.

To remove a delegate from Skype for Business client:

1. Open Skype for Business client.

2. Sign into Skype for Business client as the person who wants to remove a delegate.

   Make sure **My Delegates** option is not selected in either the **Simultaneously ring** or **Forward my calls to** list.

3. Click **Edit my delegate members**.
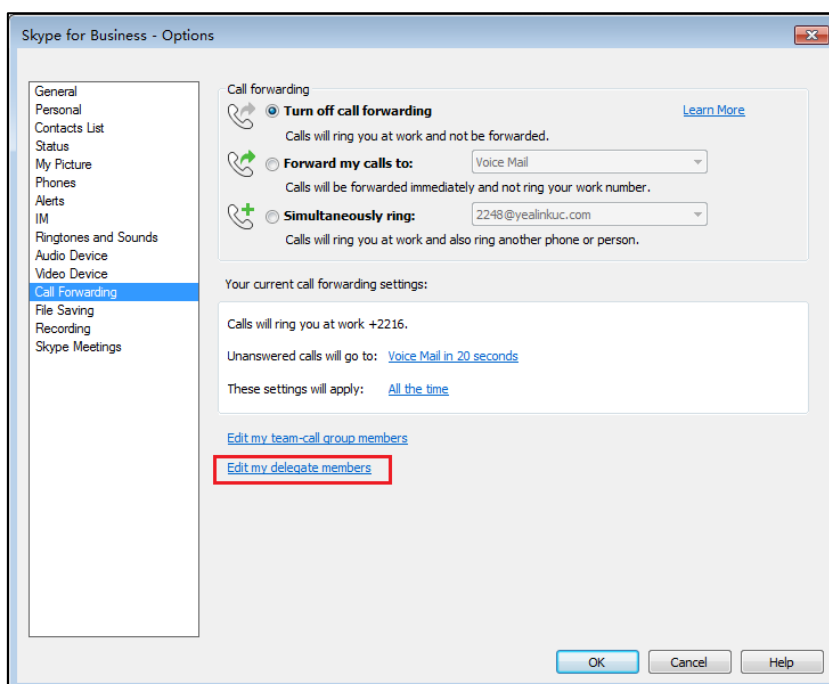
4. Check the checkbox of the delegate you want to remove.

5. Click **Remove**.

6. Click **OK** in the **Delegates** dialog box.

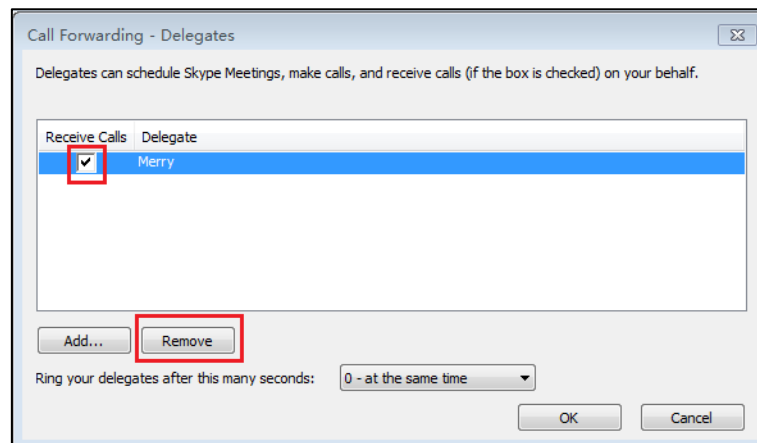7. Click **OK** in the **Option**s dialog box.

Uploading a Trusted Certificate

When the IP phone requests a TLS connection with a server, the IP phone should verify the certificate sent by the server to decide whether it is trusted based on the trusted certificates list.

The IP phone has 44 built-in trusted certificates. You can upload 10 custom certificates at most. The format of the trusted certificate files must be *.pem,*.cer,*.crt and *.der and the maximum file size is 5MB.

Yealink IP phones trust the following CAs by default:

● DigiCert High Assurance EV Root CA

● Deutsche Telekom AG Root CA-2

● Equifax Secure Certificate Authority

● Equifax Secure eBusiness CA-1

● Equifax Secure Global eBusiness CA-1

● GeoTrust Global CA

● GeoTrust Global CA2

● GeoTrust Primary CA

● GeoTrust Primary CA G2 ECC

● GeoTrust Universal CA

● GeoTrust Universal CA2

● Thawte Personal Freemail CA

● Thawte Premium Server CA

● Thawte Primary Root CA - G1 (EV)

- Thawte Primary Root CA - G2 (ECC)

- Thawte Primary Root CA - G3 (SHA256)

- Thawte Server CA

- VeriSign Class 1 Public Primary Certification Authority

- VeriSign Class 1 Public Primary Certification Authority - G2

- VeriSign Class 1 Public Primary Certification Authority - G3

- VeriSign Class 2 Public Primary Certification Authority - G2

- VeriSign Class 2 Public Primary Certification Authority - G3

- VeriSign Class 3 Public Primary Certification Authority

- VeriSign Class 3 Public Primary Certification Authority - G2

- VeriSign Class 3 Public Primary Certification Authority - G3

- VeriSign Class 3 Public Primary Certification Authority - G4

- VeriSign Class 3 Public Primary Certification Authority - G5

- VeriSign Class 4 Public Primary Certification Authority - G2

- VeriSign Class 4 Public Primary Certification Authority - G3

- VeriSign Universal Root Certification Authority

- Microsoft_IT_SSL_SHA2.cer

- CNNIC_Root.cer

- baltimoreCyberTrust.cer

- UserTrust.cer

- AAA Certificate Services.cer

- DigiCert Assured ID Root CA.cer

- Entrust.net Certification Authority (2048).cer

- Entrust Root Certification Authority

- Entrust.net Secure Server Certification Authority

- GTE CyberTrust Global Root.cer

- Starfield Class 2 Certification Authority.cer

- AddTrust External CA Root

- Go Daddy Class 2 Certification Authority

- StartCom Certification Authority

Note	Yealink endeavors to maintain a built-in list of most common used CA Certificates. Due to memory constraints, we cannot ensure a complete set of certificates. If you are using a certificate from a commercial Certificate Authority not in the list above, you can send a request to your local distributor. At this point, you can upload your particular CA certificate into your phone.

Uploading a Trusted Certificate from the Provisioning Server

Procedure

Configuration changes can be performed using the configuration files or locally.

|		
Configuration File	<y0000000000xx>.cfg	Upload the trusted certificates. **Parameter:** trusted_certificates.url
Local	Web User Interface	Upload the trusted certificates. **Navigate to**: http://<phoneIPAddress>/servlet?p=server-cert&q=load

Details of Configuration Parameters:

Parameters	Permitted Values	Default
trusted_certificates.url	**URL within 511 characters**	**Blank**

Description:

Configures the access URL of the custom trusted certificate used to authenticate the connecting server.

Example:

trusted_certificates.url = http://192.168.1.20/tc.crt

Note: The certificate you want to upload must be in *.pem, *.crt, *.cer or *.der format.

Web User Interface:

Security->Trusted Certificates->Load trusted certificates file

Phone User Interface:

None

Uploading a Trusted Certificate via Web User Interface

To upload a trusted certificate via web user interface:

1. Click on **Security**->**Trusted Certificates**.

2. Click **Browse** to select the certificate (*.pem, *.crt, *.cer or *.der) from your local system.
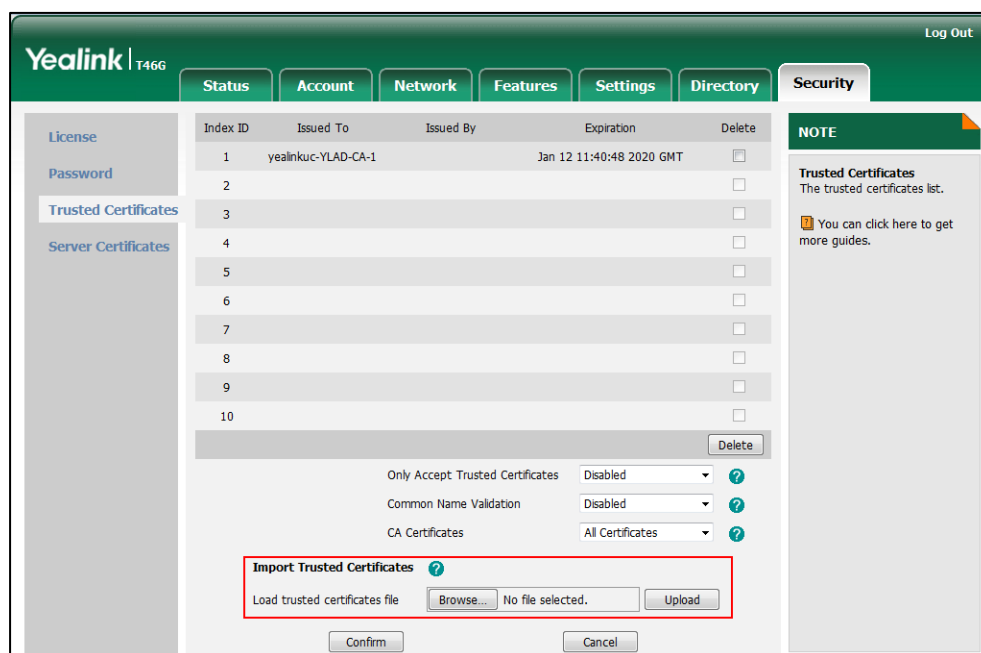
3. Click **Upload** to upload the certificate.

Upgrading Phone Firmware

Common reasons for updating firmware include fixing bugs or adding features to the device. You can download the latest firmware for your product online:

http://www.yealink.com/solution_info.aspx?ProductsCateID=1248&cateid=1248&BaseI nfoCateId=1328&Cate_Id=1248&parentcateid=1328.

Yealink supports three methods to upgrade phone firmwares:

- **Upgrade firmware from provisioning server**: Download firmware in ROM file format, and use auto provisioning method to upgrade the firmware. This method requires setting up a provisioning server, and uses configuration files to provision the phone.

- **Upgrade firmware via web user interface**: Download firmware in ROM file format from Yealink website, and upload it to the phone via web user interface. This method can deploy small number of phones.

- **Upgrade firmware from Skype for Business Server**: Download firmware in CAB file format, and place the firmware on Skype for Business Server to provision the phones.

The following table lists the associated and latest firmware name for each IP phone model (X is replaced by the actual firmware version).

IP Phone Model	Associated Firmware Name	Firmware Name(.rom)	Firmware Name(.cab)
SIP-T48G	35.x.x.x.rom	35.8.0.21.rom	Yealink_ver_35.8.0.21.cab
SIP-T46G	28.x.x.x.rom	28.8.0.21.rom	Yealink_ver_28.8.0.21.cab
SIP-T42G/ T41P	29.x.x.x.rom	29.8.0.21.rom	Yealink_ver_29.8.0.21.cab
SIP-T40P	54.x.x.x.rom	54.8.0.21.rom	Yealink_ver_54.8.0.21.cab

Note   Do not unplug the network and power cables when the IP phone is upgrading firmware.

Upgrading Firmware from the Provisioning Server

IP phones support using FTP, TFTP, HTTP and HTTPS protocols to download configuration files and firmware from the provisioning server, and then upgrade firmware automatically.

IP phones can download firmware stored on the provisioning server in one of two ways:

- Check for configuration files and then download firmware during startup.

- Automatically check for configuration files and then download firmware at a fixed interval or specific time.

Method of checking for configuration files is configurable.

Procedure

Configuration changes can be performed using the configuration files or locally.

Configuration File	<y0000000000xx>.cfg	Configure the way for the IP phone to check for configuration files. **Parameters:** auto_provision.power_on auto_provision.repeat.enable auto_provision.repeat.minutes auto_provision.weekly.enable auto_provision.weekly.begin_time auto_provision.weekly.end_time auto_provision.weekly.dayofweek Specify the access URL of firmware. **Parameter:**

		firmware.url
Local	Web User Interface	Configure the way for the IP phone to check for configuration files. **Navigate to**: http://<phoneIPAddress>/servlet?p=settings-autop&q=load

Details of Configuration Parameters:

Parameters	Permitted Values	Default
auto_provision.power_on	**0 or 1**	**1**
Description: Triggers the power on feature to on or off. **0**-Off **1**-On If it is set to 1 (On), the IP phone will perform an auto provisioning process when powered on. **Web User Interface:** Settings->Auto Provision->Power On **Phone User Interface:** None		
auto_provision.repeat.enable	**0 or 1**	**0**
Description: Triggers the repeatedly feature to on or off. **0**-Off **1**-On If it is set to 1 (On), the IP phone will perform an auto provisioning process repeatedly. **Web User Interface:** Settings->Auto Provision->Repeatedly **Phone User Interface:** None		
auto_provision.repeat.minutes	**Integer from 1 to 43200**	**1440**

Parameters	Permitted Values	Default
Description:		
Configures the interval (in minutes) for the IP phone to perform an auto provisioning process repeatedly.		
Note: It works only if the value of the parameter "auto_provision.repeat.enable" is set to 1 (On).		
Web User Interface:		
Settings->Auto Provision->Interval(Minutes)		
Phone User Interface:		
None		
auto_provision.weekly.enable	**0 or 1**	**0**
Description:		
Triggers the weekly feature to on or off.		
0-Off		
1-On		
If it is set to 1 (On), the IP phone will perform an auto provisioning process weekly.		
Web User Interface:		
Settings->Auto Provision->Weekly		
Phone User Interface:		
None		
auto_provision.weekly.begin_time	**Time from 00:00 to 23:59**	**00:00**
Description:		
Configures the begin time of the day for the IP phone to perform an auto provisioning process weekly.		
Note: It works only if the value of the parameter "auto_provision.weekly.enable" is set to 1 (On).		
Web User Interface:		
Settings->Auto Provision->Time		
Phone User Interface:		
None		
auto_provision.weekly.end_time	**Time from 00:00 to 23:59**	**00:00**

Parameters	Permitted Values	Default
Description: Configures the end time of the day for the IP phone to perform an auto provisioning process weekly. **Note**: It works only if the value of the parameter "auto_provision.weekly.enable" is set to 1 (On). **Web User Interface:** Settings->Auto Provision->Time **Phone User Interface:** None		
auto_provision.weekly.dayofweek	**0, 1, 2, 3, 4, 5, 6 or a combination of these digits**	**0123456**
Description: Configures the days of the week for the IP phone to perform an auto provisioning process weekly. **0**-Sunday **1**-Monday **2**-Tuesday **3-**Wednesday **4**-Thursday **5**-Friday **6**-Saturday **Example**: auto_provision.weekly.dayofweek = 01 It means the IP phone will perform an auto provisioning process every Sunday and Monday. **Note**: It works only if the value of the parameter "auto_provision.weekly.enable" is set to 1 (On). **Web User Interface:** Settings->Auto Provision->Day of Week **Phone User Interface:** None		
firmware.url	**URL within 511 characters**	**Blank**

Parameters	Permitted Values	Default
Description: Configures the access URL of the firmware file. **Example:** firmware.url = http://192.168.1.20/28.8.0.21.rom **Note:** If you change this parameter, the IP phone will reboot to make the change take effect. **Web User Interface:** Settings->Upgrade->Select and Upgrade Firmware **Phone User Interface:** None		

To configure the way for the IP phone to check for configuration files via web user interface:

1. Click on **Settings**->**Auto Provision**.

2. Make the desired change.
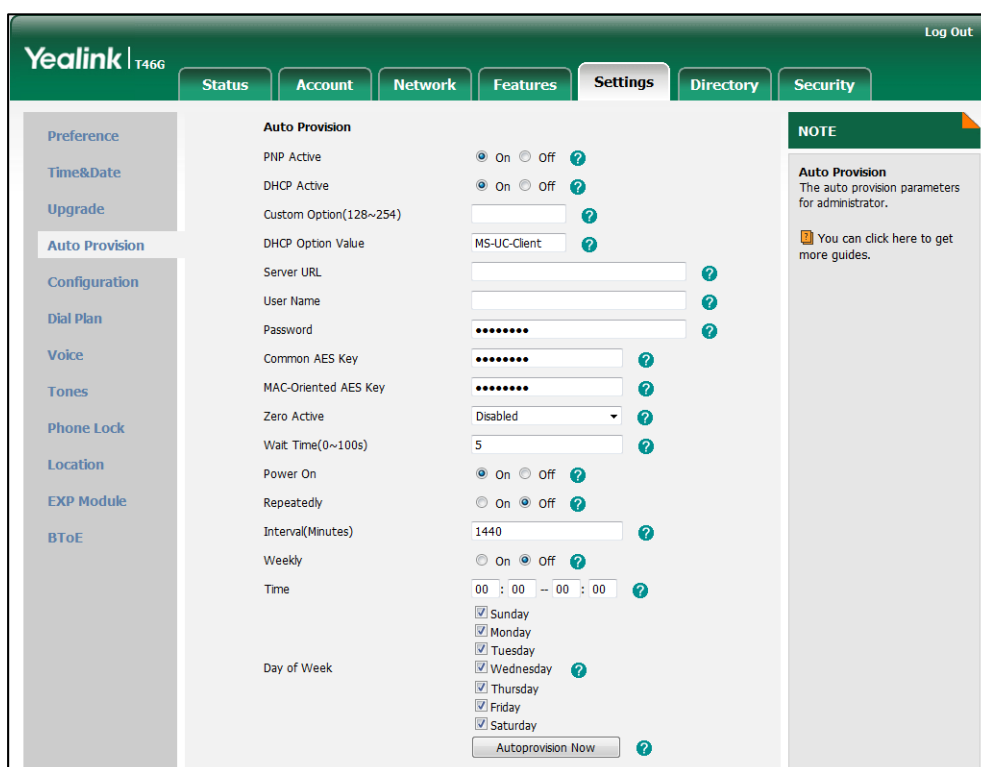
3. Click **Confirm** to accept the change.

When the "Power On" is set to **On**, the IP phone will check configuration files stored on the provisioning server during startup and then will download firmware from the server.
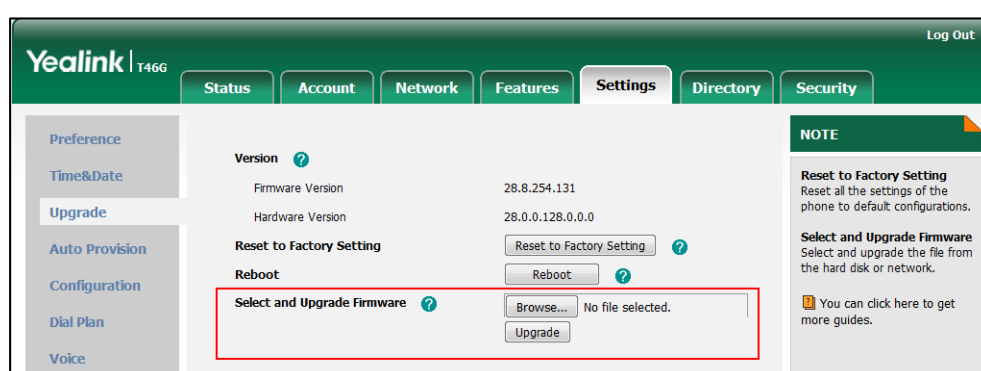
Upgrading Firmware via Web User Interface

To manually upgrade firmware via web user interface, you need to store firmware to your local system in advance.

To upgrade firmware manually via web user interface:

1. Click on **Settings**->**Upgrade**.

2. Click **Browse** to locate the required firmware from your local system.

3. Click **Upgrade**.

   A dialog box pops up to prompt "Firmware of the SIP Phone will be updated. It will take 5 minutes to complete. Please don't power off!".

4. Click **OK** to confirm the upgrade.

Note	Do not close and refresh the browser when the IP phone is upgrading firmware via web user interface.

Upgrading Firmware from Skype for Business Server

The following section briefly describes the upgrade process. For more detailed information, refer to *Updating Phone Firmware from Microsoft Skype for Business Server Guide*.
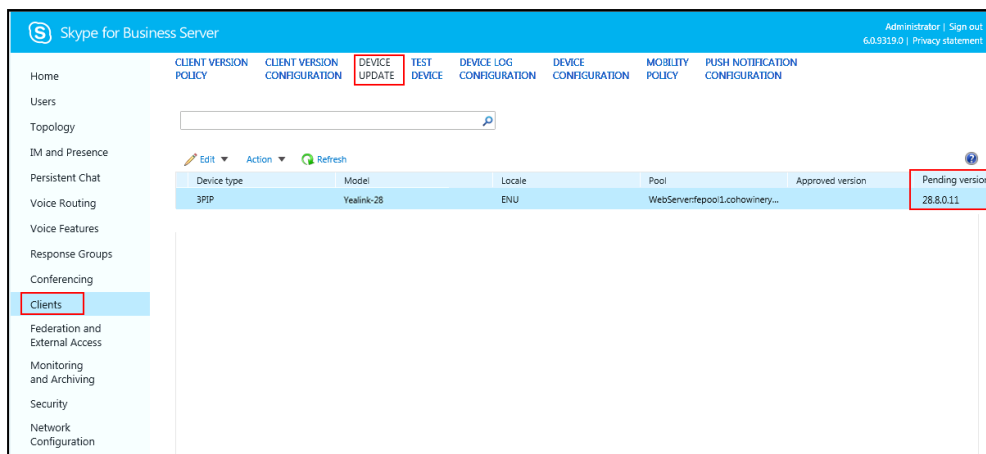
To upgrade firmware from Skype for Business Server:

1. Download firmware in CAB file format (e.g., Yealink_ver_28.8.0.11.cab) to your computer.

2. Go to Skype for Business Server and copy the CAB file to a C: drive directory.

3. Use the Windows PowerShell to go to a particular directory.

4. In the Windows PowerShell, run the following import command:

   Import-CsDeviceUpdate -Identity "service:webserver:fepool.cohowinery.cohovineyard.com" -FileName c:\Yealink_ver_28.8.0.11.cab

The -Identity value format is important and must be exactly service:webServer:< Skype for Business FQDN>, while the –FileName value is simply an absolute path of the CAB file.

```
PS C:\Users\administrator.COHOWINERY>
PS C:\Users\administrator.COHOWINERY> Import-CsDeviceUpdate -Identity "service:webserver:fepool.cohowinery.cohovineyard.
com" -FileName c:\Yealink_ver_28.8.0.11.cab_
```

5. In the Skype for Business Control Panel, click on **Clients ->DEVICE UPDATE** to view firmware versions available on Skype for Business Server.

6. Click on **Clients > DEVICE UPDATE-> Action > Approve** to approve the firmware.

The firmware version will be displayed as Approved Version.
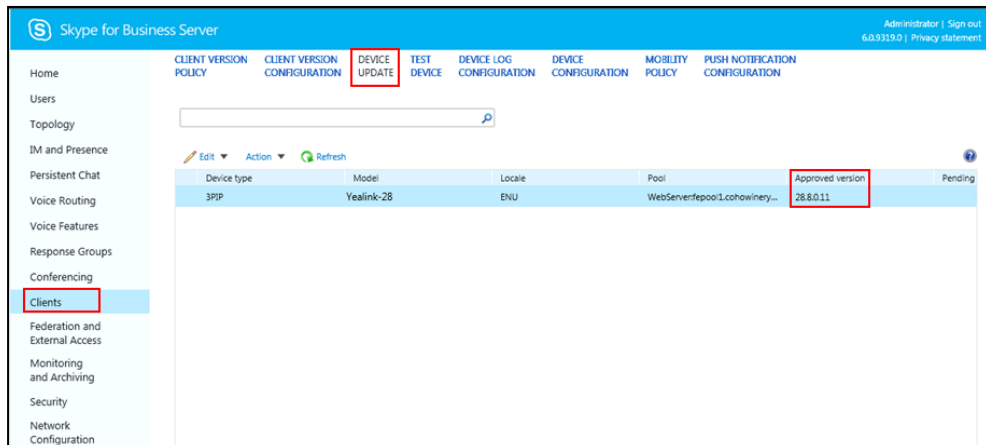
There are two ways for the phones to update firmware from Skype for Business Server:

● Automatic Update

● Manual Update

Automatic Update

a) Reboot

When the phone connects to the network and is powered on, it automatically checks if an update is available on Skype for Business Server, regardless of whether a Skype for

Business Server user signs on the phone. If there is an update available on Skype for Business Server, the phone will automatically update firmware.

b)   Regular Update When a User Signs in

If the phone is powered on, and a user signs in, the phone automatically checks if an update is available on Skype for Business Server when the auto timer (8 hours) expires. If there is an update available, and the phone is idle, the phone LCD screen pops up a dialog box:
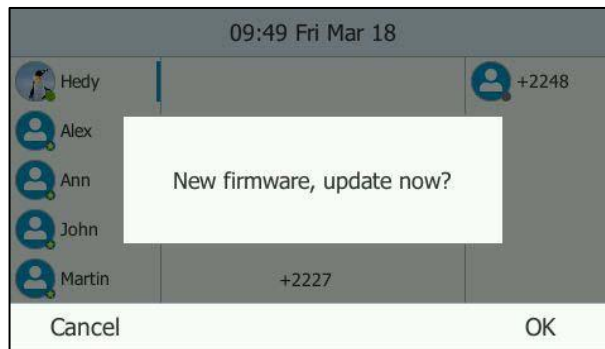
Press the **OK** soft key to update immediately or the **Cancel** soft key to cancel the update. If the phone is in a call, the prompt box will pop up after the phone releases the call.

c)   Regular Update When no User Signs in

If the phone is powered on, and no user signs in, the phone automatically checks if an update is available on Skype for Business Server when the auto update timer (8 hours) expires. If there is an update available, the phone will automatically update firmware.

> The IP phone will not perform an update check when a user signs in/out. It only performs an update check when the auto update timer (8 hours) expires. The timer will be cleared when the phone reboots or a user signs in/out.
>
> If there is no update available on Skype for Business Server, the IP phone does not prompt any message when the timer expires.

Manual Update

You can initiate an update immediately, just power off the phone and power on it again. The phone will boot up, check for updates and apply the updates. You can also trigger an update manually via phone user interface.

To trigger an update manually via phone user interface:

1.   Press **Menu**-> **Basic** ->**Firmware Update**.

2.   Press the **Update** soft key.

The LCD screen prompts "New firmware, update now?".

3. Press the **OK** soft key to confirm the update.

If there is no update available on Skype for Business Server, the LCD screen prompts "The firmware is the latest".

Resetting the Phone to Factory Default Settings

Reset the phone to factory configurations after you have tried all appropriate troubleshooting suggestions but still have not solved your problems.

When factory resetting the phone, the following happens:

- The call logs will be deleted.

- Passwords will be reset to default.

- All configuration parameters will be reset to default values.

- All custom files will be deleted. Such as, local contacts and registered accounts.

Three ways to reset the phone:

- **Full Reset**: All configurations and userdata on the phone will be reset.

- **Config Reset**: All configurations (e.g., account, call history) set on the phone will be reset.

- **Userdata Reset**: All custom data (e.g., ring tone) set on the phone will be reset.

To reset the phone via phone user interface:

1. Press **Menu->Advanced** (default password: admin) ->**Reset to Factory**.

2. Press (‹) or (›), or the **Switch** soft key to select the desired value from the **Reset Option** field.

3. Press the **Save** soft key.

   The LCD screen prompts the following warning:
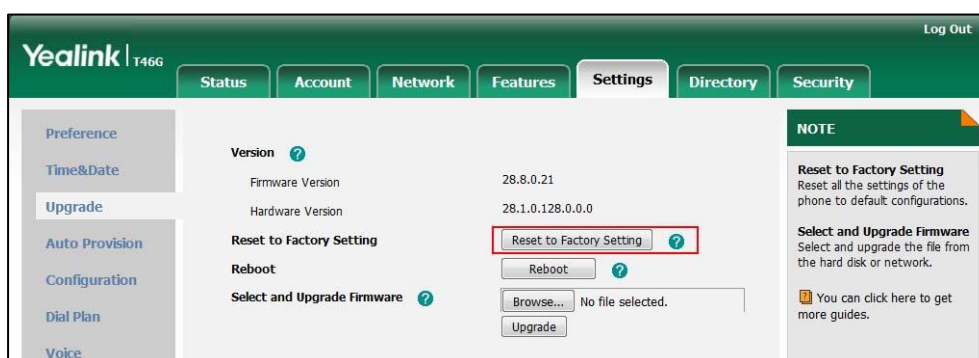

4. Press the **OK** soft key.

   The LCD screen prompts "Resetting to factory,please wait…".

   The phone will be reset to factory settings sucessfully after startup.

To reset the phone via web user interface:

1. Click on **Settings**->**Upgrade**.

2. Click **Reset to Factory Setting** in the Reset to Factory Setting field.

   The web user interface prompts the message "Do you want to reset to factory?".

3. Click **OK** to confirm the resetting.

   The IP phone will be reset to factory sucessfully after startup.

Note   Reset of your phone may take a few minutes. Do not power off until the phone has started up successfully.

Branch Office Resiliency

Branch office resiliency is critical for multi-site deployments of Microsoft Skype for Business Server where the control servers are located at a central site or data center. It allows branch site users to continue to have Enterprise Voice service and voice mail (if voice mail rerouting settings are configured) when the branch site loses the connection to the central site.

When the WAN connection between the branch site and central site is unavailable, the phone goes into resiliency mode:

- Branch site user on the phone stays signed in with an indication of "Limited service due to outage".

- Presence icon on the phone LCD screen is displayed as Unknown icon: ● (SIP-T46G/T48G)/ ? (SIP-T42G/T41P/T40P).

- Call between branch site users is established successfully with 2-way audio.

- Conference between branch site users can be established successfully.

- The call history cannot get modified. (Already downloaded call log entries will not be deleted)

- Calls can be placed from the call history on the IP phone.

- Contact list is unavailable but you can search for a contact on the IP phone.

- User is not able to change his presence state manually.

- User is not able to use calendar feature.

- User is not able to receive the voice mail as exchange is unreachable and when IP phone comes out of resiliency mode, it downloads the yet undownloaded voice mail items and updates the voice mail screen.

- Calls between the branch office phones can be transferred to another branch site user.

- Call forward settings cannot be changed.

When the WAN connection between the branch site and central site becomes available, the phone comes out of resiliency mode automatically. You can use phone features as normal.

Note For more information on branch office resiliency, contact your system administrator.

Troubleshooting

This chapter provides an administrator with general information for troubleshooting some common problems that he (or she) may encounter while using IP phones.

Why can't I sign into Skype for Business Server on the phone?

- Check your phone is properly connected to the switch or hub.

- Validate your domain name and sign-in information are correct.

- Ensure that DNS address is properly configured on the phone, or DHCP is configured to provide DNS address as part of DHCP response.

What's the main difference between PIN Sign-in and User Sign-in?

The sign-in screen appears after phone initialization by default. User Sign-in method uses the user name, sign-in address and password to sign in. PIN Sign-in method uses the user's extension and PIN to sign in.

How to reboot the phone?

To reboot the phone via web user interface:

1. Click on **Settings**->**Upgrade**.

2. Click **Reboot** to reboot the IP phone.
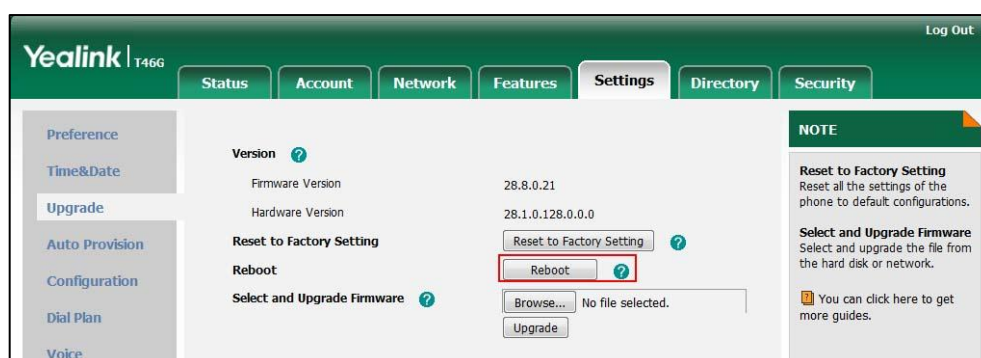
Any reboot of the phone may take a few minutes.

How to export PCAP trace?

We may need you to provide a PCAP trace to help analyze your problem.

To export a PCAP trace via web user interface:

1. Click on **Settings**->**Configuratio**n.

2. Click **Start** to begin capturing signal traffic.

3. Recreate the error to be documented in the trace.

4. Click **Stop** to stop the capture.

5. Click **Export** to open file download window, and then save the file to your local system.
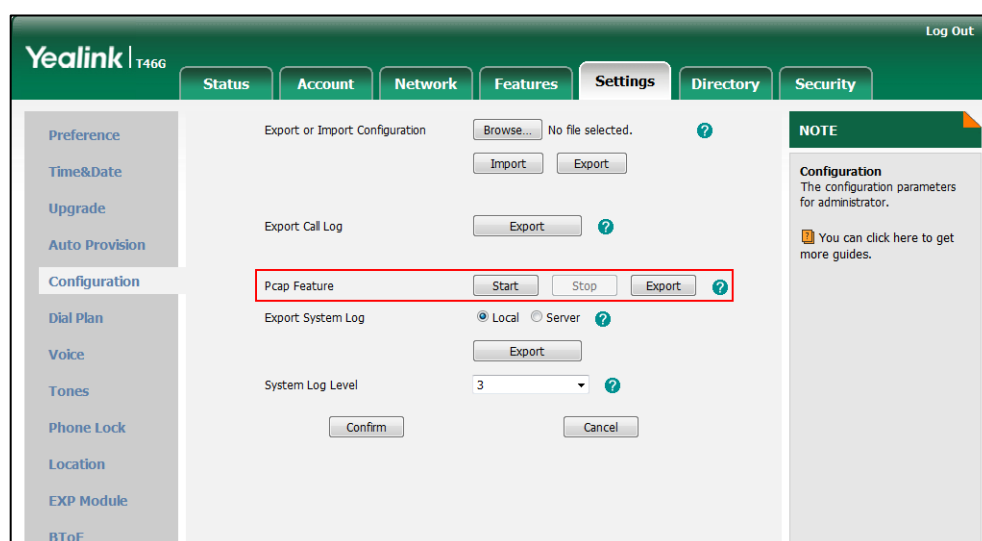
Exporting the Log File

The log files are Yealink specific debug files which may be requested by the Yealink support organization. If you need technical support, you can export the log files to a syslog server, local system or the Skype for Business Server. You can also specify the severity level of the log to be reported to a log file. The default system log level is 6.

Exporting the Log File to the Skype for Business Server

You can upload system log to the Skype for Business Server via phone user interface only.

To export a log file to the Skype for Business Server via phone user interface:

1. Press **Menu**->**Basic**->**Log Upload**.

A dialog box pops up to prompt "Log Upload Success！".

The log file can be found on the Skype for Business Server at %ocsfilestore%\%domain%-WebServices-1\DeviceUpdateLogs\Cient.

Exporting the Log File to the Local System

To export a log file to the local system via web user interface:

1. Click on **Settings**->**Configuration**.

2. Mark the **Local** radio box in the **Export System Log** field.

3. Click **Export** to open file download window, and then save the file to your local system.
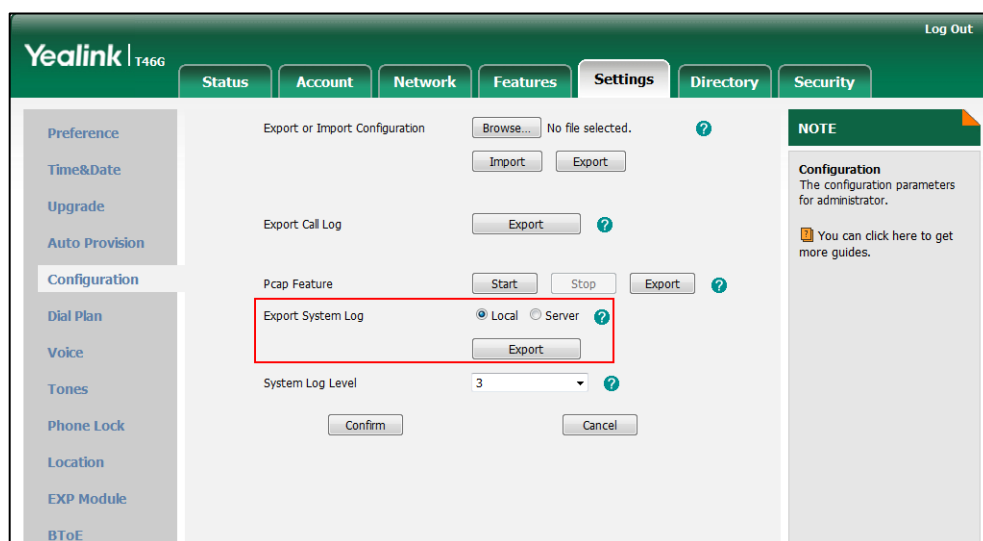

A log file named **syslog.tar** is successfully exported to your local system.

Exporting the Log File to a Syslog Server

To configure the phone to export the system log to a syslog server via web user interface:

1. Click on **Settings**->**Configuration**.

2. Mark the **Server** radio box in the **Export System Log** field.

3. Enter the IP address or domain name of the syslog server in the **Server Name** field.

   For example, the IP address of your syslog server is 192.168.1.100.
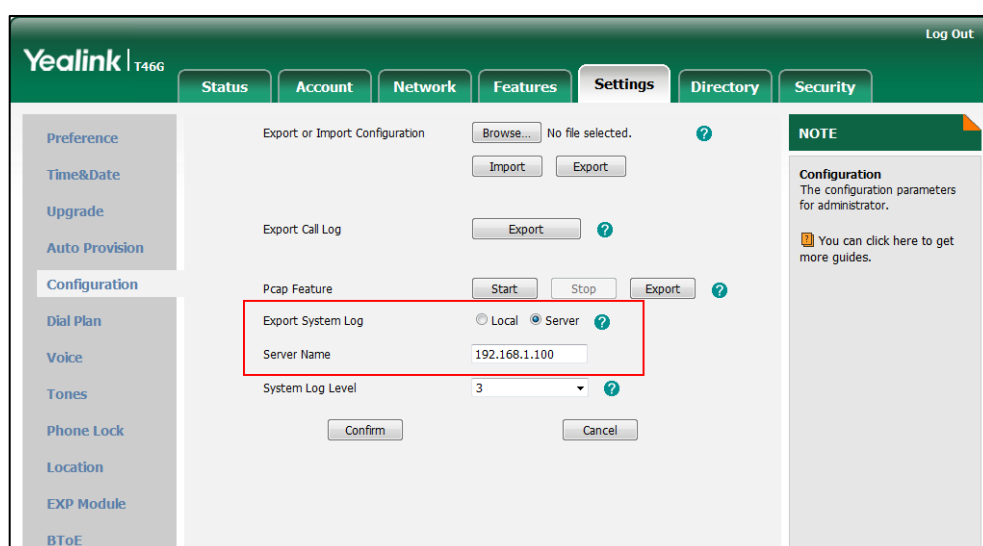
4. Click **Confirm** to accept the change.

   A dialog box pops up to prompt "Do you want to restart your machine?". The

configuration will take effect after a reboot.

5. Click **OK** to reboot the phone.

The system log will be exported successfully to the desired syslog server (192.168.1.100) after a reboot.