Yealink

Yealink SIP-T2 Series/T19P/T4 Series IP Phones Auto Provisioning Guide

Version 72.25

Feb. 2014

Table of Contents

Table of Contents iii

Summary of Changes vii

Changes for Release 72, Guide Version 72.25 vii
Changes for Release 72, Guide Version 72.2 vii
Changes for Release 72, Guide Version 72.1 vii
Changes for Release 71, Guide Version 71.165 viii
Changes for Release 71, Guide Version 71.140 viii
Changes for Release 71, Guide Version 71.125 viii
Changes for Release 71, Guide Version 71.120 viii
Changes for Release 71, Guide Version 71.110 viii
Changes for Release 70, Guide Version 1.3 ix

Introduction 1

Getting Started 3

Obtaining Configuration Information 3
Obtaining Configuration Files 3
Obtaining Phone Information 4
Managing Configuration Files 4
Editing Common CFG File 5
Editing MAC-Oriented CFG File 7
Encrypting Configuration Files 14
Customizing Resource Files 14
Customizing a Ring Tone 14
Customizing an LCD Language 15
Customizing an LCD Logo 16
Customizing a Wallpaper 17
Customizing a Local Contact File 18
Customizing a Replace Rule File 21
Customizing a Dial-now File 22
Customizing a Directory Template 23
Customizing a Super Search Template 24
Upgrading Firmware 25

Configuring a TFTP Server 27

Preparing a Root Directory 27

Configuring a TFTP Server 28

Obtaining the Address of Provisioning Server 29

Zero Touch 29

Plug and Play (PnP) Server 31

DHCP Options 32

Phone Flash 33

Update Mode 35

Power On 35

Repeatedly 36

Weekly 37

Auto Provision Now 38

Multi-mode Mixed 39

SIP NOTIFY Message 39

Downloading and Verifying Configurations 41

Downloading Configuration Files 41

Resolving and Updating Configurations 41

Verifying Configurations 42

Troubleshooting 45

Glossary 47

Appendix 49

Configuring an FTP Server 49

Preparing a Root Directory 49

Configuring an FTP server 50

Configuring an HTTP Server 52

Preparing a Root Directory 52

Configuring an HTTP Server 52

Configuring a DHCP server 55

Customizing a Ring Tone Using Cool Edit Pro 63

Customizing a Logo File Using PictureExDemo 64

Description of Configuration Parameters in CFG Files 65
Time Zones 225
BLF LED Mode 228

Summary of Changes

This section describes the changes to this guide for each release and guide version.

Changes for Release 72, Guide Version 72.25

Major updates have occurred to the following sections:

- Description of Configuration Parameters in CFG Files on page 65

Changes for Release 72, Guide Version 72.2

This version is updated to incorporate SIP-T48G IP phones. The following sections are new for this version:

- Customizing a Directory Template on page 23
- Customizing a Super Search Template on page 24

Major updates have occurred to the following sections:

- Editing Common CFG File on page 5
- Editing MAC-Oriented CFG File on page 7
- Customizing Resource Files on page 14
- Description of Configuration Parameters in CFG Files on page 65
- BLF LED Mode on page 228

Changes for Release 72, Guide Version 72.1

This version is updated to incorporate SIP-T46G, SIP-T42G and SIP-T41P IP phones. The following sections are new for this version:

- Time Zones on page 225
- BLF LED Mode on page 228

Major updates have occurred to the following sections:

- Editing Common CFG File on page 5
- Editing MAC-Oriented CFG File on page 7
- Customizing Resource Files on page 14
- Description of Configuration Parameters in CFG Files on page 65

Changes for Release 71, Guide Version 71.165

Documentations of the newly released SIP-T21P and SIP-T19P IP phones have also been added.

Changes for Release 71, Guide Version 71.140

Major updates have occurred to the following sections:

- Editing Common CFG File on page 5
- Editing MAC-Oriented CFG File on page 7
- Encrypting Configuration Files on page 14
- Customizing an LCD Logo on page 16
- Customizing a Local Contact File on page 18
- Description of Configuration Parameters in CFG Files on page 65

Changes for Release 71, Guide Version 71.125

Major updates have occurred to the following section:

- Customizing an LCD Logo on page 16

Changes for Release 71, Guide Version 71.120

Major updates have occurred to the following section:

- Description of Configuration Parameters in CFG Files on page 65

Changes for Release 71, Guide Version 71.110

The following sections are new for this version:

- Encrypting Configuration Files on page 14
- Update Mode on page 35
- SIP NOTIFY Message on page 39
- Resolving and Updating Configurations on page 41
- Description of Configuration Parameters in CFG Files on page 65

Major updates have occurred to the following sections:

- Customizing a Local Contact File on page 18
- Customizing a Replace Rule File on page 21

- Customizing a Dial-now File on page 22

Changes for Release 70, Guide Version 1.3

The following sections are new for this version:

- Customizing a Wallpaper on page 17
- Customizing a Replace Rule File on page 21
- Customizing a Dial-now File on page 22

Major updates have occurred to the following sections:

- Customizing a Local Contact File on page 18
- Upgrading Firmware on page 25

Introduction

Yealink IP phones are full-featured telephones that can be plugged directly into an IP network and can be used easily without manual configuration.

This guide provides instructions on how to provision Yealink IP phones with the minimum settings required. Yealink IP phones support FTP, TFTP, HTTP, and HTTPS protocols for auto provisioning and are configured by default to use the TFTP protocol.

The purpose of this guide is to serve as a basic guidance for provisioning Yealink IP phones, including:

- Yealink SIP-T28P
- Yealink SIP-T26P
- Yealink SIP-T22P
- Yealink SIP-T21P
- Yealink SIP-T20P
- Yealink SIP-T19P
- Yealink SIP-T48G
- Yealink SIP-T46G
- Yealink SIP-T42G
- Yealink SIP-T41P

The auto provisioning process outlined in this guide applies to Yealink IP phones running firmware V72 or later. We recommend that IP phones running firmware V72 or later CANNOT be downgraded to an earlier firmware version. The new firmware is compatible with old configuration parameters, but not vice versa.

This guide is also applicable to SIP-T21/T20/T19 IP phones.

Getting Started

This section provides instructions on how to get ready for auto provisioning. The auto provisioning process discussed in this guide uses the TFTP server as the provisioning server.

To begin the auto provisioning process, the following steps are required:

- Obtaining Configuration Information
- Managing Configuration Files

Obtaining Configuration Information

Obtaining Configuration Files

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 phone tries to download these CFG files from the server during provisioning.

The MAC-Oriented CFG file is only effectual for the specific phone. It uses the 12-digit MAC address of the phone as the file name. For example, if the MAC address of the phone is 0015651130F9, the MAC-Oriented CFG file name must be 0015651130F9.cfg. However, the Common CFG file is effectual for all the phones with the same model. It uses a fixed name “y0000000000XX.cfg” or “y00000000000X.cfg” as the file name, where "XX" or “X” equals to the first two digits or the first digit (except 0 for SIP-T28P) of the hardware version of the phone model.

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

Phone Model	Common CFG File
SIP-T28P	y000000000000.cfg
SIP-T26P	y000000000004.cfg
SIP-T22P	y000000000005.cfg
SIP-T21P	y000000000034.cfg
SIP-T20P	y000000000007.cfg
SIP-T19P	y000000000031.cfg
SIP-T48G	y000000000035.cfg
SIP-T46G	y000000000028.cfg

Phone Model	Common CFG File
SIP-T42G	y000000000029.cfg
SIP-T41P	y000000000036.cfg

You can ask the distributor or Yealink FAE for configuration files. The IP phones running firmware version 71 or later can only recognize configuration files using UTF-8 or ANSI encoding.

Obtaining Phone Information

Before beginning provisioning, you also need the phone information. For example, MAC address and the SIP account information of the phone.

MAC Address: The unique 12-digit serial number of the phone. You can obtain it from the bar code on the back of the phone.

SIP Account Information: This may include SIP credentials such as user name, password and IP address of the SIP server. Ask your system administrator for SIP account information.

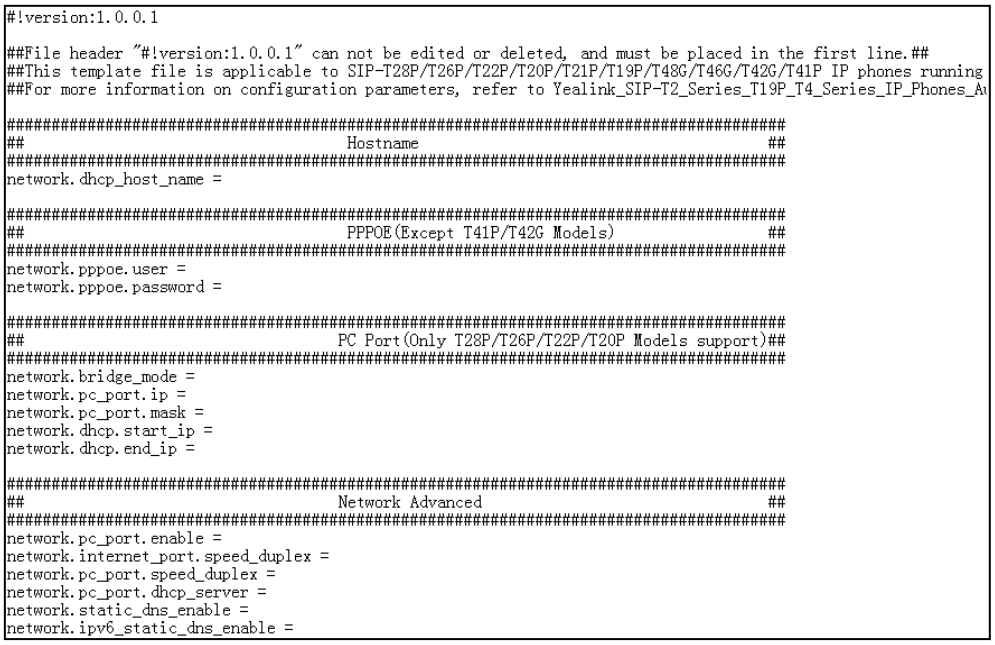
Managing Configuration Files

Auto provisioning enables Yealink IP phones to update themselves automatically via downloading Common CFG and MAC-Oriented CFG files. Before beginning provisioning, you may need to edit and customize your configuration files. For more information on configuration parameters in configuration files, refer to Description of Configuration Parameters in CFG Files on page 65.

Editing Common CFG File

Common CFG file contains configuration parameters which apply to phones with the same model, such as language and volume.

The following figure shows a portion of the common CFG file:



```
#!version:1.0.0.1

##File header "#!version:1.0.0.1" can not be edited or deleted, and must be placed in the first line.##
##This template file is applicable to SIP-T28P/T26P/T22P/T20P/T21P/T19P/T48G/T46G/T42G/T41P IP phones running
##For more information on configuration parameters, refer to Yealink_SIP-T2_Series_T19P_T4_Series_IP_Phones_Au

###############################################################################
##                                  Hostname                                 ##
###############################################################################
network.dhcp_host_name =

###############################################################################
##                                PPPOE(Except T41P/T42G Models)             ##
###############################################################################
network.pppoe.user =
network.pppoe.password =

###############################################################################
##                                PC Port(Only T28P/T26P/T22P/T20P Models support)##
###############################################################################
network.bridge_mode =
network.pc_port.ip =
network.pc_port.mask =
network.dhcp.start_ip =
network.dhcp.end_ip =

###############################################################################
##                                Network Advanced                           ##
###############################################################################
network.pc_port.enable =
network.internet_port.speed_duplex =
network.pc_port.speed_duplex =
network.pc_port.dhcp_server =
network.static_dns_enable =
network.ipv6_static_dns_enable =
```

The line beginning with "#" is considered to be a comment.

The file header "#!version:1.0.0.1" is not a comment and must be placed in the first line. It cannot be edited or deleted.

The partial parameters in the Common CFG file are described as follows:

```
#######################################################
##                  Common CFG File                  ##
#######################################################
```

#!version:1.0.0.1

##File header "#!version:1.0.0.1" cannot be edited or deleted, and must be placed in the first line. This template file is applicable to SIP-T28P/T26P/T22P/T21P/T20P/T19P/T48G/T46G/T42G/T41P IP phones running firmware version 72 or later. For more information on configuration parameters, refer to Yealink_SIP-T2_Series_T19P_T4_Series_IP_Phones_Auto_Provisioning_Guide. ##

```
#######################################################
##                      Hostname                     ##
#######################################################
```

network.dhcp_host_name =

```
#######################################################
##                PPPOE(Except SIP-T42GP/T41P Models)  ##
#######################################################
```

network.pppoe.user =

network.pppoe.password =
##
PC Port(Only SIP-T28P/T26P/T22P/T20P Models support)
##
network.bridge_mode =
network.pc_port.ip =
network.pc_port.mask =
network.dhcp.start_ip =
network.dhcp.end_ip =
##
Network Advanced
##
network.pc_port.enable =
network.internet_port.speed_duplex =
network.pc_port.speed_duplex =
network.pc_port.dhcp_server =
network.static_dns_enable =
network.ipv6_static_dns_enable =
##Only T41P/T42G/T46G/T48G Models support this parameter##
network.vlan.pc_port_mode =
##
VLAN
##
network.vlan.internet_port_enable =
network.vlan.internet_port_vid =
network.vlan.internet_port_priority =
network.vlan.pc_port_enable =
network.vlan.pc_port_vid =
network.vlan.pc_port_priority =
network.vlan.dhcp_enable =
network.vlan.dhcp_option =
##
WEB Port
##
network.port.http =
network.port.https =
wui.https_enable =
wui.http_enable =
##
QoS
##
network.qos.rtptos =
network.qos.signaltos =
##
802.1X
##
network.802_1x.mode =
network.802_1x.identity =
network.802_1x.md5_password =

```
network.802_1x.root_cert_url =
network.802_1x.client_cert_url =
#############################################################
##                    OpenVPN(Except SIP-T19P Model)       ##
#############################################################
network.vpn_enable =
openvpn.url =
#############################################################
##                          LLDP                           ##
#############################################################
network.lldp.enable =
network.lldp.packet_interval =
```

Editing MAC-Oriented CFG File

MAC-Oriented CFG file contains configuration parameters which are expected to be updated per phone, such as the registration information.

The following figure shows a portion of the MAC-Oriented CFG file:

```
##This template file is applicable to SIP-T28P/T26P/T22P/T20P/T21P/T19P/T48G/T46G/T42G/T41P IP phones running
##For more information on configuration parameters, refer to Yealink_SIP-T2_Series_T19P_T4_Series_IP_Phones_Au

#############################################################################################
##                          Account1 Basic Settings                                        ##
#############################################################################################
account.1.enable =
account.1.label =
account.1.display_name =
account.1.auth_name =
account.1.user_name =
account.1.password =
account.1.outbound_proxy_enable =
account.1.outbound_host =
account.1.outbound_port =
account.1.sip_listen_port =
account.1.transport =

#############################################################################################
##                          Failback                                                       ##
#############################################################################################
account.1.reregister_enable =
account.1.naptr_build =
account.1.fallback.redundancy_type =
account.1.fallback.timeout =
account.1.sip_server.1.address =
account.1.sip_server.1.port =
account.1.sip_server.1.expires =
account.1.sip_server.1.retry_counts =
account.1.sip_server.1.failback_mode =
account.1.sip_server.1.failback_timeout =
account.1.sip_server.1.register_on_enable =

account.1.sip_server.2.address =
account.1.sip_server.2.port =
account.1.sip_server.2.expires =
account.1.sip_server.2.retry_counts =
account.1.sip_server.2.failback_mode =
account.1.sip_server.2.failback_timeout =
account.1.sip_server.2.register_on_enable =
```

The partial parameters in the MAC-Oriented CFG file are described as follows:

```
#######################################################
##                MAC-Oriented CFG File                ##
#######################################################
#!version:1.0.0.1
##File header "#!version:1.0.0.1" cannot be edited or deleted, and must be placed in the first line. This template file is applicable to SIP-T28P/T26P/T22P/T21P/T20P/T19P/ T48G/T46G/T42G/T41P IP phones running firmware version 72 or later. For more information on configuration parameters, refer to Yealink_SIP-T2_Series_T19P_T4_Series_IP_Phones_Auto_Provisioning_Guide. ##
#######################################################
##                Account1 Basic Settings              ##
#######################################################
account.1.enable =
account.1.label =
account.1.display_name =
account.1.auth_name =
account.1.user_name =
account.1.password =
account.1.outbound_proxy_enable =
account.1.outbound_host =
account.1.outbound_port =
account.1.sip_listen_port =
account.1.transport =
#######################################################
##                Failback                             ##
#######################################################
account.1.reregister_enable =
account.1.naptr_build =
account.1.fallback.redundancy_type =
account.1.fallback.timeout =
account.1.sip_server.1.address =
account.1.sip_server.1.port =
account.1.sip_server.1.expires =
account.1.sip_server.1.retry_counts =
account.1.sip_server.1.failback_mode =
account.1.sip_server.1.failback_timeout =
account.1.sip_server.1.register_on_enable =
account.1.sip_server.2.address =
```

account.1.sip_server.2.port =

account.1.sip_server.2.expires =

account.1.sip_server.2.retry_counts =

account.1.sip_server.2.failback_mode =

account.1.sip_server.2.failback_timeout =

account.1.sip_server.2.register_on_enable =

```
##############################################################
##                Account2 Basic Settings (except SIP-T19P Model)                ##
##############################################################
```

account.2.enable =

account.2.label =

account.2.display_name =

account.2.auth_name =

account.2.user_name =

account.2.password =

account.2.outbound_proxy_enable =

account.2.outbound_host =

account.2.outbound_port =

account.2.sip_listen_port =

account.2.transport =

```
##############################################################
##                              Failback                                ##
##############################################################
```

account.2.reregister_enable =

account.2.naptr_build =

account.2.fallback.redundancy_type =

account.2.fallback.timeout =

account.2.sip_server.1.address =

account.2.sip_server.1.port =

account.2.sip_server.1.expires =

account.2.sip_server.1.retry_counts =

account.2.sip_server.1.failback_mode =

account.2.sip_server.1.failback_timeout =

account.2.sip_server.1.register_on_enable =

account.2.sip_server.2.address =

account.2.sip_server.2.port =

account.2.sip_server.2.expires =

account.2.sip_server.2.retry_counts =

account.2.sip_server.2.failback_mode =

account.2.sip_server.2.failback_timeout =

account.2.sip_server.2.register_on_enable =

##

Account3 Basic Settings (except SIP-T21P/T20P/T19P Models)

##

account.3.enable =

account.3.label =

account.3.display_name =

account.3.auth_name =

account.3.user_name =

account.3.password =

account.3.outbound_proxy_enable =

account.3.outbound_host =

account.3.outbound_port =

account.3.sip_listen_port =

account.3.transport =

##

Failback

##

account.3.reregister_enable =

account.3.naptr_build =

account.3.fallback.redundancy_type =

account.3.fallback.timeout =

account.3.sip_server.1.address =

account.3.sip_server.1.port =

account.3.sip_server.1.expires =

account.3.sip_server.1.retry_counts =

account.3.sip_server.1.failback_mode =

account.3.sip_server.1.failback_timeout =

account.3.sip_server.1.register_on_enable =

account.3.sip_server.2.address =

account.3.sip_server.2.port =

account.3.sip_server.2.expires =

account.3.sip_server.2.retry_counts =

account.3.sip_server.2.failback_mode =

account.3.sip_server.2.failback_timeout =

account.3.sip_server.2.register_on_enable =

##

Account4 Basic Settings (for SIP-T28P/T48G/T46G models)

##

account.4.enable =

account.4.label =

account.4.display_name =

account.4.auth_name =

account.4.user_name =

account.4.password =

account.4.outbound_proxy_enable =

account.4.outbound_host =

account.4.outbound_port =

account.4.sip_listen_port =

account.4.transport =

##

Failback

##

account.4.reregister_enable =

account.4.naptr_build =

account.4.fallback.redundancy_type =

account.4.fallback.timeout =

account.4.sip_server.1.address =

account.4.sip_server.1.port =

account.4.sip_server.1.expires =

account.4.sip_server.1.retry_counts =

account.4.sip_server.1.failback_mode =

account.4.sip_server.1.failback_timeout =

account.4.sip_server.1.register_on_enable =

account.4.sip_server.2.address =

account.4.sip_server.2.port =

account.4.sip_server.2.expires =

account.4.sip_server.2.retry_counts =

account.4.sip_server.2.failback_mode =

account.4.sip_server.2.failback_timeout =

account.4.sip_server.2.register_on_enable =

```
############################################################
##                Account5 Basic Settings (for SIP-T28P/T48G/T46G models)        ##
############################################################
account.5.enable =
account.5.label =
account.5.display_name =
account.5.auth_name =
account.5.user_name =
account.5.password =
account.5.outbound_proxy_enable =
account.5.outbound_host =
account.5.outbound_port =
account.5.sip_listen_port =
account.5.transport =
############################################################
##                              Failback                                    ##
############################################################
account.5.reregister_enable =
account.5.naptr_build =
account.5.fallback.redundancy_type =
account.5.fallback.timeout =
account.5.sip_server.1.address =
account.5.sip_server.1.port =
account.5.sip_server.1.expires =
account.5.sip_server.1.retry_counts =
account.5.sip_server.1.failback_mode =
account.5.sip_server.1.failback_timeout =
account.5.sip_server.1.register_on_enable =
account.5.sip_server.2.address =
account.5.sip_server.2.port =
account.5.sip_server.2.expires =
account.5.sip_server.2.retry_counts =
account.5.sip_server.2.failback_mode =
account.5.sip_server.2.failback_timeout =
account.5.sip_server.2.register_on_enable =
```

```
##############################################################
##                Account6 Basic Settings (for SIP-T28P/T48G/T46G models)      ##
##############################################################
account.6.enable =
account.6.label =
account.6.display_name =
account.6.auth_name =
account.6.user_name =
account.6.password =
account.6.outbound_proxy_enable =
account.6.outbound_host =
account.6.outbound_port =
account.6.sip_listen_port =
account.6.transport =
##############################################################
##                          Failback                                                ##
##############################################################
account.6.reregister_enable =
account.6.naptr_build =
account.6.fallback.redundancy_type =
account.6.fallback.timeout =
account.6.sip_server.1.address =
account.6.sip_server.1.port =
account.6.sip_server.1.expires =
account.6.sip_server.1.retry_counts =
account.6.sip_server.1.failback_mode =
account.6.sip_server.1.failback_timeout =
account.6.sip_server.1.register_on_enable =
account.6.sip_server.2.address =
account.6.sip_server.2.port =
account.6.sip_server.2.expires =
account.6.sip_server.2.retry_counts =
account.6.sip_server.2.failback_mode =
account.6.sip_server.2.failback_timeout =
account.6.sip_server.2.register_on_enable =
```

Encrypting Configuration Files

To protect against unauthorized access and tampering of sensitive information (e.g., login password, registration information), you can encrypt configuration files using Yealink Configuration Encryption Tool. AES keys must be 16 characters and the supported characters contain: 0 ~ 9, A ~ Z, a ~ z. For more information on how to encrypt configuration files, refer to *Yealink Configuration Encryption Tool User Guide*.

Customizing Resource Files

When configuring some particular features, you may need to upload resource files to IP phones, such as personalized ring tone file, language package file and logo file. Yealink supplies some resource file templates for the particular features. Ask the distributor or Yealink FAE for resource file templates. The following provides information on how to customize resource files and specify the access URL for the resource files.

Customizing a Ring Tone

Yealink IP phones have built-in system ring tones. You can change the ring type, or customize a ring tone and upload it to the phone via auto provisioning.

The ring tone file must meet the following:

Phone Model	File Format	Single File Size	Total Files Size
SIP-T28P/T26P/T22P/T20P	.wav	<=100KB	<=100KB
SIP-T21P/T19P	.wav	<=100KB	<=200KB
SIP-T48G/T46G	.wav	<=8MB	<=20MB
SIP-T42G/T41P	.wav	<=100KB	<=100KB

The ring tone file must be PCMU audio format, mono channel, 8K sample rate and 16 bit resolution.

For more information on customizing a ring tone file, refer to Customizing a Ring Tone Using Cool Edit Pro on page 63.

```
##################################################
##              Configure the access URL of the custom ring tone              ##
##################################################
```

ringtone.url =

For example, enter “tftp://192.168.1.100/Ring1.wav” in the “ringtone.url =” field. During the auto provisioning process, the phone connects to the provisioning server “192.168.1.100”, and downloads the ring tone file “Ring1.wav”.

#Delete all custom ring tones.

ringtone.delete = http://localhost/all

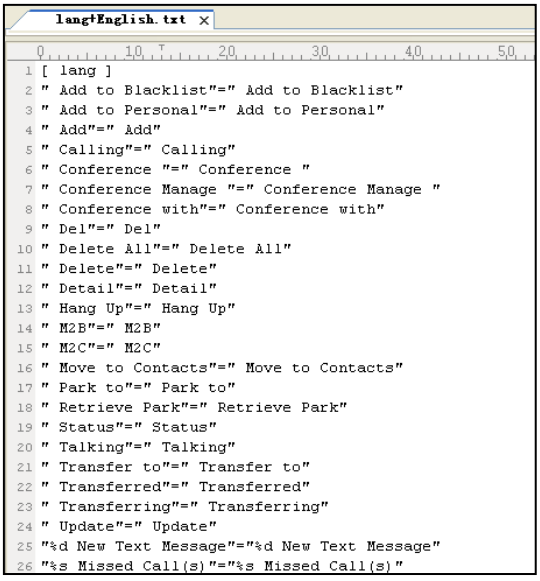
Customizing an LCD Language

You can modify the language translation for the phone user interface. For SIP-T4X IP phones, you can also add a new language to IP phones.

The following table lists available languages and the associated language files for the phone user interface:

Available Language	Associated Language Pack for SIP-T28P/T26P/T22P/T20P/ T42G/T41P	Associated Language Pack for SIP-T21P/T19P/T48G/T46G
English	lang+English.txt	lang+English.txt
Chinese_S	/	lang-Chinese_S.txt
Chinese_T	/	lang-Chinese_T.txt
German	lang-German.txt	lang-German.txt
French	lang-French.txt	lang-French.txt
Italian	lang-Italian.txt	lang-Italian.txt
Polish	lang-Polish.txt	lang-Polish.txt
Portuguese	lang-Portuguese.txt	lang-Portuguese.txt
Spanish	lang-Spanish.txt	lang-Spanish.txt
Turkish	lang-Turkish.txt	lang-Turkish.txt

The following figure shows a portion of a txt formatted English language file:



```
##################################################
##          Configure the access URL of the LCD language file          ##
##################################################
```

gui_lang.url =

If you want to modify the translation of an existing language, configure the parameter "gui_lang.url =" in the configuration file, for example:

gui_lang.url = tftp://192.168.1.100/lang+English.txt.

During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the language file "lang+English.txt".

If you want to add a new language "Russian" to SIP-T4X IP phones, configure the parameter "gui_lang.url =" in the configuration file, for example:

gui_lang.url = tftp://192.168.1.100/lang-Russian.txt

During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the language file "lang-Russian.txt". After update, you will find a new language selection "Russian" on the phone user interface: **Menu->Basic->Language**.

#Delete all custom languages.

gui_lang.delete = http://localhost/all

SIP-T48G/T46G IP phones also support adding a custom or modify an existing LCD language with an X.GUI.Y.lang (e.g., 0.GUI.English.lang) formatted language file. "X" is an integer which starts from 0. "Y" means the name of the language.

Available languages may vary between different firmware versions.

English language file name must be "lang+English.txt".

To modify translation of an existing language, do not rename the language file.

Customizing an LCD Logo

Yealink IP phones allow you to customize the logo displayed on the LCD screen. SIP-T20P IP phones only support a text logo. Logo is not applicable to SIP-T48G/T46G IP phones. These two IP phone models use the wallpaper instead.

The following table lists the supported logo file format and resolution for each phone model:

Phone Model	Logo File Format	Resolution
SIP-T28P	.dob	**<=236*82** 2 gray scale
SIP-T26P	.dob	**<=132*64** 2 gray scale
SIP-T22P/T21P/T19P	.dob	**<=132*64** 2 gray scale
SIP-T42G/T41P	.dob	**<=192*64** 2 gray scale

For more information on customizing a logo file, refer to Customizing a Logo File Using PictureExDemo on page 64.

Ask the distributor or Yealink FAE for the logo file, or you can customize a *.dob logo file. Upload the logo file to the provisioning server and then specify the access URL in configuration files:

```
##################################################
##              Configure the access URL of the Logo File              ##
##################################################
#(not applicable to SIP-T20P IP phones)
lcd_logo.url =
```

For example, enter "tftp://192.168.1.100/logo.dob" in the "lcd_logo.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the logo file "logo.dob".

To use the custom logo, you also need to configure the following parameter:

```
#Configure the logo mode (not applicable to SIP-T20P IP phones).
#0-Disabled (Except for SIP-T28P IP phones), 1-System logo, 2-Custom logo
phone_setting.lcd_logo.mode = 2
```

To configure a text logo, you need to configure the following parameter:

```
#Enable or disable a text logo (only applicable to SIP-T20P IP phones).
#0-Disabled, 1-Enabled
phone_setting.lcd_logo.mode = 1
#Configure a text logo (only applicable to SIP-T20P IP phones).
phone_setting.lcd_logo.text =Yealink
```

After auto provisioning, you will find that the custom logo or text logo appears on the LCD screen.

```
#Delete all custom logo files (not applicable to SIP-T20P IP phones).
lcd_logo.delete = http://localhost/all
```

Customizing a Wallpaper

Yealink SIP-T48G and SIP-T46G IP phones allow you to customize the wallpaper displayed on the LCD screen.

The following table lists the supported wallpaper image format and resolution for SIP-T48G and SIP-T46G IP phones:

Phone Model	Format	Resolution	Single File Size	Total File Size
SIP-T46G	.jpg/.png/.bmp	<=480*272	<=5MB	<=20MB
SIP-T48G	.jpg/.png/.bmp	<=800*480	<=5MB	<=20MB

Upload the wallpaper image to the provisioning server and then specify the access URL in configuration files:

```
#######################################################
##              Configure the access URL of the wallpaper              ##
#######################################################
wallpaper_upload.url =
```

For example, enter "tftp://192.168.1.100/wallpaper.jpg" in the "wallpaper_upload.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the wallpaper image "wallpaper.jpg".

To use the custom wallpaper, you also need to configure the following parameter:

```
#Configure the custom image (e.g., wallpaper.jpg) as phone wallpaper.
phone_setting.backgrounds = Config:wallpaper.jpg
```

Customizing a Local Contact File

Yealink IP phones allow you to upload contact data in batch via auto provisioning. You can create multiple contacts using the provided local contact template file. The existing local contacts on the phones will be overwritten by the downloaded local contacts.

Yealink IP phones support both *.xml and *.csv formats.

When editing the local contact template file, learn the following:

- Add groups between <root_group> and </root_group>.
- At most 5 groups (including the default groups) can be stored on SIP-T19/T2xP IP phones.
- At most 48 groups (including the default groups) can be stored on SIP-T4X IP phones.
- Add local contacts between <root_contact> and </root_contact>.
- At most 1000 local contacts can be added to IP phones.
- When specifying a desired line for a contact, valid values are -1~6. This is not applicable to SIP-T19P IP phones.

  (For SIP-T21P/T20P, valid values are 0~2. For SIP-T26P/T22P, valid values are 0~3. For SIP-T28P, valid values are 0~6. 0 stands for Auto (the first registered line). 1~6 stand for line1~line6.

  For SIP-T42G/T41P, valid values are -1~2. For SIP-T48G/T46G, valid values are -1~5. -1 stands for Auto (the first registered line). 0~5 stand for line1~line6. Multiple line IDs are separated by commas.)
- When specifying a ring tone for a contact, valid values are Auto, Resource:RingN.wav (system ring tone, integer N ranges from 1 to 5 for

SIP-T2xP/T19P/T42G/T41P and from 1 to 8 for SIP-T48G/T46G) and Custom:Name.wav (custom ring tone).

- When specifying a group for a contact, valid values are the group names (built-in or custom groups).
- When specifying an avatar for a contact, valid values are "Default: avatar name" (for the built-in avatar) and "Config: avatar name" (for the custom avatar). This is only applicable to SIP-T48G/T46G IP phones.

To customize a local contact file:

1. Open the template file using an ASCII editor.
2. For each group that you wish to add, add the following string to the file. Each starts on a separate line:

   <group display_name="" ring=""/>

   Where:

   display_name="" specifies the name of the group.

   ring="" specifies the ring tone for this group.
3. For each contact that you wish to add, add the following string to the file. Each starts on a separate line:

   <contact display_name="" office_number="" mobile_number="" other_number="" line="" ring="" group_id_name="" default_photo=""/>

   Where:

   display_name="" specifies the name of the contact (This value cannot be blank or duplicated).

   office_number="" specifies the office number of the contact.

   mobile_number="" specifies the mobile number of the contact.

   other_number="" specifies the other number of the contact.

   line="" specifies the line for the contact.

   ring="" specifies the ring tone for the contact.

   group_id_name="" specifies the group you want to add the contact to.

   default_photo="" specifies the avatar for the contact (for SIP-T48G/T46G IP phones).
4. Specify the values within double quotes.
5. Save the change.

After editing the local contact template file, upload it to the provisioning server and then specify the access URL in configuration files.

The following shows an example of a local contact file used for SIP-T2xP IP phones:

```
<root_group>
   <group display_name="All Contacts" ring=""/>
   <group display_name="Family" ring="Resource:Ring1.wav"/>
   <group display_name="Friend" ring="Auto"/>
</root_group>

<root_contact>
   <contact display_name="Mary" office_number="123" mobile_number="456"
   other_number="2201" line="0" ring="Auto" group_id_name="Family"/>
   <contact display_name="Damy" office_number="124" mobile_number="789"
   other_number="2202" line="1" ring="Resource:Ring2.wav"
   group_id_name=""/>
   <contact display_name="Jack" office_number="125" mobile_number="234"
   other_number="2203" line="2" ring="Custom:lin.wav"
   group_id_name="Family"/>
   <contact display_name="Ada" office_number="8800"
  mobile_number="1234" other_number="0000" line="0" ring=""
  group_id_name=""/>

</root_contact>
```

```
#######################################################
##                Configure the access URL of the local contact file          ##
#######################################################
```

local_contact.data.url =

For example, enter "tftp://192.168.1.100/contact_list.xml" in the "local_contact.data.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the contact file "contact_list.xml".

```
#######################################################
##              Upload TAR file of local contact file and avatar TAR file          ##
#######################################################
#All avatars needed for contacts should be tarred in advance.
#(only applicable to SIP-T46G/T48G IP phones)
```

local_contact.data_photo_tar.url =

For example, enter "tftp://192.168.1.100/Contact.tar" in the "local_contact.data_photo_tar.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the contact file "Contact.tar".

Customizing a Replace Rule File

You can create replace rules directly in configuration files, or create multiple replace rules using the supplied replace rule template file. The existing replace rules on the phones will be overwritten by the downloaded replace rules.

When editing the replace rule template file, learn the following:

- <DialRule> indicates the start of the template file and </DialRule> indicates the end of the template file.
- Create replace rules between <DialRule> and </DialRule>.
- When specifying the desired line(s) to apply the replace rule, valid values are 0 and line ID. The digit 0 stands for all lines. Multiple line IDs are separated by commas. Specifying the desired line(s) to apply replace rules is not applicable to SIP-T19P IP phones.
- At most 100 replace rules can be added to the IP phone.
- For the basic expression syntax of the replace rule, refer to Yealink phone-specific user guide.

To customize a replace rule file:

1. Open the template file using an ASCII editor.
2. For each replace rule you wish to add, add the following string to the file. Each starts on a separate line:

   <Data Prefix="" Replace="" LineID=""/>

   Where:

   Prefix="" specifies the numbers to be replaced.

   Replace="" specifies the alternate string.

   LineID="" specifies the desired line(s) for this rule. When you leave it blank or enter 0, this replace rule will apply to all lines.
3. Specify the values within double quotes.
4. Save the change.

The following shows an example of a replace rule file:

```
<DialRule>
   <Data Prefix="1" Replace="05928665234" LineID=""/>
   <Data Prefix="2(xx)" Replace="002$1" LineID="0"/>
</DialRule>
```

```
##################################################
##                Upload replace rule file      ##
##################################################
```

dialplan_replace_rule.url =

For example, enter "tftp://192.168.1.100/DialPlan.xml" in the "dialplan_replace_rule.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the replace rule file "DialPlan.xml".

Customizing a Dial-now File

You can create dial-now rules directly in configuration files, or create multiple dial-now rules using the supplied dial-now rule template file. The existing dial-now rules on the phones will be overwritten by the downloaded dial-now rules.

When editing a dial-now file, learn the following:

- <DialNow> indicates the start of the template file and </DialNow> indicates the end of the template file.
- Create dial-now rules between <DialNow> and </DialNow>.
- When specifying the desired line(s) for the dial-now rule, valid values are 0 and line ID. The digit 0 stands for all lines. Multiple line IDs are separated by commas. Specifying the desired line(s) to apply dial-now rules is not applicable to SIP-T19P IP phones.
- At most 100 dial-now rules can be added to the IP phone.
- For the basic expression syntax of the dial-now rule, refer to Yealink phone-specific user guide.

To customize a dial-now file:

1. Open the template file using an ASCII editor.
2. For each dial-now rule you wish to add, add the following string to the file. Each starts on a separate line:

   <Data DialNowRule="" LineID=""/>

   Where:

   DialNowRule=""/ rule="" specifies the dial-now rule.

   LineID=""/ lines="" specifies the desired line(s) for this rule. When you leave it blank or enter 0, this dial-now rule will apply to all lines.
3. Specify the values within double quotes.
4. Save the change.

The following shows an example of a dial-now file:

```
<DialNow>
  <Data DialNowRule="1234" LineID="1"/>
  <Data DialNowRule="52[0-6]" LineID="1"/>
  <Data DialNowRule="xxxxxx" LineID=""/>
</DialNow>
```

```
#####################################################
##                  Upload dial-now file           ##
#####################################################
```

dialplan_dialnow.url =

For example, enter "tftp://192.168.1.100/DialNow.xml" in the "dialplan_dialnow.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the dial-now file "DialNow.xml".

Customizing a Directory Template

Directory provides easy access to frequently used lists. You can access lists by pressing the Directory soft key when the IP phone is idle. The lists may contain Local Directory, History, Remote Phone Book and LDAP (LDAP list is not applicable to SIP-T19P IP phones). You can add the desired list(s) to Directory using the supplied directory template (favorite_setting.xml). After setup, place the directory template to the provisioning server and specify the access URL in the configuration files. Directory is not applicable to SIP-T20P IP phones.

When editing a directory template, learn the following:

- Do not rename the directory template.
- <root_favorite_set> indicates the start of a template and </root_favorite_set> indicates the end of a template.
- The default display names of directory lists are Local Directory, History, Remote Phone Book and LDAP.
- When specifying the display priority of the directory list, the valid values are 1, 2, 3 and 4. 1 is the highest priority, 4 is the lowest.
- When enabling or disabling the desired directory list for Directory, the valid values are 0 and 1. 0 stands for Disabled, 1 stands for Enabled.

To customize a directory template:

1. Open the template file using an ASCII editor.
2. For each directory list that you want to configure, edit the corresponding string in the file. For example, you want to configure the local directory list, edit the following strings:

<item id_name="localdirectory" display_name="Local Directory" priority="1" enable="1" />

Where:

id_name="" specifies the directory list (id_name = "localdirectory" specifies the local directory list). Do not edit this field.

display_name="" specifies the display name of the directory list. We recommend you do not edit this field.

priority="" specifies the display priority of the directory list.

enable="" enables or disables the directory list for Directory.

3. Edit the values within double quotes.
4. Place this file to the provisioning server.

The following is an example of a directory template:

```
<root_favorite_set>
  <item id_name="localdirectory" display_name="Local Directory" priority="1" enable="1" />
  <item id_name="history" display_name="History" priority="2" enable="0" />
  <item id_name="remotedirectory" display_name="Remote Phone Book" priority="3" enable="0" />
  <item id_name="ldap" display_name="LDAP" priority="4" enable="0" />
</root_favorite_set>
```

Customizing a Super Search Template

Search source list in dialing allows the IP phone to search for entries from the desired lists when the phone is in the dialing screen, and then the user can select the desired entry to dial out quickly. The lists may contain Local Directory, History, Remote Phone Book and LDAP (LDAP list is not applicable to SIP-T19P IP phones). You can configure the search source list in dialing using the supplied super search template (super_search.xml). After setup, place the super search template to the provisioning server and specify the access URL in the configuration files. Search source list in dialing is not applicable to SIP-T20P IP phones.

When editing a super search template, learn the following:

- Do not rename the super search template.
- <root_super_search> indicates the start of a template and </root_super_search> indicates the end of a template.
- The default display names of directory lists are Local Directory, History, Remote Phone Book and LDAP.
- When specifying the priority of search results, the valid values are 1, 2, 3 and 4. 1 is the highest priority, 4 is the lowest.

- When enabling or disabling the phone to search the desired directory list, the valid values are 0 and 1. 0 stands for Disabled, 1 stands for Enabled.

To customize a super search template:

1. Open the template file using an ASCII editor.
2. For each directory list that you want to configure, edit the corresponding string in the file. For example, you want to configure the local directory list, edit the following strings:

   <item id_name="local_directory_search" display_name="Local Directory" priority="1" enable="1" />

   Where:

   id_name="" specifies the directory list (id_name = "local_directory_search" specifies the local directory list). Do not edit this field.

   display_name="" specifies the display name of the directory list. We recommend you do not edit this field.

   priority="" specifies the priority of search results.

   enable="" enables or disables the phone to search the directory list.
3. Edit the values within double quotes.
4. Place this file to the provisioning server.

The following is an example of a super search template:

```
<root_super_search>
  <item id_name="local_directory_search" display_name="Local Directory" priority="1" enable="1" />
  <item id_name="calllog_search" display_name="History" priority="2" enable="1" />
  <item id_name="remote_directory_search" display_name="Remote Phone Book" priority="3" enable="0" />
  <item id_name="ldap_search" display_name="LDAP" priority="4" enable="0" />
</root_super_search>
```

Upgrading Firmware

Yealink IP phones allow you to upgrade firmware manually via web user interface, or upgrade firmware in batch via auto provisioning.

The following table lists the firmware name for each phone model (X is replaced by the actual firmware version):

Phone Model	Firmware Name
SIP-T28P	2.x.x.x.rom

Phone Model	Firmware Name
SIP-T26P	6.x.x.x.rom
SIP-T22P	7.x.x.x.rom
SIP-T21P	34.x.x.x.rom
SIP-T20P	9.x.x.x.rom
SIP-T19P	31.x.x.x.rom
SIP-T48G	35.x.x.x.rom
SIP-T46G	28.x.x.x.rom
SIP-T42G	29.x.x.x.rom
SIP-T41P	36.x.x.x.rom

To upgrade the phones' firmware in batch via auto provisioning, ask the distributor for the firmware file, upload it to the provisioning server, and then specify the access URL in configuration files.

```
#######################################################
##              Configure the access URL of the firmware file              ##
#######################################################
```

firmware.url =

For example, enter "tftp://admin:password@192.168.1.100/2.72.0.1.rom" ("admin" is replaced by the authentication user name and "password" is replaced by the authentication password) in the "firmware.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the firmware file "2.72.0.1.rom".

Configuring a TFTP Server

Yealink IP phones support using FTP, TFTP, HTTP and HTTPS protocols to download configuration files. You can use one of these protocols for provisioning. The TFTP protocol is used by default. The following section provides instructions on how to configure a TFTP server.

We recommend that you use 3CDaemon or TFTPD32 as a TFTP server. 3CDaemo and TFTPD32 are free applications for Windows. You can download 3CDaemon online: http://www.oldversion.com/3Com-Daemon.html and TFTPD32 online: http://tftpd32.jounin.net/.

For more information on how to configure FTP and HTTP servers, refer to Configuring an FTP server on page 49 and Configuring an HTTP Server on page 52.

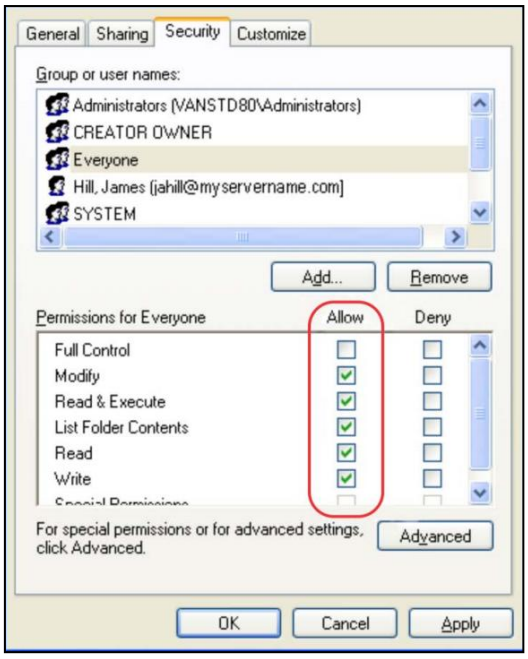
Preparing a Root Directory

To prepare a root directory:

1. Create a TFTP root directory on the local system.
2. Place configuration files to this root directory.
3. Set security permissions for the TFTP directory folder.

   You need to define a user or a group name, and set the permissions: read, write or modify. Security permissions vary by organizations.

   An example of configuration on the Windows platform is shown as below:

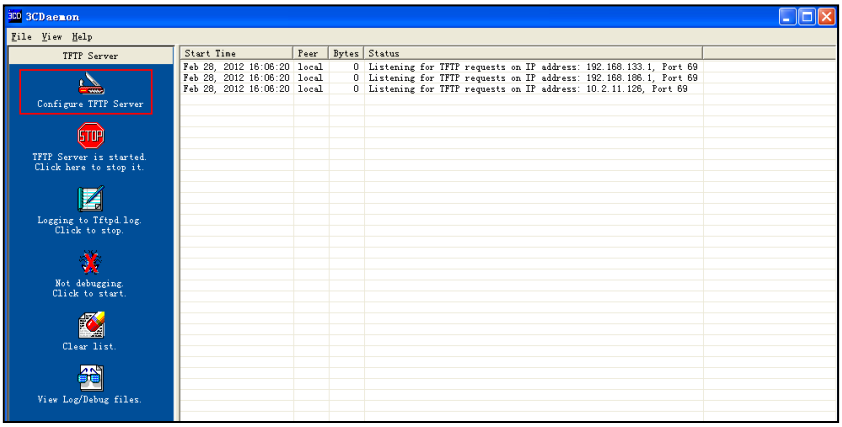


Configuring a TFTP Server

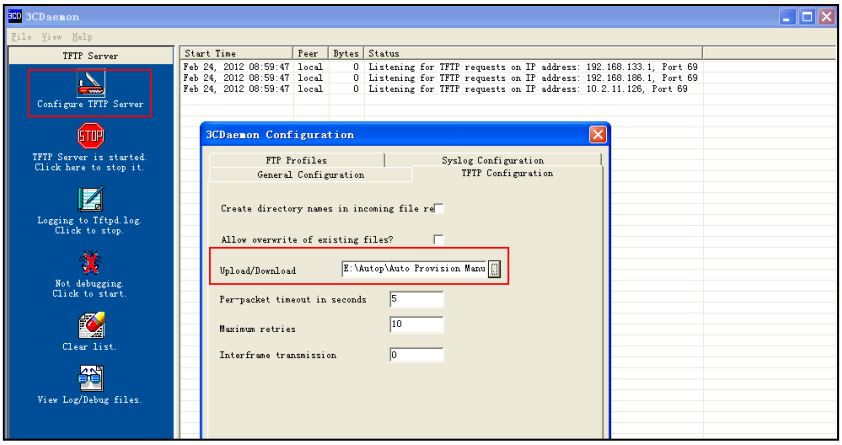
If you have a 3CDaemon application installed on your local system, use it directly. Otherwise, download and install it.

To configure a TFTP server:

1. Double click 3CDaemon.exe to start the application. A configuration page is shown as below:



2. Select **Configure TFTP Server**. Click the  button to locate the TFTP root directory from your local system:



3. Click the **Confirm** button to finish configuring the TFTP server.

   The server URL "tftp://IP/" (Here "IP" means the IP address of the provisioning server, for example, "tftp://192.168.1.100/") is where the phone downloads configuration files from.

Obtaining the Address of Provisioning Server

Yealink IP phones support obtaining the provisioning server address in the following ways:

- Zero Touch
- Plug and Play (PnP) Server
- DHCP Options
- Phone Flash

The priority of obtaining the provisioning server address is as follows: Zero Touch-->PnP Server-->DHCP Options (Custom option-->option 66-->option 43) -->Phone Flash.

The following sections detail the process of each way (take the SIP-T28P IP phone as an example).

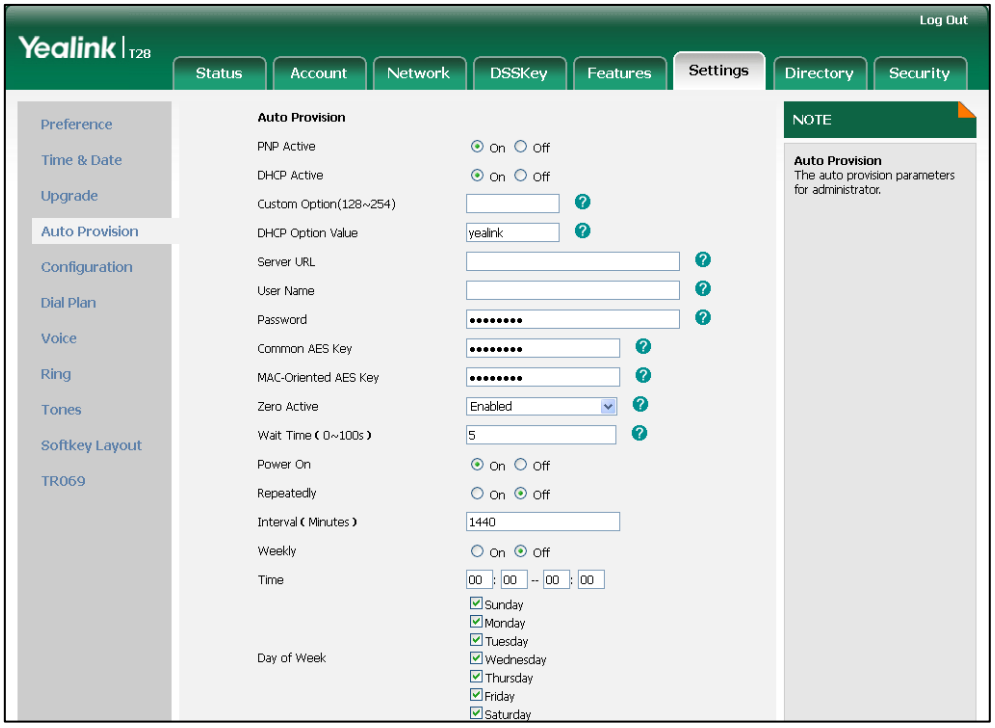
Zero Touch

Zero Touch allows you to configure the network parameters and provisioning server address via phone user interface during startup. This feature is helpful when there is a system failure on the phone. To use Zero Touch, make sure this feature is enabled.

To configure the Zero Touch via web user interface:

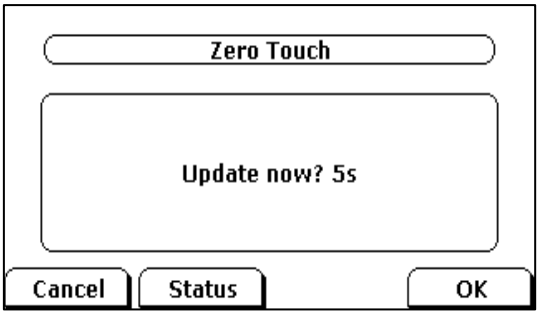
1. Click on **Settings**->**Auto Provision**.
2. Select **Enabled** from the pull-down list of **Zero Active**.

3. Configure the wait time in the **Wait Time (0~100s)** field.



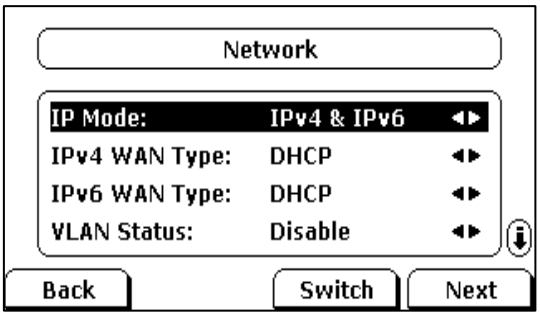
4. Click **Confirm** to accept the change.

When Zero Touch is enabled, there will be a configuration wizard during startup:



Press the **OK** soft key.

The network parameters are configurable via phone user interface:

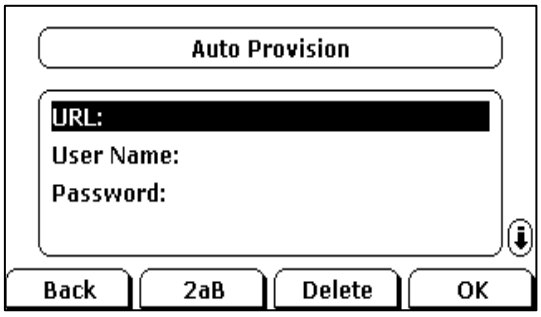


Press the **Next** soft key after finishing network setting.

Configure the provisioning server address, authentication user name (optional) and

password (optional) in the **Auto Provision** screen.

An example of screenshot is shown as below:

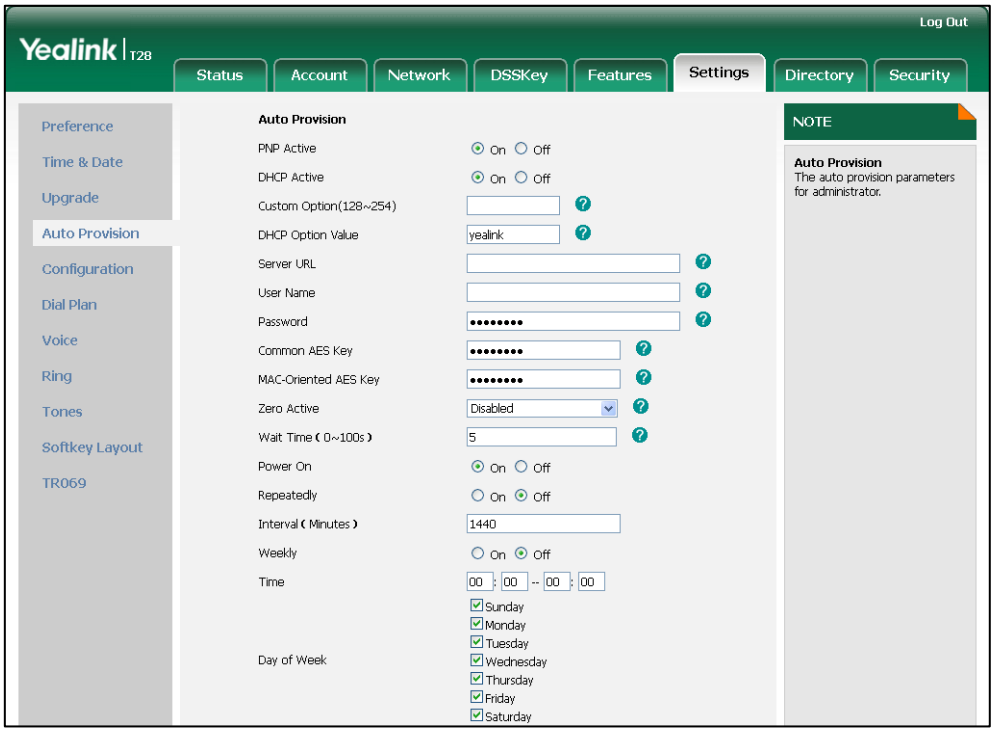


Plug and Play (PnP) Server

Yealink IP phones support obtaining the provisioning server address from the PnP server. The phone broadcasts the PnP SUBSCRIBE message to obtain the provisioning server address during startup. To use Plug and Play, make sure this feature is enabled.

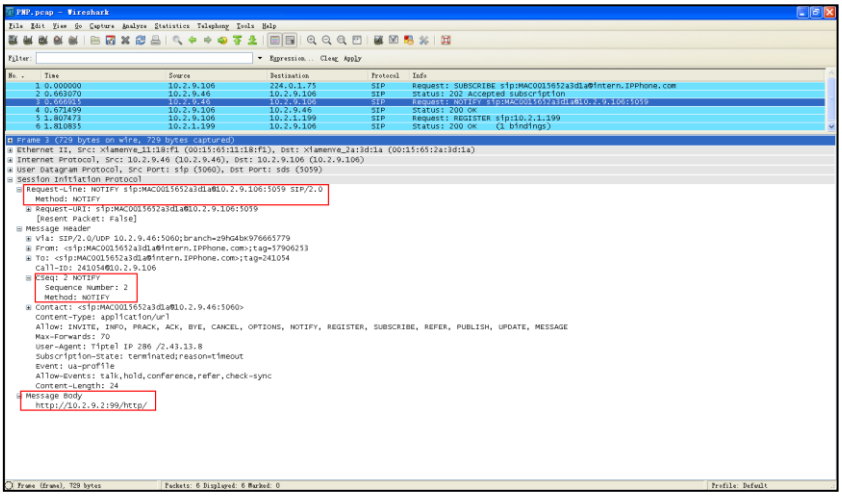
To configure PnP via web user interface:

1. Click on **Settings**->**Auto Provision**.
2. Mark the **On** radio box in the **PNP Active** field.



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

Any PnP server activated in the network responses with a **SIP NOTIFY** message, and an address of the provisioning server is contained in the message body. Then the phone can connect to the provisioning server and perform the auto provisioning process.



DHCP Options

Yealink IP phones support obtaining the provisioning server address from DHCP options. You can configure the phone to obtain the provisioning server address from a custom DHCP option, or the phone will automatically detect the Option 66 and Option 43. The Option 66 is used to identify the TFTP server. To obtain the provisioning server address by a custom DHCP option, make sure the DHCP option is set properly.

The custom DHCP option must be in accordance with the one defined in the DHCP server. For more information on configuring a DHCP server, refer to Configuring a DHCP server on page 55.

To configure the DHCP option via web user interface:

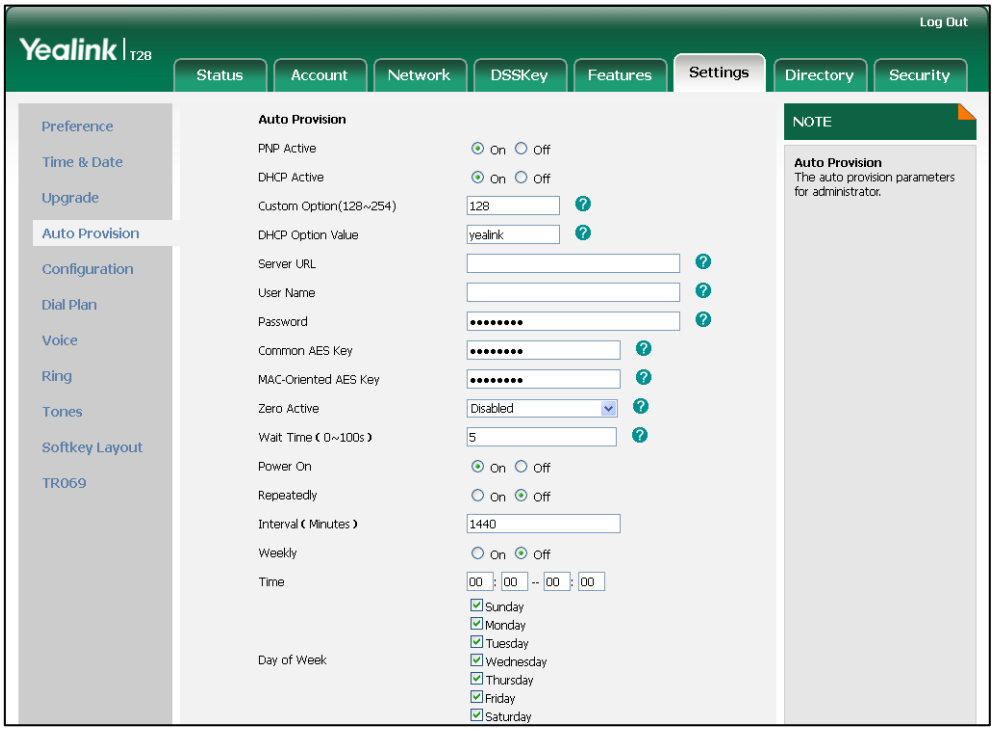
1. Click on **Settings**->**Auto Provision**.
2. Mark the **On** radio box in the **DHCP Active** field.
3. Enter the desired value in the **Custom Option (128~254)** field.

4. Enter the desired value in the **DHCP Option Value** field.

   The default value is yealink.

5. Configure the desired update mode.

   For more information, refer to Update Mode on page 35.



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

Phone Flash

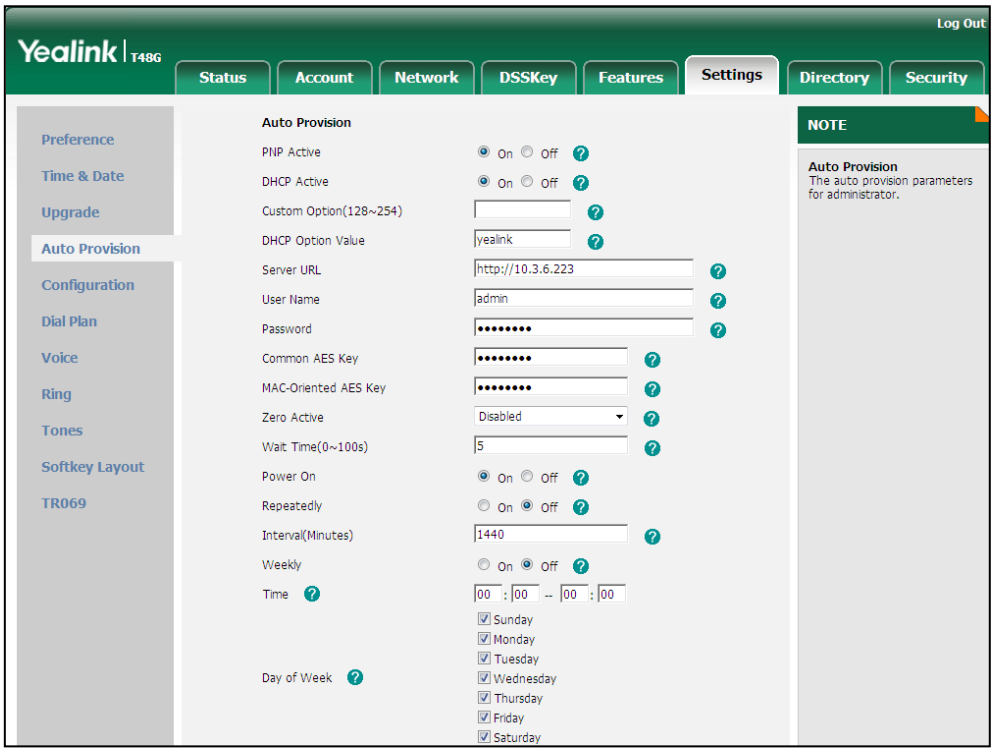
Yealink IP phones support obtaining the provisioning server address from the phone flash. To obtain the provisioning server address by reading the phone flash, make sure the configuration is set properly.

To configure the Phone Flash via web user interface:

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

2. Enter the URL, user name and password of the provisioning server in the **Server URL**, **User Name** and **Password** fields (the user name and password are optional).
3. Configure the desired update mode.

   For more information, refer to Update Mode on page 35.



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

Update Mode

The update mode is used to set the desired time for the phone to perform the auto provisioning process. This chapter introduces the following update modes in detail:

- Power On
- Repeatedly
- Weekly
- Auto Provision Now
- Multi-mode Mixed
- SIP NOTIFY Message

When there is an active call on the phone during provisioning, the auto provisioning process will detect the call status every 30 seconds. If the call is released within 2 hours, the auto provisioning process will be performed normally. Otherwise, the process will be completed, due to timeout.

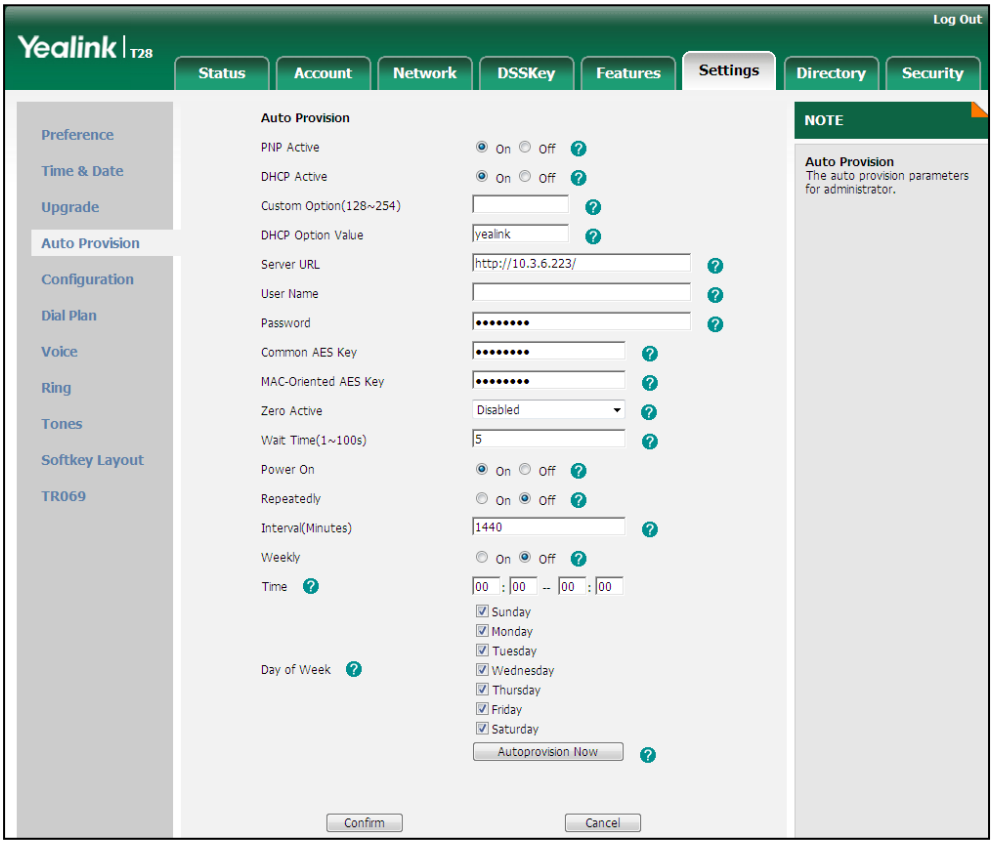
Power On

The phone performs the auto provisioning process when the phone is powered on.

To activate the Power On mode via a web user interface:

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

2. Mark the **On** radio box in the **Power On** field.



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

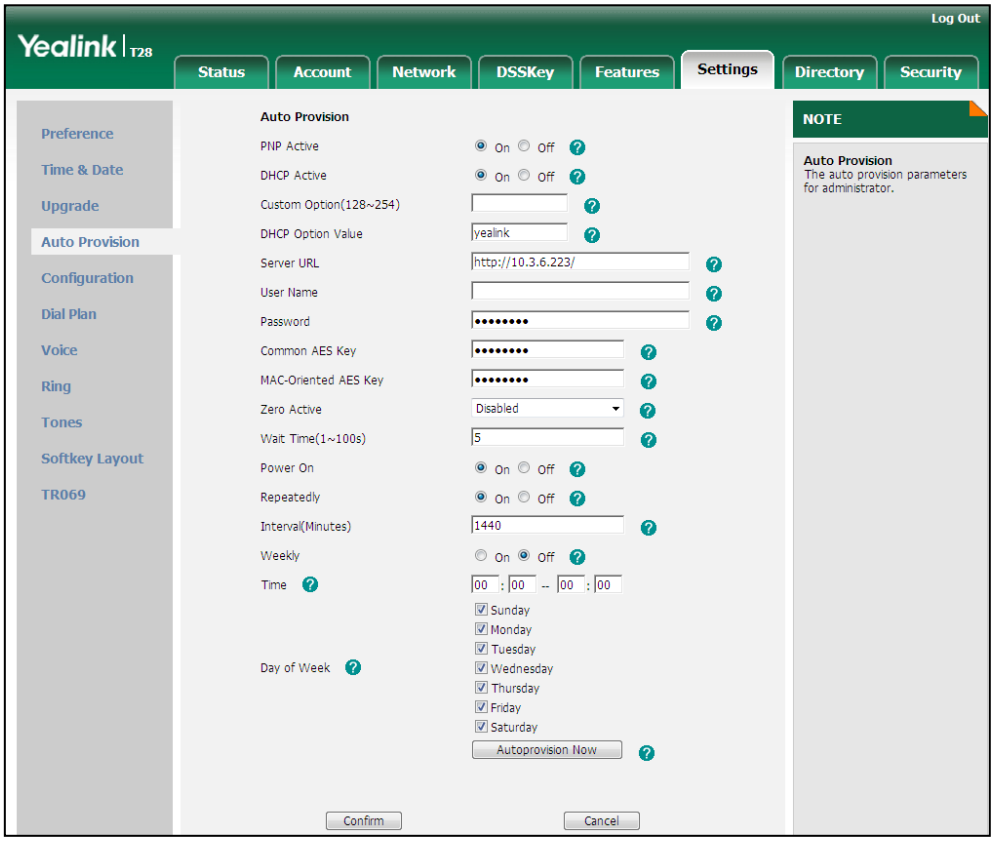
Repeatedly

The phone performs the auto provisioning process at regular intervals. You can configure the interval for the Repeatedly mode. The default interval is 1440 minutes.

To activate the Repeatedly mode via web user interface:

1. Click on **Settings->Auto Provision**.
2. Mark the **On** radio box in the **Repeatedly** field.

3. Enter the interval time (in minutes) in the **Interval (Minutes)** field.



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

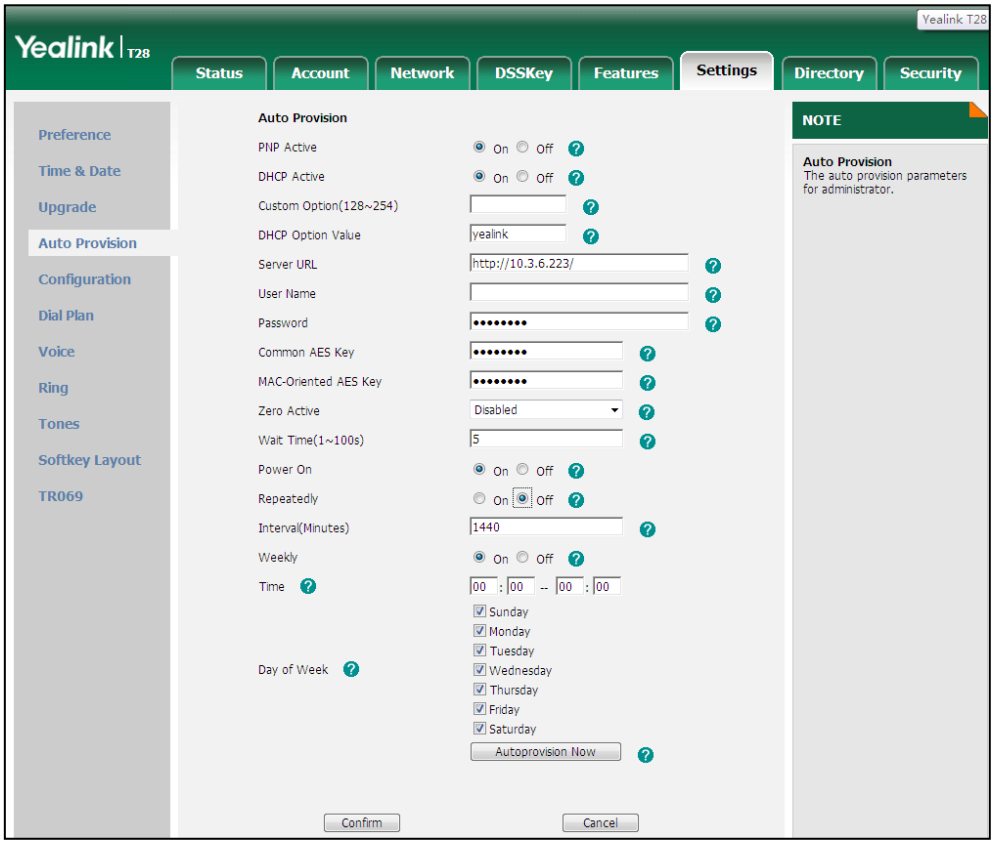
Weekly

The phone performs the auto provisioning process at the fixed time every week. You can configure what time of the day and which day of the week to trigger the phone to perform the auto provisioning process. For example, you can configure the phone to check and update new configuration between 2 to 3 o'clock every Friday and Sunday.

To activate the Weekly mode via web user interface:

1. Click on **Settings**->**Auto Provision**.
2. Mark the **On** radio box in the **Weekly** field.
3. Enter the desired time in the **Time** field.

4. Mark one or more checkboxes in the **Day of Week** field.



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

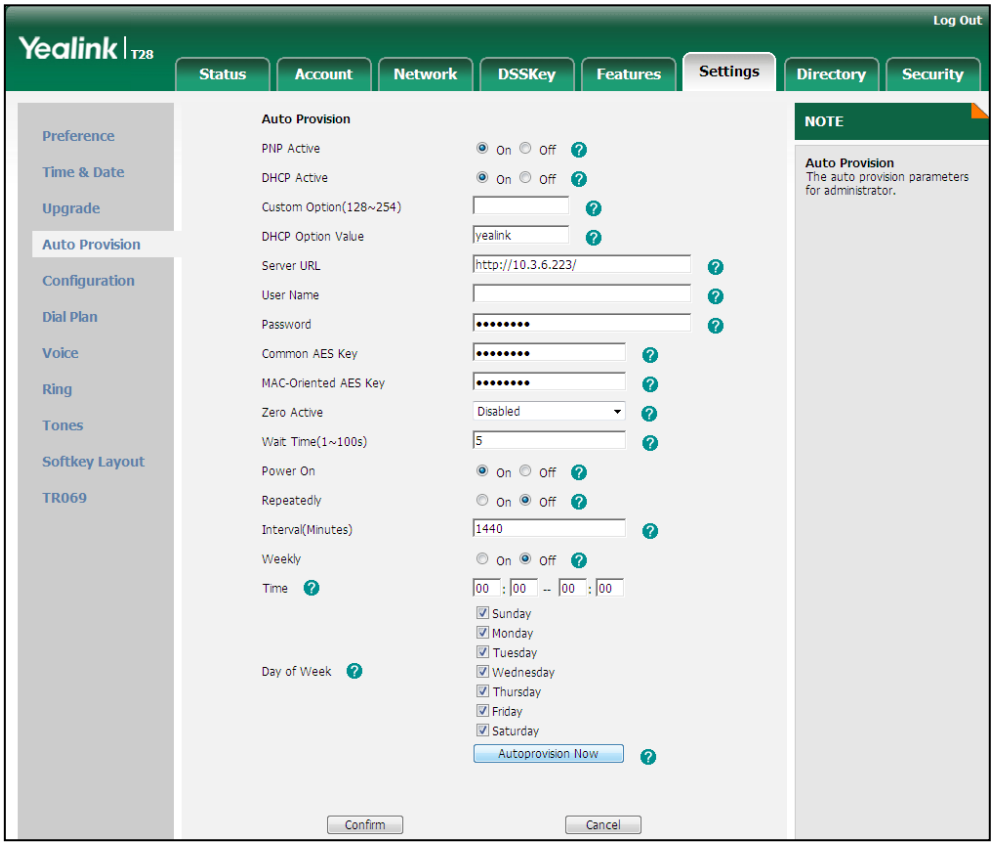
Auto Provision Now

You can use Auto Provision Now mode to manually trigger the phone to perform the auto provisioning process immediately.

To use the Auto Provision Now mode via web user interface:

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

2. Click **Autoprovision Now**.



The phone will perform the auto provisioning process immediately.

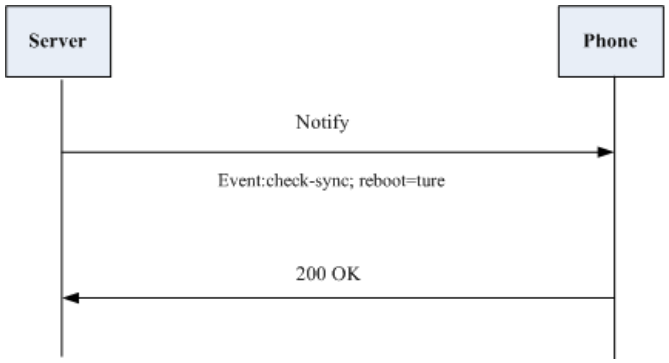
Multi-mode Mixed

You can activate more than one update mode for auto provisioning. For example, you can activate the "Power On" and "Repeatedly" modes simultaneously. The phone will perform the auto provisioning process when it is powered on and at a specified interval.

SIP NOTIFY Message

The phone will perform the auto provisioning process when receiving a SIP NOTIFY message which contains the header "Event: check-sync". If the header of the SIP NOTIFY message contains an additional string "reboot=true", the phone will reboot immediately and then perform the auto provisioning process. This update mode requires server support.

The following figure shows the message flow:



Downloading and Verifying Configurations

Downloading Configuration Files

Once obtaining a provisioning server address in one of the ways introduced above, the phone will connect to the provisioning server and download configuration files. During the auto provisioning process, the phone will try to download the Common CFG file firstly, and then try to download the MAC-Oriented CFG file from the provisioning server. If resource files need to be updated and the access URLs have been specified in configuration files, the phone will then try to download and update the resource files.

Resolving and Updating Configurations

After downloading, the phone resolves the configuration files, downloads the resource files requested in the configuration files, and then updates the configurations and resource files to the phone flash. Generally, updated configurations will automatically take effect after the auto provisioning process is completed. For update of some specific configurations which require a reboot before taking effect, for example, network configurations, the phone will reboot to make the configurations effective after the auto provisioning process is completed.

The phone calculates the MD5 values of the downloaded files. If the MD5 values of the Common and MAC-Oriented configuration files are the same as those of the last downloaded configuration files, this means these two configuration files on the provisioning server are not changed. The phone will complete the auto provisioning without repeated update. This is used to avoid unnecessary restart and impact of phone use.

If configuration files have been AES-encrypted, the phone will decrypt them after downloading the configuration files. For more information on how the phone decrypts configuration files, refer to *Yealink Configuration Encryption Tool User Guide*.

The phone only reboots when there is at least a specific configuration requiring a reboot during auto provisioning.

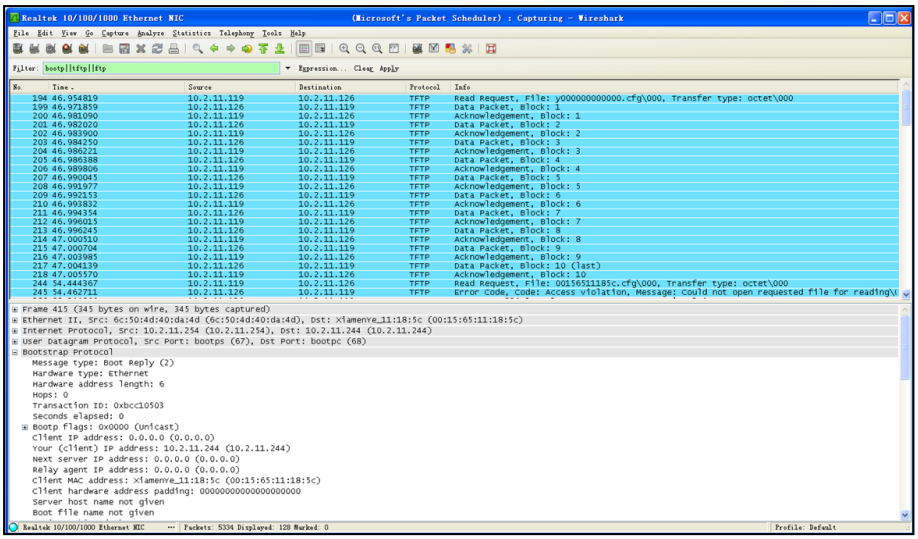
For more information on the specific configurations which require a reboot during auto provisioning, refer to Description of Configuration Parameters in CFG Files on page 65.

Verifying Configurations

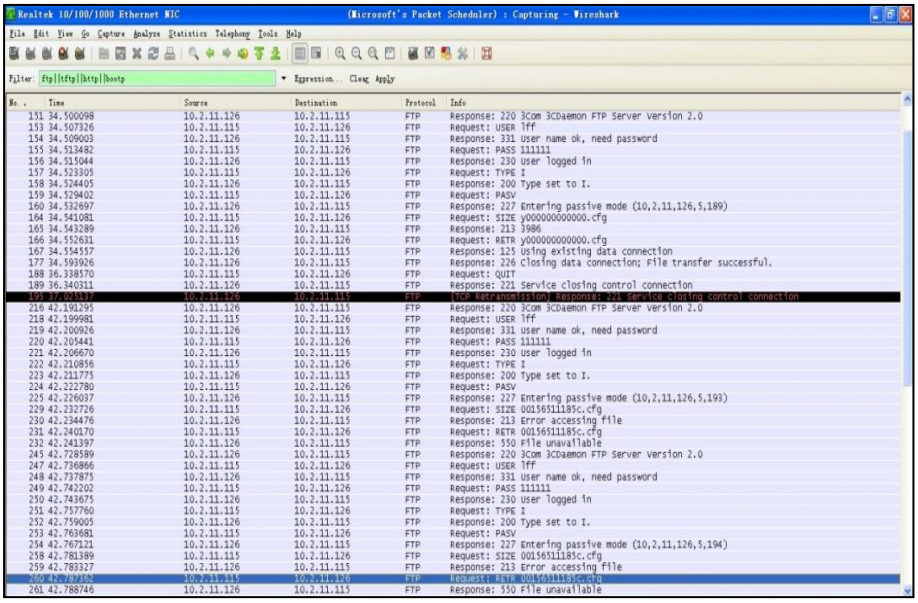
After auto provisioning, you can then verify the update via phone user interface, or you can verify it via web user interface of the phone. For more information, refer to Yealink phone-specific user guide.

During the auto provisioning process, you can monitor the downloading requests and response messages by a WinPcap tool. The following shows some examples.

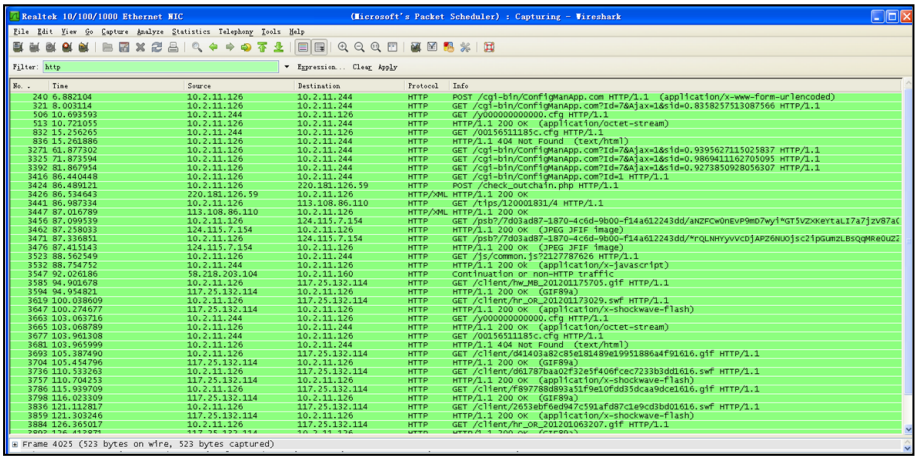
Example1: Yealink SIP-T28P IP phone downloads configuration files from the TFTP server.



Example 2: Yealink SIP-T28P IP phone downloads configuration files from the FTP server.



Example 3: Yealink SIP-T28P IP phone downloads configuration files from the HTTP server.



Troubleshooting

This chapter provides general troubleshooting information to help you solve problems you might encounter when deploying phones.

If you require additional information or assistance with the deployment, contact your system administrator.

Why does the phone fail to download configuration files?

- Ensure that auto provisioning feature is configured properly.
- Ensure that the provisioning server and network are reachable.
- Ensure that authentication credentials configured on the phone are correct.
- Ensure that configuration files exist on the provisioning server.

Why does the provisioning server return HTTP 404?

- Ensure that the provisioning server is properly set up.
- Ensure that the access URL is correct.
- Ensure that the requested files exist on the provisioning server.

Why does the phone display "Network Unavailable"?

- Ensure that the Ethernet cable is plugged into the Internet port on the phone and the Ethernet cable is not loose.
- Ensure that the switch or hub in your network is operational.
- Ensure that the configurations of network are properly set in the configuration files.

Why is the permission denied when uploading files to the root directory of the FTP server?

- Ensure that the complete path to the root directory of the FTP server is authorized.
- Check security permissions on the root directory of the FTP server, if necessary, change the permissions.

Why doesn't the phone obtain the IP address from the DHCP server?

- Ensure that settings are correct on the DHCP server.
- Ensure that the phone is configured to obtain the IP address from the DHCP server.

Why doesn't the phone download the ring tone?

- Ensure that the file format of the ring tone is *.wav.
- Ensure that the size of the ring tone file is no larger than that the phone supports.
- Ensure that the properties of the ring tone for the phone are correct.
- Ensure that the network is available and the root directory is right for downloading.
- Ensure that the ring tone file exists on the provisioning server.

Why doesn't the phone update configurations?

- Ensure that the configuration files are different from the last ones.
- Ensure that the phone has downloaded the configuration files.
- Ensure that the parameters are correctly set in the configuration files.

Glossary

MAC Address: A Media Access Control address (MAC address) is a unique identifier assigned to network interfaces for communications on the physical network segment.

MD5: The MD5 Message-Digest Algorithm is a widely used cryptographic hash function that produces a 128-bit (16-byte) hash value.

DHCP: Dynamic Host Configuration Protocol (DHCP) is a network configuration protocol for hosts on Internet Protocol (IP) networks. Computers that are connected to IP networks must be configured before they can communicate with other hosts.

FTP: File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. It is often used to upload web pages and other documents from a private development machine to a public web-hosting server.

HTTP: The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web.

HTTPS: Hypertext Transfer Protocol Secure (HTTPS) is a combination of Hypertext Transfer Protocol (HTTP) with SSL/TLS protocol. It provides encrypted communication and secure identification of a network web server.

TFTP: Trivial File Transfer Protocol (TFTP) is a simple protocol to transfer files. It has been implemented on top of the User Datagram Protocol (UDP) using port number 69.

AES: Advanced Encryption Standard (AES) is a specification for the encryption of electronic data.

URL: A uniform resource locator or universal resource locator (URL) is a specific character string that constitutes a reference to an Internet resource.

XML: Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

Appendix

Configuring an FTP Server

This section provides instructions on how to configure an FTP server using 3CDaemon. You can download the 3CDaemon software online: http://www.oldversion.com/3Com-Daemon.html.

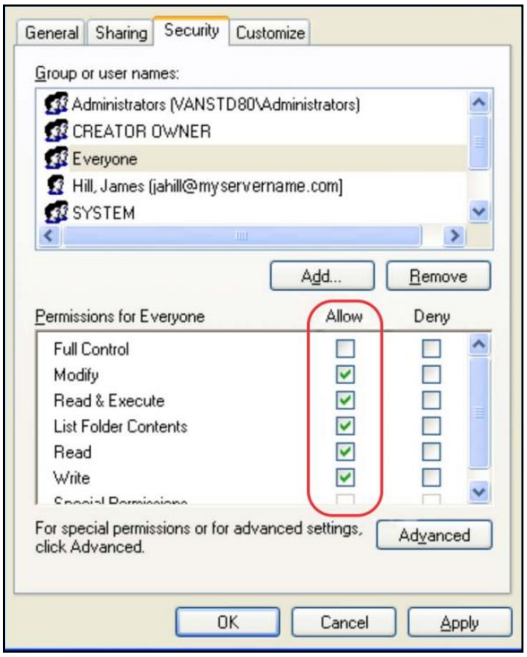
Preparing a Root Directory

To prepare a root directory:

1. Create an FTP root directory on the local system.
2. Place the configuration files to this root directory.
3. Set the security permissions for the FTP directory folder.

   You need to define a user or group name, and set the permissions: read, write, and modify. Security permissions vary by organizations.

   An example of configuration on the Windows platform is shown as below:



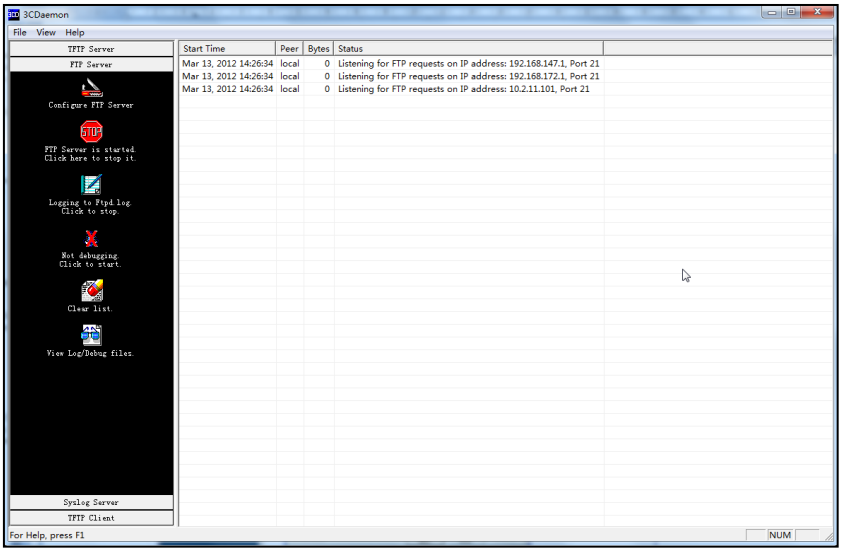
Configuring an FTP server

If you have a 3CDaemon application installed on your local system, use it directly. Otherwise, download and install it.

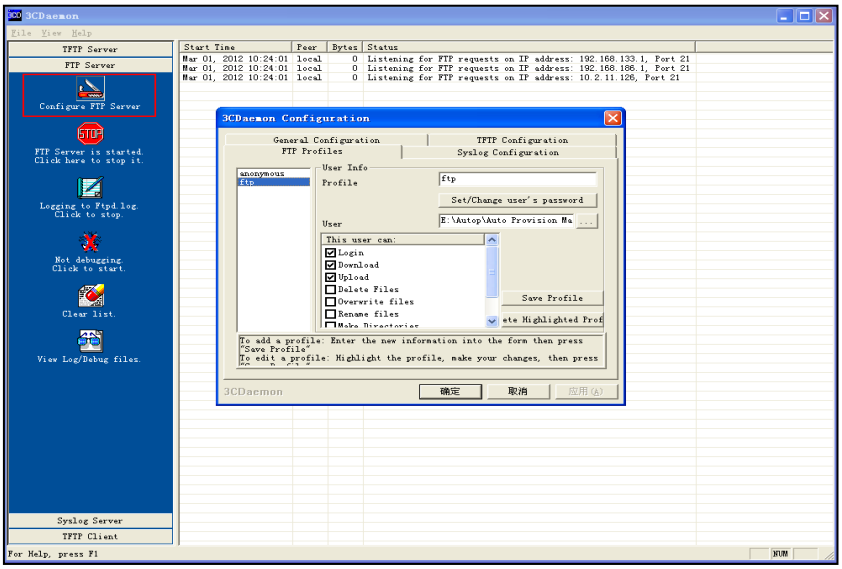
To configure an FTP server:

1. Double click the 3CDaemon.exe to start the application.
2. Click the **FTP Server** button on the left of the main page.

   A configuration page is shown as below:



3. Select **Configure FTP Server**.
4. Click the ... button to locate the FTP root directory from your local system:

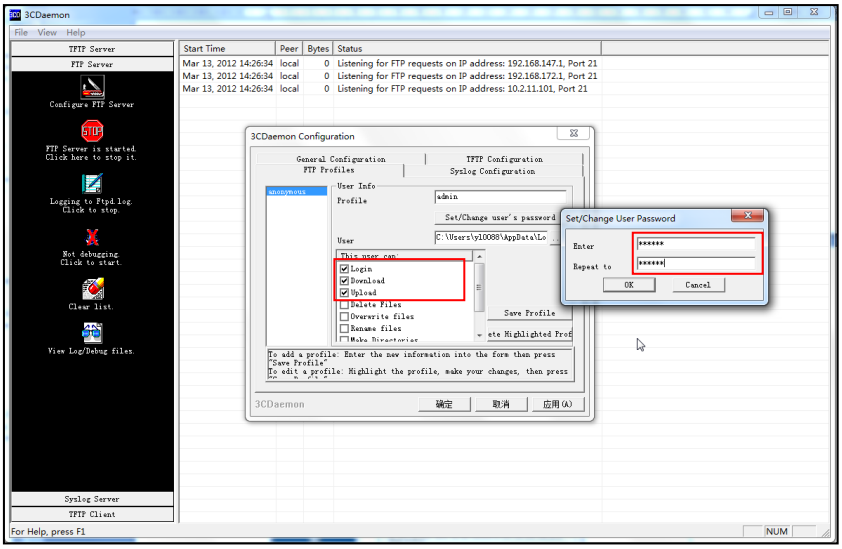


5. Enter the new authentication user name in the **Profile** field.
6. Click the **Set/Change user's password** button to set the password in the pop-up

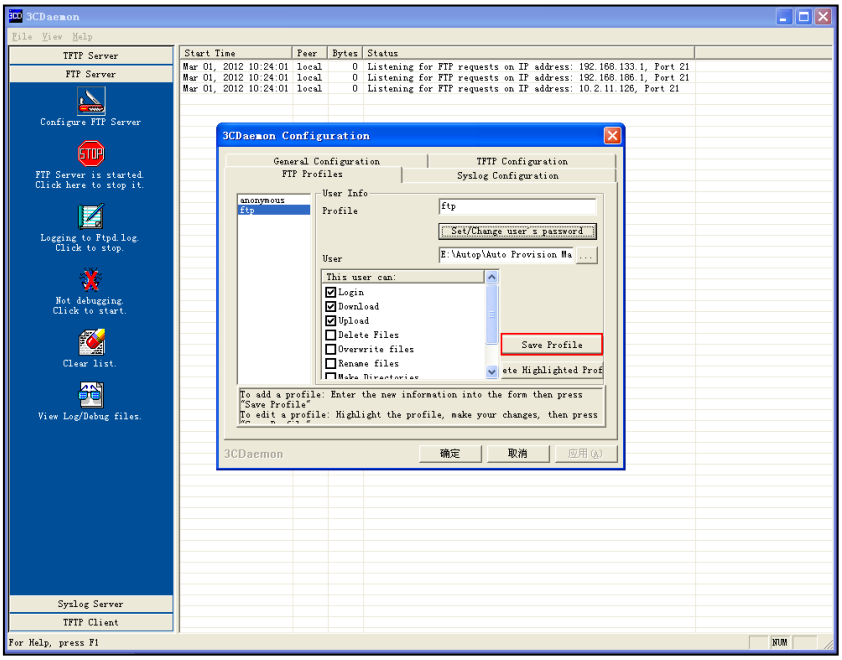
dialogue box.

7. Click the **OK** button to save.

8. Mark the check boxes of **Login**, **Download** and **Upload** to make sure the FTP user has the login, download and upload permission.



9. Click the **Save Profile** button to save the settings and finish the configurations.



10. Click the **Confirm** button to finish configuring the FTP server.

    The server URL "ftp://username:password@IP/" (Here "IP" means the IP address of the provisioning server, "username" and "password" are the authentication for FTP download. For example, "ftp://admin:123456@192.168.1.100/") is where the phone downloads configuration files from.

Configuring an HTTP Server

This section provides instructions on how to configure an HTTP server using HFS tool. You can download the HFS software online: http://www.snapfiles.com/get/hfs.html.

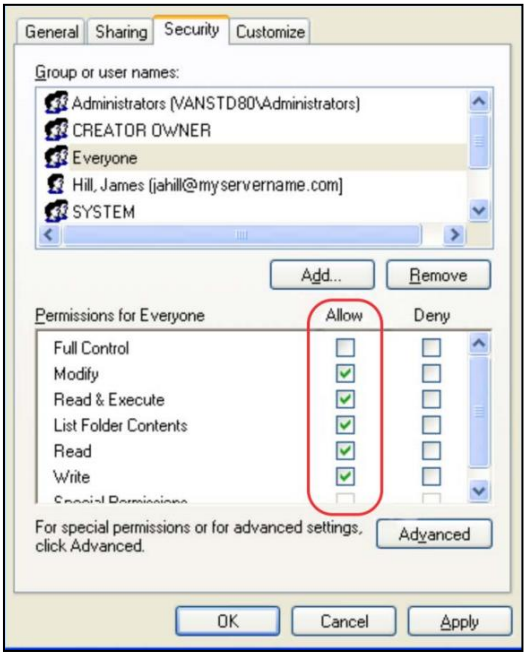
Preparing a Root Directory

To prepare a root directory:

1. Create an HTTP root directory on the local system.
2. Place configuration files to this root directory.
3. Set the security permissions for the HTTP directory folder.

   You need to define a user or group name and set the permissions: read, write, and modify. Security permissions vary by organizations.

   An example of configuration on the Windows platform is shown as below:



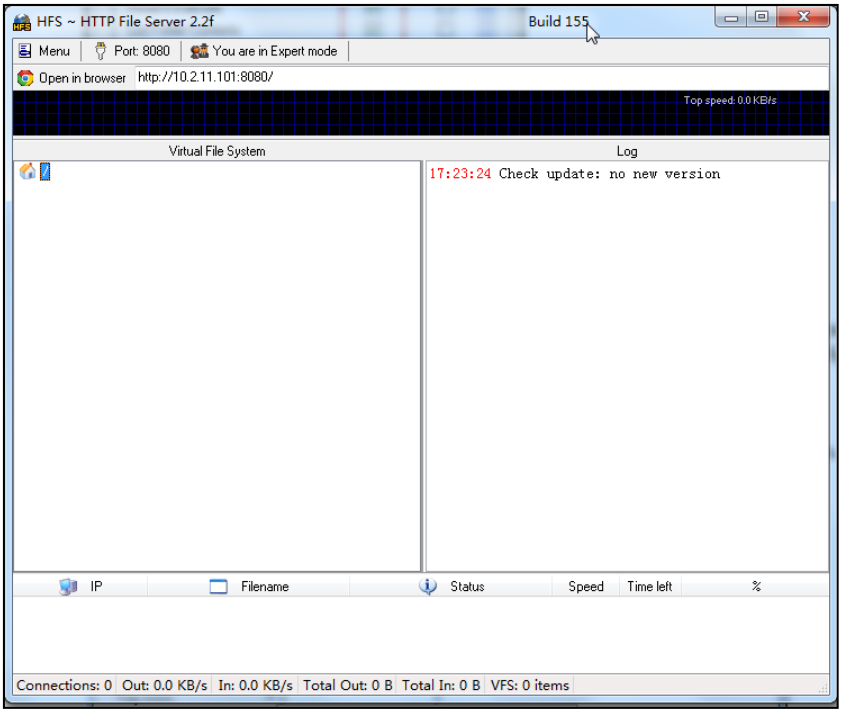
Configuring an HTTP Server

HFS tool is an executable application, so you don't need to install it.

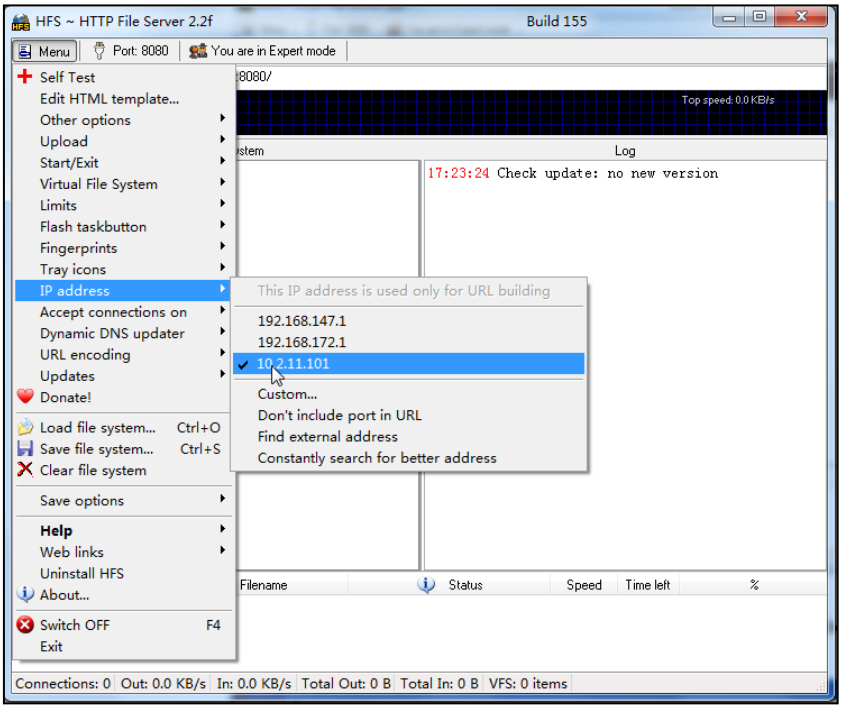
To configure an HTTP server:

1. Download the application file to your local directory, double click the hfs.exe.

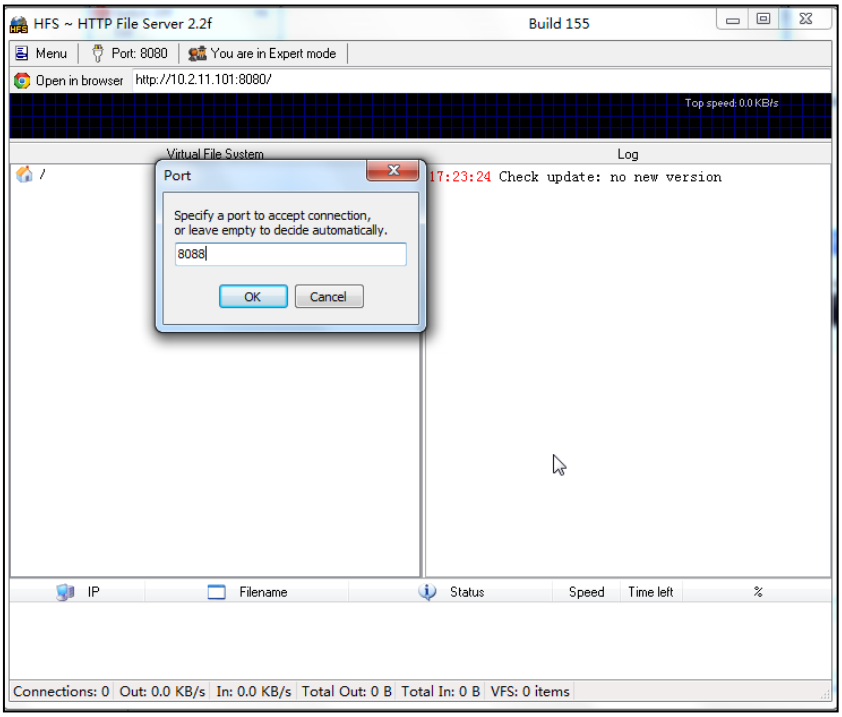
The main configuration page is shown as below:



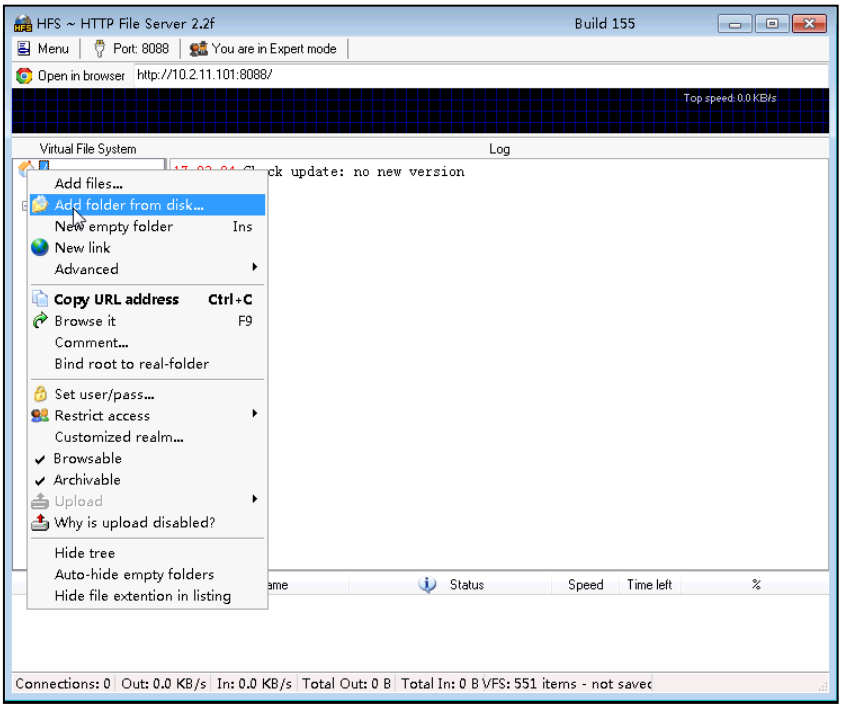
2. Click **Menu** in the main page and select the IP address of the PC from **IP address**.



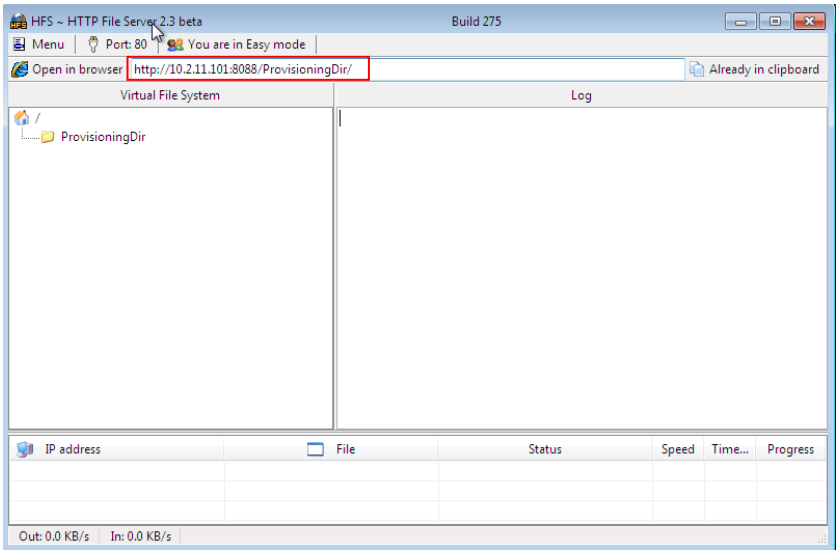
The default HTTP port is 8080. You can also reset the HTTP port (make sure there is no port conflict).



3. Right click the icon on the left of the main page, select **Add folder from disk** to add the HTTP Server root directory.



4. Locate the root directory from your local system.



5. Check the server URL (e.g., http:// 10.2.11.101:8088/ProvisioningDir/) by clicking "**Open in browser**".

Yealink IP phones also support the Hypertext Transfer Protocol with SSL/TLS (HTTPS) protocol for auto provisioning. HTTPS protocol provides the encrypted communication and secure identification. For more information on installing and configuring an Apache HTTPS Server, refer to the network resource.

Configuring a DHCP server

This section provides instructions on how to configure a DHCP server for Windows using DHCP Turbo. You can download this software online: http://www.tucows.com/preview/265297 and install it following the setup wizard.

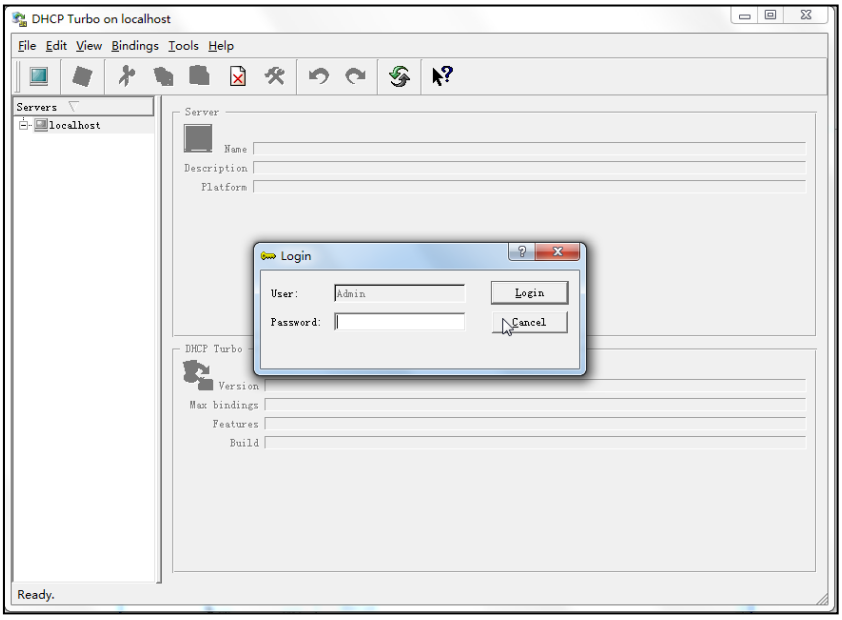
Before configuring the DHCP Turbo, make sure:

- The firewall on the PC is disabled.
- There is no DHCP server in your local system.

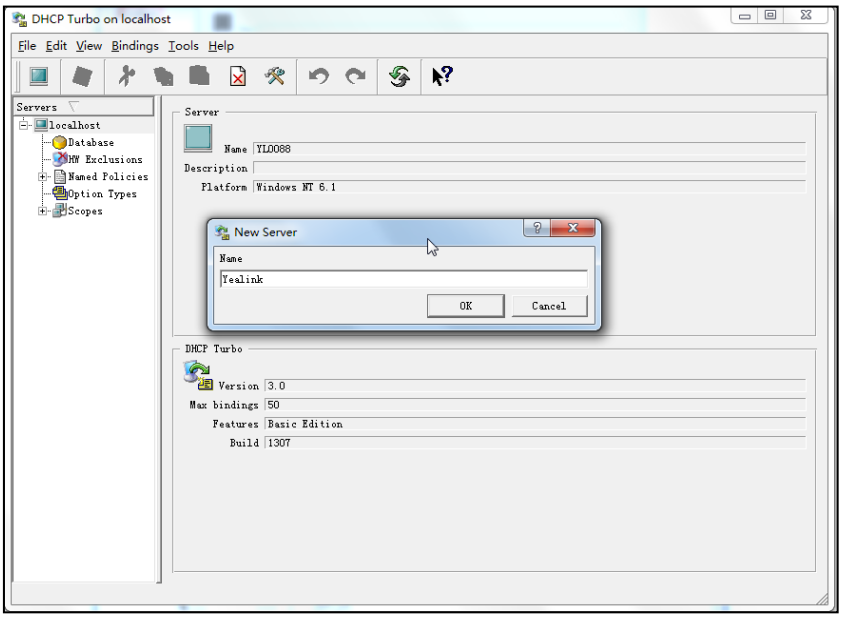
To configure the DHCP Turbo:

1. To start the DHCP Turbo application, double click **localhost**.

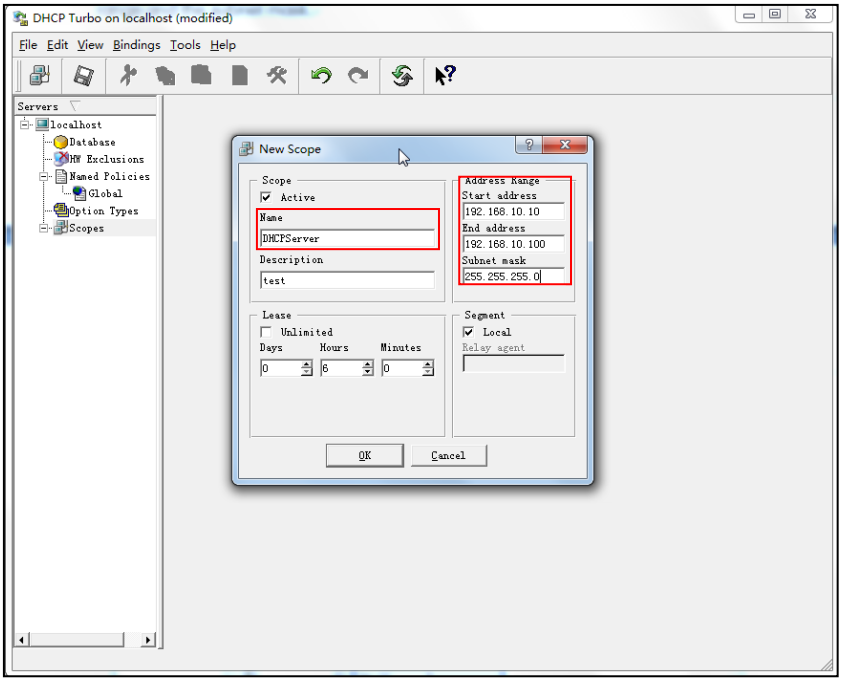
2. Click the **Login** button (the login password is blank) to log in.



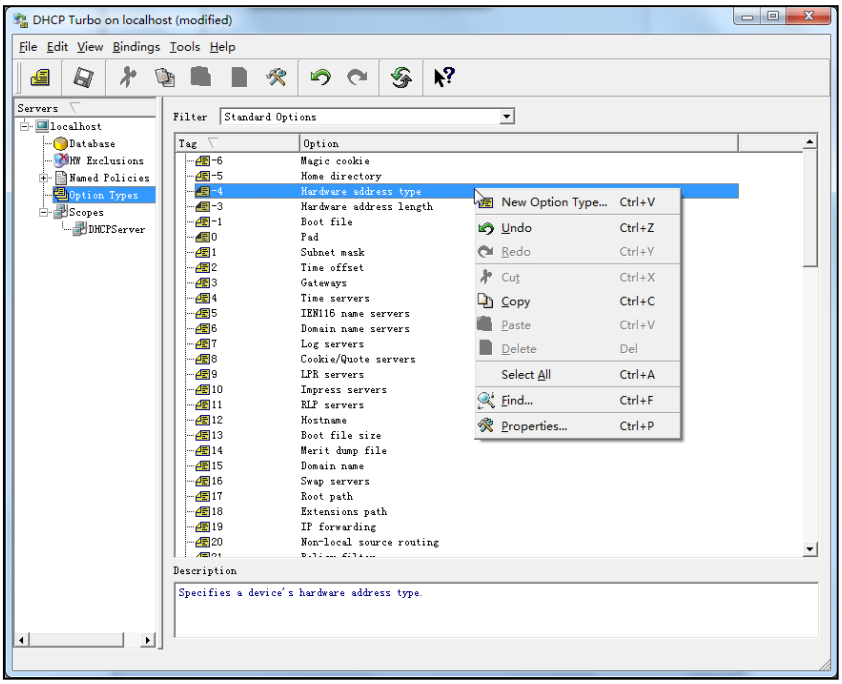
3. You can then edit the existing DHCP server, or you can right click **localhost** and select **New Server** to add a new DHCP server.



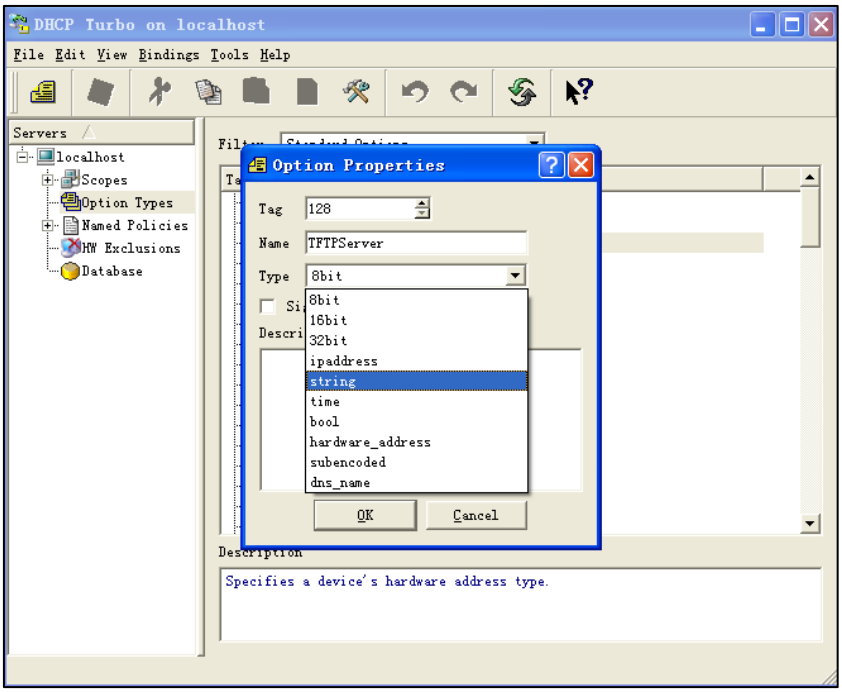
4. Right click **Scopes** and select **New Scope**.
5. Configure the DHCP server name, the DHCP IP range and the subnet mask.
6. Click **OK** to accept the change.



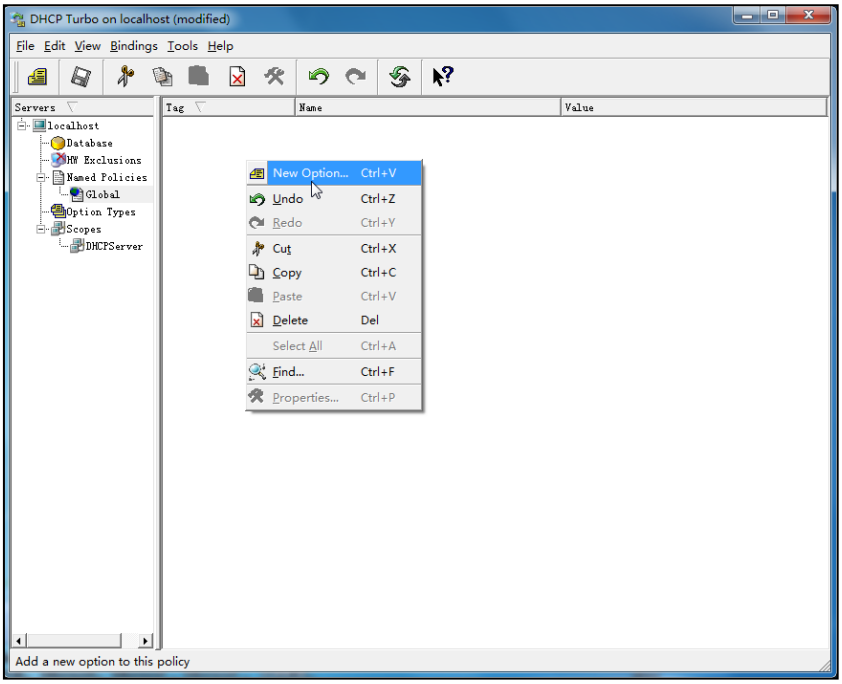
7. You can add a custom option via DHCP Turbo. Select **Option Types**, right click one of the options on the right of the main page, and then select **New Option Type**.



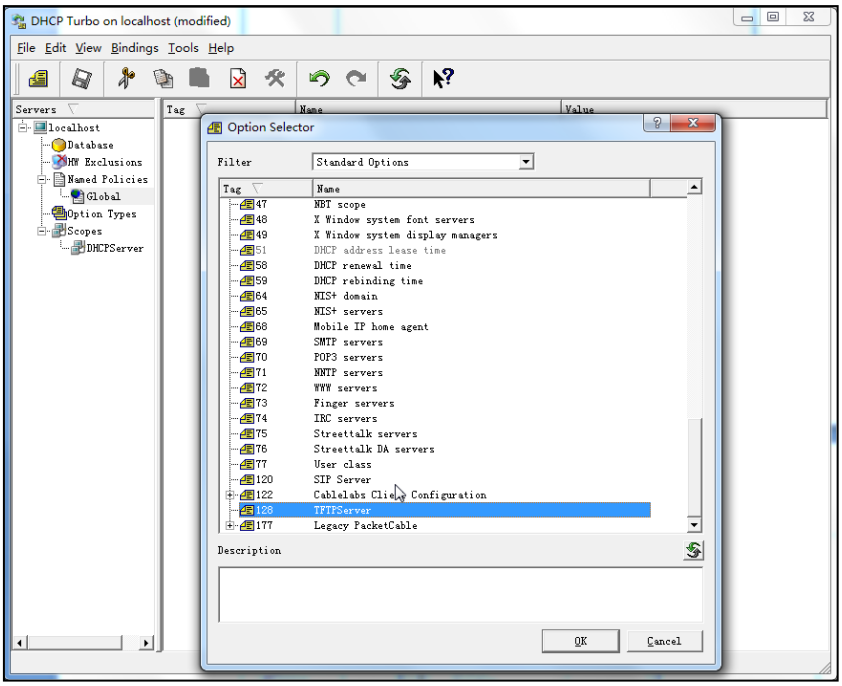
8. Set the custom DHCP option (custom DHCP option tag number ranges from 128 to 254) and select the option type (Yealink supports **String** and **IP Address** option types only). Click the **OK** button to finish setting the option properties. Click  to save the change.



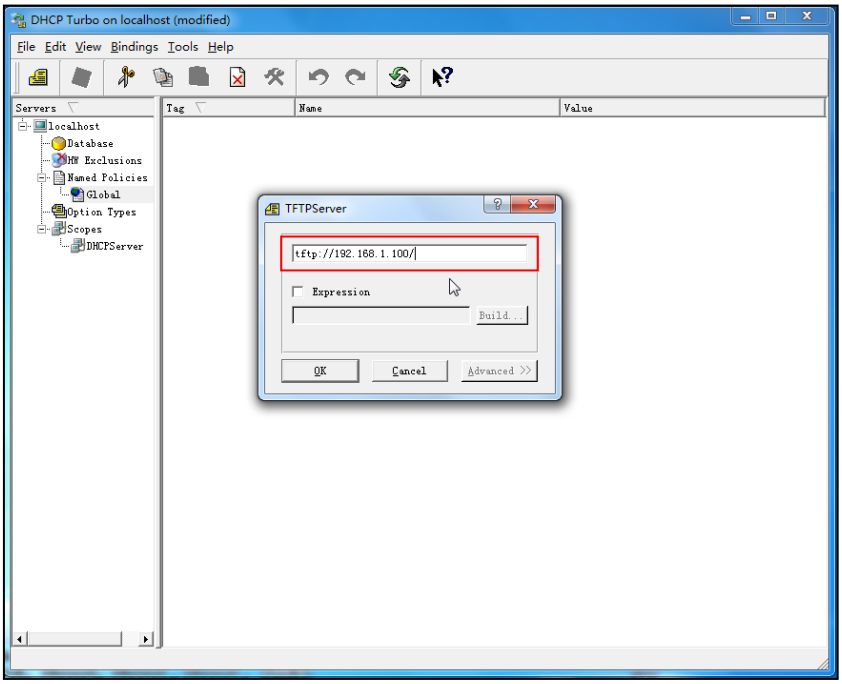
9. Click **Named Policies**-->**Global**, right click the blank area on the right of the main page and then select **New Option**.



10. Scroll down and double click the custom option 128.

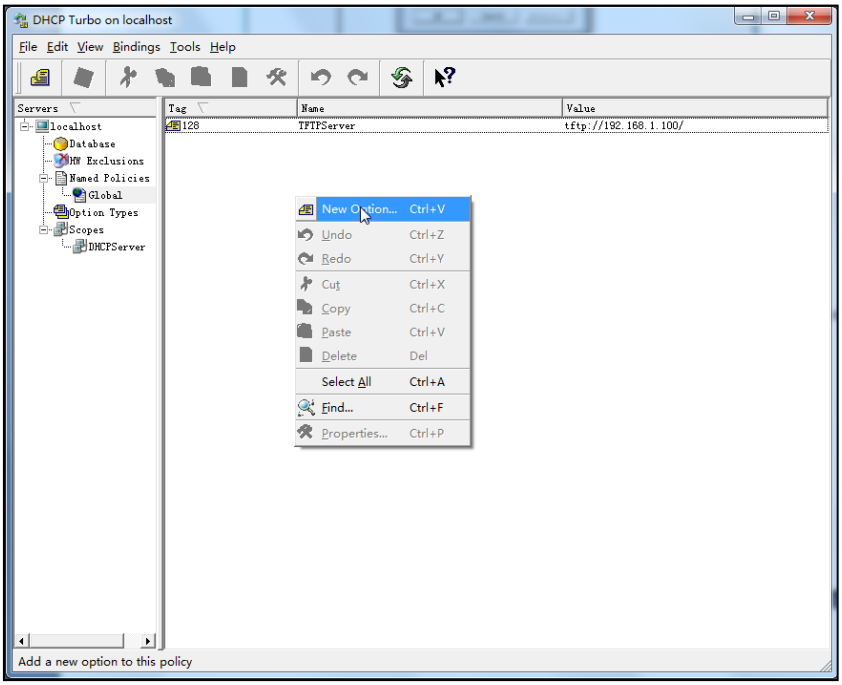


11. Fill the provisioning server address in the input field.
12. Click the **OK** button to finish setting a custom option.
13. Click  to save the change.

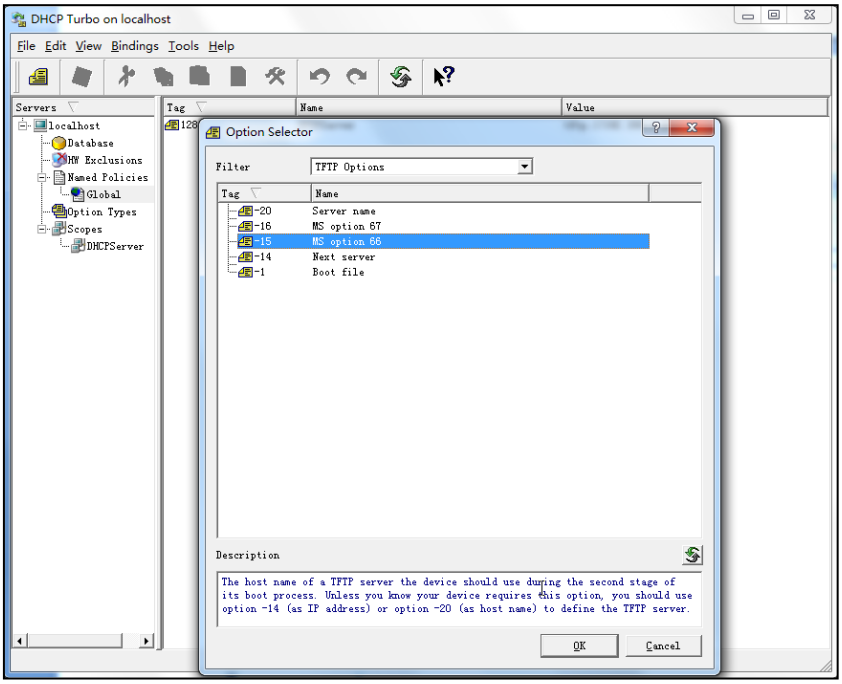


You can add the option 66 via DHCP Turbo. The following shows the detailed processes.

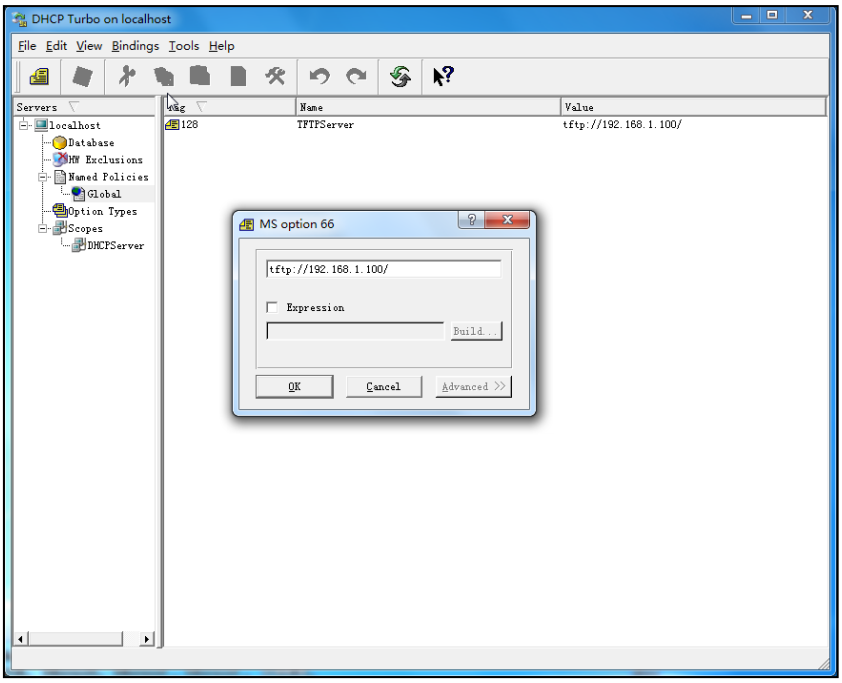
1. Click **Named Policies-->Global**, right click the blank area on the right of the main page and then select **New Option**.



2. Select **TFTP Options** from the pull-down list of **Filter**.
3. Scroll down and double click **MS option 66**.



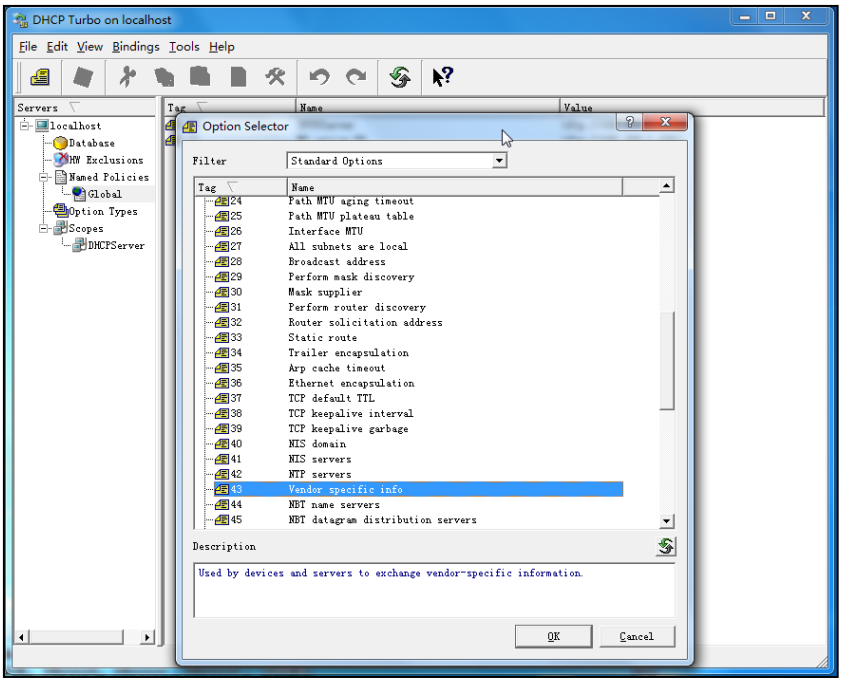
4. Fill the provisioning server address in the input field.



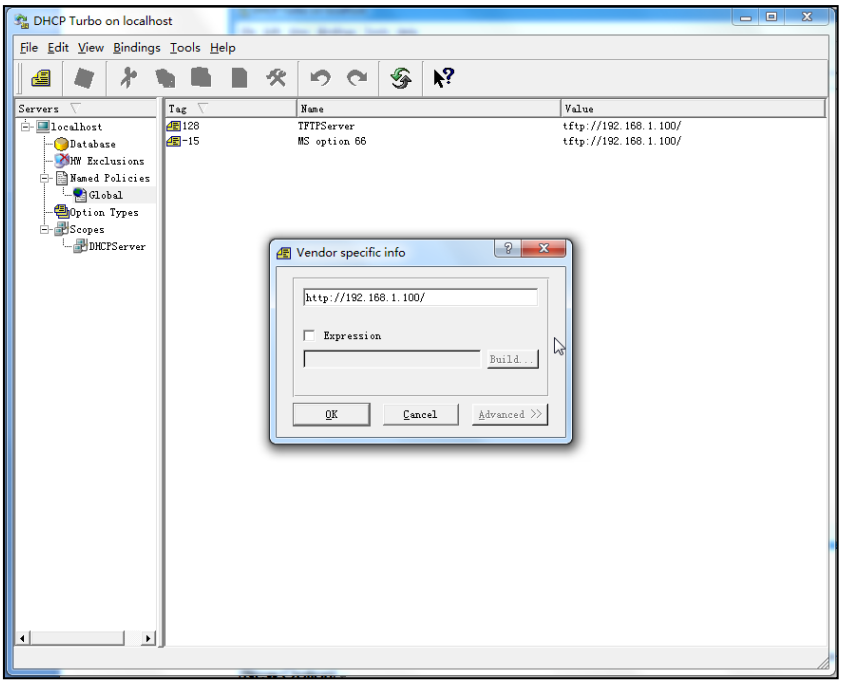
5. Click the **OK** button to finish setting a custom option.
6. Click to save the change.

You also can add the option 43. The following shows the detailed processes.

1. Click **Named Policies**-->**Global**, right click the blank area on the right of the main page and then select **New Option**.
2. Select the **Standard Options** from the pull-down list of **Filter**.
3. Scroll down and double click **43**.



4. Fill the provisioning server address in the input field.



5. Click the **OK** button to finish setting a custom option.
6. Click  to save the change.

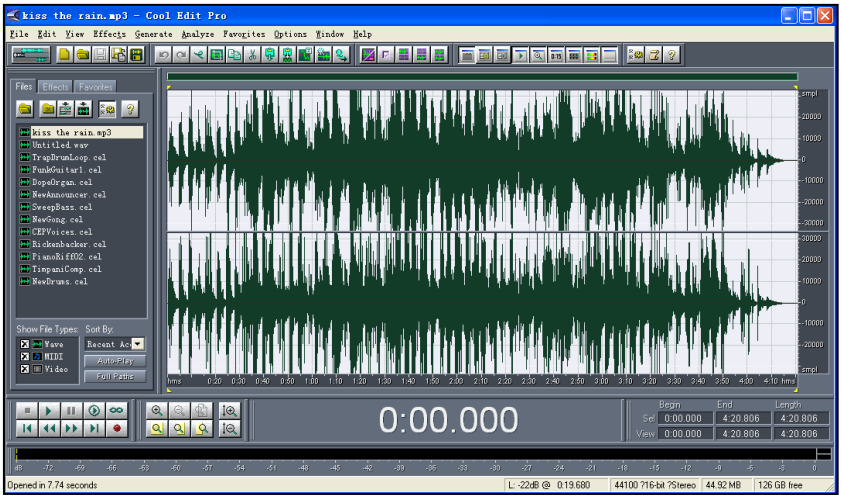
Customizing a Ring Tone Using Cool Edit Pro

If you have installed the Cool Edit application, double click to open it. Otherwise, you can download the installation package online: http://www.toggle.com/lv/group/view/kl36218/Cool_Edit_Pro.htm and install it.

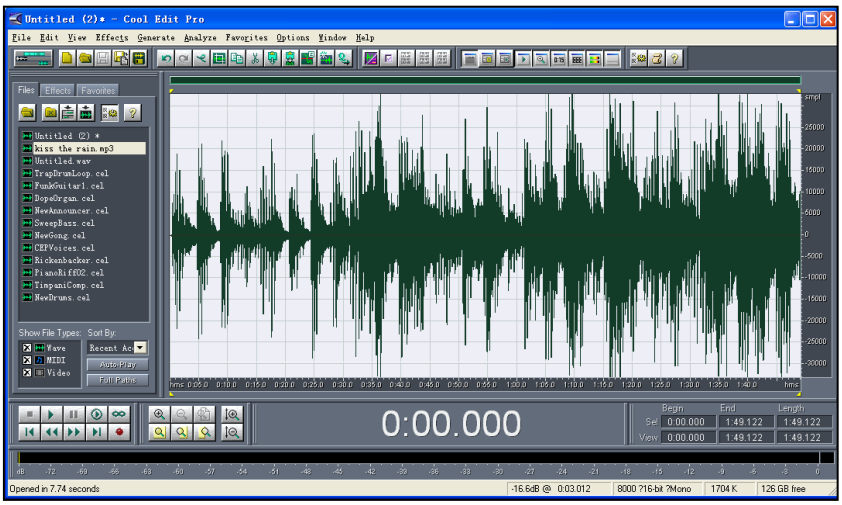
To customize a ring tone using Cool Edit Pro:

1. Open the **Cool Edit Pro** application.
2. Click **File** to open an audio file.
3. Locate the ring tone file, click **Open**, the file is uploaded as follows.

   A sample audio file loaded is shown as below:



4. Select and copy the audio waveform.
5. Select **File**->**New** to create a new file, set the channels as **Mono**, the sample rate as **8000** and the resolution as **16-bit**.
6. Paste the audio waveform to the new file.



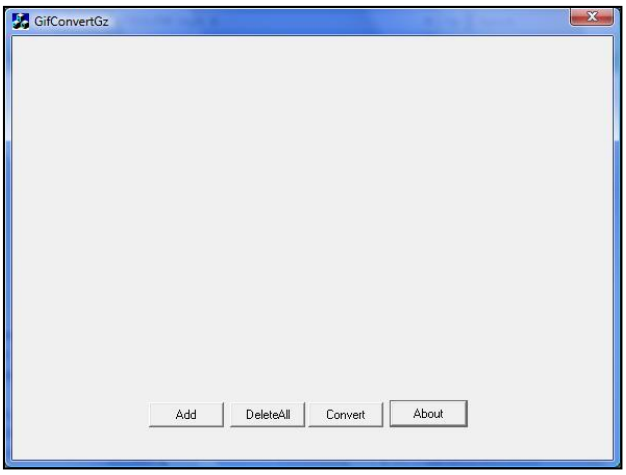
7. Select **File**->**Save as** to save the new audio file. On the Save waveform page,

select the file format as **A/mu-law wave**.

Customizing a Logo File Using PictureExDemo

The original picture format must be *.bmp or *.gif. We recommend placing all files and the PictureExDemo application to the root directory of the PC.

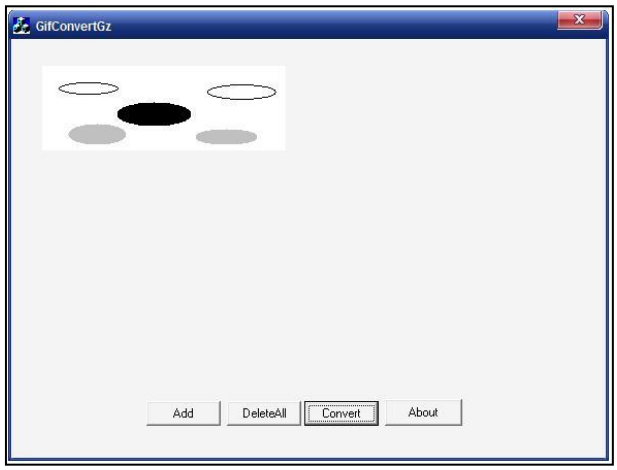
1. Double click the PictureExDemo.exe.



2. Click **Add** button to open a *.bmp or *.gif file.

   You can repeat the second step to add multiple original picture files.

3. Click the **Convert** button.



Then you can find the **DOB** logo files in the **adv** directory.

Description of Configuration Parameters in CFG Files

If you want to reset the configuration of a parameter, set the value of the parameter to !NULL! or %NULL%. For example, local_time.ntp_server1 = %NULL%. After the auto provisioning process is completed, the NTP server 1 will be reset to "cn.pool.ntp.org".

Parameter	Permitted Values	Descriptions	Web Setting Path
network.ip_address_mode =	0, 1 or 2	It configures the IP address mode. **0**-IPv4 **1**-IPv6 **2**-IPv4&IPv6 The default value is 0. It takes effect after a reboot.	Network->Basic->Internet Port->Mode (IPv4/IPv6)
network.internet_port.type =	0, 1 or 2	It configures the Internet (WAN) port type for IPv4 when the IP address mode is configured as IPv4 or IPv4&IPv6. **0**-DHCP **1**-PPPoE (not applicable to SIP-T42G/T41P IP phones) **2**-Static IP Address The default value is 0. It takes effect after a reboot.	Network->Basic->IPv4 Config
network.static_dns_enable =	0 or 1	It enables or disables the phone to use manually configured static IPv4 DNS when Internet (WAN) port type for IPv4 is configured as DHCP. **0**-Disabled (use the IPv4 DNS obtained by DHCP) **1**-Enabled The default value is 0. It takes effect after a reboot.	Network->Basic->IPv4 Config->Static DNS
network.internet_port.ip =	IPv4 address	It configures the IPv4 address when the IP address mode is configured as IPv4 or IPv4&IPv6, and the Internet (WAN) port type for IPv4 is configured as Static IP Address. The default value is blank.	Network->Basic->IPv4 Config->Static IP Address->IP Address

Parameter	Permitted Values	Descriptions	Web Setting Path
		It takes effect after a reboot.	
network.internet_port.mask =	Subnet Mask	It configures the IPv4 subnet mask when the IP address mode is configured as IPv4 or IPv4&IPv6, and the Internet (WAN) port type for IPv4 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv4 Config->Static IP Address->Subnet Mask
network.internet_port.gateway =	IPv4 address	It configures the IPv4 default gateway when the IP address mode is configured as IPv4 or IPv4&IPv6, and the Internet (WAN) port type for IPv4 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv4 Config->Static IP Address->Gateway
network.primary_dns =	IPv4 address	It configures the primary IPv4 DNS server when the IP address mode is configured as IPv4 or IPv4&IPv6, and the Internet (WAN) port type for IPv4 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv4 Config->Static IP Address->Primary DNS
network.secondary_dns =	IPv4 address	It configures the secondary IPv4 DNS server when the IP address mode is configured as IPv4 or IPv4&IPv6, and the Internet (WAN) port type for IPv4 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv4 Config->Static IP Address->Secondary DNS
network.pppoe.user = (not applicable to SIP-T42G/T41P IP phones)	String within 32 characters	It configures the user name for PPPoE connection. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv4 Config->PPPoE->User Name
network.pppoe.password =	String within 99	It configures the password for PPPoE connection.	Network->Basic->IPv4 Config->

Parameter	Permitted Values	Descriptions	Web Setting Path
(not applicable to SIP-T42G/T41P IP phones)	characters	The default value is blank. It takes effect after a reboot.	PPPoE->Password
network.ipv6_internet_port.type =	0 or 1	It configures the Internet (WAN) port type for IPv6 when the IP address mode is configured as IPv6 or IPv4&IPv6. **0**-DHCP **1**-Static IP Address The default value is 0. It takes effect after a reboot.	Network->Basic->IPv6 Config
network.ipv6_static_dns_enable =	0 or 1	It enables or disables the phone to use manually configured static IPv6 DNS when Internet (WAN) port type for IPv6 is configured as DHCP. **0**-Disabled (use the IPv6 DNS obtained by DHCP) **1**-Enabled The default value is 0. It takes effect after a reboot.	Network->Basic->IPv6 Config->IPv6 Static DNS
network.ipv6_prefix =	Integer from 0 to 128	It configures the IPv6 prefix when the IP address mode is configured as IPv6 or IPv4&IPv6, and the Internet (WAN) port type for IPv6 is configured as Static IP Address. The default value is 64. It takes effect after a reboot.	Network->Basic->IPv6 Config->Static IP Address->IPv6 Prefix (0~128)
network.ipv6_internet_port.ip =	IPv6 address	It configures the IPv6 address when the IP address mode is configured as IPv6 or IPv4&IPv6, and the Internet (WAN) port type for IPv6 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic->IPv6 Config->Static IP Address->IP Address
network.ipv6_internet_port.g	IPv6 address	It configures the IPv6 default gateway when the IP address mode is	Network->Basic->IPv6 Config->Static

Parameter	Permitted Values	Descriptions	Web Setting Path
ateway =		configured as IPv6 or IPv4&IPv6, and the Internet (WAN) port type for IPv6 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	IP Address-> Gateway
network.ipv6_primary_dns =	IPv6 address	It configures the primary IPv6 DNS server when the IP address mode is configured as IPv6 or IPv4&IPv6, and the Internet (WAN) port type for IPv6 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network->Basic-> IPv6 Config->Static IP Address-> Primary DNS
network.ipv6_secondary_dns =	IPv6 address	It configures the secondary IPv6 DNS server when the IP address mode is configured as IPv6 or IPv4&IPv6, and the Internet (WAN) port type for IPv6 is configured as Static IP Address. The default value is blank. It takes effect after a reboot.	Network-> Basic-> IPv6 Config->Static IP Address-> Secondary DNS
network.ipv6_icmp_v6.enable = (only applicable to SIP-T48G/T46G IP phones)	0 or 1	It enables or disables the phone to obtain IPv6 network settings by ICMPv6. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->Advanced->ICMPv6 Status->Active
network.bridge_mode = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	0 or 1	It configures the PC (LAN) port type. **0**-Router **1**-Bridge The default value is 1. It takes effect after a reboot. **Note**: SIP-T19P/T21P/T48G/T46G/ T42G/T41P/ IP phones only support bridge mode for PC connection.	Network->PC Port ->PC Port Config
network.pc_port.enable =	0 or 1	It enables or disables the PC port. **0**-Disabled	Network->PC Port ->PC Port Active

Parameter	Permitted Values	Descriptions	Web Setting Path
		1-Auto Negotiation The default value is 1. It takes effect after a reboot.	
network.pc_port.ip = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	IP address	It configures the IP address of the PC (LAN) port when the PC (LAN) port is configured as Router. The default value is 10.0.0.1. It takes effect after a reboot.	Network->PC Port ->PC Port Config ->As Router->IP Address
network.pc_port.mask = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	IP address	It configures the mask of the PC (LAN) port when the PC (LAN) port is configured as Router. The default value is 255.255.255.0. It takes effect after a reboot.	Network->PC Port ->PC Port Config ->As Router ->Subnet Mask
network.pc_port.dhcp_server = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	0 or 1	It enables or disables the phone to act as a DHCP server when the PC (LAN) port is configured as Router. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->PC Port ->PC Port Config ->As Router ->Enable DHCP Server
network.dhcp.start_ip = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP	IP address	It configures the start IP address of the DHCP IP segment. The default value is 10.0.0.10. It takes effect after a reboot.	Network->PC Port ->PC Port Config ->As Router->Start IP Address

Parameter	Permitted Values	Descriptions	Web Setting Path
phones)			
network.dhcp.end_ip = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	IP address	It configures the end IP address of the DHCP IP segment. The default value is 10.0.0.100. It takes effect after a reboot.	Network->PC Port ->PC Port Config ->As Router->End IP Address
network.internet_port.speed_duplex =	0, 1, 2, 3, 4 or 5	It configures the transmission mode and speed of the Internet (WAN) port. **0**-Auto negotiate **1**-Full duplex 10Mbps **2**-Full duplex 100Mbps **3**-Half duplex 10Mbps **4**-Half duplex 100Mbps **5**-Full duplex 1000Mbps (only applicable to SIP-T48G, SIP-T46G and SIP-T42G IP phones) The default value is 0. It takes effect after a reboot.	Network-> Advanced->Port Link-> WAN Port Link
network.pc_port.speed_duplex =	0, 1, 2, 3, 4 or 5	It configures the transmission mode and speed of the PC (LAN) port. **0**-Auto negotiate **1**-Full duplex 10Mbps **2**-Full duplex 100Mbps **3**-Half duplex 10Mbps **4**-Half duplex 100Mbps **5**-Full duplex 1000Mbps (only applicable to SIP-T48G, T46G and T42G IP phones) The default value is 0. It takes effect after a reboot.	Network-> Advanced->Port Link->PC Port Link
network.vlan.internet_port_e	0 or 1	It enables or disables VLAN of the Internet (WAN) port.	Network-> Advanced->VLAN ->WAN Port->

Parameter	Permitted Values	Descriptions	Web Setting Path
nable =		**0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	Active
network.vlan.internet_port_vid =	Integer from 1 to 4094	It configures VLAN ID of the Internet (WAN) port. The default value is 1. It takes effect after a reboot.	Network->Advanced->VLAN->WAN Port->VID (1-4094)
network.vlan.internet_port_priority =	Integer from 0 to 7	It configures VLAN priority of the Internet (WAN) port. The default value is 0. It takes effect after a reboot.	Network->Advanced->VLAN->WAN Port->Priority
network.vlan.pc_port_enable =	0 or 1	It enables or disables VLAN of the PC (LAN) port. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	Network->Advanced->VLAN>PC Port->Active
network.vlan.pc_port_vid =	Integer from 1 to 4094	It configures VLAN ID of the PC (LAN) port. The default value is 1. It takes effect after a reboot.	Network->Advanced->VLAN>PC Port->VID (1-4094)
network.vlan.pc_port_priority =	Integer from 0 to 7	It configures VLAN priority of the PC (LAN) port. The default value is 0. It takes effect after a reboot.	Network->Advanced->VLAN>PC Port->Priority
network.vlan.pc_port_mode = (only applicable to SIP-T4X IP phones)	0 or 1	It configures the way the phone processes packets sent from the PC port when VLAN is enabled on the PC port. **0**-Forward the packets directly **1**-Tag and then forward the packets if there is no VLAN tag on the packets, otherwise, forward the packets directly.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0. It takes effect after a reboot.	
network.vlan.dhcp_enable =	0 or 1	It enables or disables the phone to obtain VLAN by DHCP. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->Advanced->VLAN >DHCP VLAN-> Active
network.vlan.dhcp_option =	Integer from 128 to 254	It configures the DHCP option from which the phone will obtain the VLAN settings. You can configure at most five DHCP options and separate them by commas. The default value is 132. It takes effect after a reboot.	Network->Advanced->VLAN >DHCP VLAN-> Option
network.dhcp_host_name =	String within 99 characters	It configures the client host name for DHCP option 12. **For SIP-T28P IP phones:** The default value is SIP-T28P. **For SIP-T26P IP phones:** The default value is SIP-T26P. **For SIP-T22P IP phones:** The default value is SIP-T22P. **For SIP-T21P IP phones:** The default value is SIP-T21P. **For SIP-T20P IP phones:** The default value is SIP-T20P. **For SIP-T19P IP phones:** The default value is SIP-T19P. **For SIP-T48G IP phones:** The default value is SIP-T48G. **For SIP-T46G IP phones:** The default value is SIP-T46G. **For SIP-T42G IP phones:** The default value is SIP-T42G.	Features->General Information-> DHCP Hostname

Parameter	Permitted Values	Descriptions	Web Setting Path
		For SIP-T41P IP phones: The default value is SIP-T41P. It takes effect after a reboot.	
wui.http_enable =	0 or 1	It enables or disables the HTTP protocol for web server access. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->Advanced->Web Server->HTTP
wui.https_enable =	0 or 1	It enables or disables the HTTPS protocol for web server access. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->Advanced->Web Server->HTTPS
network.port.http =	Integer from 1 to 65535	It configures the HTTP port for web server access. The default value is 80. It takes effect after a reboot.	Network->Advanced->Web Server->HTTP Port (1~65535)
network.port.https =	Integer from 1 to 65535	It configures the HTTPS port for web server access. The default value is 443. It takes effect after a reboot.	Network->Advanced->Web Server->HTTPS Port (1~65535)
network.port.max_rtpport =	Integer from 1024 to 65535	It configures the maximum local RTP port. The default value is 11800. It takes effect after a reboot.	Network->Advanced->Local RTP Port-> Max RTP Port (1024~65535)
network.port.min_rtpport =	Integer from 1024 to 65535	It configures the minimum local RTP port. The default value is 11780. It takes effect after a reboot.	Network->Advanced->Local RTP Port->Min RTP Port (1024~65535)
network.qos.rtptos =	Integer from 0 to 63	It configures the voice QoS. The default value is 46. It takes effect after a reboot.	Network->Advanced->Voice QoS (0~63)

Parameter	Permitted Values	Descriptions	Web Setting Path
network.qos.signaltos =	Integer from 0 to 63	It configures the SIP QoS. The default value is 26. It takes effect after a reboot.	Network-> Advanced->SIP QoS (0~63)
network.802_1x.mode =	0, 1, 2, 3 or 4	It configures the 802.1x mode. **0**-Disabled **1**-EAP-MD5 **2**-EAP-TLS **3**-PEAP-MSCHAPV2 **4**-EAP-TTLS/EAP-MSCHAPv2 The default value is 0. It takes effect after a reboot.	Network-> Advanced->802.1x ->802.1x Mode
network.802_1x.identity =	String within 32 characters	It configures the user name for 802.1x authentication. The default value is blank. It takes effect after a reboot.	Network-> Advanced->802.1x ->Identity
network.802_1x.md5_password =	String within 32 characters	It configures the password for 802.1x authentication. The default value is blank. It takes effect after a reboot.	Network-> Advanced->802.1x ->MD5 Password
network.802_1x.root_cert_url =	URL within 511 characters	It configures the access URL of the CA certificate when the 802.1x mode is configured as EAP-TLS, PEAP-MSCHAPV2 or EAP-TTLS/EAP-MSCHAPV2. The default value is blank. It takes effect after a reboot.	Network-> Advanced->802.1x ->CA Certificates
network.802_1x.client_cert_url =	URL within 511 characters	It configures the access URL of the device certificate when the 802.1x mode is configured as EAP-TLS. The default value is blank. It takes effect after a reboot.	Network-> Advanced->802.1x ->Device Certificates
network.vpn_enable = (not applicable to	0 or 1	It enables or disables OpenVPN feature. **0**-Disabled **1**-Enabled	Network-> Advanced->VPN ->Active

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P IP phones)		The default value is 0. It takes effect after a reboot.	
openvpn.url = (not applicable to SIP-T19P IP phones)	URL within 511 characters	It configures the access URL of the *.tar file for OpenVPN. The default value is blank.	Network->Advanced->VPN->Upload VPN Config
network.lldp.enable =	0 or 1	It enables or disables LLDP feature. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Network->Advanced->LLDP->Active
network.lldp.packet_interval =	Integer from 1 to 3600	It configures the interval (in seconds) for the phone to broadcast the LLDP request. The default value is 60. It takes effect after a reboot.	Network->Advanced->LLDP->Packet Interval (1~3600s)
network.span_to_pc_port =	0 or 1	It enables or disables the phone to span data packets received in the WAN port to the PC port. If it is enabled, all packets from WAN port can be received by PC port. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	Network->Advanced->Span to PC->Span to PC Port
sip.reg_surge_prevention =	Integer from 0 to 60	It configures the maximum duration (in seconds) for account register after startup. The default value is 0. It takes effect after a reboot.	Network->Advanced->Registration Random->Registration Random (0~60s)
sip.send_response_by_request =	0 or 1	It configures from where the phone retrieves the destination address for response. The phone will then send all SIP response messages to the destination address.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		0-from VIA header in the request message **1**-from source address of the request message The default value is 1. It takes effect after a reboot.	
sip.notify_reboot_enable =	0, 1or 2	It configures the phone behavior when receiving a SIP NOTIFY message which contains the header "Event: check-sync". **0**-The phone will reboot only if the SIP NOTIFY message contains an additional string "reboot=true". **1**-The phone will be forced to reboot. **2**-The phone will ignore the SIP NOTIFY message. The default value is 1.	
syslog.mode =	0 or 1	It configures the phone to export log files to a syslog server or the local system. **0**-Local **1**-Server The default value is 0. It takes effect after a reboot.	Settings-> Configuration->Export System Log
syslog.server =	IP address or domain name	It configures the IP address or domain name of the syslog server when exporting log to the syslog server. It takes effect only if the parameter "syslog.mode" is configured as Server. The default value is blank. It takes effect after a reboot.	Settings-> Configuration-> Server Name
syslog.log_level =	Integer from 0 to 6	It configures the detail level of syslog information to be exported. 0 means nothing and 6 means all. The default value is 3. It takes effect after a reboot.	Settings-> Configuration-> System Log Level

Parameter	Permitted Values	Descriptions	Web Setting Path
auto_provision.power_on =	0 or 1	It enables or disables the phone to perform an auto provisioning process when powered on. **0**-Disabled **1**-Enabled The default value is 1. **Note**: The old parameter "auto_provision.mode" is also applicable to IP phones.	Settings->Auto Provision->Power On
auto_provision.pnp_enable =	0 or 1	It enables or disables Plug and Play feature. If it is enabled, the phone will broadcast PnP SUBSCRIBE messages to obtain a provisioning server address after startup. **0**-Disabled **1**-Enabled The default value is 1.	Settings->Auto Provision->PNP Active
auto_provision.weekly.enable =	0 or 1	It enables or disables the phone to check new configuration weekly. **0**-Disabled **1**-Enabled The default value is 0.	Settings->Auto provision->Weekly
auto_provision.weekly.dayofweek =	0,1,2,3,4,5,6 or a combination of these digits	It configures the days of the week for the phone to check new configuration weekly. **0**-Sunday **1**-Monday **2**-Tuesday **3**-Wednesday **4**-Thursday **5**-Friday **6**-Saturday Example: auto_provision.weekly.dayofweek = 01 means the phone will check the new configuration every Sunday and	Settings->Auto provision->Day of week

Parameter	Permitted Values	Descriptions	Web Setting Path
		Monday. The default value is 0123456. **Note**: The old parameters "auto_provision.weekly.mask" is also applicable to SIP-T21P/T19P/T4X IP phones and "auto_provision.schedule.dayofweek". is also applicable to SIP-T28P/T26P/T22P/T20P IP phones.	
auto_provision.weekly.begin_time =	Time from 00:00 to 23:59	It configures the begin time of the day for the phone to check new configuration weekly. The default value is 00:00. **Note**: The old parameter "auto_provision.schedule.time_from" is also applicable to SIP-T28P/T26P/T22P/T20P IP phones.	Settings->Auto provision->Time
auto_provision.weekly.end_time =	Time from 00:00 to 23:59	It configures the end time of the day for the phone to check new configuration weekly. The default value is 00:00. **Note**: The old parameter "auto_provision.schedule.time_to" is also applicable to SIP-T28P/T26P/T22P/T20P IP phones.	Settings->Auto provision->Time
auto_provision.repeat.enable =	0 or 1	It enables or disables the phone to check new configuration repeatedly. **0**-Disabled **1**-Enabled The default value is 0.	Settings->Auto provision-> Repeatedly
auto_provision.repeat.minutes =	Integer from 1 to 43200	It configures the interval (in minutes) for the phone to check new configuration repeatedly. The default value is 1440. **Note**: The old parameter "auto_provision.schedule.periodic_minute" is also applicable to SIP-T28P/T26P/T22P/T20P IP phones.	Settings->Auto provision->Interval (minutes)

Parameter	Permitted Values	Descriptions	Web Setting Path
auto_provision.dhcp_option.enable =	0 or 1	It enables or disables the phone to obtain the provisioning server address by detecting DHCP options. **0**-Disabled **1**-Enabled The default value is 1.	Settings->Auto Provision->DHCP Active
auto_provision.dhcp_option.list_user_options =	Integer from 128 to 254	It configures the custom DHCP option for provisioning server address. The default value is blank.	Settings->Auto Provision->Custom Option (128~254)
auto_provision.server.url =	URL within 511 characters	It configures the access URL of configuration files. The default value is blank.	Settings->Auto Provision->Server URL
auto_provision.server.username =	String within 32 characters	It configures the user name for authentication during auto provisioning. The default value is blank.	Settings->Auto Provision->User Name
auto_provision.server.password =	String within 32 characters	It configures the password for authentication during auto provisioning. The default value is blank.	Settings->Auto Provision-> Password
auto_provision.dhcp_option.option60_value =	String within 99 characters	It configures the value (vendor name of the device) of DHCP option 60. The default value is yealink.	Settings->Auto Provision->DHCP Option Value
auto_provision.aes_key_16.com =	16 characters	It configures the AES key for decrypting the Common CFG file. The valid characters contain: 0 ~ 9, A ~ Z, a ~ z. The default value is blank.	Settings->Auto Provision-> Common AES Key
auto_provision.aes_key_16.mac =	16 characters	It configures the AES key for decrypting the MAC-Oriented CFG file. The valid characters contain: 0 ~ 9, A ~ Z, a ~ z. The default value is blank.	Settings->Auto Provision-> MAC-Oriented AES Key

Parameter	Permitted Values	Descriptions	Web Setting Path
auto_provision.aes_key_in_file =	0 or 1	It enables or disables the phone to decrypt configuration files using the encrypted AES keys. **0**-Disabled **1**-Enabled If it is set to 1, the phone will download <y0000000000xx_Security>.enc and <MAC_Security>.enc files during auto provisioning, and then decrypts these files into the plaintext keys (e.g., key2, key3) respectively using the phone built-in key (e.g., key1). The IP phone then decrypts the encrypted configuration files using corresponding key (e.g., key2, key3). The default value is 0.	
autoprovision.X.name = (X ranges from 1 to 50)	String within 64 characters	It configures the name of the code for triggering auto provisioning. The default value is blank. It takes effect after a reboot.	
autoprovision.X.code = (X ranges from 1 to 50)	String	It configures the code for triggering auto provisioning. Valid characters are digits, # and *. Example: autoprovision.1.code = *99 The default value is blank. It takes effect after a reboot.	
autoprovision.X.url = (X ranges from 1 to 50)	URL within 511 characters	It configures the access URL of auto provisioning server. The default value is blank. It takes effect after a reboot.	
autoprovision.X.user = (X ranges from 1 to 50)	String within 64 characters	It configures the user name for authentication during auto provisioning. The default value is blank. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
autoprovision.X.password = (X ranges from 1 to 50)	String within 32 characters	It configures the password for authentication during auto provisioning. The default value is blank. It takes effect after a reboot.	
autoprovision.X.com_aes = (X ranges from 1 to 50)	16 characters	It configures the AES key for decrypting the Common CFG file. The default value is blank. It takes effect after a reboot.	
autoprovision.X.mac_aes = (X ranges from 1 to 50)	16 characters	It configures the AES key for decrypting the MAC-Oriented CFG file. The default value is blank. It takes effect after a reboot.	
sip.use_23_as_pound =	0 or 1	It enables or disables the phone to reserve the pound sign when dialing out. **0**-Disabled (convert the pound sign into "%23") **1**-Enabled The default value is 1.	Features->General Information-> Reserve # in User Name
sip.rfc2543_hold =	0 or 1	It enables or disables the phone to support RFC 2543 hold (c=0.0.0.0). **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->RFC 2543 Hold
sip.use_out_bound_in_dialog =	0 or 1	It enables or disables the phone to keep sending SIP requests to the outbound server in a dialog. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Features->General Information->Use Outbound Proxy In Dialog
watch_dog.enable =	0 or 1	It enables or disables Watch Dog feature. If it is enabled, the phone will reboot automatically when the system	Settings-> Preference-> Watch Dog

Parameter	Permitted Values	Descriptions	Web Setting Path
		is broken down. **0**-Disabled **1**-Enabled The default value is 1.	
managementserver.enable = (not applicable to SIP-T42G and SIP-T41P IP phones)	0 or 1	It enables or disables TR069 feature. **0**-Disabled **1**-Enabled The default value is 0.	Settings->TR069->Enable TR069
managementserver.username = (not applicable to SIP-T42G and SIP-T41P IP phones)	String within 128 characters	It configures the user name for the phone to authenticate with the ACS. The default value is blank.	Settings->TR069->ACS Username
managementserver.password = (not applicable to SIP-T42G and SIP-T41P IP phones)	String within 64 characters	It configures the password for the phone to authenticate with the ACS. The default value is blank.	Settings->TR069->ACS Password
managementserver.url = (not applicable to SIP-T42G and SIP-T41P IP phones)	URL within 511 characters	It configures the access URL of the ACS. The default value is blank.	Settings->TR069->ACS URL
managementserver.periodic_inform_enabl	0 or 1	It enables or disables the phone to report its configuration to the ACS. **0**-Disabled	Settings->TR069->Enable Periodic Inform

Parameter	Permitted Values	Descriptions	Web Setting Path
e = (not applicable to SIP-T42G and SIP-T41P IP phones)		**1**-Enabled The default value is 1.	
managementserver.periodic_inform_interval = (not applicable to SIP-T42G and SIP-T41P IP phones)	Integer from 5 to 4294967295	It configures the interval (in seconds) for the phone to report its configuration to the ACS. The default value is 60.	Settings->TR069->Periodic Inform Interval (seconds)
managementserver.connection_request_username = (not applicable to SIP-T42G and SIP-T41P IP phones)	String within 128 characters	It configures the user name for the phone to authenticate the connection requests. The default value is blank.	Settings->TR069->Connection Request Username
managementserver.connection_request_password = (not applicable to SIP-T42G and SIP-T41P IP phones)	String within 64 characters	It configures the password for the phone to authenticate the connection requests. The default value is blank.	Settings->TR069->Connection Request Password
transfer.semi_attend_tran_enable =	0 or 1	It enables or disables the transferee party's phone to prompt a missed call on the LCD screen before displaying the caller ID when performing a semi-attended transfer. **0**-Enabled	Features->Transfer->Semi-Attend Transfer

Parameter	Permitted Values	Descriptions	Web Setting Path
		1-Disabled The default value is 1.	
transfer.blind_tran_on_hook_enable =	0 or 1	It enables or disables the phone to complete the blind transfer through on-hook. **0**-Disabled **1**-Enabled The default value is 1.	Features->Transfer ->Blind Transfer On Hook
transfer.on_hook_trans_enable =	0 or 1	It enables or disables the phone to complete the attended transfer through on-hook. **0**-Disabled **1**-Enabled The default value is 1.	Features->Transfer ->Semi Attend Transfer On Hook
transfer.dsskey_deal_type =	0, 1 or 2	It configures the DSS key behavior during an active call when user presses the DSS key and the DSS key is configured as a speed dial, transfer or BLF/BLF list key. **0**-New Call **1**-Attended Transfer **2**-Blind Transfer The default value is 2.	Features->Transfer ->Transfer Mode Via Dsskey
transfer.multi_call_trans_enable = (not applicable to SIP-T20P and SIP-T4X IP phones)	0 or 1	It enables or disables the phone to enter Transfer to menu during multiple calls when pressing the transfer soft key or TRAN key. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information-> Allow Trans Exist Call
transfer.tran_others_after_conf_enable =	0 or 1	It enables or disables the phone to transfer call to the two parties after a local conference call hangs up. **0**-Disabled **1**-Enabled	Features->Transfer ->Transfer on Conference Hang up

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
voice.vad =	0 or 1	It enables or disables VAD (Voice Activity Detection) feature. **0**-Disbaled **1**-Enabled The default value is 0.	Settings->Voice->Echo Cancellation ->VAD
voice.cng =	0 or 1	It enables or disables CNG (Comfortable Noise Generator) feature. **0**-Disabled **1**-Enabled The default value is 1.	Settings->Voice->Echo Cancellation ->CNG
voice.echo_cancellation =	0 or 1	It enables or disables AEC (Acoustic Echo Canceller) feature. **0**-Disabled **1**-Enabled The default value is 1.	Settings->Voice->Echo Cancellation ->ECHO
voice.jib.adaptive =	0 or 1	It configures the type of jitter buffer. **0**-Fixed **1**-Adaptive The default value is 1.	Settings->Voice->JITTER BUFFER->Type
voice.jib.min =	Integer from 0 to 400	It configures the minimum delay (in milliseconds) of jitter buffer. The default value is 60.	Settings->Voice->JITTER BUFFER->Min Delay
voice.jib.max =	Integer from 0 to 400	It configures the maximum delay (in milliseconds) of jitter buffer. The default value is 300.	Settings->Voice->JITTER BUFFER->Max Delay
voice.jib.normal =	Integer from 0 to 400	It configures the normal delay (in milliseconds) of jitter buffer. The default value is 120.	Settings->Voice->JITTER BUFFER->Normal
voice.tone.country =	Custom, Australia, Austria, Brazil, Belgium,	It configures the country tone for the phone. The default value is Custom.	Settings->Tones->Select Country

Parameter	Permitted Values	Descriptions	Web Setting Path
	China, Czech, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Lithuania, India, Italy, Japan, Mexico, New Zealand, Netherlands, Norway, Portugal, Spain, Switzerland, Sweden, Russia, United States, Chile, Czech ETSI		
voice.tone.dial =	String	It customizes the dial tone when the parameter "voice.tone.country" is set to Custom. tonelist = element[,element][,element]... Where **element** = [!]Freq1[+Freq2][+Freq3][+Freq4]/Duration **Freq**: the frequency of the tone (ranges from 200 to 7000 Hz). If it is set to 0Hz, it means silence. A tone is comprised of at most four different frequencies.	Settings->Tones->Dial

Parameter	Permitted Values	Descriptions	Web Setting Path
		Duration: the duration (in milliseconds) of the dial tone, ranges from 0 to 30000ms. You can configure at most eight different tones for one condition, and separate them by commas. (e.g., 250/200, 0/1000, 200+300/500, 600+700+800+1000/2000). If you want the phone to play tones once, add an exclamation mark "!" before tones (e.g., !250/200, 0/1000, 200+300/500, 600+700+800+1000/2000). The default value is blank.	
voice.tone.ring =	String	It customizes the ringback tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones->Ring Back
voice.tone.busy =	String	It customizes the busy tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones->Busy
voice.tone.congestion =	String	It customizes the tone for network congestion when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones->Congestion

Parameter	Permitted Values	Descriptions	Web Setting Path
voice.tone.call waiting =	String	It customizes the call waiting tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones-> Call Waiting
voice.tone.dia lrecall =	String	It customizes the call back tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones-> Dial Recall
voice.tone.inf o =	String	It customizes the info tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones-> Info
voice.tone.stut ter =	String	It customizes the stutter tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones-> Stutter
voice.tone.me ssage = (not applicable to SIP-T20P, SIP-T42G and	String	It customizes the message tone when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter	Settings->Tones-> Message

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T41P IP phones)		"voice.tone.dial". The default value is blank.	
voice.tone.autoanswer =	String	It customizes the warning tone for auto answer when the parameter "voice.tone.country" is set to Custom. The value format is Freq/Duration. For more information on the value format, refer to the parameter "voice.tone.dial". The default value is blank.	Settings->Tones->Auto Answer
voice.group_spk_vol =	Integer from 1 to 15	It configures the receiving volume of the group listening mode. The default value is 8.	
voice.ring_vol =	Integer from 1 to 15	It configures the volume of ringer. The default value is 8.	
voice.handfree.spk_vol =	Integer from 1 to 15	It configures the receiving volume of speaker. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	
voice.handset.spk_vol =	Integer from 1 to 15	It configures the receiving volume of handset. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	
voice.headset.spk_vol =	Integer from 1 to 15	It configures the receiving volume of headset. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	
voice.handfree.tone_vol =	Integer from 1 to 15	It configures the dial tone volume of speaker. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	

Parameter	Permitted Values	Descriptions	Web Setting Path
voice.handset .tone_vol =	Integer from 1 to 15	It configures the dial tone volume of handset. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	
voice.headset .tone_vol =	Integer from 1 to 15	It configures the dial tone volume of headset. The default value is 8. It takes effect after a reboot (only for SIP-T28P/T26P/T22P/T20P IP phones).	
voice.handfree_send = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	Integer from 1 to 53	It configures the sending volume of speaker. The default value is 35. It takes effect after a reboot.	Features-> Audio->Handfree Send Volume (1~53)
voice.handset_send = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	Integer from 1 to 53	It configures the sending volume of handset. The default value is 25. It takes effect after a reboot.	Features-> Audio->Handset Send Volume (1~53)
voice.headset_send = (only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T20P IP phones)	Integer from 1 to 53	It configures the sending volume of headset. The default value is 30. It takes effect after a reboot.	Features-> Audio->Headset Send Volume (1~53)

Parameter	Permitted Values	Descriptions	Web Setting Path
security.trust_certificates =	0 or 1	It enables or disables the phone to only accept the certificates in the Trusted Certificates list. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	Security->Trusted Certificates->Only Accept Trusted Certificates
security.ca_cert =	0, 1 or 2	It configures the source certificates for the phone to authenticate for TLS connection. **0**-Default certificates **1**-Custom certificates **2**-All certificates The default value is 2. It takes effect after a reboot.	Security->Trusted Certificates->CA Certificates
security.cn_validation =	0 or 1	It enables or disables the phone to mandatorily validate the CommonName or SubjectAltName of the certificate received from the connecting server. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	Security->Trusted Certificates->Common Name Validation
security.dev_cert =	0 or 1	It configures the device certificates for the phone to send for TLS authentication. **0**-Default certificates **1**-Custom certificates The default value is 0. It takes effect after a reboot.	Security->Server Certificates->Device Certificates
phone_setting.reserve_certs_enable =	0 or 1	It enables or disables the phone to reserve custom certificates after it is reset to factory defaults. **0**-Disabled **1**-Enabled	

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0. **Note**: It is only applicable to SIP-T28P/T26P/T22P/T20P IP phones running firmware version X.72.0.25 or later.	
security.user_name.user =	String within 32 characters	It configures the user name of the user for web server access. The default value is user.	
security.user_name.admin =	String within 32 characters	It configures the user name of the administrator for web server access. The default value is admin.	
security.user_name.var =	String within 32 characters	It configures the user name of the var for web server access. The default value is var.	
security.user_password =	String within 32 characters	It configures the password of the user, var and administrator. The valid value format is username:new password. Example: security.user_password = admin:password123 means setting the password of administrator (current user name is "admin") to password123. The default value is blank.	Security->Password
security.var_enable =	0 or 1	It enables or disables the 3-level permissions (admin, user, var). **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	
web_item_level.url =	URL within 511 characters	It configures the access URL of the file, which defines 3-level access permissions. The default value is blank. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
phone_setting .custom_softkey_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables customizing the soft keys layout. 0-Disabled 1-Enabled The default value is 0.	Settings->Softkey Layout->Custom Softkey
custom_softkey_call_failed.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Call failed. The default value is blank.	
custom_softkey_call_in.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Call in. The default value is blank.	
custom_softkey_connecting.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Connecting. The default value is blank.	
custom_softkey_dialing.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Dialing. The default value is blank.	
custom_softkey_ring_back.url = (not applicable to	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Ringback. The default value is blank.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T20P IP phones)			
custom_softkey_talking.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the file for custom soft keys layout on the LCD screen when Talking. The default value is blank.	
memorykey.X.type = (X ranges from 1 to 10) (only applicable to SIP-T28P and SIP-T26P IP phones)	Integer	It configures the desired feature for memory key X. **Valid values are:** **0**-N/A **1**-Conference **2**-Forward **3**-Transfer **4**-Hold **5**-DND **7**-Call Return **8**-SMS **9**-Directed Pickup **10**-Call Park **11**-DTMF **12**-Voice Mail **13**-Speed Dial **14**-Intercom **15**-Line **16**-BLF **17**-URL **18**-Group Listening **20**-Private Hold **22**-XML Group **23**-Group Pickup **24**-Multicast Paging **25**-Record **27**-XML Browser	DSSKey->Memory Key->Memory KeyX->Type

Parameter	Permitted Values	Descriptions	Web Setting Path
		34-Hot Desking **35**-URL Record **38**-LDAP **39**-BLF List **40**-Prefix **41**-Zero Touch **42**-ACD **45**-Local Group **46**-Network Group **49**-Custom Button **50**-Keypad Lock **55**-Meet-Me Conference **56**-Retrieve Park **57**-Hoteling **58**-ACD Trace **59**-Disp Code **60**-Emergency **61**-Directory The default value is 0.	
memorykey.X.line = (X ranges from 1 to 10) (only applicable to SIP-T28P and SIP-T26P IP phones)	Integer from 1 to 6	It configures the desired line to apply the key feature. **1**-Line 1 **2**-Line 2 **3**-Line 3 **4**-Line 4 **5**-Line 5 **6**-Line 6 The default value is 1.	DSSKey->Memory Key->Memory KeyX->Line
memorykey.X.value = (X ranges from 1 to 10) (only applicable to SIP-T28P and SIP-T26P IP	String within 99 characters	It configures the value of the memory key feature. For example, when the key feature is BLF, it is used to configure the number of the monitored user. The default value is blank.	DSSKey->Memory Key->Memory KeyX->Value

Parameter	Permitted Values	Descriptions	Web Setting Path
phones)			
memorykey.X.pickup_value = (X ranges from 1 to 10) (only applicable to SIP-T28P and SIP-T26P IP phones)	String within 256 characters	It configures the pickup code for BLF feature or conference ID followed by the # sign for Meet-Me conference feature. It only applies to BLF and Meet-Me conference features. The default value is blank.	DSSKey->Memory Key->Memory KeyX->Extension
memorykey.X.xml_phonebook = (X ranges from 1 to 10) (only applicable to SIP-T28P and SIP-T26P IP phones)	Integer from 0 to 5	It configures the desired local group/XML group/network group for the memory key X. It only applies to the Local Group, XML Group and Network Group features. When the key feature is configured as Local Group, valid values are: **0**-All contacts **1**-First local group **2**-Second local group **3**-Third local group **4**-Fourth local group **5**-Fifth local group When the key feature is configured as XML Group (remote phone book), valid values are: **0**-First XML group **1**-Second XML group **2**-Third XML group **3**-Fourth XML group **4**-Fifth XML group When the key feature is configured as Network Group, valid values are: **0**-All contacts **1**-Group **2**-Enterprise	DSSKey->Memory Key->Memory KeyX->Line

Parameter	Permitted Values	Descriptions	Web Setting Path
		3-GroupCommon **4**-EnterpriseCommon **5**-Personal The default value is 0.	
linekey.X.type = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to SIP-T19P IP phones)	Integer	It configures the key feature for the line key X. **Valid values are**: **0**-N/A (only applicable to SIP-T4X IP phones) **1**-Conference **2**-Forward **3**-Transfer **4**-Hold **5**-DND **7**-Call Return **8**-SMS (not applicable to SIP-T20P, SIP-T48G, SIP-T42G and SIP-T41P IP phones) **9**-Directed Pickup **10**-Call Park **11**-DTMF **12**-Voice Mail **13**-Speed Dial **14**-Intercom **15**-Line **16**-BLF **17**-URL (only applicable to SIP-T4X IP phones) **18**-Group Listening **20**-Private Hold **22**-XML Group (not applicable to SIP-T20P IP phones) **23**-Group Pickup **24**-Multicast Paging **25**-Record **27**-XML Browser	DSSKey->Line Key->Line KeyX->Type

Parameter	Permitted Values	Descriptions	Web Setting Path
		34-Hot Desking **35**-URL Record **38**-LDAP (not applicable to SIP-T20P IP phones) **39**-BLF List **40**-Prefix **41**-Zero Touch **42**-ACD (not applicable to SIP-T48G/T46G) **45**-Local Group **46**-Network Group (not applicable to SIP-T20P IP phones) **49**-Custom Button (not applicable to SIP-T4X IP phones) **50**-Keypad Lock (not applicable to SIP-T48G IP phones) **55**-Meet-Me Conference **56**-Retrieve Park **57**-Hoteling **58**-ACD Trace **59**-Disp Code **60**-Emergency **61**-Directory **62**-Network Favorite (only applicable to SIP-T48G and SIP-T46G IP phones) **63**-UC Favorite (only applicable to SIP-T48G and SIP-T46G IP phones) **64**-Buddies (only applicable to SIP-T48G and SIP-T46G IP phones) **65**-My Status (only applicable to SIP-T48G and SIP-T46G IP phones) **For SIP- T2xP/T19P IP phones:** The default value is 15. **For SIP-T48G IP phones:** The default value of the line key 1-6 is 15, and the default value of the line keys 7-29 is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		For SIP-T46G IP phones: The default value of the line key 1-6 is 15, and the default value of the line keys 7-27 is 0. **For SIP-T42G/T41P IP phones**: The default value of the line key 1-3 is 15, and the default value of the line keys 4-15 is 0.	
linekey.X.line = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to SIP-T19P IP phones)	Integer from 1 to 6	It configures the desired line to apply the key feature. **1**-Line 1 **2**-Line 2 **3**-Line 3 **4**-Line 4 **5**-Line 5 **6**-Line 6 When X=1, the default value is 1. When X=2, the default value is 2. When X=3, the default value is 3. When X=4, the default value is 4. When X=5, the default value is 5. When X=6, the default value is 6. Line 3 is only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T4X IP phones. Lines 4-6 are only applicable to SIP-T28P, SIP-T48G and SIP-T46G IP phones.	DSSKey->Line Key->Line KeyX->Line
linekey.X.value = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from	String within 99 characters	It configures the value of the line key feature. For example, when setting the key feature to BLF, it configures the number of the monitored user. The default value is blank.	DSSKey->Line Key->Line KeyX->Value

Parameter	Permitted Values	Descriptions	Web Setting Path
1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to SIP-T19P IP phones)			
linekey.X.pick up_value = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to	String within 256 characters	It configures the pickup code for BLF feature or conference ID followed by the # sign for Meet-Me conference feature. It only applies to BLF and Meet-Me conference features. The default value is blank.	DSSKey->Line Key->Line KeyX->Extension

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P IP phones)			
linekey.X.xml_phonebook = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to SIP-T19P IP phones)	Integer from 0 to 48	It configures the desired local group/XML group/network group for the line key X. It only applies to the Local Group, XML Group and Network Group features. XML Group and Network Group features are not applicable to SIP-T20P IP phones. When the key feature is configured as Local Group, valid values are: **0**-All contacts **1**-First local group **2**-Second local group **3**-Third local group **4**-Fourth local group **5**-Fifth local group … **48**-Forty-eighth local group Local groups 6-48 are only applicable to SIP-T4X IP phones. When the key feature is configured as XML Group (remote phone book), valid values are: **0**-First XML group **1**-Second XML group **2**-Third XML group **3**-Fourth XML group **4**-Fifth XML group When the key feature is configured as Network Group, valid values are: **0**-All contacts **1**-Group **2**-Enterprise **3**-GroupCommon	DSSKey->Line Key->Line KeyX->Line

Parameter	Permitted Values	Descriptions	Web Setting Path
		4-EnterpriseCommon **5**-Personal The default value is 0.	
linekey.X.label = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T48G: X ranges from 1 to 29. SIP-T46G: X ranges from 1 to 27. SIP-T42G/T41P: X ranges from 1 to 15.) (not applicable to SIP-T19P IP phones)	String within 99 characters	It configures the label displayed on the LCD screen for each line key. The default value is blank.	DSSKey->Line Key->Line KeyX->Label
programablekey.X.type = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T22P: X=1-10, 12-14; SIP-T21P: X=1-10, 14; SIP-T20P: X=5-12, 14;	Integer	It configures the key feature for the programmable key X. **Valid values are:** **0**-N/A **2**-Forward **5**-DND **7**-Call Return **8**-SMS (not applicable to SIP-T20P, SIP-T41P, SIP-T42G and SIP-T48G IP phones) **9**-Directed Pickup	DSSKey-> Programmable Key->Type

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1-9, 13, 14. SIP-T48G/ T46G: X=1-10, 12-14; SIP-T42G/T41P: X=1-10, 13.)		**13**-Spead Dial **22**-XML Group (not applicable to SIP-T19P IP phones) **23**-Group Pickup **27**-XML Browser **28**-History **30**-Menu **31**-Switch Account (not applicable to SIP-T19P and SIP-T4X IP phones) **32**-New SMS (not applicable to SIP-T20P, SIP-T41P, SIP-T42G and SIP-T48G IP phones) **33**-Status **34**-Hot Desking (only applicable to SIP-T19P, SIP-T48G and SIP-T46G IP phones) **38**-LDAP (not applicable to SIP-T19P and SIP-T20P IP phones) **40**-Prefix (not applicable to SIP-T20P IP phones) **41**-Zero Touch (not applicable to SIP-T4X IP phones) **43**-Local Directory **44**-Network Directory **45**-Local Group **46**-Network Group **47**-XML Directory (not applicable to SIP-T20P IP phones) **50**-Keypad Lock (not applicable to SIP-T48G IP phones) **51**-Switch Account Up (only applicable to SIP-T4X IP phones) **52**-Switch Account Down (only applicable to SIP-T4X IP phones) **55**-Meet-Me Conference **61**-Directory **64**-Buddies (only applicable to	

Parameter	Permitted Values	Descriptions	Web Setting Path
		SIP-T48G and SIP-T46G IP phones) **65**-My Status (only applicable to SIP-T48G and SIP-T46G IP phones)	
programablekey.X.line = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T21P: X=1-10, 14; SIP-T20P: X=5-12, 14; SIP-T19P: X=1-9, 13, 14. SIP-T48G/ T46G: X=1-10, 12-14; SIP-T42G /T41P: X=1-10, 13.)	Integer from 1 to 6	It configures the desired line to apply the programmable key feature. **1**-Line 1 **2**-Line 2 **3**-Line 3 **4**-Line 4 **5**-Line 5 **6**-Line 6 Line 3 is only applicable to SIP-T28P, SIP-T26P, SIP-T22P and SIP-T4X IP phones. Lines 4-6 are only applicable to SIP-T28P, SIP-T48G and SIP-T46G IP phones. The default value is 1.	DSSKey-> Programmable Key->Line
programablekey.X.value = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T22P: X=1-10, 12-14; SIP-T21P: X=1-10, 14; SIP-T20P: X=5-12, 14; SIP-T19P: X=1-9, 13, 14. SIP-T48G/ T46G: X=1-10, 12-14; SIP-T42G /T41P: X=1-10, 13.)	String within 99 characters	It configures the value of the programmable key feature. For example, when configuring the key feature to be Speed Dial, it is used to configure the number. The default value is blank.	DSSKey-> Programmable Key->Value

Parameter	Permitted Values	Descriptions	Web Setting Path
programablekey.X.xml_phonebook = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T22P: X=1-10, 12-14; SIP-T21P: X=1-10, 14; SIP-T20P: X=5-12, 14; SIP-T19P: X=1-9, 13, 14. SIP-T48G/T46G: X=1-10, 12-14; SIP-T42G/T41P: X=1-10, 13.)	Integer from 0 to 48	It configures the desired local group/XML group/network group for the programmable key. It only applies to the Local Group, XML Group and Network Group features. XML Group and Network Group features are not applicable to SIP-T20P IP phones. When the key feature is configured as Local Group, valid values are: **0**-All contacts **1**-First local group **2**-Second local group **3**-Third local group **4**-Fourth local group **5**-Fifth local group … **48**-Forty-eighth local group Local groups 6-48 are only applicable to SIP-T4X IP phones. When the key feature is configured as XML Group (remote phone book), valid values are: **0**-First XML group **1**-Second XML group **2**-Third XML group **3**-Fourth XML group **4**-Fifth XML group When the key feature is configured as Network Group, valid values are: **0**-All contacts **1**-Group **2**-Enterprise **3**-GroupCommon **4**-EnterpriseCommon **5**-Personal	DSSKey->Programmable Key->Line

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
programablekey.X.history_type = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T22P: X=1-10, 12-14; SIP-T21P: X=1-10, 14; SIP-T19P: X=1-9, 13, 14. SIP-T48G/ T46G: X=1-10, 12-14; SIP-T42G /T41P: X=1-10, 13.) (not applicable to SIP-T20P IP phones)	Integer	It configures the history type of programmable key. **0**-Local History **1**-Network History The default value is 0.	DSSKey-> Programmable Key->Line
programablekey.X.label = (X ranges from 1 to 4) (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the label displayed on the LCD screen for each soft key. The default value is blank.	DSSKey-> Programmable Key->Label
programablekey.X.pickup_value = (SIP-T28/T26P: X ranges from 1 to 14; SIP-T22P:	String within 256 characters	It configures conference ID followed by the # sign for Meet-Me conference feature. It only applies to Meet-Me conference feature. The default value is blank.	DSSKey->Programmable Key->Extension

Parameter	Permitted Values	Descriptions	Web Setting Path
X=1-10, 12-14; SIP-T21P: X=1-10, 14; SIP-T20P: X=5-12, 14; SIP-T19P: X=1-9, 13, 14. SIP-T48G/ T46G: X=1-10, 12-14; SIP-T42G /T41P: X=1-10, 13.)			
expansion_module.X.key.Y.type = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P, SIP-T48G and SIP-T46G IP phones)	Integer	It configures the key feature of the expansion module X key Y. **Valid values are**: **0**-NA **1**-Conference **2**-Forward **3**-Transfer **4**-Hold **5**-DND **7**-Call Return **8**-SMS (not applicable to SIP-T48G IP phones) **9**-Directed Pickup **10**-Call Park **11**-DTMF **12**-Voice Mail **13**-Speed Dial **14**-Intercom **15**-Line **16**-BLF **17**-URL **18**-Group Listening **20**-Private Hold **22**-XML Group	DSSKey->Ext Key->Type

Parameter	Permitted Values	Descriptions	Web Setting Path
		23-Group Pickup **24**-Multicast Paging **25**-Record **27**-XML Browser **34**-Hot Desking **35**-URL Record **37**-Switch (not applicable to SIP-T48G/T46G IP phones) **38**-LDAP **39**-BLF List **40**-Prefix **41**-Zero Touch **42**-ACD (not applicable to SIP-T48G/T46G) **45**-Local Group **46**-Network Group **49**-Custom Button **50**-Keypad Lock (not applicable to SIP-T48G IP phones) **55**-Meet-Me Conference **56**-Retrieve Park **57**-Hoteling **58**-ACD Grace **59**-Disp Code **60**-Emergency **61**-Directory **62**-Network Favorite (only applicable to SIP-T48G and SIP-T46G IP phones) **63**-UC Favorite (only applicable to SIP-T46G IP phones) **64**-Buddies (only applicable to SIP-T48G and SIP-T46G IP phones) **65**-My Status (only applicable to SIP-T48G and SIP-T46G IP phones) **For SIP-T28P/T26P IP phones:** The default value of the expansion	

Parameter	Permitted Values	Descriptions	Web Setting Path
		keys 2-20, 22-40 is 0, and the default value of the expansion keys 1, 21 is 37. **For SIP-T48G/T46G IP phones**: The default value is 0.	
expansion_module.X.key.Y.line = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P, SIP-T48G and SIP-T46G IP phones)	Integer from 1 to 6	It configures the desired line to apply the expansion module key feature. **1**-Line 1 **2**-Line 2 **3**-Line 3 **4**-Line 4 **5**-Line 5 **6**-Line 6 Lines 4-6 are only applicable to SIP-T28P, SIP-T48G and SIP-T46G IP phones. The default value is 1.	DSSKey->Ext Key->Line
expansion_module.X.key.Y.value = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P,	String within 99 characters	It configures the value of the expansion module key feature. The default value is blank.	DSSKey->Ext Key->Value

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T48G and SIP-T46G IP phones)			
expansion_module.X.key.Y.pickup_value = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P, SIP-T48G and SIP-T46G IP phones)	String within 255 characters	It configures the pickup code for BLF feature or conference ID followed by the # sign for Meet-Me conference feature. It only applies to BLF and Meet-Me conference features. The default value is blank.	DSSKey->Ext Key->Extension
expansion_module.X.key.Y.label = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P, SIP-T48G and	String within 99 characters	It configures the label displayed on the LCD screen of the expansion module for each key. The default value is blank.	DSSKey->Ext Key->Label

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T46G IP phones)			
expansion_module.X.key.Y.xml_phonebook = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P: X ranges from 1 to 3. Y ranges from 1 to 40) (only applicable to SIP-T28P, SIP-T26P, SIP-T48G and SIP-T46G IP phones)	Integer from 0 to 48	It only applies to the Local Group, XML Group and Network Group features. When the key feature is configured as Local Group, valid values are: **0**-All contacts **1**-First local group **2**-Second local group **3**-Third local group **4**-Fourth local group **5**-Fifth local group … **48**-Forty-eighth local group Local groups 6-48 are only applicable to SIP-T48G/T46G IP phones. When the key feature is configured as XML Group (remote phone book), valid values are: **0**-First XML group **1**-Second XML group **2**-Third XML group **3**-Fourth XML group **4**-Fifth XML group When the key feature is configured as Network Group, valid values are: **0**-All contacts **1**-Group **2**-Enterprise **3**-GroupCommon **4**-EnterpriseCommon **5**-Personal The default value is 0.	DSSKey->Ext Key->Ext KeyX->Line
phone_setting.page_tip = (only	0 or 1	It enables or disables the phone to display page icons on LCD screen and flash page switch key LED to indicate	DSSKey->Line key->Enable Page Tips

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T46G, SIP-T42G and SIP-T41P IP phones)		different states of line keys. **0**-Disabled **1**-Enabled The default value is 0.	
phone_setting.backgrounds = (only applicable to SIP-T48G and SIP-T46G IP phones)	Resource:X (Valid values of X are: Default.jpg, 1.png, 2.png, 3.png, 4.png, 5.png, 6.png, 7.png, 8.png or 9.png) or Config:wallpaper name	It configures the wallpaper displayed on the phone. Example: To configure a phone built-in picture (e.g., 1.png) to be wallpaper, the value format is: phone_setting.backgrounds = Resource:1.png To configure a custom picture (e.g., custom1.png) to be wallpaper, the value format is: Config:custom1.png The default value is Resource:Default.jpg.	Settings-> Preference-> Wallpaper
wallpaper_upload.url = (only applicable to SIP-T48G and SIP-T46G IP phones)	URL within 511 characters	It configures the access URL of the custom wallpaper image. The default value is blank.	Settings-> Preference->Upload Wallpaper
forward.always.enable =	0 or 1	It enables or disables always forward feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward &DND->Always Forward->On/Off
forward.always.target =	String within 32 characters	It configures the target number the phone forwards all incoming calls to. The default value is blank.	Features->Forward &DND->Always Forward->Target
forward.always.on_code =	String within 32 characters	It configures the always forward on code. The default value is blank.	Features->Forward &DND->Always Forward->On

Parameter	Permitted Values	Descriptions	Web Setting Path
			Code
forward.always.off_code =	String within 32 characters	It configures the always forward off code. The default value is blank.	Features->Forward &DND->Always Forward->Off Code
forward.busy.enable =	0 or 1	It enables or disables busy forward feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward &DND->Busy Forward->On/Off
forward.busy.target =	String within 32 characters	It configures the target number the phone forwards incoming calls to when busy. The default value is blank.	Features->Forward &DND->Busy Forward->Target
forward.busy.on_code =	String within 32 characters	It configures the busy forward on code. The default value is blank.	Features->Forward &DND->Busy Forward->On Code
forward.busy.off_code =	String within 32 characters	It configures the busy forward off code. The default value is blank.	Features->Forward &DND->Busy Forward->Off Code
forward.no_answer.enable =	0 or 1	It enables or disables no answer forward feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward &DND->No Answer Forward->On/Off
forward.no_answer.target =	String within 32 characters	It configures the target number the phone forwards incoming calls to after a period of ring time. The default value is blank.	Features->Forward &DND->No Answer Forward->Target
forward.no_answer.timeout =	Integer from 0 to 20	It configures ring times (N) to wait before forwarding incoming calls. Incoming calls are forwarded when not answered after N*6 seconds.	Features->Forward &DND->No Answer Forward->After Ring Time (0~120s)

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 2.	
forward.no_answer.on_code =	String within 32 characters	It configures the no answer forward on code. The default value is blank.	Features->Forward &DND->No Answer Forward->On Code
forward.no_answer.off_code =	String within 32 characters	It configures the no answer forward off code. The default value is blank.	Features->Forward &DND->No Answer Forward->Off Code
forward.international.enable =	0 or 1	It enables or disables the phone to forward incoming calls to international numbers. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Fwd International
acd.auto_available = (not applicable to SIP-T48G/T46G)	0 or 1	It enables or disables the phone to automatically change the status of the ACD agent to available. **0**-Disabled **1**-Enabled The default value is 0.	Features->ACD->ACD Auto Available
acd.auto_available_timer = (not applicable to SIP-T48G/T46G)	Integer from 0 to 120	It configures the interval (in seconds) to automatically change the status of the ACD agent to available. The default value is 60.	Features->ACD->ACD Auto Available Timer (0~120s)
action_url.setup_completed =	URL within 511 characters	It configures the action URL the phone sends after startup. The value format is: http(s)://IP address of server/help.xml? variable name=variable value. **Valid variable values are:** • $mac	Features->Action URL->Setup Completed

Parameter	Permitted Values	Descriptions	Web Setting Path
		• $ip • $model • $firmware • $active_url • $active_user • $active_host • $local • $remote • $display_local • $display_remote • $call_id Example: action_url. setup_completed = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	
action_url.registered =	URL within 511 characters	It configures the action URL the phone sends after account is registered. Example: action_url.registered = http://192.168.0.20/help.xml?IP=$ip The default value is blank. **Note**: The old parameter "action_url.log_on" is also applicable to IP phones.	Features->Action URL->Registered
action_url.unregistered =	URL within 511 characters	It configures the action URL the phone sends after account is unregistered. Example: action_url.unregistered = http://192.168.0.20/help.xml?IP=$ip The default value is blank. **Note**: The old parameter "action_url.log_off" is also applicable to IP phones.	Features->Action URL->Unregistered
action_url.register_failed =	URL within 511 characters	It configures the action URL the phone sends after register failed. Example:	Features->Action URL->Register Failed

Parameter	Permitted Values	Descriptions	Web Setting Path
		action_url.register_failed = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	
action_url.off_hook =	URL within 511 characters	It configures the action URL the phone sends when off hook. Example: action_url.off_hook = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Off Hook
action_url.on_hook =	URL within 511 characters	It configures the action URL the phone sends when on hook. Example: action_url.on_hook = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->On Hook
action_url.incoming_call =	URL within 511 characters	It configures the action URL the phone sends when receiving an incoming call. Example: action_url.incoming_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Incoming Call
action_url.outgoing_call =	URL within 511 characters	It configures the action URL the phone sends when placing a call. Example: action_url.outgoing_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Outgoing Call
action_url.call_established =	URL within 511 characters	It configures the action URL the phone sends when establishing a call. Example: action_url.call_established = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Established
action_url.call_terminated =	URL within 511	It configures the action URL the phone sends when terminating a call.	Features->Action URL->Terminated

Parameter	Permitted Values	Descriptions	Web Setting Path
	characters	Example: action_url.call_terminated = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	
action_url.dnd_on =	URL within 511 characters	It configures the action URL the phone sends when DND feature is enabled. Example: action_url.dnd_on = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Open DND
action_url.dnd_off =	URL within 511 characters	It configures the action URL the phone sends when DND feature is disabled. Example: action_url.dnd_off = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Close DND
action_url.always_fwd_on =	URL within 511 characters	It configures the action URL the phone sends when always forward feature is enabled. Example: action_url.always_fwd_on = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Open Always Forward
action_url.always_fwd_off =	URL within 511 characters	It configures the action URL the phone sends when always forward feature is disabled. Example: action_url.always_fwd_off = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Close Always Forward
action_url.busy_fwd_on =	URL within 511 characters	It configures the action URL the phone sends when busy forward feature is enabled. Example: action_url.busy_fwd_on = http://192.168.0.20/help.xml?IP=$ip	Features->Action URL->Open Busy Forward

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is blank.	
action_url.busy_fwd_off =	URL within 511 characters	It configures the action URL the phone sends when busy forward feature is disabled. Example: action_url.busy_fwd_off = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Close Busy Forward
action_url.no_answer_fwd_on =	URL within 511 characters	It configures the action URL the phone sends when no answer forward feature is enabled. Example: action_url.no_answer_fwd_on = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Open No Answer Forward
action_url.no_answer_fwd_off =	URL within 511 characters	It configures the action URL the phone sends when no answer forward feature is disabled. Example: action_url.no_answer_fwd_off = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Close No Answer Forward
action_url.transfer_call =	URL within 511 characters	It configures the action URL the phone sends when performing a transfer. Example: action_url.transfer_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Transfer Call
action_url.blind_transfer_call =	URL within 511 characters	It configures the action URL the phone sends when performing a blind transfer. Example: action_url.blind_transfer_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Blind Transfer

Parameter	Permitted Values	Descriptions	Web Setting Path
action_url.attended_transfer_call =	URL within 511 characters	It configures the action URL the phone sends when performing an attended or a semi-attended transfer. Example: action_url.attended_transfer_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Attended Transfer
action_url.hold =	URL within 511 characters	It configures the action URL the phone sends when placing a call on hold. Example: action_url.hold = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Hold
action_url.unhold =	URL within 511 characters	It configures the action URL the phone sends when resuming a held call. Example: action_url.unhold = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->UnHold
action_url.mute =	URL within 511 characters	It configures the action URL the phone sends when muting a call. Example: action_url.mute = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Mute
action_url.unmute =	URL within 511 characters	It configures the action URL the phone sends when un-muting a call. Example: action_url.unmute = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->UnMute
action_url.missed_call =	URL within 511 characters	It configures the action URL the phone sends when missing a call. Example: action_url.missed_call = http://192.168.0.20/help.xml?IP=$ip	Features->Action URL->Missed Call

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is blank.	
action_url.busy_to_idle =	URL within 511 characters	It configures the action URL the phone sends when changing the state of the phone from busy to idle. Example: action_url.busy_to_idle = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Busy To Idle
action_url.idle_to_busy =	URL within 511 characters	It configures the action URL the phone sends when changing the state of the phone from idle to busy. Example: action_url.idle_to_busy = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Idle To Busy
action_url.ip_change =	URL within 511 characters	It configures the action URL the phone sends when changing the IP address of the phone. Example: action_url.ip_change = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->IP Changed
action_url.forward_incoming_call =	URL within 511 characters	It configures the action URL the phone sends when forwarding an incoming call. Example: action_url.forward_incoming_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Forward Incoming Call
action_url.reject_incoming_call =	URL within 511 characters	It configures the action URL the phone sends when rejecting an incoming call. Example: action_url.reject_incoming_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Reject Incoming Call

Parameter	Permitted Values	Descriptions	Web Setting Path
action_url.answer_new_incoming_call =	URL within 511 characters	It configures the action URL the phone sends when answering a new incoming call. Example: action_url.answer_new_incoming_call = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Answer New-In Call
action_url.transfer_finished =	URL within 511 characters	It configures the action URL the phone sends when completing a call transfer. Example: action_url.transfer_finished = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Transfer Finished
action_url.transfer_failed =	URL within 511 characters	It configures the action URL the phone sends when failing to transfer a call. Example: action_url.transfer_failed = http://192.168.0.20/help.xml?IP=$ip The default value is blank.	Features->Action URL->Transfer Failed
lang.wui =	English, Chinese_S, Chinese_T, German, French, Italian, Spanish, Turkish or Portuguese	It configures the language of the web user interface. Chinese_S is only applicable to SIP-T21P, SIP-T19P, SIP-T48G and SIP-T46G IP phones. Chinese_T is only applicable to SIP-T48G and SIP-T46G IP phones. French, Portuguese and Spanish are not applicable to SIP-T21P and SIP-T19P IP phones.	Settings->Preference->Language
lang.gui =	English, Chinese_S, Chinese_T, German, French, Turkish, Italian, Polish,	It configures the language of the phone user interface. Chinese_S and Chinese_T are only applicable to SIP-T21P, SIP-T19P, SIP-T48G and SIP-T46G IP phones. The default value is English.	

Parameter	Permitted Values	Descriptions	Web Setting Path
	Spanish or Portuguese		
local_time.time_zone =	-11 to +13	It configures the time zone. For more available time zones, refer to Time Zones on page 225. The default value is +8.	Settings->Time & Date->Time Zone
local_time.time_zone_name =	String within 32 characters	It configures the time zone name. For more available time zone names, refer to Time Zones on page 225. The default time zone name is China(Beijing).	Settings->Time & Date->Time Zone
local_time.manual_time_enable =	0 or 1	It configures the phone to obtain time from NTP server or manual settings. **0**-Manual **1**-NTP The default value is 1.	Settings->Time & Date->Manual Time
local_time.manual_ntp_srv_prior =	0 or 1	It enables or disables the phone to use manually configured NTP server preferentially. **0**-Disabled (use the NTP server obtained by DHCP preferentially) **1**-Enabled The default value is 0.	Settings->Time & Date->NTP By DHCP Priority
local_time.ntp_server1 =	IP address or domain name	It configures the IP address or domain name of the NTP server 1. The default value is cn.pool.ntp.org.	Settings->Time & Date->Primary Server
local_time.ntp_server2 =	IP address or domain name	It configures the IP address or domain name of the NTP server 2. The default value is cn.pool.ntp.org.	Settings->Time & Date->Secondary Server
local_time.interval =	Integer from 15 to 86400	It configures the update interval (in seconds) when using the NTP server. The default value is 1000.	Settings->Time & Date->Synchronism (15~86400s)
local_time.summer_time =	0, 1 or 2	It enables or disables daylight saving time (DST) feature. **0**-Disabled	Settings->Time & Date-> Daylight Saving Time

Parameter	Permitted Values	Descriptions	Web Setting Path
		1-Enabled **2**-Automatic The default value is 2.	
local_time.dst_time_type =	0 or 1	It configures the way DST works when DST feature is enabled. **0**-DST By Date **1**-DST By Week The default value is 0.	Settings->Time & Date->Fixed Type
local_time.start_time =	Time	It configures the start time of the DST. **Value formats are:** • Month/Day/Hour (for By Date) • Month/ Day of Week/ Day of Week Last in Month/ Hour of Day (for By Week) The default value is 1/1/0.	**For DST By Date:** Settings->Time & Date->Start Date **For DST By Week:** Settings->Time & Date->DST Start Month/DST Start Day of Week/DST Start Day of Week Last in Month/ Start Hour of Day
local_time.end_time =	Time	It configures the end time of the DST. **Value formats are:** • Month/Day/Hour (for By Date) • Month/ Day of Week/ Day of Week Last in Month/ Hour of Day (for By Week) The default value is 12/31/23.	**For DST By Date:** Settings->Time & Date-> End Date **For DST By Week:** Settings ->Time & Date->DST Stop Month/DST Stop Day of Week/DST Stop Day of Week Last in Month/Stop Hour of Day
local_time.dhcp_time =	0 or 1	It enables or disables the phone to update time with the offset time obtained from the DHCP server. It is only available to offset from GMT 0. **0**-Disabled **1**-Enabled	Settings->Time & Date->DHCP Time

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
local_time.offset_time =	Integer from -300 to 300	It configures the offset time (in minutes). The default value is blank.	Settings->Time & Date->Offset (minutes)
local_time.time_format =	0 or 1	It configures the time format. **0**-12 Hour **1**-24 Hour The default value is 1.	Settings->Time & Date->Time Format
local_time.date_format =	0, 1, 2, 3, 4, 5 or 6 (for SIP-T19P/T21P/T22P/T26P/T28P/T4X) 7, 8 or 9 (for SIP-T20P)	It configures the date format. **For SIP-T19P/SIP-T21P/T22P/T26P/T28P/T4X IP phones:** **0**-WWW MMM DD **1**-DD-MMM-YY **2**-YYYY-MM-DD **3**-DD/MM/YYYY **4**-MM/DD/YY **5**-DD MMM YYYY **6**-WWW DD MMM The default value is 0. **For SIP-T20P IP phones:** **7**-MM DD YY **8**-DD MM YY **9**-YY MM DD The default value is 7. "WWW" represents the abbreviation of the week, "DD" represents a two-digit day, "MMM" represents the first three letters of the month, "YYYY" represents a four-digit year, and "YY" represents a two-digit year which is not displayed on the LCD screen of SIP-T20P IP phones.	Settings->Time & Date->Date Format
hotdesking.startup_register	0 or 1	It enables or disables the phone to provide input field of register name on	

Parameter	Permitted Values	Descriptions	Web Setting Path
_name_enable =		the hot desking login wizard during startup. **0**-Disabled **1**-Enabled The default value is 0.	
hotdesking.startup_username_enable =	0 or 1	It enables or disables the phone to provide input field of user name on the hot desking login wizard during startup. **0**-Disabled **1**-Enabled The default value is 1.	
hotdesking.startup_password_enable =	0 or 1	It enables or disables the phone to provide input field of password on the hot desking login wizard during startup. **0**-Disabled **1**-Enabled The default value is 1.	
hotdesking.startup_sip_server_enable =	0 or 1	It enables or disables the phone to provide input field of SIP server on the hot desking login wizard during startup. **0**-Disabled **1**-Enabled The default value is 0.	
hotdesking.startup_outbound_enable =	0 or 1	It enables or disables the phone to provide input field of outbound server on the hot desking login wizard during startup. **0**-Disabled **1**-Enabled The default value is 0.	
hotdesking.dsskey_register_name_enable	0 or 1	It enables or disables the phone to provide input field of register name on the hot desking login wizard when	

Parameter	Permitted Values	Descriptions	Web Setting Path
=		pressing the Hot Desking key. **0**-Disabled **1**-Enabled The default value is 0.	
hotdesking.dskey_username_enable =	0 or 1	It enables or disables the phone to provide input field of user name on the hot desking login wizard when pressing the Hot Desking key. **0**-Disabled **1**-Enabled The default value is 1.	
hotdesking.dskey_password_enable =	0 or 1	It enables or disables the phone to provide input field of password on the hot desking login wizard when pressing the Hot Desking key. **0**-Disabled **1**-Enabled The default value is 1.	
hotdesking.dskey_sip_server_enable =	0 or 1	It enables or disables the phone to provide input field of SIP server on the hot desking login wizard when pressing the Hot Desking key. **0**-Disabled **1**-Enabled The default value is 0.	
hotdesking.dskey_outbound_enable =	0 or 1	It enables or disables the phone to provide input field of outbound server on the hot desking login wizard when pressing the Hot Desking key. **0**-Disabled **1**-Enabled The default value is 0.	
distinctive_ring_tones.alert_info.X.text = (X ranges	String within 32 characters	It configures the internal ringer text to the info texts contained in the Alert-Info header. Example:	Settings->Ring->Internal Ringer Text

Parameter	Permitted Values	Descriptions	Web Setting Path
from 1 to 10)		distinctive_ring_tones.alert_info.1.text = Family The default value is blank.	
distinctive_ring_tones.alert_info.X.ringer = (X ranges from 1 to 10)	Integer from 1 to 8	It configures the desired ring tones for each text. The value ranges from 1 to 8, the digit stands for the appropriate ring tone. Ring tones 6-8 are only applicable to SIP-T46G and SIP-T48G IP phones. The default value is 1.	Settings->Ring ->Internal Ringer File
auto_redial.enable =	0 or 1	It enables or disables the phone to automatically redial the called number when the called party is temporarily unavailable. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->Auto Redial
auto_redial.interval =	Integer from 1 to 300	It configures the interval (in seconds) for the phone to wait before redial. The default value is 10.	Features->General Information->Auto Redial Interval (1~300s)
auto_redial.times =	Integer from 1 to 300	It configures the auto redial times when the called party is temporarily unavailable. The default value is 10.	Features->General Information->Auto Redial Times (1~300)
zero_touch.enable =	0 or 1	It enables or disables zero touch for the phone to perform provisioning during startup. **0**-Disabled **1**-Enabled The default value is 0.	Settings->Auto Provision->Zero Active
zero_touch.wait_time =	Integer from 1 to 100	It configures the duration time (in seconds) of the phone displaying the zero-sp-touch configuration screen when powered on. The default value is 5.	Settings->Auto Provision->Wait Time (1~100s)

Parameter	Permitted Values	Descriptions	Web Setting Path
push_xml.server =	IP address	It configures the IP address of the push XML server. The default value is blank.	Features->Remote Control->Push XML Server IP Address
push_xml.block_in_calling =	0 or 1	It enables or disables the phone to block displaying the push XML screen when in calling status. **0**-Disabled **1**-Enabled The default value is 0.	Features->Remote Control->Block XML In Calling
push_xml.sip_notify =	0 or 1	It enables or disables the phone to use the push XML via SIP NOTIFY message. **0**-Disabled **1**-Enabled The default value is 0.	Features->Remote Control->SIP Notify
features.action_uri_limit_ip =	IP address or any	It configures the IP address of server from which the phone receives the action URI requests. Multiple IP addresses are separated by commas. If it is set to any, the phone will receive action URI requests from any server. If it is left blank, the phone will not receive action URI requests. The default value is blank.	Features->Remote Control->Action URI allow IP List
dialplan.area_code.code =	String within 16 characters	It configures the area code. The default value is blank.	Settings->Dial Plan->Area Code->Code
dialplan.area_code.min_len =	Integer from 1 to 15	It configures the minimum length of the number prefixed with the area code. The default value is 1.	Settings->Dial Plan->Area Code->Min Length (1-15)
dialplan.area_code.max_len =	Integer from 1 to 15	It configures the maximum length of the number prefixed with the area code. The value must be larger than the minimum length.	Settings->Dial Plan->Area Code->Max Length (1-15)

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 15.	
dialplan.area_code.line_id = (not applicable to SIP-T19P IP phones)	Integer	It configures lines applying the area code. 0 to 6 (for SIP-T28P/T48G/T46G) 0 to 3 (for SIP-T26P/T22P/T42G/T41P) 0 to 2 (for SIP-T21P/T20P) Multiple line IDs are separated by commas. 0 stands for all lines. If it is left blank, the area code rule will apply to all accounts on the phone. The default value is blank.	Settings->Dial Plan->Area Code->Account
dialplan.block_out.number.X = (X ranges from 1 to 10)	String within 32 characters	It configures the block out string. The default value is blank.	Settings->Dial Plan->Block Out->BlockOut NumberX
dialplan.block_out.line_id.X = (X ranges from 1 to 10) (not applicable to SIP-T19P IP phones)	Integer	It configures lines applying the block out rule. 0 to 6 (for SIP-T28P/T48G/T46G) 0 to 3 (for SIP-T26P/T22P/T42G/T41P) 0 to 2 (for SIP-T28P/T48G/T46G) Multiple line IDs are separated by commas. 0 stands for all lines. If it is left blank, the block out rule will apply to all accounts on the phone. The default value is blank.	Settings->Dial Plan->Block Out->Account
dialplan.dialnow.rule.X = (X ranges from 1 to 100)	String within 511 characters	It configures the dial now rule. The default value is blank.	Settings->Dial Plan->Dial-now->Rule
dialplan.dialnow.line_id.X = (X ranges from 1 to 100) (not applicable to	Integer	It configures lines applying the dial-now rule. 0 to 6 (for SIP-T28P/T48G/T46G) 0 to 3 (for SIP-T26P/T22P/T42G/T41P) 0 to 2 (for SIP-T21P/T20P) Multiple line IDs are separated by	Settings->Dial Plan->Dial-now->Account

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P IP phones)		commas. 0 stands for all lines. If it is left blank, the dial-now rule will apply to all accounts on the phone. The default value is blank.	
dialplan_dialnow.url =	URL within 511 characters	It configures the access URL of the dial-now rule file. The default value is blank.	
phone_setting.dialnow_delay =	Integer from 1 to 14	It configures the delay time (in seconds) for the dial-now rule. The default value is 1.	Features->General Information->Time-Out for Dial-Now Rule
dialplan.replace.prefix.X = (X ranges from 1 to 100)	String within 32 characters	It configures the entered number to be replaced. The default value is blank.	Settings->Dial Plan->Replace Rule->Prefix
dialplan.replace.replace.X = (X ranges from 1 to 100)	String within 32 characters	It configures the alternate number to replace the entered number. The default value is blank.	Settings->Dial Plan->Replace Rule->Replace
dialplan.replace.line_id.X = (X ranges from 1 to 100) (not applicable to SIP-T19P IP phones)	Integer	It configures lines applying the dial-now rule. 0 to 6 (for SIP-T28P/T48G/T46G) 0 to 3 (for SIP-T26P/T22P/T42G/T41P) 0 to 2 (for SIP-T21P/T20P) Multiple line IDs are separated by commas. 0 stands for all lines. The default value is blank.	Settings->Dial Plan->Replace Rule-> Account
dialplan_replace_rule.url =	URL within 511 characters	It configures the access URL of the replace rule file. The default value is blank.	
remote_phonebook.data.X.url = (X ranges from 1 to 5)	URL within 511 characters	It configures the access URL of the remote phone book. The default value is blank.	Directory->Remote Phone Book-> Remote URL

Parameter	Permitted Values	Descriptions	Web Setting Path
(not applicable to SIP-T20P IP phones)			
remote_phonebook.data.X.name = (X ranges from 1 to 5) (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the display name of the remote phone book item. The default value is blank.	Directory->Remote Phone Book-> Display Name
remote_phonebook.display_name = (not applicable to SIP-T20P, SIP-T42G and SIP-T41P IP phones)	String within 99 characters	It configures the display name of the remote phone book. If it is left blank, Remote Phone Book is displayed on the LCD screen at the path Menu->Directory. The default value is blank.	
ldap.enable = (not applicable to SIP-T20P and SIP-T19P IP phones)	0 or 1	It enables or disables LDAP feature. **0**-Disabled **1**-Enabled The default value is 0.	Directory->LDAP-> Enable LDAP
ldap.name_filter = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the criteria for searching the contact name attributes. Example: ldap.name_filter = (|(cn=%)(sn=%)) The default value is blank.	Directory->LDAP-> LDAP Name Filter
ldap.number_filter = (not	String within 99 characters	It configures the criteria for searching the contact number attributes. Example:	Directory->LDAP-> LDAP Number Filter

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T20P and SIP-T19P IP phones)		ldap.number_filter = (|(telephoneNumber=%)(mobile=%)(ipPhone=%)) The default value is blank.	
ldap.host = (not applicable to SIP-T20P and SIP-T19P IP phones)	IP address or domain name	It configures the IP address or domain name of the LDAP server. The default value is blank.	Directory->LDAP->Server Address
ldap.port = (not applicable to SIP-T20P and SIP-T19P IP phones)	Integer from 1 to 65535	It configures the port of the LDAP server. The default value is 389.	Directory->LDAP->Port
ldap.base = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the LDAP search base which corresponds to the location of the LDAP phonebook. Example: ldap.base = dc=yealink,dc=cn The default value is blank.	Directory->LDAP->Base
ldap.user = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the user name for accessing the LDAP server. The default value is blank.	Directory->LDAP->Username
ldap.password = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the password for accessing the LDAP server. The default value is blank.	Directory->LDAP->Password
ldap.max_hits =	Integer from 1 to 32000	It configures the maximum of the search results returned by the LDAP	Directory->LDAP->Max. Hits

Parameter	Permitted Values	Descriptions	Web Setting Path
(not applicable to SIP-T20P and SIP-T19P IP phones)		server to be displayed. The default value is 50.	(1~32000)
ldap.name_attr = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the name attributes of each record to be returned by the LDAP server. Multiple attributes are separated by spaces. Example: ldap.name_attr =sn cn The default value is blank.	Directory->LDAP->LDAP Name Attributes
ldap.numb_attr = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the number attributes of each record to be returned by the LDAP server. Multiple attributes are separated by spaces. Example: ldap.numb_attr = Mobile ipPhone The default value is blank.	Directory->LDAP->LDAP Number Attributes
ldap.display_name = (not applicable to SIP-T20P and SIP-T19P IP phones)	String within 99 characters	It configures the display name of the contact record displayed on the LCD screen. The value of this parameter must start with "%" symbol. Example: ldap.display_name = %cn The default value is blank.	Directory->LDAP->LDAP Display Name
ldap.version = (not applicable to SIP-T20P and SIP-T19P IP phones)	2 or 3	It configures the LDAP version. The default value is 3.	Directory->LDAP->Protocol
ldap.call_in_lookup =	0 or 1	It enables or disables the phone to perform an LDAP search when	Directory->LDAP->LDAP Lookup For

Parameter	Permitted Values	Descriptions	Web Setting Path
(not applicable to SIP-T20P and SIP-T19P IP phones)		receiving an incoming call. **0**-Disabled **1**-Enabled The default value is 0.	Incoming Call
ldap.ldap_sort = (not applicable to SIP-T20P and SIP-T19P IP phones)	0 or 1	It enables or disables the phone to sort the search results in alphabetical order or numerical order. **0**-Disabled **1**-Enabled The default value is 0.	Directory->LDAP->LDAP Sorting Results
features.call_num_filter =	String within 99 characters	It configures the characters the phone filters when dialing. If the dialed number contains configured characters, the phone will automatically filter these characters when dialing. The default value is "-,".	Features->General Information->Call Number Filter
features.dnd_refuse_code =	404, 480 or 486	It configures a return code and reason of SIP response messages when rejecting an incoming call by DND. **404**-No Found **480**-Temporarily not available **486**-Busy here The default value is 480.	Features->General Information-> Return Code When DND
features.normal_refuse_code =	404, 480 or 486	It configures a return code and reason of SIP response messages when rejecting an incoming call. **404**-No Found **480**-Temporarily not available **486**-Busy here The default value is 486.	Features->General Information-> Return Code When Refuse
features.call_completion_enable =	0 or 1	It enables or disables call completion feature. **0**-Disabled **1**-Enabled	Features->General Information->Call Completion

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
features.fwd_mode = (not applicable to SIP-T19P IP phones)	0 or 1	It configures the call forward mode. **0**-Phone **1**-Custom The default value is 0.	Features->Forward&DND->Forward->Mode
features.dnd_mode = (not applicable to SIP-T19P IP phones)	0 or 1	It configures the DND mode. **0**-Phone **1**-Custom The default value is 0.	Features->Forward&DND->DND->Mode
features.dnd.enable =	0 or 1	It enables or disables DND feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward&DND->DND->DND Status
features.dnd.on_code =	String within 32 characters	It configures the DND on code when the DND mode is configured as Phone. The default value is Blank.	Features->Forward&DND->DND->DND On Code
features.dnd.off_code =	String within 32 characters	It configures the DND off code when the DND mode is configured as Phone. The default value is Blank.	Features->Forward&DND->DND->DND Off Code
features.dnd.emergency_enable =	0 or 1	It enables or disables the phone to receive incoming calls from authorized numbers when DND feature is enabled. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward&DND->DND Emergency
features.dnd.emergency_authorized_number =	String within 511 characters	It configures the numbers the phone will receive incoming calls from when DND feature is enabled. Multiple numbers are separated by	Features->Forward&DND->DND Authorized Numbers

Parameter	Permitted Values	Descriptions	Web Setting Path
		commas. The default value is blank.	
features.fwd_diversion_enable =	0 or 1	It enables or disables forward diversion feature. **0**- Disabled **1**-Enabled The default value is 1.	Features->General Information-> Diversion/History-Info
call_waiting.enable =	0 or 1	It enables or disables call waiting feature. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Call Waiting
call_waiting.tone =	0 or 1	It enables or disables the phone to play the call waiting tone. **0**-Disabled **1**-Enabled The default value is 1.	Features->Audio-> Call Waiting Tone
call_waiting.on_code =	String within 32 characters	It configures the call waiting on code. The default value is blank.	Features->General Information->Call Waiting On Code
call_waiting.off_code =	String within 32 characters	It configures the call waiting off code. The default value is blank.	Features->General Information->Call Waiting Off Code
features.intercom.allow =	0 or 1	It enables or disables the phone to automatically answer an incoming intercom call. **0**-Disabled **1**-Enabled The default value is 1.	Features->Intercom ->Accept Intercom
features.intercom.mute =	0 or 1	It enables or disables the phone to mute the speaker when answering an intercom call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Intercom ->Intercom Mute

Parameter	Permitted Values	Descriptions	Web Setting Path
features.intercom.tone =	0 or 1	It enables or disables the phone to play a warning tone when answering an intercom call. **0**-Disabled **1**-Enabled The default value is 1.	Features->Intercom ->Intercom Tone
features.intercom.barge =	0 or 1	It enables or disables the phone to barge in an intercom call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Intercom ->Intercom Barge
features.remote_phonebook.enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to perform a remote phone book search when receiving an incoming call. **0**-Disabled **1**-Enabled The default value is 0.	Directory->Remote Phone Book-> Search Remote Phonebook Name
features.remote_phonebook.flash_time = (not applicable to SIP-T20P IP phones)	Integer from 120 to 2592000	It configures the interval (in seconds) for the phone to update the data of the remote phone book from the remote phone book server. The default value is 21600.	Directory->Remote Phone Book-> Search Flash Time (Seconds)
features.hotline_number =	String within 32 characters	It configures the hotline number. The default value is blank.	Features->General Information-> Hotline Number
features.hotline_delay =	Integer from 0 to 10	It configures the delay time (in seconds) for the phone to dial out the hotline number automatically. The default value of delay time is 4.	Features->General Information-> Hotline Delay (0~10s)
features.dtmf.hide =	0 or 1	It enables or disables the phone to suppress the display of DTMF digits. **0**-Disabled **1**-Enabled	Features->General Information->Suppress DTMF Display

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
features.dtmf.hide_delay = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the DTMF digits for a short period before displaying as asterisks when the parameter "features.dtmf.hide" is set to 1 (Enabled). **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->Suppress DTMF Display Delay
features.dtmf.repetition =	1, 2 or 3	It configures the repetition times for sending the DTMF packets. The default value is 3.	Features->General Information->DTMF Repetition
features.dtmf.replace_tran =	0 or 1	It enables or disables the phone to send DTMF sequences for transfer function when pressing the transfer soft key or the TRAN key. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->DTMF Replace Tran
features.dtmf.transfer =	String within 32 characters	It configures DTMF sequences for transfer key function to be sent. It consists of 0-9, A-D, * and #. The default value is blank.	Features->General Information->Tran Send DTMF
features.headset_prior =	0 or 1	It enables or disables headset prior feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information-> Headset Prior
features.headset_training = (not applicable to SIP-T21P and SIP-T19P IP phones)	0 or 1	It enables or disables dual headset feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->Dual-Headset

Parameter	Permitted Values	Descriptions	Web Setting Path
features.play_local_dtmf_tone_enable=	0 or 1	It enables or disables the phone to play a local DTMF tone. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Play Local DTMF Tone
features.busy_tone_delay =	0, 3 or 5	It configures the duration time (in seconds) for the busy tone. The default value is 0.	Features->General Information->Busy Tone Delay (Seconds)
features.send_pound_key =	0 or 1	It configures whether to send one pound key by pressing the pound key twice when the pound key is configured as a send key. **0**-Send one pound key **1**-Do not send any pound key The default value is 0.	Features->General Information->Send Pound Key
features.key_as_send =	0, 1 or 2	It configures the "#" or "*" key as a send key. **0**-Disabled **1**-# key **2**-* key The default value is 1. **Note**: The old parameter "features.pound_key.mode" is also applicable to IP phones.	Features->General Information->Key As Send
features.send_key_tone =	0 or 1	It enables or disables the phone to play key tone when pressing the send key. **0**-Disabled **1**-Enabled The default value is 1.	Features->Audio-> Send Sound
features.key_tone =	0 or 1	It enables or disables the phone to play key tone when pressing any key. **0**-Disabled **1**-Enabled The default value is 1.	Features->Audio-> Key Tone

Parameter	Permitted Values	Descriptions	Web Setting Path
features.play_hold_tone.enable =	0 or 1	It enables or disables the phone to play a warning tone when there is a call on hold. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Play Hold Tone
features.play_hold_tone.delay =	Integer from 3 to 3600	It configures the interval (in seconds) for playing a hold warning tone. The default value is 30.	Features->General Information->Play Hold Tone Delay
features.redial_tone =	Integer within 6 digits	It configures the phone to continue to play the dial tone after inputting the preset numbers in the dialing screen. Example: features.redial_tone = 125 The phone will continue to play the dial tone after inputting "125" in the dialing screen. If it is left blank, the phone will not play the dial tone after inputting numbers in the dialing screen. The default value is blank.	Features->Audio->Redial Tone
features.partition_tone =	0 or 1	It enables or disables the phone with active accounts to play tones in the dialing screen differently from the phone with no active accounts. **0**-Disabled **1**-Enbaled The default value is 0.	
features.password_dial.enable =	0 or 1	It enables or disables password dial feature for the phone. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->PswDial
features.password_dial.prefix =	String within 32 characters	It configures the prefix of the password-dial number. For example, set the prefix to 12 and	Features->General Information->PswPrefix

Parameter	Permitted Values	Descriptions	Web Setting Path
		the length to 3, when you want to dial the number 123456, the entered number is displayed as 12***6 on the LCD screen. The default value is blank.	
features.password_dial.length =	Integer from 0 to 99	It configures the number of digits to be hidden. The hidden digits are displayed as asterisks on the LCD screen. The default value is blank.	Features->General Information-> PswLength
features.save_call_history =	0 or 1	It enables or disables the phone to save the call history. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Save Call Log
phone_setting.common_power_led_enable =	0 or 1	It enables or disables the power indicator LED to be turned on. **For SIP-T2xP/T19P IP phones:** **0**-Disabled (power indicator LED is off) **1**-Enabled (power indicator LED is solid green) The default value is 1. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED is off) **1**-Enabled (power indicator LED is solid red) The default value is 0. **Note**: The old parameter "features.power_led_on" is also applicable to IP phones and "features.idle_talk_power_led_flash_enable" is also applicable to SIP-T21P/T19P/T4X IP phones.	Features->Power LED->Common Power Light On
phone_setting.ring_power_led_flash_enable =	0 or 1	It enables or disables the power indicator LED to flash when the phone receives an incoming call. **For SIP-T2xP/T19P IP phones:**	Features->Power LED->Ring Power Light Flash

Parameter	Permitted Values	Descriptions	Web Setting Path
		0-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (300ms) green) The default value is 1. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (300ms) red) If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_enable". The default value is 1.	
phone_setting.mail_power_led_flash_enable =	0 or 1	It enables or disables the power indicator LED to flash when the phone receives a voice mail or a text message. **For SIP-T2xP/T19P IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED slow flashes (1000ms) green) The default value is 0. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED slow flashes (1000ms) red) The default value is 1. If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_enable".	Features->Power LED->Voice/Text Mail Power Light Flash
phone_setting	0 or 1	It enables or disables the power	Features->Power

Parameter	Permitted Values	Descriptions	Web Setting Path
.mute_power_led_flash_enable =		indicator LED to flash when a call is mute. **For SIP-T2xP/T19P IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (300ms) green) The default value is 1. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (300ms) red) The default value is 0. If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_enable".	LED->Mute Power Light On
phone_setting.hold_and_held_power_led_flash_enable =	0 or 1	It enables or disables the power indicator LED to flash when a call is placed on hold or is held. **For SIP-T2xP/T19P IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (500ms) green) The default value is 0. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (500ms) red) The default value is 0. If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_e	Features->Power LED->Hold/Held Power Light On

Parameter	Permitted Values	Descriptions	Web Setting Path
		nable".	
phone_setting.talk_and_dial_power_led_enable =	0 or 1	It enables or disables the power indicator LED to be turned on when the phone is busy. **For SIP-T2xP/T19P IP phones:** **0**-Disabled (power indicator LED is off) **1**-Enabled (power indicator LED is solid green) The default value is 1. **For SIP-T4X IP phones:** **0**-Disabled (power indicator LED is off) **1**-Enabled (power indicator LED is solid red) The default value is 0. If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_enable".	Features->Power LED->Talk/Dial Power Light On
features.relog_offtime =	Integer from 1 to 1000	It configures the web access timeout (in minutes). The default value is 5. It takes effect after a reboot.	Features->General Information->Auto-Logout Time (1~1000min)
features.direct_ip_call_enable =	0 or 1	It enables or disables the phone to make an IP call directly. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information-> Allow IP Call
features.allow_mute =	0 or 1	It enables or disables the phone to mute an active call. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Allow Mute
features.group_listen_in_talking_enable =	0 or 1	It enables or disables the phone to enter into the group listening mode by pressing the speakerphone key when	

Parameter	Permitted Values	Descriptions	Web Setting Path
		it is in talking using the handset. **0**-Disabled **1**-Enabled The default value is 1.	
features.ringer_device.is_use_headset =	0, 1 or 2	It configures the ringer device for the phone in the headset mode. **0**-Use Speaker **1**-Use Headset **2**-Use Headset & Speaker The default value is 0.	Features->Audio-> Ringer Device for Headset
features.factory_pwd_enable =	0 or 1	It enables or disables the phone to prompt for the administrator password when you long press the OK key to perform factory reset. **0**-Disabled **1**-Enabled The default value is 0.	
features.export_cfg_erase_pwd =	0 or 1	It configures the phone to export the configuration file with what type of password. **0**-Encrypted **1**-Blank **2**-Plaintext The default value is 1.	
features.pickup.group_pickup_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the GPickup soft key when the phone is in the pre-dialing screen. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Group Call Pickup
features.pickup.group_pickup_code =	String within 32 characters	It configures the group call pickup code. The default value is blank.	Features->Call Pickup->Group Call Pickup Code
features.pickup.direct_picku	0 or 1	It enables or disables the phone to display the DPickup soft key when the	Features->Call Pickup->Directed

Parameter	Permitted Values	Descriptions	Web Setting Path
p_enable = (not applicable to SIP-T20P IP phones)		phone is in the pre-dialing screen. **0**-Disabled **1**-Enabled The default value is 0.	Call Pickup
features.pickup.direct_pickup_code =	String within 32 characters	It configures the directed call pickup code. The default value is blank.	Features->Call Pickup->Directed Call Pickup Code
features.pickup.blf_visual_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display a visual alert when the monitored user receives an incoming call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Visual Alert for BLF Pickup
features.pickup.blf_audio_enable =	0 or 1	It enables or disables the phone to play an audio alert when the monitored user receives an incoming call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Audio Alert for BLF Pickup
features.blf_led_mode = (not applicable to SIP-T19P and SIP-T48G IP phones)	0, 1, 2 or 3	It configures BLF LED mode and provides four kinds of definition for the BLF/BLF list key LED status. For more information, refer to BLF LED Mode on page 228. The default value is 0. **Note**: The old parameter "features.blf_and_callpark_idle_led_enable" is also applicable to IP phones.	Features->General Information->BLF LED Mode
features.blf_list_version =	0 or 1	It enables or disables the phone to deal with the Version header in the BLF NOTIFY message sent by the server. **0**-Disabled **1**-Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		It takes effect after a reboot.	
features.voice_mail_tone_enable =	0 or 1	It enables or disables the phone to play the warning tone when receiving a voice mail. **0**-Disabled **1**-Enabled The default value is 1.	
multicast.codec = (not applicable to SIP-T19P IP phones)	PCMU PCMA G729 G722 G726-16 G726-24 G726-32 G726-40 G723_53	It configures the codec of multicast paging. Codecs G726-16, G726-24 and G726-40 are not applicable to SIP-T21P IP phones. The default value is G722.	Features->General Information-> Multicast Codec
multicast.receive_priority.enable =	0 or 1	It enables or disables the phone to handle the incoming multicast paging calls when there is a multicast paging call on the phone. **0**-Disabled **1**-Enabled The default value is 1.	Directory-> Multicast IP->Paging Priority Active
multicast.receive_priority.priority =	Integer from 0 to 10	It configures the priority of multicast paging calls. 1 is the highest priority, 10 is the lowest priority. The default value is 10.	Directory-> Multicast IP->Paging Barge
multicast.listen_address.X.ip_address = (X ranges from 1 to 10)	IP address: port	It configures the listening multicast IP address and port number for the phone. Example: multicast.listen_address.1.ip_address = 224.5.6.20:10008 The default value is blank.	Directory-> Multicast IP-> Listening Address

Parameter	Permitted Values	Descriptions	Web Setting Path
multicast.listen_address.X.label = (X ranges from 1 to 10)	String within 99 characters	It configures the label displayed on the LCD screen when receiving the multicast paging. The default value is blank.	Directory->Multicast IP->Label
phone_setting.predial_autodial =	0 or 1	It enables or disables the phone to automatically dial out the entered digits in the pre-dialing screen. **0**-Disabled **1**-Enabled The default value is 0.	Settings->Preference->Live Dialpad
phone_setting.inter_digit_time =	Integer from 1 to 14	It configures the time (in seconds) for the phone to automatically dial out the entered digits without pressing a send key. The default value is 4.	Settings->Preference->Inter Digit Time (1~14s)
phone_setting.lock = (only applicable to SIP-T2xP and SIP-T19P IP phones)	0, 1, 2 or 3	It configures the keypad lock type. **0**-Disabled **1**-Menu Key **2**-Function Keys **3**-All Keys The default value is 0.	Features->Phone Lock->Keypad Lock Type
phone_setting.phone_lock.enable = (only applicable to SIP- T46G, T42G and T41P IP phones)	0 or 1	It enables or disables keypad lock feature. **0**-Disabled **1**-Enabled The default value is 0.	Features->Phone Lock->Keypad Lock Enable
phone_setting.phone_lock.lock_key_type = (only applicable to SIP- T46G,	0, 1 or 2	It configures the keypad lock type. **0**-All Keys **1**-Function Keys **2**-Menu Key The default value is 0.	Features->Phone Lock->Keypad Lock Type

Parameter	Permitted Values	Descriptions	Web Setting Path
T42G and T41P IP phones)			
phone_setting .phone_lock.unlock_pin = (not applicable to SIP-T48G IP phones)	characters within 15 digits	It configures the password for unlocking the keypad. The default value is 123.	Features->Phone Lock->Phone Unlock PIN (0~15 Digit)
phone_setting .phone_lock.lock_time_out = (not applicable to SIP-T48G IP phones)	Integer from 0 to 3600	It configures the interval (in seconds) to automatically lock the keypad. The default value is 0 (the keypad is locked only by long pressing the pound key or pressing the keypad lock key)	Features->Phone Lock->Phone Lock Time Out (0~3600s)
features.bluetooth_enable = (only applicable to SIP-48G and SIP-T46G IP phones)	0 or 1	It enables or disables Bluetooth feature. **0**-Disabled **1**-Enabled The default value is 0.	Features-> Bluetooth-> Bluetooth Active
phone_setting .ring_type =	Ring1.wav, Ring2.wav, Ring3.wav, Ring4.wav, Ring5.wav Ring6.wav, Ring7.wav, Ring8.wav	It configures the ring tone for the phone. Example: phone_setting.ring_type = Ring1.wav The default value is Ring1.wav. **Note:** Ring tones 6-8 are only applicable to SIP-T48G and SIP-T46G IP phones.	Settings->Preference->Ring Type
phone_setting .contrast = (only applicable to SIP-T28P,	Integer from 1 to 10	It configures the contrast of the LCD screen. For SIP-T21P and SIP-T19P IP phones, it configures the LCD's contrast of the phone only.	Settings->Preference->Contrast

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P, SIP-19P IP phones, EXP39 connected to SIP-T28P and SIP-T26P IP phones, and EXP40 connected to SIP-T48G/T46G IP phones)		For SIP-T26P IP phones, it configures the LCD's contrast of the connected EXP39 only. For SIP-T28P IP phones, it configures the LCD's contrast of the IP phone and the connected EXP39. For SIP-T48G/T46G IP phones, it configures the LCD's contrast of the connected EXP40 only. The default value is 6.	
phone_setting .lcd_logo.mode = (not applicable to SIP-T48G/T46G IP phones)	0, 1 or 2	It configures the logo mode of the LCD screen (except for SIP-T20P IP phones). **For SIP-T26P/T22P/T21P/T19P/ T42G/T41P IP phones:** **0**-Disabled **1**-System logo **2**-Custom logo The default value is 0. **For SIP-T28P IP phones:** **1**-System logo **2**-Custom logo The default value is 1. It enables or disables a text logo (for SIP-T20P IP phones). **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information->Use Logo
phone_setting .lcd_logo.text = (only applicable to SIP-T20P IP phones)	String within 15 characters	It configures a text logo. The default value is Yealink.	Features->General Information->Text Logo
lcd_logo.url = (not	URL within 511	It configures the access URL of logo file.	Features->General Information->

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T20P and SIP-T48G/T46G IP phones)	characters	The default value is blank.	Upload Logo
lcd_logo.delete = (not applicable to SIP-T20P and SIP-T48G/T46G IP phones)	URL within 511 characters	It deletes all custom logo files. The valid value is: http://localhost/all The default value is blank.	
phone_setting.active_backlight_level = (only applicable to SIP-T28P IP phones and the connected EXP39, and SIP-T48G/T46G IP phones and the connected EXP40)	Integer from 1 to 3 for SIP-T28P and the connected EXP39 IP phones. Integer from 1 to 10 for SIP-T48G/T46G IP phones and the connected EXP40	It configures the level of the active backlight intensity. **For SIP-T28P IP phones and the connected EXP39:** The default value is 2. **For SIP-T48G IP phones and the connected EXP40:** The default value is 10. **For SIP-T46G IP phones and the connected EXP40:** The default value is 8.	Settings->Preference->Backlight Active Level
phone_setting.inactive_backlight_level = (only applicable to SIP-T48G/T46G IP phones)	0 or 1	It configures the phone to go out or reduce intensity of the backlight on the LCD screen after a period of inactivity. **0**-Off **1**-Low The default value is 1.	Settings-> Preference-> Backlight Inactive Level
phone_setting.backlight_time = (not applicable to SIP-T21P,	0, 1, 15, 30, 60, 120, 300, 600 or 1800	It configures the backlight time (in seconds). **For SIP-T28P/T26P/T22P IP phones:** **0**-Always off **1**-Always on	Settings->Preference->Backlight Time (seconds)

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T20P and SIP-T19P IP phones)		**15**-15s **30**-30s **60**-60s **120**-120s **300**-300s **600**-600s **1800**-1800s The default value is 30. **For SIP-T4X IP phones:** **0**-Always on **15**-15s **30**-30s **60**-60s **120**-120s **300**-300s **600**-600s **1800**-1800s The default value is 0.	
phone_setting.ring_for_tranfailed =	Ring1.wav Ring2.wav Ring3.wav Ring4.wav Ring5.wav Ring6.wav Ring7.wav Ring8.wav	It configures the ring tone when the phone fails to transfer a call. The default value is Ring1.wav. **Note**: Ring tones 6-8 are applicable to SIP-T48G/T46G IP phones only.	
phone_setting.logon_wizard =	0 or 1	It enables or disables the phone to provide the logon wizard during startup. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information-> Logon Wizard
phone_setting.is_deal180 =	0 or 1	It enables or disables the phone to deal with the 180 SIP message received after the 183 SIP message.	Features->General Information->180 Ring Workaround

Parameter	Permitted Values	Descriptions	Web Setting Path
		0-Disabled **1**-Enabled The default value is 1.	
phone_setting .headsetkey_ mode =	0 or 1	It configures headset mode precedence during a call. **0**-Always use (pressing the Speakerphone key and picking up the handset are not effective when the headset mode is activated) **1**-Use as normal The default value is 1.	
phone_setting .emergency.n umber = (not applicable to SIP-T48G IP phones)	String within 99 characters	It configures emergency numbers. Multiple emergency numbers are separated by commas. The default value is 110,911,120.	Features->Phone Lock->Emergency
phone_setting .show_code40 3 =	String within 99 characters	It configures the display message on the LCD screen when receiving a 403 message. If it is left blank, the phone will display the value sent from the server when receiving the 403 message. The default value is blank. It takes effect after a reboot.	
super_search. recent_call = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables recent call in dialing feature. If it is enabled, you can see the placed calls list when the phone is in the pre-dialing screen. **0**-Disabled **1**-Enabled The default value is 0.	Directory-> Setting->Recent Call In Dialing
directory_setti ng.url = (not applicable to	URL within 511 characters	It configures the access URL of the custom directory list file. The default value is blank.	Directory-> Setting->Directory

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T20P IP phones)			
super_search.url = (not applicable to SIP-T20P IP phones)	URL within 511 characters	It configures the access URL of the custom search source list in dialing file. The default value is blank.	Directory->Setting->Search Source List In Dialing
firmware.url =	URL within 511 characters	It configures the access URL of the firmware file. The default value is blank. It takes effect after a reboot.	Settings->Upgrade->Select and Upgrade Firmware
ringtone.url =	URL within 511 characters	It configures the access URL of the custom ring tone file. The default value is blank.	Settings->Preference->Upload Ringtone
ringtone.delete =	URL within 511 characters	It deletes all custom ring tone files. The valid value is: http://localhost/all The default value is blank.	
gui_lang.url =	URL within 511 characters	It configures the access URL of the custom language file. The default value is blank.	
gui_lang.delete =	URL within 511 characters	It deletes all custom language files. The valid value is: http://localhost/all The default value is blank.	
trusted_certificates.url =	URL within 511 characters	It configures the access URL of the custom trusted certificate file. The default value is blank.	Security->Trusted Certificates->Load trusted certificates file
trusted_certificates.delete =	URL within 511 characters	It deletes all uploaded trusted certificate files. The valid value is: http://localhost/all The default value is blank.	
server_certificates.url =	URL within 511 characters	It configures the access URL of the custom server certificate file. The default value is blank.	Security->Server Certificates->Load server cer file

Parameter	Permitted Values	Descriptions	Web Setting Path
server_certificates.delete =	URL within 511 characters	It deletes the uploaded server certificate file. The valid value is: http://localhost/all The default value is blank.	
local_contact.data.url =	URL within 511 characters	It configures the access URL of the local contact file. The default value is blank.	Directory->Local Directory->Import Local Directory File
local_contact.data_photo_tar.url = (only applicable to SIP-T48G/T46G IP phones)	URL within 511 characters	It configures the access URL of the TAR file compressed from custom contact file and avatar TAR file. All avatars needed for contacts should be tarred in advance. The default value is blank.	
auto_dst.url =	URL within 511 characters	It configures the access URL of the DST Time file. The default value is blank.	
custom_factory_configuration.url =	URL within 511 characters	It configures the access URL of the custom factory configuration files. The default value is blank. It takes effect after a reboot.	
features.custom_factory_config.enable =	0 or 1	It enables or disables Import Factory Configuration feature. **0**-Disabled **1**-Enabled The default value is 0.	
configuration.url =	URL within 511 characters	It configures the access URL for the custom configuration files. The default value is blank. It takes effect after a reboot.	Settings-> Configuration-> Export or Import Configuration
custom_mac_cfg.url =	URL within 511 characters	It configures the access URL of the custom MAC-Oriented CFG file. The default value is blank.	
account.X.out_dialog_blf_en	0 or 1	It enables or disables the phone to handle NOTIFY messages out of the	

Parameter	Permitted Values	Descriptions	Web Setting Path
able = (SIP-T19P: X=1 SIP-T21P/T20P: X ranges from 1 to 2. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T28P/T48G/T46G: X ranges from 1 to 6)		BLF dialog for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	0 or 1	It enables or disables the account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Register ->Line Active
account.X.label = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from	String within 99 characters	It configures the label displayed on the LCD screen for account X. The default value is blank.	Account->Register ->Label

Parameter	Permitted Values	Descriptions	Web Setting Path
1 to 2. SIP-T19P: X=1)			
account.X.display_name = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	String within 99 characters	It configures the display name for account X. The default value is blank.	Account->Register->Display Name
account.X.auth_name = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	String within 99 characters	It configures the user name for register authentication for account X. The default value is blank.	Account->Register->Register Name
account.X.user_name = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X	String within 32 characters	It configures the register user name for account X. The default value is blank.	Account->Register->User Name

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)			
account.X.password = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	String within 99 characters	It configures the password for register authentication for account X. The default value is blank.	Account->Register->Password
account.X.transport = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	Integer	It configures the transport type for account X. **0**-UDP **1**-TCP **2**-TLS **3**-DNS-NAPTR The default value is 0.	Account->Register->Transport
account.X.reregister_enable = (SIP-T28P/T48G	0 or 1	It configures whether the phone needs to re-register the account when encountering an INVITE failover, if the SIP server is configured with a domain	

Parameter	Permitted Values	Descriptions	Web Setting Path
/T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)		name for account X. **0**-Do not need to re-register **1**-Need to re-register The default value is 0.	
account.X.naptr_build = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	0 or 1	It configures the way of SRV query when there is no result from the NAPTR query for account X. **0**-SRV query using UDP only **1**-SRV query using UDP, TCP or TLS. The default value is 0.	
account.X.fallback.redundancy_type = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	0 or 1	It configures the registration mode for account X. **0**-Concurrent registration **1**-Successive registration The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1)			
account.X.fallback.timeout = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	Integer from 10 to 2147483647	It configures the time interval (in seconds) for the phone to detect whether the working server is available by sending the registration request for account X. It is only applicable to successive registration mode. The default value is 120.	
account.X.sip_server.Y.address = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1 Y ranges from 1 to 2.)	IP address or domain name	It configures the IP address or domain name of the SIP server Y for account X. Example: account.1.sip_server.1.address = 10.2.1.128 The default value is blank. **Note**: The old parameter "account.X.sip_server_host" is also applicable to IP phones.	Account->Register->SIP Server Y->Server Host
account.X.sip_server.Y.port = (SIP-T28P/T48G/T46G: X	Integer from 0 to 65535	It configures the port of SIP server Y for account X. The default value is 5060. **Note**: The old parameter	Account->Register->SIP Server Y->Port

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1 Y ranges from 1 to 2)		"account.X.sip_server_port" is also applicable to IP phones.	
account.X.sip_ server.Y.expire s = (SIP-T19P: X=1 SIP-T20P/T21P: X ranges from 1 to 2. SIP-T22P/T26P/T 41P/T42G: X ranges from 1 to 3. SIP-T28P/T46G/ T48G: X ranges from 1 to 6. Y ranges from 1 to 2)	Integer from 30 to 2147483647	It configures the registration expiration time (in seconds) to SIP server Y for account X. The default value is 3600.	Account->Register ->SIP Server Y-> Server Expires
account.X.sip_ server.Y.retry_ counts = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1	Integer from 0 to 20	It configures the times for the phone to retransmit the request when the SIP server Y is unavailable or there is no response from the SIP server Y for account X. The default value is 3.	Account->Register ->SIP Server Y ->Server Retry Counts

Parameter	Permitted Values	Descriptions	Web Setting Path
to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1 Y ranges from 1 to 2)			
account.X.sip_server.Y.failback_mode = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2)	0, 1, 2 or 3	It configures the mode for the phone to retry the primary server in failover mode for account X. **0**-newRequests: all requests are forwarded to the primary server first, regardless of the last used server. **1**-DNSTTL: the phone retries to use the primary server after the timeout of the DNSTTL configured for the SIP server. **2**-Registration: the phone retries to use the primary server when the SIP server's registration requires renewal. **3**-duration: the phone retries to use the primary server after the timeout defined by the parameter "account.X.failback_timeout". The default value is 0.	
account.X.sip_server.Y.failback_timeout = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	Integer 0, from 60 to 65535	It configures the timeout (in seconds) for the phone to retry to use the primary server after failing over to the current working server for account X when the parameter "account.X.sip_server.Y.failback_mode " is set to 3 (duration). If you set the parameter between 1 and 59, the timeout will be 60 seconds. The default value is 3600.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1. Y ranges from 1 to 2.)			
account.X.sip_server.Y.register_on_enable = (SIP-T19P: X=1 SIP-T20P/T21P: X ranges from 1 to 2. SIP-T22P/T26P/T41P/T42G: X ranges from 1 to 3. SIP-T28P/T46G/T48G: X ranges from 1 to 6. Y ranges from 1 to 2.)	0 or 1	It enables or disables the phone to send registration requests to the secondary server for account X when encountering a failover. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.static_cache_pri = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It configures whether preferentially to use the DNS static cache for domain name resolution of the SIP server for account X. **0**-Use domain name server preferentially **1**-Use DNS static cache preferentially The default value is 0.	
account.X.dns_cache_type	0, 1 or 2	It configures the content that the DNS static cache records for account X.	

Parameter	Permitted Values	Descriptions	Web Setting Path
= (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)		**0**-Do not use DNS static cache. **1**-Use DNS static cache, but do not record the additional records. **2**-Use DNS static cache and record the additional records. The default value is 1.	
account.X.dns_cache_a.Y.name = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Domain name	It configures the domain name of A record Y in the DNS static cache for account X. The default value is blank. It takes effect after a reboot.	
account.X.dns_cache_a.Y.ip = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X	IP address	It configures the IP address that the domain name of A record Y maps to in the DNS static cache for account X. The default value is blank. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)			
account.X.dns_cache_a.Y.ttl = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 30 to 2147483647	It configures the time interval that A record Y may be cached before the record should be consulted again for account X. The default value is 300. It takes effect after a reboot.	
account.X.dns_cache_srv.Y.name = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	Domain name	It configures the domain name of SRV record Y in the DNS static cache for account X. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1. Y ranges from 1 to 2.)			
account.X.dns_cache_srv.Y.port = ((SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the port to be used in SRV record Y for account X. The default value is 0. It takes effect after a reboot.	
account.X.dns_cache_srv.Y.priority = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the priority for the specific host entry in SRV record Y for account X. Lower priority is more preferred. The default value is 0. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.dns_cache_srv.Y.target = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Domain name	It configures the actual host for an A query for account X. The default value is blank. It takes effect after a reboot.	
account.X.dns_cache_srv.Y.weight = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the weight of SRV record Y for account X. When priorities are equal, weight is used to differentiate the preference. Higher weight is more preferred. The default value is 0. It takes effect after a reboot.	
account.X.dns_cache_srv.Y.ttl = (SIP-T28P/T48G/T46G: X	Integer from 30 to 2147483647	It configures the time interval that SRV record Y may be cached before the record should be consulted again for account X.	

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)		The default value is 300. It takes effect after a reboot.	
account.X.dns _cache_naptr. Y.name = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Domain name	It configures the domain name to which NAPTR record Y refers in the DNS static cache for account X. The default value is blank. It takes effect after a reboot.	
account.X.dns _cache_naptr. Y.flags = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1	S, A, U or P	It configures the flag of NAPTR record Y in the DNS static cache for account X. (Always "s" for SIP, which means to do an SRV lookup on whatever is in the replacement field) **S**-Do an SRV lookup next. **A**-Do an A lookup next. **U**-No need to do a DNS query next. **P**-Service customized by the user	

Parameter	Permitted Values	Descriptions	Web Setting Path
to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)		The default value is blank. It takes effect after a reboot.	
account.X.dns_cache_naptr.Y.order = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the order of NAPTR record Y for account X. NAPTR record with lower order is more preferred. The default value is 0. It takes effect after a reboot.	
account.X.dns_cache_naptr.Y.preference = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	Integer from 0 to 65535	It configures the preference of NAPTR record Y for account X. NAPTR record with lower preference is more preferred. The default value is 0. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1. Y ranges from 1 to 2.)			
account.X.dns_cache_naptr.Y.replace = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Domain name	It configures a domain name to be used for the next SRV query in NAPTR record Y for account X. The default value is blank. It takes effect after a reboot.	
account.X.dns_cache_naptr.Y.service = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	String within 32 characters	It configures the transport protocol available for SIP in NAPTR record Y for account X. The default value is blank. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.dns_cache_naptr.Y.ttl = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 2.)	Integer from 30 to 2147483647	It configures the time interval that NAPTR record Y may be cached before the record should be consulted again for account X. The default value is 300. It takes effect after a reboot.	
account.X.srv_ttl_timer_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to refresh the DNS-SRV query record at the regular time for account X. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	
account.X.outbound_proxy_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6.	0 or 1	It enables or disables the phone to use the outbound proxy server for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Register->Enable Outbound Proxy Server

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.outbound_host = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	IP address or domain name	It configures the IP address or domain name of the outbound proxy server for account X. The default value is blank.	Account->Register ->Outbound Proxy Server
account.X.outbound_port = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 0 to 65535	It configures the port of the outbound proxy server for account X. The default value is 5060.	Account->Register ->Outbound Proxy Server->Port
voice_mail.number.X =	String within 99	It configures the voice mail number for account X.	Account-> Advanced->Voice

Parameter	Permitted Values	Descriptions	Web Setting Path
(SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	characters	The default value is blank.	Mail
account.X.proxy_require = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 256 characters	It configures the proxy server for account X. The default value is blank.	Account->Basic->Proxy Require
account.X.sip_trust_ctrl = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	0 or 1	It enables or disables the phone to only accept the message from the trusted server for account X. **0**-Disabled **1**-Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1.)			
account.X.anonymous_call = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables anonymous call feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Basic->Local Anonymous
account.X.send_anonymous_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It configures the phone to send anonymous on/off code to activate/deactivate the server-side anonymous call feature for account X. **0**-Off Code **1**-On Code The default value is 0.	Account->Basic->Send Anonymous Code
account.X.anonymous_call_oncode = (SIP-T28P/T48G/T46G: X ranges from 1 to 6.	String within 32 characters	It configures the code for activating the server-side anonymous call feature for account X when the parameter "account.X.send_anonymous_code" is set to 1 (On Code). The default value is blank.	Account->Basic->Anonymous Call->On Code

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.anonymous_call_offcode = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 32 characters	It configures the code for deactivating the server-side anonymous call feature for account X when the parameter "account.X.send_anonymous_code" is set to 0 (Off Code). The default value is blank.	Account->Basic-> Anonymous Call-> Off Code
account.X.reject_anonymous_call = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables anonymous call rejection feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Basic-> Anonymous Call Rejection

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.anonymous_reject_oncode = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 32 characters	It configures the code for activating the server-side anonymous call rejection feature for account X. The default value is blank.	Account->Basic->Anonymous Call Rejection->On Code
account.X.anonymous_reject_offcode = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 32 characters	It configures the code for deactivating the server-side anonymous call rejection feature for account X. The default value is blank.	Account->Basic->Anonymous Call Rejection->Off Code
account.X.dnd.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1	0 or 1	It enables or disables DND feature for account X when the DND mode is configured as Custom. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward& DND->DND->DND Status

Parameter	Permitted Values	Descriptions	Web Setting Path
to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)			
account.X.dnd.on_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the DND on code for account X when the DND mode is configured as Custom. The default value is blank.	Features->Forward& DND->DND On Code
account.X.dnd.off_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not	String within 32 characters	It configures the DND off code for account X when the DND mode is configured as Custom. The default value is blank.	Features->Forward& DND->DND Off Code

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T19P IP phones)			
account.X.always_fwd.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	0 or 1	It enables or disables always forward feature for account X when the call forward mode is configured as Custom. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward& DND->Always Forward->On/Off
account.X.always_fwd.target = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the target number the phone forwards all incoming calls to for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Always Forward->Target

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.busy_fwd.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	0 or 1	It enables or disables busy forward feature for account X when the call forward mode is configured as Custom. **0**-Disabled **1**-Enabled The default value is 0.	Features->Forward& DND->Busy Forward->On/Off
account.X.busy_fwd.target = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the target number the phone forwards incoming calls to when busy for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Busy Forward->Target
account.X.timeout_fwd.enable =	0 or 1	It enables or disables no answer forward feature for account X when the call forward mode is configured as	Features->Forward& DND->No Answer Forward->

Parameter	Permitted Values	Descriptions	Web Setting Path
(SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)		Custom. **0**-Disabled **1**-Enabled The default value is 0.	On/Off
account.X.timeout_fwd.target = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the target number the phone forwards incoming calls to after a period of ring time for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->No Answer Forward->Target
account.X.timeout_fwd.timeout = (SIP-T28P/T48G /T46G: X ranges from 1	Integer from 0 to 20	It configures ring times (N) to wait before forwarding incoming calls for account X when the call forward mode is configured as Custom. Incoming calls are forwarded when not answered after N*6 seconds.	Features->Forward& DND->No Answer Forward->After Ring Time (0~120s)

Parameter	Permitted Values	Descriptions	Web Setting Path
to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)		The default value is 2.	
account.X.always_fwd.off_code = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the always forward off code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Always Forward ->Off Code
account.X.always_fwd.on_code = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X	String within 32 characters	It configures the always forward on code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Always Forward->On Code

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)			
account.X.busy_fwd.off_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the busy forward off code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Busy Forward ->Off Code
account.X.busy_fwd.on_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P:	String within 32 characters	It configures the busy forward on code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->Busy Forward->On Code

Parameter	Permitted Values	Descriptions	Web Setting Path
X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)			
account.X.timeout_fwd.off_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the no answer forward off code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->No Answer Forward ->Off Code
account.X.timeout_fwd.on_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not	String within 32 characters	It configures the no answer forward on code for account X when the call forward mode is configured as Custom. The default value is blank.	Features->Forward& DND->No Answer Forward ->On Code

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T19P IP phones)			
account.X.sip_listen_port = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 1024 to 65535	It configures the local SIP port for account X. The default value is 5060.	Account-> Advanced->Local SIP Port
account.X.100rel_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the 100 reliable retransmission feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account-> Advanced-> Retransmission
account.X.subscribe_mwi = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/	0 or 1	It enables or disables the phone to subscribe the message waiting indicator for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account-> Advanced-> Subscribe for MWI

Parameter	Permitted Values	Descriptions	Web Setting Path
T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.subscribe_mwi_expires = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 0 to 84600	It configures the interval (in seconds) of MWI subscription for account X. The default value is 3600.	Account->Advanced->MWI Subscription Period (Seconds)
account.X.cid_source = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0, 1, 2, 3, 4 or 5	It configures the source caller identity for presentation when receiving an incoming call for account X. **0**-FROM **1**-PAI **2**-PAI-FROM **3**-PRID-PAI-FROM **4**-PAI-RPID-FROM, **5**-RPID-FROM The default value is 0.	Account->Advanced->Caller ID Source
account.X.cid_source_privac	0 or 1	It enables or disables the phone to deal with PRIVACY header field in the	

Parameter	Permitted Values	Descriptions	Web Setting Path
y = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)		180 or 200 OK message for account X. **0**-Disabled **1**-Enabled The default value is 1.	
account.X.cid_source_ppi = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to process the P-Preferred-Identity header for caller identity presentation when receiving an incoming call for account X. **0**-Disabled **1**-Enabled The default value is 1.	
account.X.cp_source = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from	0, 1 or 2	It configures the source callee identity for presentation for account X. **0**-PAI-RPID **1**-Dialed Digits **2**-RFC4916 The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
1 to 2. SIP-T19P: X=1.)			
account.X.session_timer.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the session timer for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->Session Timer
account.X.session_timer.expires = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 30 to 7200	It configures the interval (in seconds) for refreshing the SIP session for account X. The default value is 1800.	Account->Advanced->Session Expires (30~7200s)
account.X.session_timer.refresher = (SIP-T28P/T48G/T46G: X ranges from 1	0 or 1	It configures the refresher of the session timer for account X. **0**-Uac **1**-Uas The default value is 0.	Account->Advanced->Session Refresher

Parameter	Permitted Values	Descriptions	Web Setting Path
to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.enable_user_equal_phone = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the "user=phone" carried in the INVITE message for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account-> Advanced->Send user=phone
account.X.srtp_encryption = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0, 1 or 2	It configures whether to use voice encryption service for account X. **0**-Disabled **1**-Optional **2**-Compulsory The default value is 0.	Account-> Advanced->RTP Encryption (SRTP)

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.ptime = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 (Disabled), 10, 20, 30, 40, 50 or 60	It configures the RTP packet time for account X. The default value is 20.	Account->Advanced->PTime (ms)
account.X.bla_number = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 99 characters	It configures the BLA number for account X. The default value is blank.	Account->Advanced->BLA Number
account.X.bla_subscribe_period = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3.	Integer from 60 to 7200	It configures the period (in seconds) of BLA subscription for account X. The default value is 300.	Account->Advanced->BLA Subscription Period

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.register_mac = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to carry the MAC address in the REGISTER message for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->SIP Send MAC
account.X.register_line = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to carry the line number in the REGISTER message for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->SIP Send Line
account.X.dialoginfo_callpickup = (SIP-T28P/T48G/T46G: X ranges from 1	0 or 1	It enables or disables the phone to pick up a call according to the SIP header of dialog-info for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->Dialog Info Call Pickup

Parameter	Permitted Values	Descriptions	Web Setting Path
to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)			
account.X.group_pickup_code = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 32 characters	It configures the group pickup code for account X. The default value is blank.	Account-> Advanced->Group Call Pickup Code
account.X.direct_pickup_code = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P:	String within 32 characters	It configures the directed pickup code for account X. The default value is blank.	Account-> Advanced-> Directed Call Pickup Code

Parameter	Permitted Values	Descriptions	Web Setting Path
X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.auto_answer = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables auto answer feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Basic->Auto Answer
features.auto_answer_delay =	Integer from 1 to 4	It configures the delay time (in seconds) before the phone automatically answers an incoming call. The default value is 1.	
account.X.missed_calllog = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to record the missed call of account X. **0**-Disabled **1**-Enabled The default value is 1.	Account->Basic->Missed Call Log
account.X.subscribe_mwi_to	0 or 1	It enables or disables the phone to subscribe to the voice mail number for	Account->Advanced->

Parameter	Permitted Values	Descriptions	Web Setting Path
_vm = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)		the message waiting indicator for account X. **0**-Disabled **1**-Enabled The default value is 0.	Subscribe MWI To Voice Mail
account.X.reg_fail_retry_interval = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 0 to 1800	It configures the interval (in seconds) for the phone to retry to register account X when registration fails. The default value is 30.	Account-> Advanced->SIP Registration Retry Timer (0~1800s)
account.X.conf_type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P:	0 or 2	It configures the conference type for account X. **0**-Local Conference **2**-Network Conference The default value is 0.	Account-> Advanced-> Conference Type

Parameter	Permitted Values	Descriptions	Web Setting Path
X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.conf_uri = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	SIP URI within 511 characters	It configures the network conference URI for account X. The default value is blank.	Account-> Advanced-> Conference URI
account.X.blf.subscribe_period = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 30 to 2147483647	It configures the period (in seconds) of the BLF subscription for account X. The default value is 1800.	
account.X.blf.subscribe_event = (SIP-T28P/T48G/T46G: X ranges from 1	0 or 1	It configures the event of the BLF subscription for account X. **0**-Dialog **1**-Presence The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.sip_ server_type = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0, 2, 4 or 6	It configures the SIP server type for account X. **0**-Default **2**-BroadSoft **4**-Cosmocom **6**-UCAP The default value is 0.	Account-> Advanced->SIP Server Type
account.X.mus ic_server_uri = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	SIP URI within 256 characters	It configures the URI of the Music On Hold server for account X. The default value is blank.	Account-> Advanced->Music Server URI

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.dtmf.type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0, 1, 2 or 3	It configures the DTMF type for account X. **0**-INBAND **1**-RFC2833 **2**-SIP INFO **3**-AUTO or SIP INFO The default value is 1.	Account->Advanced->DTMF Type
account.X.dtmf.dtmf_payload = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 96 to 127	It configures the RFC2833 payload for account X. The default value is 101.	Account->Advanced->DTMF Payload Type (96~127)
account.X.dtmf.info_type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3.	1, 2 or 3	It configures the DTMF info type when the DTMF type is configured as "SIP INFO", "AUTO or SIP INFO" for account X. **0**-Disabled **1**-DTMF-Relay **2**-DTMF **3**-Telephone-Event The default value is 0.	Account->Advanced->DTMF Info Type

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.nat.nat_traversal = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the NAT traversal for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Register ->NAT
account.X.nat.stun_server = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	IP address or domain name	It configures the IP address or domain name of the STUN server for account X. The default value is blank.	Account->Register ->STUN Server
account.X.nat.stun_port = (SIP-T28P/T48G/T46G: X ranges from 1	Integer from 1024 to 65000	It configures the port of the STUN server for account X. The default value is 3478.	Account->Register ->STUN Server ->Port

Parameter	Permitted Values	Descriptions	Web Setting Path
to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.nat. udp_update_e nable = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0, 1, 2 or 3	It configures the type of keep-alive packets sent by the phone to the NAT device to keep the communication port open so that NAT can continue to function for account X. **0**-Dsiabled **1**-Default: the phone sends UDP packets to the server. **2**-Option: the phone sends SIP OPTION packets to the server. **3**-Notify: the phone sends SIP NOTIFY packets to the server. The default value is 1.	Account-> Advanced->Keep Alive Type
account.X.nat. udp_update_ti me = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 15 to 2147483647	It configures the keep-alive interval (in seconds) for account X. The default value is 30.	Account-> Advanced->Keep Alive Interval (Seconds)

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.nat.rport = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables NAT Rport feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->RPort
account.X.advanced.timer_t1 = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Float from 0.5~10s	It configures the session timer T1 (in seconds) for account X. The default value is 0.5.	Account->Advanced->SIP Session Timer T1 (0.5~10s)
account.X.advanced.timer_t2 = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1	Float from 2~40s	It configures the session timer T2 (in seconds) for account X. The default value is 4.	Account->Advanced->SIP Session Timer T2 (2~40s)

Parameter	Permitted Values	Descriptions	Web Setting Path
to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.advanced.timer_t4 = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Float from 2.5~60s	It configures the session timer T4 (in seconds) for account X. The default value is 5.	Account->Advanced->SIP Session Timer T4 (2.5~60s)
account.X.alert_info_url_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the IP phone to download the ring tone from the URL contained in the Alert-Info header for account X. **0**-Disabled **1**-Enabled The default value is 0.	Account->Advanced->Distinctive Ring Tones
features.alert_info_tone =	0 or 1	It enables and disables the phone to map the keywords in the Alert-Info header to the specified Bellcore ring	

Parameter	Permitted Values	Descriptions	Web Setting Path
		tones. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.ringtone.ring_type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Common, Ring1.wav, Ring2.wav, Ring3.wav Ring4.wav Ring5.wav Ring6.wav, Ring7.wav, Ring8.wav	It configures a ring tone for account X. Example: account.1.ringtone.ring_type = Ring3.wav means configuring Ring3.wav for account1. account.1.ringtone.ring_type = Common means account1 will use the ring tone selected for the phone. The default value is Common. **Note**: Ring tones 6-8 are only applicable to SIP-T48G/T46G IP phones.	Account->Basic->Ring Type
account.X.codec.Y.payload_type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. SIP-T28P/T26P/T22P/T20P: Y ranges from 1 to 11.	PCMU PCMA G729 G722 G723_53 G723_63 G726-16 G726-24 G726-32 G726-40 iLBC GSM	It configures the codec for account X. Codecs G726-16, G726-24 and G726-40 are not applicable to SIP-T21P and SIP-T19P IP phones. Codec GSM is only applicable to SIP-T4X IP phones. **For SIP-T28P/T26P/T22P/T20P/T4X IP phones:** When Y=1, the default value is PCMU; When Y=2, the default value is PCMA; When Y=3, the default value is G723_53; When Y=4, the default value is G723_63; When Y=5, the default value is G729; When Y=6, the default value is G722; When Y=7, the default value is iLBC; When Y=8, the default value is	Account->Codec

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P/T19P: Y ranges from 1 to 8. SIP-T4X: Y ranges from 1 to 12)		G726-16; When Y=9, the default value is G726-24; When Y=10, the default value is G726-32; When Y=11, the default value is G726-40. When Y=12, the default value is GSM. **For SIP-T21P/T19P IP phones:** When Y=1, the default value is PCMU; When Y=2, the default value is PCMA; When Y=3, the default value is G723_53; When Y=4, the default value is G723_63; When Y=5, the default value is G729; When Y=6, the default value is G722; When Y=7, the default value is iLBC; When Y=8, the default value is G726-32.	
account.X.codec.Y.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. SIP-T28P/T26P/T22P/T20P: Y ranges from 1 to 11.	0 or 1	It enables or disables the specified codec for account X. **0**-Disabled **1**-Enabled Example: account.1.codec.1.enable =1 This means that the codec PCMU is enabled on the phone. **For SIP-T28P/T26P/T22P/T20P/T4X IP phones:** When Y=1, the default value is 1; When Y=2, the default value is 1; When Y=3, the default value is 0; When Y=4, the default value is 0; When Y=5, the default value is 1; When Y=6, the default value is 1;	Account->Codec

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P/T19P: Y ranges from 1 to 8. SIP-T4X: Y ranges from 1 to 12)		When Y=7, the default value is 0; When Y=8, the default value is 0; When Y=9, the default value is 0; When Y=10, the default value is 0; When Y=11, the default value is 0. When Y=12, the default value is 0 (only applicable to SIP-T4X IP phones). **For SIP-T21P/T19P IP phones:** When Y=1, the default value is 1; When Y=2, the default value is 1; When Y=3, the default value is 0; When Y=4, the default value is 0; When Y=5, the default value is 1; When Y=6, the default value is 1; When Y=7, the default value is 0; When Y=8, the default value is 0.	
account.X.codec.Y.priority = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. SIP-T28P/T26P/T22P/T20P: Y ranges from 1 to 11. SIP-T21P/T19P: Y ranges from 1 to 8.	Integer from 0 to 11 for SIP-T4X IP phones Integer from 0 to 10 for SIP-T20P/T22P/T26P/T28P IP phones Integer from 0 to 7 for SIP-T19P/T21P IP phones	It configures the priority of the enabled codec for account X. Example: account.1.codec.1.priority =1 **For SIP-T28P/T26P/T22P/T20P/T4X IP phones:** When Y=1, the default value is 1; When Y=2, the default value is 2; When Y=3, the default value is 0; When Y=4, the default value is 0; When Y=5, the default value is 3; When Y=6, the default value is 4; When Y=7, the default value is 0; When Y=8, the default value is 0; When Y=9, the default value is 0; When Y=10, the default value is 0; When Y=11, the default value is 0. When Y=12, the default value is 0. (only applicable to SIP-T4X IP phones)	Account->Codec

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T4X: Y ranges from 1 to 12)		**For SIP-T21P/T19P IP phones:** When Y=1, the default value is 1; When Y=2, the default value is 2; When Y=3, the default value is 0; When Y=4, the default value is 0; When Y=5, the default value is 3; When Y=6, the default value is 4; When Y=7, the default value is 0; When Y=8, the default value is 0.	
account.X.codec.Y.rtpmap = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. SIP-T28P/T26P/T22P/T20P: Y ranges from 1 to 11. SIP-T21P/T19P: Y ranges from 1 to 8. SIP-T4X: Y ranges from 1 to 12)	Integer from 0 to 127	It configures rtpmap of the audio codec for account X. Example: account.1.codec.1.rtpmap = 0 **For SIP-T28P/T26P/T22P/T20P/T4X IP phones:** When Y=1, the default value is 0; When Y=2, the default value is 8; When Y=3, the default value is 4; When Y=4, the default value is 4; When Y=5, the default value is 18; When Y=6, the default value is 9; When Y=7, the default value is 106; When Y=8, the default value is 103; When Y=9, the default value is 104; When Y=10, the default value is 102; When Y=11, the default value is 105. When Y=12, the default value is 97. (only applicable to SIP-T4X IP phones) **For SIP-T21P/T19P IP phones:** When Y=1, the default value is 0; When Y=2, the default value is 8; When Y=3, the default value is 4; When Y=4, the default value is 4; When Y=5, the default value is 18; When Y=6, the default value is 9;	

Parameter	Permitted Values	Descriptions	Web Setting Path
		When Y=7, the default value is 106; When Y=8, the default value is 102.	
account.X.unregister_on_reboot = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to un-register account X before a reboot. **0**-Disabled **1**-Enabled The default value is 0.	Account-> Advanced-> Unregister When Reboot
account.X.picture_info_enable = (X ranges from 1 to 6) (only applicable to SIP-T48G/T46G IP phones)	0 or 1	It enables or disables the phone to download the picture information for account X when receiving an incoming call or during a call. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.compact_header_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P:	0 or 1	It enables or disables the phone to support compact SIP header for account X. **0**-Disabled **1**-Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.music_on_hold_type = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It configures the way on how the phone processes Music On Hold when placing an active call on hold for account X. **0**-Calling the music server before holding **1**-Calling the music server after holding The default value is 0.	
account.X.acd.enable = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.) (not applicable to SIP-T48G/T46G)	0 or 1	It enables or disables ACD feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.acd.available = (SIP-T28P: X	0 or 1	It enables or disables the phone to display the available and unavailable soft keys for account X after the phone	

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.) (not applicable to SIP-T48G/T46G)		logs into the ACD system. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.subscribe_acd_expires = (SIP-T28P: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.) (not applicable to SIP-T48G/T46G)	Integer from 120 to 3600	It configures the period (in seconds) of ACD subscription for account X. The default value is 1800.	Account-> Advanced->ACD Subscrip Period (120~3600s)

The following table lists configuration parameters that are integrated with BroadSoft platform. For more information on BroadSoft features, refer to *Yealink_IP_Phones_Deployment_Guide_for_BroadSoft_UC-One_Environment*.

Parameter	Permitted Values	Descriptions	Web Setting Path
bw.enable =	0 or 1	It enables or disables BroadSoft features for IP phones. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	
features.uc_enable = (only applicable to SIP-T48G/ T46G IP phones)	0 or 1	It enables or disables UC feature. **0**-Disabled **1**-Enabled The default value is 1. It takes effect after a reboot.	
features.uc_username = (only applicable to SIP-T48G/ T46G IP phones)	String within 99 characters	Configures the user name for UC authentication. The default value is blank. It takes effect after a reboot.	Directory-> Network Directory->UC Username
features.uc_password = (only applicable to SIP-T48G/ T46G IP phones)	String within 32 characters	It configures the password for UC authentication. The default value is blank. It takes effect after a reboot.	Directory-> Network Directory->UC Password
features.config_dsskey_length = (only applicable to SIP-T46G IP phones)	0 or 1	It enables or disables extended length of the label displayed on the idle LCD screen for the line key. **0**-Disabled **1**-Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
phone_setting.dsskey_directory_auto.enable = (only applicable to SIP-T48G/ T46G IP phones)	0 or 1	It enables or disables Auto Favorite feature. If enabled, the IP phone will download information of favorites from the cloud server and automatically configure UC Favorite keys from the first unused line key (the line key is configured as N/A). If a line key is used, the IP phone will skip to the next unused line key. **0**-Disabled **1**-Enabled The default value is 1.	Features->General Information->Auto Favorite
account.X.xsi.host = (X=1)	IP address or domain name	It configures the IP address or domain name of the Xtended Services Platform server for account X. Example: account.1.xsi.host = xsp1.iop1.broadworks.net The default value is blank.	Directory-> Network Directory->Host Server
account.X.xsi.port = (X=1)	Integer from 1 to 65535	It configures the port of the Xtended Services Platform server for account X. Example: account.1.xsi.port = 80 The default value is 80.	Directory-> Network Directory->Port
account.X.xsi.server_type = (X=1)	"http" or "https"	It configures the access protocol of the Xtended Services Platform server for account X. Example: account.1.xsi.server_type = http The default value is http.	Directory-> Network Directory->XSI Server Type
account.X.xsi.user = (X=1)	String within 99 characters	It configures the user name for XSI authentication for account X. Example: account.1.xsi.user = 3502@as.iop1.broadworks.net The default value is blank.	Directory-> Network Directory->User ID

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.xsi.password = (X=1)	String within 99 characters	It configures the password for XSI authentication for account X. Example: account.1.xsi.password = 123456 The default value is blank.	Directory-> Network Directory-> Password
bw_phonebook.group_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the group directory. **0**-Disabled **1**-Enabled The default value is 1.	Directory-> Network Directory->Group
bw_phonebook.group_displayname = (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the display name on the LCD screen for the group directory. The default value is Group.	Directory-> Network Directory->Group
bw_phonebook.enterprise_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the enterprise directory. **0**-Disabled **1**-Enabled The default value is 1.	Directory-> Network Directory->Enterprise
bw_phonebook.enterprise_displayname = (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the display name on the LCD screen for the enterprise directory. The default value is Enterprise.	Directory-> Network Directory->Enterprise
bw_phonebook.group_common_enable = (not	0 or 1	It enables or disables the phone to display the group common directory. **0**-Disabled **1**-Enabled	Directory-> Network Directory->Group Common

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T20P IP phones)		The default value is 1.	
bw_phonebook.group_common_displayname = (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the display name on the LCD screen for the group common directory. The default value is GroupCommon.	Directory-> Network Directory->Group Common
bw_phonebook.enterprise_common_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the enterprise common directory. **0**-Disabled **1**-Enabled The default value is 1.	Directory-> Network Directory->Enterprise Common
bw_phonebook.enterprise_common_displayname = (not applicable to SIP-T20P IP phones)	String within 99 characters	It configures the display name on the LCD screen for the enterprise common directory. The default value is EnterpriseCommon.	Directory-> Network Directory->Enterprise Common
bw_phonebook.personal_enable= (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the personal directory. **0**-Disabled **1**-Enabled The default value is 1.	Directory-> Network Directory->Personal
bw_phonebook.personal_displayname= (not applicable to	String within 99 characters	It configures the display name on the LCD screen for the personal directory. The default value is Personal.	Directory-> Network Directory->Personal

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T20P IP phones)			
bw_phonebook.custom = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables custom directory feature. **0**-Disabled **1**-Enabled The default value is 0.	Directory-> Network Directory->Enable Custom Directory
directory.update_time_interval = (not applicable to SIP-T20P IP phones)	Integer from 2 to 43200	It configures the interval (in minutes) for the phone to update the data of the BroadSoft directory from the BroadSoft server. The default value is 60.	
bw_phonebook.call_log_enable = (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables BroadSoft call log feature. **0**-Disabled **1**-Enabled The default value is 0.	
call_park.enable= (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the Park soft key during a call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Call Park
call_park.group_enable= (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to display the GPark soft key during a call. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Group Call Park
call_park.park_visual_notify_enable = (not	0 or 1	It enables or disables the phone to display a parked indicator when a call is parked against its line.	Features->Call Pickup->Visual Alert for Parked Call

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to SIP-T20P IP phones)		**0**-Disabled **1**-Enabled The default value is 0.	
call_park.park_ring= (not applicable to SIP-T20P IP phones)	0 or 1	It enables or disables the phone to play a warning tone when a call is parked against its line. **0**-Disabled **1**-Enabled The default value is 0.	Features->Call Pickup->Audio Alert for Parked Call
bw.feature_key_sync =	0 or 1	It enables or disables feature key synchronization. **0**-Disabled **1**-Enabled The default value is 0.	Features->General Information-> Feature Key Synchronization
account.X.blf.blf_list_uri = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	SIP URI within 256 characters	It configures the BLF List URI to monitor a list of users for account X. The default value is blank.	Account-> Advanced->BLF List URI
account.X.blf_list_code = (SIP-T28P/T48G/T46G: X ranges from 1 to 6.	String within 32 characters	It configures the feature access code for directed call pickup (default: *97) for account X. The default value is blank.	Account-> Advanced->BLF List Code

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)			
account.X.blf_list_barge_in_code = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.) (not applicable to SIP-T19P IP phones)	String within 32 characters	It configures the feature access code for directed call pickup with barge-in (default: *33) for account X. The default value is blank.	Account-> Advanced->BLF List Barge In Code
phone_setting .auto_blf_list_ enable = (not applicable to SIP-T19P IP phones)	0 or 1	It enables or disables the phone to automatically configure the BLF list keys in order. **0**-Disabled **1**-Enabled The default value is 1.	
phone_setting .blf_list_sequence_type =	0 or 1	It configures the order of BLF list keys assigned automatically. **0**-Line Keys->Memory	

Parameter	Permitted Values	Descriptions	Web Setting Path
(only applicable to SIP-T28P, SIP-T26P, SIP-T48G and SIP-T46G IP phones)		Keys->Extension Keys **1**-Extension Keys->Memory Keys->Line Keys Memory keys are not applicable to SIP-T46G/SIP-T48G IP phones. The default value is 0.	
account.X.shared_line = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	0 or 1	It enables or disables Broadsoft SCA feature for account X. **0**-Disabled **1**-Broadsoft SCA The default value is 0.	Account->Advanced->Shared Line
account.X.acd.initial_state = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)	1 or 2	It configures the initial agent state for account X. **1**-Avaliable **2**-Unavailable The default value is 1.	
account.X.acd.unavailable_reason_enable =	0 or 1	It enables or disables unavailable reason code feature for account X. **0**-Disabled	

Parameter	Permitted Values	Descriptions	Web Setting Path
(SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1)		**1**-Enabled The default value is 0.	
account.X.reason_code.Y = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)	Integer from 1 to 2147483647	It configures the unavailable code which must match one of the codes configured on BroadWorks for account X. The value Y must be continuous. The default value is blank.	
account.X.reason_code_name.Y = (SIP-T28P/T48G /T46G: X ranges from 1 to 6. SIP-T26P/T22P/ T42G/T41P: X ranges from 1 to 3.	String within 99 characters	It configures the unavailable reason which must match one of the reasons configured on BroadWorks for account X. The value Y must be continuous. The default value is blank.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)			
account.X.call_center.call_info_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables call center call information feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.call_center.show_call_info_time = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	Integer from 1 to 86400	It configures the interval (in seconds) to specify how long the call center call information displays for account X. The default value is 30 seconds.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.call_center.disp_code_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables disposition code feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.bw_disp_code.Y = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)	Integer from 1 to 2147483647	It configures the disposition code which must match one of the codes configured on BroadWorks for account X. The value Y must be continuous. The default value is blank.	
account.X.bw_disp_code_name.Y = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/	String within 99 characters	It configures the disposition code name which must match one of the names configured on BroadWorks for account X. The value Y must be continuous. The default value is blank.	

Parameter	Permitted Values	Descriptions	Web Setting Path
T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)			
account.X.call_center.trace_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables customer originated trace feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.call_center.emergency_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2.	0 or 1	It enables or disables the emergency escalation feature for account X. **0**-Disabled **1**-Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
SIP-T19P: X=1.			
account.X.supervisor_info_code.Y = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)	Integer from 1 to 2147483647	It configures the supervisor number for account X. The value Y must be continuous. The default value is blank.	
account.X.supervisor_info_code_name.Y = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1. Y ranges from 1 to 100)	String within 99 characters	It configures the supervisor name for account X. The value Y must be continuous. The default value is blank.	
account.X.call_center.queue	0 or 1	It enables or disables the queue status notification feature for account X.	

Parameter	Permitted Values	Descriptions	Web Setting Path
_status_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)		**0**-Disabled **1**-Enabled The default value is 0.	
account.X.call_center.queue_status_light_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the power indicator LED to flash when the ACD call queue has reached the maximum number of calls for account X. **0**-Disabled (power indicator LED does not flash) **1**-Enabled (power indicator LED fast flashes (300ms) green) If it is set to 0, the status of the power indicator LED is determined by the value of the parameter "phone_setting.common_power_led_enable". The default value is 0.	
account.X.hoteling.enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X	0 or 1	It enables or disables hoteling feature for account X. **0**-Disabled **1**-Enabled The default value is 0. It takes effect after a reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)			
account.X.hoteling.auto_login_enable = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	0 or 1	It enables or disables the phone to save login credentials automatically when logging into the guest profile for account X. **0**-Disabled **1**-Enabled The default value is 0.	
account.X.hoteling.user_id = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	String within 99 characters	It configures the user ID used to log into the guest profile for account X. The default value is blank.	
account.X.hoteling.passwor	String within 99	It configures the password used to log into the guest profile for account X.	

Parameter	Permitted Values	Descriptions	Web Setting Path
d = (SIP-T28P/T48G/T46G: X ranges from 1 to 6. SIP-T26P/T22P/T42G/T41P: X ranges from 1 to 3. SIP-T21P/T20P: X ranges from 1 to 2. SIP-T19P: X=1.)	characters	The default value is blank.	

The following parameters are not applicable to IP phones running firmware version 72 or later, so the description of these parameters has been deleted in this guide.

account.X.bw_acd_reason_code.Y =

account.X.dns_query_timeout=

account.X.failback_mode =

account.X.failback_timeout =

account.X.retry_counts =

acd.bw =

bw.calllog_and_dir =

bw_phonebook.server_search_enable =

directory.incoming_call_match_enable =

features.action_uri_reboot_now =

features.auto_release_bla_line =

features.dsskey_blind_tran =

features.hold_trans_delay =

features.ldap.input_type =

ldap.dial_lookup =

network.snmp.enable =

network.snmp.port =

network.snmp.trust_ip =

phone_setting.blf_list_enable =

phone_setting.sms_popup_enable =

voice.call_preview_mode=

voice.tone.record =

features.hoteling.enable =

action_url.call_interrupt =

action_url.setup_autop_finish =

features.blf_pickup_only_send_code =

Time Zones

Time Zone	Time Zone Name
−11:00	Samoa
−10:00	United States-Hawaii-Aleutian
−10:00	United States-Alaska-Aleutian
−09:00	United States-Alaska Time
−08:00	Canada(Vancouver, Whitehorse)
−08:00	Mexico(Tijuana, Mexicali)
−08:00	United States-Pacific Time
−07:00	Canada(Edmonton, Calgary)
−07:00	Mexico(Mazatlan, Chihuahua)
−07:00	United States-Mountain Time
−07:00	United States-MST no DST
−06:00	Canada-Manitoba(Winnipeg)
−06:00	Chile(Easter Islands)
−06:00	Mexico(Mexico City, Acapulco)
−06:00	United States-Central Time
−05:00	Bahamas(Nassau)
−05:00	Canada(Montreal, Ottawa, Quebec)
−05:00	Cuba(Havana)
−05:00	United States-Eastern Time
−04:30	Venezuela(Caracas)
−04:00	Canada(Halifax, Saint John)
−04:00	Chile(Santiago)
−04:00	Paraguay(Asuncion)
−04:00	United Kingdom-Bermuda(Bermuda)
−04:00	United Kingdom(Falkland Islands)
−04:00	Trinidad&Tobago
−03:30	Canada-New Foundland(St.Johns)
−03:00	Denmark-Greenland(Nuuk)
−03:00	Argentina(Buenos Aires)
−03:00	Brazil(no DST)
−03:00	Brazil(DST)
−02:00	Brazil(no DST)
−01:00	Portugal(Azores)
0	GMT
0	Greenland
0	Denmark-Faroe Islands(Torshavn)
0	Ireland(Dublin)
0	Portugal(Lisboa, Porto, Funchal)
0	Spain-Canary Islands(Las Palmas)

Time Zone	Time Zone Name
0	United Kingdom(London)
0	Morocco
+01:00	Albania(Tirane)
+01:00	Austria(Vienna)
+01:00	Belgium(Brussels)
+01:00	Caicos
+01:00	Chad
+01:00	Spain(Madrid)
+01:00	Croatia(Zagreb)
+01:00	Czech Republic(Prague)
+01:00	Denmark(Kopenhagen)
+01:00	France(Paris)
+01:00	Germany(Berlin)
+01:00	Hungary(Budapest)
+01:00	Italy(Rome)
+01:00	Luxembourg(Luxembourg)
+01:00	Macedonia(Skopje)
+01:00	Netherlands(Amsterdam)
+01:00	Namibia(Windhoek)
+02:00	Estonia(Tallinn)
+02:00	Finland(Helsinki)
+02:00	Gaza Strip(Gaza)
+02:00	Greece(Athens)
+02:00	Israel(Tel Aviv)
+02:00	Jordan(Amman)
+02:00	Latvia(Riga)
+02:00	Lebanon(Beirut)
+02:00	Moldova(Kishinev)
+02:00	Russia(Kaliningrad)
+02:00	Romania(Bucharest)
+02:00	Syria(Damascus)
+02:00	Turkey(Ankara)
+02:00	Ukraine(Kyiv, Odessa)
+03:00	East Africa Time
+03:00	Iraq(Baghdad)
+03:00	Russia(Moscow)
+03:30	Iran(Teheran)
+04:00	Armenia(Yerevan)
+04:00	Azerbaijan(Baku)
+04:00	Georgia(Tbilisi)
+04:00	Kazakhstan(Aktau)
+04:00	Russia(Samara)

Time Zone	Time Zone Name
+04:30	Afghanistan
+05:00	Kazakhstan(Aqtobe)
+05:00	Kyrgyzstan(Bishkek)
+05:00	Pakistan(Islamabad)
+05:00	Russia(Chelyabinsk)
+05:30	India(Calcutta)
+06:00	Kazakhstan(Astana, Almaty)
+06:00	Russia(Novosibirsk, Omsk)
+07:00	Russia(Krasnoyarsk)
+07:00	Thailand(Bangkok)
+08:00	China(Beijing)
+08:00	Singapore(Singapore)
+08:00	Australia(Perth)
+09:00	Korea(Seoul)
+09:00	Japan(Tokyo)
+09:30	Australia(Adelaide)
+09:30	Australia(Darwin)
+10:00	Australia(Sydney, Melbourne, Canberra)
+10:00	Australia(Brisbane)
+10:00	Australia(Hobart)
+10:00	Russia(Vladivostok)
+10:30	Australia(Lord Howe Islands)
+11:00	New Caledonia(Noumea)
+12:00	New Zealand(Wellington, Auckland)
+12:45	New Zealand(Chatham Islands)
+13:00	Tonga(Nukualofa)

BLF LED Mode

BLF LED Mode provides four kinds of definition for the BLF/BLF list key LED status. The following tables list the LED statuses of the BLF/BLF list key when BLF LED Mode is set to 0, 1, 2 or 3 respectively. The default value of the BL LED Mode is 0. BLF LED Mode is not applicable to SIP-T48G and SIP-T19PIP phones. BLF/BLF list key LED status for line keys on T46G/T42G/T41P IP phones are the same as that for memory keys.

Line key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 0)

LED Status	Description
Solid green	The monitored user is idle.
Fast flashing green (200ms)	The monitored user receives an incoming call.
Slow flashing green (500ms)	The monitored user is dialing. The monitored user is talking. The monitored user's conversation is placed on hold.
Slow flashing green (1s)	The call is parked against the monitored user's phone number.
Off	The monitored user does not exist.

Memory key/Expansion Module key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 0)

LED Status	Description
Solid green	The monitored user is idle.
Fast flashing red (200ms)	The monitored user receives an incoming call.
Solid red	The monitored user is dialing. The monitored user is talking.
Slow flashing red (1s)	The call is parked against the monitored user's phone number. The monitored user's conversation is placed on hold.
Off	The monitored user does not exist.

Line key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 1)

LED Status	Description
Fast flashing green (200ms)	The monitored user receives an incoming call.
Solid green	The monitored user is dialing. The monitored user is talking.
Slow flashing green (500ms)	The monitored user's conversation is placed on hold.

Slow flashing green (1s)	The call is parked against the monitored user's phone number.
Off	The monitored user is idle. The monitored user does not exist.

Memory key/Expansion Module key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 1)

LED Status	Description
Fast flashing red (200ms)	The monitored user receives an incoming call.
Solid red	The monitored user is dialing. The monitored user is talking.
Slow flashing red (1s)	The call is parked against the monitored user's phone number. The monitored user's conversation is placed on hold.
Off	The monitored user is idle. The monitored user does not exist.

Line key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 2)

LED Status	Description
Fast flashing green (200ms)	The monitored user receives an incoming call.
Slow flashing green (500ms)	The monitored user is dialing. The monitored user is talking. The monitored user's conversation is placed on hold.
Slow flashing green (1s)	The call is parked against the monitored user's phone number.
Off	The monitored user is idle. The monitored user does not exist.

Memory key/Expansion Module key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 2)

LED Status	Description
Fast flashing red (200ms)	The monitored user receives an incoming call.
Solid red	The monitored user is dialing. The monitored user is talking.
Slow flashing red (1s)	The call is parked against the monitored user's phone number. The monitored user's conversation is placed on hold.
Off	The monitored user is idle. The monitored user does not exist.

Line key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 3)

LED Status	Description
Fast flashing green (200ms)	The monitored user receives an incoming call.
Solid green	The monitored user is dialing. The monitored user is talking. The monitored user's conversation is placed on hold.
Slow flashing green (1s)	The call is parked against the monitored user's phone number.
Off	The monitored user is idle. The monitored user does not exist.

Memory key/Expansion Module key LED (configured as a BLF/BLF list key and BLF LED Mode is set to 3)

LED Status	Description
Fast flashing red (200ms)	The monitored user receives an incoming call.
Solid red	The monitored user is dialing. The monitored user is talking. The monitored user's conversation is placed on hold.
Slow flashing red (1s)	The call is parked against the monitored user's phone number.
Off	The monitored user is idle. The monitored user does not exist.

Customer Feedback

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