



Yealink Auto Provisioning User Guide

SIP-T2xP/SIP-T3xG/VP530

IP Phone Family

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Summary of Changes

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

Changes for Release 71.0, Guide Version 71.110

The following sections are new for this version:

- [Encrypting Configuration Files](#) on page 12
- [Update Mode](#) on page 31
- [SIP Notify Message](#) on page 35
- [Resolving and Updating the Configurations](#) on page 37
- [Description of Configuration Parameters in CFG Files](#) on page 61

Major updates have occurred to the following sections:

- [Customizing a Local Contact](#) File on page 16
- [Customizing a Replace Rule](#) File on page 18
- [Customizing a Dial-now](#) File on page 19

Changes for Release 70.0, Guide Version 1.3

The following sections are new for this version:

- [Customizing a Wallpaper](#) on page 15
- [Customizing a Screensaver](#) on page 15
- [Customizing a Replace Rule](#) File on page 18
- [Customizing a Dial-now](#) File on page 19

Major updates have occurred to the following sections:

- [Customizing a Local Contact](#) File on page 16
- [Updating Firmware](#) on page 20

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 instruction on how to provision Yealink IP phones with the minimum settings required. Yealink IP phones support the 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 auto provisioning Yealink IP phones, including:

- Yealink VP530
- Yealink SIP-T38G
- Yealink SIP-T32G
- Yealink SIP-T28(P)
- Yealink SIP-T26(P)
- Yealink SIP-T22(P)
- Yealink SIP-T20(P)

The provisioning process outlined in this document applies to the firmware V71 or later version of Yealink IP phones. We recommend that Yealink IP phones running firmware V71 or later CANNOT be downgraded to the earlier firmware version. If your phones are running a firmware version earlier than 71, please contact your system administrator for help.

Getting Started

This section provides instruction 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 the configuration files. There are 2 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" as the file name, where "XX" equals to the hardware version of the phone model, except 00 for T28(P).

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

Phone Model	Common CFG File
VP530	y000000000023.cfg
SIP-T38G	y000000000038.cfg
SIP-T32G	y000000000032.cfg
SIP-T28(P)	y000000000000.cfg
SIP-T26(P)	y000000000004.cfg
SIP-T22(P)	y000000000005.cfg
SIP-T20(P)	y000000000007.cfg

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

ANSI encoding.

Obtaining Phone Information

Before beginning provisioning, you will 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 phone's bar code on the back of the phone.

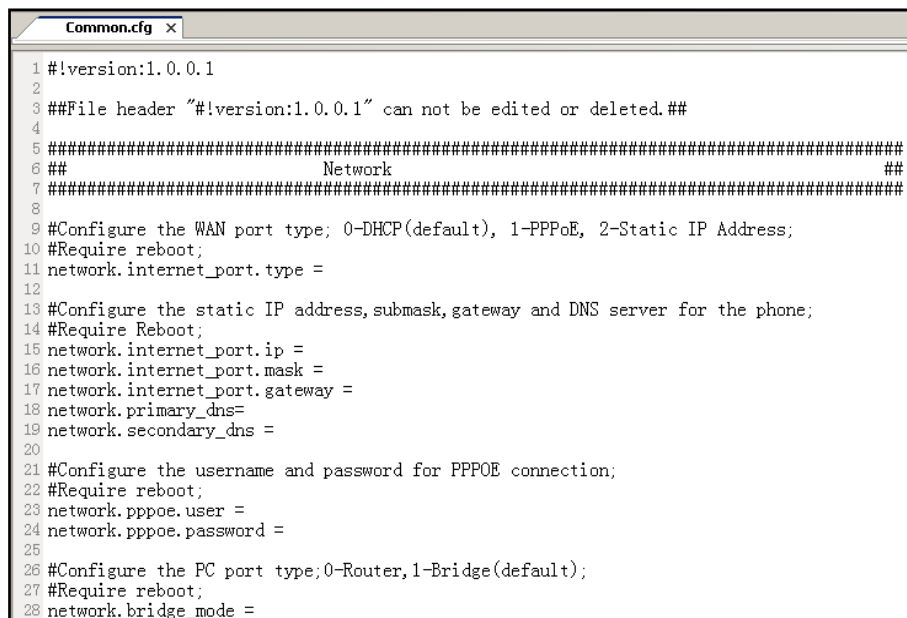
SIP Account Information: This may include SIP credentials such as user name, password and the address of the phone's registration server address. Ask your system administrator for SIP account information.

Managing Configuration Files

Auto provisioning enables Yealink IP phones to update themselves automatically via downloading the Common CFG file and MAC-Oriented CFG file. Before beginning provisioning, you may need to edit and customize your configuration files. For more information on the configuration parameters in configuration files, refer to [Description of Configuration Parameters in CFG Files](#) on page 61.

Editing Common CFG File

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



```

1 #!version:1.0.0.1
2
3 ##File header "!!version:1.0.0.1" can not be edited or deleted.##
4
5 #####
6 ##                Network                ##
7 #####
8
9 #Configure the WAN port type; 0-DHCP(default), 1-PPPoE, 2-Static IP Address;
10 #Require reboot;
11 network.internet_port.type =
12
13 #Configure the static IP address, submask, gateway and DNS server for the phone;
14 #Require Reboot;
15 network.internet_port.ip =
16 network.internet_port.mask =
17 network.internet_port.gateway =
18 network.primary_dns=
19 network.secondary_dns =
20
21 #Configure the username and password for PPPoE connection;
22 #Require reboot;
23 network.pppoe.user =
24 network.pppoe.password =
25
26 #Configure the PC port type;0-Router,1-Bridge(default);
27 #Require reboot;
28 network.bridge_mode =
  
```

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 parameters commonly edited in the Common CFG file (Take T2xP IP phones as an example) are described as following:

```

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

```
#!version:1.0.0.1
```

```
##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. ##
```

```
#Configure the WAN port type; 0-DHCP (default), 1-PPPoE, 2-Static IP Address
```

```
#Require reboot
```

```
network.internet_port.type = 0
```

```
#Configure the static IP address, submask, gateway address and DNS server address
for the phone
```

```
#Require reboot
```

```
network.internet_port.ip = 192.168.1.10
```

```
network.internet_port.mask = 255.255.255.0
```

```
network.internet_port.gateway = 192.168.1.1
```

```

network.primary_dns= 202.101.103.55
network.secondary_dns = 202.101.103.54

#Configure the transmission mode and the speed of the WAN port.
#0-Auto negotiate (default), 1-Full duplex 10Mbps, 2-Full duplex 100Mbps, 3-Half
duplex 10Mbps, 4-Half duplex 100Mbps;

network.internet_port.speed_duplex =

#Configure the user name and password for PPPoE connection.
#Require reboot

network.pppoe.user =
network.pppoe.password =

#Enable or disable the PC port; 0-Disabled, 1-Auto-Negotiation (default);
#Require reboot

network.PC_port.enable =

#Configure the PC port type; 0-Router, 1-Bridge (default)
#Require reboot

network.bridge_mode = 1

#Configure the IP address and mask when the PC port is configured as Router.
#Require reboot

network.pc_port.ip = 10.0.0.1
network.pc_port.mask = 255.255.255.0
network.pc_port.speed_duplex = 0
network.pc_port.dhcp_server = 1
network.dchp.start_ip = 10.0.0.10
network.dchp.end_ip = 10.0.0.100

#Enable or disable the Plug and Play feature; 0-Disabled, 1-Enabled (default)

auto_provision.pnp_enable = 1

#Configure the domain name of the PnP server.

auto_provision.pnp_domain_name =

#Configure the value (manufacturer of the device) of the PnP SUBSCRIBE message.

auto_provision.pnp_event_vendor =

#Configure the auto provision mode;
#0-Disabled (default), 1-Power on, 4-Repeatedly, 5-Weekly, 6-Power on + Repeatedly,
7-Power on + Weekly;

auto_provision.mode = 1

```

#Configure the interval (in minutes) for the phone to check new configuration files. It ranges from 1 to 43200, the default value is 1440.

#It is only applicable to "Repeatedly" and "Power on + Repeatedly" modes.

auto_provision.schedule.periodic_minute =

#Configure the start time of the day for the phone to check new configuration files. The default value is 00:00.

#It is only applicable to "Weekly" and "Power on + Weekly" modes.

#If the desired start time of the day is seven forty-five a.m., the value format is 07:45.

auto_provision.schedule.time_from = 00:00

#Configure the end time of the day for the phone to check new configuration files. The default time is 00:00.

#It is only applicable to "Weekly" and "Power on + Weekly" modes.

#If the desired end time of the day is seven forty-five p.m., the value format is 19:45.

auto_provision.schedule.time_to = 00:00

#Configure the day of week for the phone to check new configuration files. The default value is 0123456.

#0-Sunday,1-Monday,2-Tuesday,3-Wednesday,4-Thursday,5-Friday,6-Saturday;

#It is only applicable to "Weekly" and "Power on + Weekly" modes.

#If the desired week is Monday, Tuesday and Wednesday, the value format is 012.

auto_provision.schedule.dayofweek =

#Configure the URL of the auto provisioning server.

auto_provision.server.url =

#Configure the user name and password for authentication.

auto_provision.server.username =

auto_provision.server.password =

#Enable or disable DHCP option mode; 0-Disabled, 1-Enabled (default);

auto_provision.dhcp_enable =

#Configure the value (manufacturer of the device) of DHCP option 60.

auto_provision.dhcp_option.option60_value =

#Configure the custom DHCP option value. It ranges from 128 to 254.

auto_provision.dhcp_option.list_user_options =

#Set the AES key used for decrypting the Common CFG file

auto_provision.aes_key_16.com =

#Set the AES key used for decrypting MAC-Oriented CFG file

auto_provision.aes_key_16.mac =

#Set the language used on the Web page

#The available values are: English, Turkish, Portuguese, Spanish, Italian, French and German

lang.wui =

#Set the language used on the phone LCD screen

#The available values are: English (default), German, French, Turkish, Italian, Polish, Spanish and Portuguese

lang.gui = English

#Enable or disable the IP phone to access its web user interface using HTTP protocol;

#0-Disabled, 1-Enabled (default);

#Require reboot

wui.http_enable =

#Set the HTTP port (80 by default)

#Require reboot

network.port.http = 80

Enable or disable the IP phone to access its web user interface using HTTPS protocol.

#0-Disabled, 1-Enabled (default);

#Require reboot

wui.https_enable =

#Set the HTTPS port (443 by default)

#Require reboot

network.port.https = 443

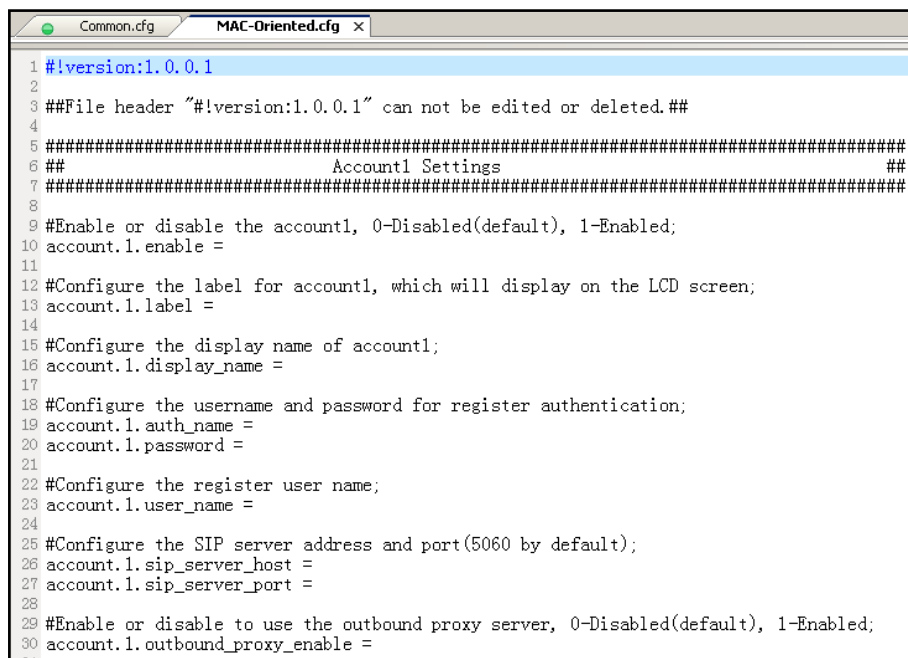
#Set a new password for the user, var and administrator;

#The value format is user name:new password.

security.user_password =

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.



```

1 #!version:1.0.0.1
2
3 ##File header "!!version:1.0.0.1" can not be edited or deleted.##
4
5 #####
6 ## Account1 Settings ##
7 #####
8
9 #Enable or disable the account1, 0-Disabled(default), 1-Enabled;
10 account.1.enable =
11
12 #Configure the label for account1, which will display on the LCD screen;
13 account.1.label =
14
15 #Configure the display name of account1;
16 account.1.display_name =
17
18 #Configure the username and password for register authentication;
19 account.1.auth_name =
20 account.1.password =
21
22 #Configure the register user name;
23 account.1.user_name =
24
25 #Configure the SIP server address and port(5060 by default);
26 account.1.sip_server_host =
27 account.1.sip_server_port =
28
29 #Enable or disable to use the outbound proxy server, 0-Disabled(default), 1-Enabled;
30 account.1.outbound_proxy_enable =
31

```

The parameters commonly edited in the MAC-Oriented CFG file (Take T2xP IP phones as an example) are described as following:

```

#####
## MAC-Oriented CFG File ##
#####

#!version:1.0.0.1
##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. ##

#Account1 settings

#Enable or disable the account1, 0-Disabled (Default), 1-Enabled
account.1.enable =

#Configure the label displayed on the LCD screen for account1
account.1.label =

#Configure the display name of account1
account.1.display_name =

#Configure the user name and password for register authentication
account.1.auth_name =
account.1.password =

#Configure the register user name
account.1.user_name =

```

#Configure the SIP server address and port (5060 by default)

account.1.sip_server_host =

account.1.sip_server_port = 5060

Account2 settings

#Enable or disable the account2, 0-Disabled (Default), 1-Enabled

account.2.enable =

#Configure the label displayed on the LCD screen for account2

account.2.label =

#Configure the display name of account2

account.2.display_name =

#Configure the user name and password for register authentication

account.2.auth_name =

account.2.password =

#Configure the register user name

account.2.user_name =

#Configure the SIP server address and port (5060 by default)

account.2.sip_server_host =

account.2.sip_server_port = 5060

Account3 settings (Except for T20P IP phone)

#Enable or disable the account3, 0-Disabled (Default), 1-Enabled

account.3.enable =

#Configure the label displayed on the LCD screen for account3

account.3.label =

#Configure the display name of account3

account.3.display_name =

#Configure the user name and password for register authentication

account.3.auth_name =

account.3.password =

#Configure the register user name

account.3.user_name =

#Configure the SIP server address and port (5060 by default)

account.3.sip_server_host =

account.3.sip_server_port = 5060

Account4 settings (For T28P IP phone only)

#Enable or disable the account4, 0-Disabled (Default), 1-Enabled

account.4.enable =


```
#Configure the label displayed on the LCD screen for account4
account.4.label =
#Configure the display name of account4
account.4.display_name =
#Configure the user name and password for register authentication
account.4.auth_name =
account.4.password =
#Configure the register user name
account.4.user_name =
#Configure the SIP server address and port (5060 by default)
account.4.sip_server_host =
account.4.sip_server_port = 5060

# Account5 settings (For T28P IP phone only)
#Enable or disable the account5, 0-Disabled (Default) 1-Enabled
account.5.enable =
# Configure the label displayed on the LCD screen for account5
account.5.label =
#Configure the display name of account5
account.5.display_name =
#Configure the user name and password for register authentication
account.5.auth_name =
account.5.password =
#Configure the register user name
account.5.user_name =
#Configure the SIP server address and port (5060 by default)
account.5.sip_server_host =
account.5.sip_server_port = 5060

# Account6 settings (For T28P IP phone only)
#Enable or disable the account6, 0-Disabled (Default), 1-Enabled
account.6.enable =
#Configure the label displayed on the LCD screen for account6
account.6.label =
#Configure the display name of account6
account.6.display_name =
#Configure the user name and password for register authentication
account.6.auth_name =
```

```

account.6.password =
#Configure the register user name
account.6.user_name =
#Configure the SIP server address and port (5060 by default)
account.6.sip_server_host =
account.6.sip_server_port = 5060

```

Encrypting Configuration Files

To protect against unauthorized access and tampering of sensitive information (e.g., login password, registration information), you can encrypt the configuration files using the Yealink Configuration Conversion Tool. The AES keys must be 16 characters and the supported characters contain: 0 ~ 9, A ~ Z, a ~ z, and the special characters # \$ % * +, - . : = ? @ [] ^ _ { } ~. For more information on how to encrypt the configuration files, refer to *Yealink Configuration Conversion Tool User Guide*.

The AES keys must be configured on the phone before the auto provisioning process. You can configure the AES keys via web user interface at the path: **Settings->Auto Provision->Common AES Key** (and **MAC-Oriented AES Key**).

Customizing Resource Files

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

Customizing a Ringtone

Yealink IP phones have built-in system ringtones. You can change the ring type, or you can customize your personal ringtone and upload it to the phone via auto provisioning.

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

The ringtone file format must be *.wav.

The ringtone file uploaded must be within 100KB.

```

#####
##          Configure the access URL of the customized ringtone          ##
#####
ringtone.url =

```

```
#ringtone.delete =http://localhost/all
```

```
#Delete all the custom ringtones uploaded through auto provisioning
```

```
ringtone.delete =
```

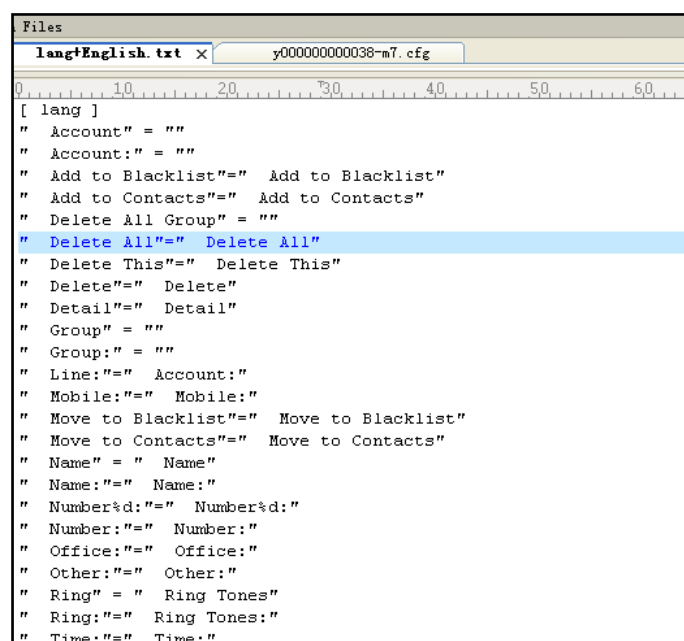
For example, enter “tftp://192.168.1.100/Ring9.wav” in the “ringtone.url =” field. During the auto provisioning process, the phone connects to the provisioning server “192.168.1.100”, and downloads the ringtone file “Ring9.wav”.

For more information on customizing a ringtone file, refer to [Customizing a Ringtone Using Cool Edit Pro](#) on page 59.

Customizing a LCD Language

You can modify the language translation for the phone user interface, but you cannot add new language to the phone. To modify the existing language translation, you need to edit the language translation file and upload it to the provisioning server, then specify the access URL in the configuration file.

The following figure shows a portion of the English language translation file:



```
#####
```

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

```
#####
```

```
gui_lang.url =
```

```
#gui_lang.delete =http://localhost/all
```

```
#Delete all custom languages downloaded through auto provision
```

```
gui_lang.delete =
```

For example, enter “tftp://192.168.1.100/lang+English.txt” in the “gui_lang.url =” field. During the auto provisioning process, the phone connects to the provisioning server

"192.168.1.100", and downloads the language file "lang+English.txt".

Available languages may vary between different firmware versions.

Do not modify the language file name.

Customizing a LCD Logo

Yealink SIP-T2xP IP phones allow you to customize the logo displayed on the phone LCD screen (The SIP-T20P IP phone only support to display the text logo).

The following table lists the 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	.dob	<=132*64 2 gray scale

Ask the distributor 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 the configuration file:

```
#####
##          Configure the access URL of the Logo File          ##
#####
#(For T2xP IP phones except T20P IP phone)
```

lcd_logo.url =

```
#lcd_logo.delete = http://localhost/all
```

```
#Delete all custom logo files
```

lcd_logo.delete =

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 (For T2xP IP phones except T20P IP phone).
```

```
#0-Disabled (Except for T28P IP phone), 1-System logo, 2-Custom logo
```

phone_setting.lcd_logo.mode = 2

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

For more information on customizing a logo file, refer to [Customizing a Logo File Using PictureExDemo](#) on page 60.

Customizing a Wallpaper

Yealink SIP-T3xG and VP530 IP phones allow you to customize the wallpaper displayed on the phone LCD screen.

The following table lists the wallpaper image format and resolution for each phone model:

Phone Model	Wallpaper Image Format	Resolution
VP530	.jpg/.png/.bmp	<=1920*1200
SIP-T38G	.jpg/.png/.bmp	<=480*272
SIP-T32G	.jpg/.png/.bmp	<=480*272

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

```
#####
##          Configure the access URL of the wallpaper          ##
#####
#(For T3xG and VP530 IP phones only)
```

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 (For T3xG and VP530 IP phones only).
```

phone_setting.backgrounds = Config:wallpaper.jpg

Customizing a Screensaver

Yealink SIP-T3xG IP phones allow you to customize the screensaver displayed on the phone LCD screen. The screensaver will automatically work each time your phone is idle for a certain period of time. You can stop the screensaver at any time by pressing any key.

The following table lists the screensaver image format and resolution for each phone model:

Phone Model	Screensaver Image Format	Resolution
SIP-T38G	.jpg/.png/.bmp	<=480*272
SIP-T32G	.jpg/.png/.bmp	<=480*272

Upload the screensaver image to the provisioning server and then specify the access URL in the configuration file:

```
#####
##          Configure the access URL of the screensaver          ##
#####
#(For T3xG IP phones only)
```

screen_saver.pic.url =

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

Customizing a Local Contact File

Yealink IP phones allow you to upload contact data by auto provisioning in batch. You can create multiple contacts using the supplied local contact template file.

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

- Add groups between <root_group> and </root_group>.
- Add local contacts between <root_contact> and </root_contact>.
- When specifying the desired line for the contact, the valid values are 0 and line ID, 0 stands for Auto.
- When specifying a ringtone for the contact, the valid values are Auto, Resource:RingN.wav (For the default system ringtone) and Custom:Name.wav (For the customized ringtone).

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 ringtone 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="" />
```

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 you want to add this contact to.

ring="" specifies the ringtone for this contact.

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

default_photo="" specifies the photo for this contact (For T3xG and VP530 IP phones).

4. Specify the values within double quotes.

5. Save the change.

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

The following shows an example of the contact_list.xml 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"/>
</root_contact>
```

```
#####
##                               Upload 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".

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

Customizing a Replace Rule File

You can create replace rules directly in the 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, the valid values are 0 and line ID. The digit 0 stands for all lines, multiple line IDs are separated by comma.
- Do not modify the file name.
- 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, this replace rule will apply to all lines.

3. Specify the values within double quotes.
4. Save the change.

The following is an example of a replace rule file used for SIP-T2xP IP phones:

```
<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 multiple dial-now rules using the supplied dial-now template file. After creating the dial-now rules, save the dial-now file to the provisioning server and specify the access URL in the configuration files.

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, the valid values are 0 and line ID. The digit 0 stands for all lines, multiple line IDs are separated by comma.
- Do not modify the file name.
- 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 leaving it blank, this rule will apply to all lines.

3. Specify the values within double quotes.
4. Save the change.

The following is an example of a dial-now file used for SIP-T2xP IP phones:

```
<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".

Updating Firmware

Yealink IP Phones allow you to update the firmware manually via web user interface, or update the firmware via the auto provisioning in batch.

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

Phone Model	Firmware Name
VP530	23.x.x.x.rom
SIP-T38G	38.x.x.x.rom
SIP-T32G	32.x.x.x.rom
SIP-T28(P)	2.x.x.x.rom
SIP-T26(P)	6.x.x.x.rom
SIP-T22(P)	7.x.x.x.rom
SIP-T20(P)	9.x.x.x.rom

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

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

firmware.url =

For example, enter "tftp://admin:password@192.168.1.100/2.71.0.110.rom" in the

"firmware.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100" ("admin" is replaced by the authentication user name and "password" is replaced by the authentication password), and downloads the firmware file "2.71.0.110.rom".

Configuring a TFTP Server

Yealink IP Phones support to use the FTP, TFTP, HTTP and HTTPS protocols to download the configuration files. You can use one of these protocols for provisioning. TFTP server is used by default. The following section provides instructions of configuring a TFTP server.

We recommend that you use 3CDaemon or TFTP32 tool as a TFTP server. 3CDaemon and TFTP32 are free applications for Windows. You can download the 3CDaemon software at: <http://www.oldversion.com/3Com-Daemon.html> and TFTP32 at: <http://tftpd32.jounin.net/>.

For more instruction on how to configure the FTP and HTTP servers, refer to [Configuring a FTP server](#) on page 45 and [Configuring a HTTP Server](#) sections on page 48.

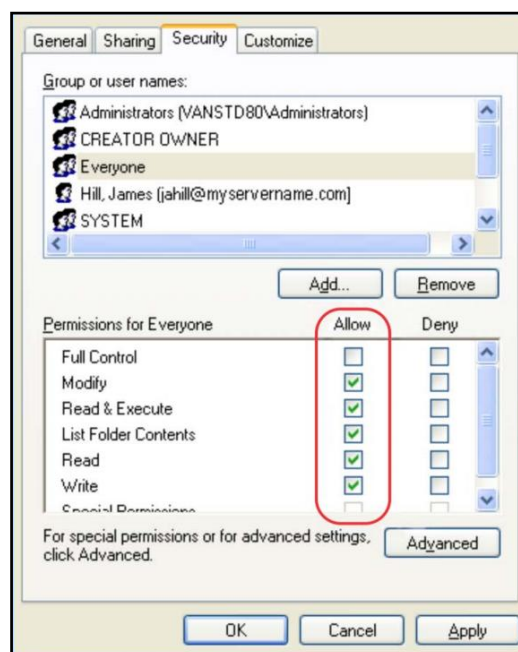
Preparing a Root Directory

To prepare a root directory:

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

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

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

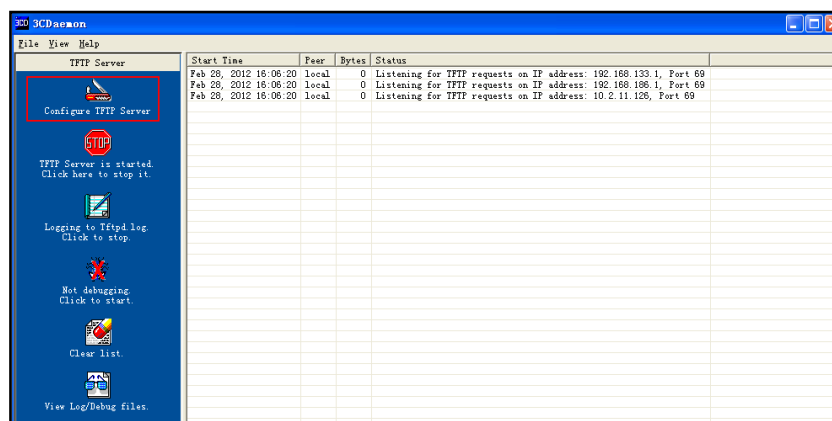



Configuring a TFTP Server

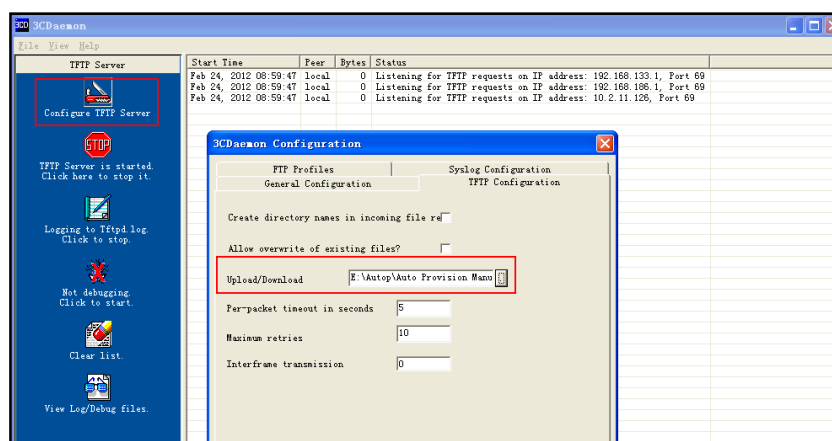
If you have a 3CDaemon application installed on your local system, use it directly. Otherwise, download and install it.

To configure a TFTP server:

1. Double click the 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 capable of TFTP downloading.

Obtaining the Address of Provisioning Server

Yealink IP phones support to obtain 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 following: Zero Touch-->PnP server-->DHCP options (Custom option-->option 66-->option 43) -->Phone Flash.

The following sections detail the process of each way.

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)** filed.

The screenshot shows the Yealink T28 web interface with the 'Settings' tab selected. The 'Auto Provision' section is active, displaying various configuration options. The 'Wait Time (0~100s)' field is set to 5. The 'Zero Active' dropdown is set to 'Enabled'. The 'Day of Week' section shows all days from Sunday to Saturday are checked. A 'NOTE' box on the right states: 'Auto Provision The auto provision parameters for administrator.'

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

When Zero Touch is enabled, there will be a configuration wizard during startup (Take T28P IP phone as an example):

The screenshot shows a 'Zero Touch' configuration screen. It displays 'Update now? 5s' and has three buttons at the bottom: 'Cancel', 'Status', and 'OK'.

Press the **OK** soft key. Then you can configure the network settings via phone user interface:

The screenshot shows a 'Network' configuration screen. It displays the following settings: 'IP Mode: IPv4 & IPv6', 'IPv4 WAN Type: DHCP', 'IPv6 WAN Type: DHCP', and 'VLAN Status: Disable'. At the bottom, there are three buttons: 'Back', 'Switch', and 'Next'.

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

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:

The screenshot shows a dialog box titled "Auto Provision". It contains three input fields: "URL:", "User Name:", and "Password:". Below these fields are four buttons: "Back", "2aB", "Delete", and "OK". There is also a small information icon (i) in the bottom right corner of the input area.

Plug and Play (PnP) Server

Yealink IP phones support to obtain the provisioning server address from the PnP server. The phone broadcasts the PnP SUBSCRIBE message to obtain a 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.

The screenshot shows the Yealink T28 web interface. The "Settings" tab is selected, and the "Auto Provision" sub-tab is active. The left sidebar shows a navigation menu with options like Preference, Time & Date, Upgrade, Auto Provision, Configuration, Dial Plan, Voice, Ring, Tones, Softkey Layout, and TR069. The main content area displays the "Auto Provision" settings. Key settings include:

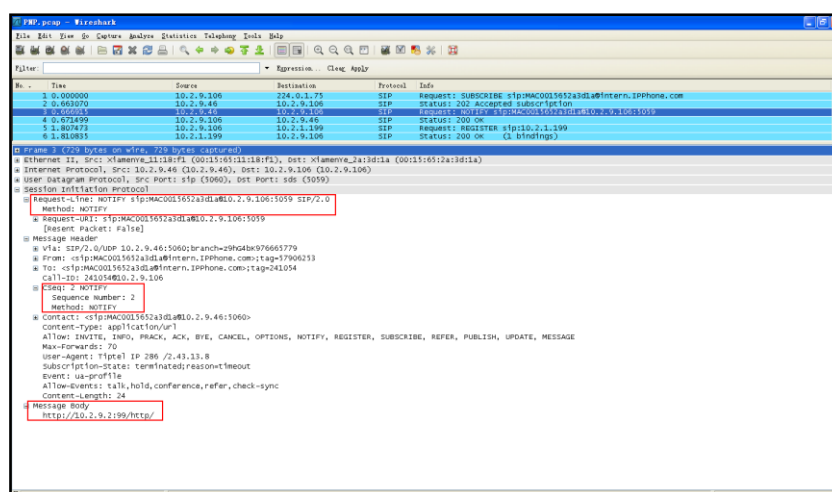
- PNP Active:** Radio buttons for On (selected) and Off.
- DHCP Active:** Radio buttons for On (selected) and Off.
- Custom Option(128~254):** A text input field.
- DHCP Option Value:** A text input field with "yealink" entered.
- Server URL:** A text input field.
- User Name:** A text input field.
- Password:** A text input field with masked characters.
- Common AES Key:** A text input field with masked characters.
- MAC-Oriented AES Key:** A text input field with masked characters.
- Zero Active:** A dropdown menu set to "Disabled".
- Wait Time (0~100s):** A text input field with "5" entered.
- Power On:** Radio buttons for On (selected) and Off.
- Repeatedly:** Radio buttons for On and Off (selected).
- Interval (Minutes):** A text input field with "1440" entered.
- Weekly:** Radio buttons for On and Off (selected).
- Time:** A time selection field showing "00:00 -- 00:00".
- Day of Week:** A list of days from Sunday to Saturday, all of which are checked.

 A "NOTE" box on the right states: "Auto Provision: The auto provision parameters for administrator."

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 provisioning process.



DHCP Options

Yealink IP phones support to obtain the provisioning server address from DHCP options.

You can configure the phone to obtain a 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 a provisioning server 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 51.

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.

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

The default value is yealink.

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

Phone Flash

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

To configure the Phone Flash via web user interface:

- 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).

The screenshot shows the Yealink T28 web interface. The top navigation bar includes 'Status', 'Account', 'Network', 'DSSKey', 'Features', 'Settings', 'Directory', and 'Security'. The 'Settings' tab is active. On the left sidebar, 'Auto Provision' is selected. The main content area is titled 'Auto Provision' and contains the following settings:

- PNP Active: ☒ On ☐ Off
- DHCP Active: ☒ On ☐ Off
- Custom Option(128~254):
- DHCP Option Value: yealink
- Server URL: http://10.3.6.226/y000000000000.cfg
- User Name: admin
- Password: [masked]
- Common AES Key: [masked]
- MAC-Oriented AES Key: [masked]
- Zero Active: Disabled
- Wait Time (0~100s): 5
- Power On: ☒ On ☐ Off
- Repeatedly: ☐ On ☒ Off
- Interval (Minutes): 1440
- Weekly: ☐ On ☒ Off
- Time: 00 : 00 -- 00 : 00
- Day of Week:
 - ☒ Sunday
 - ☒ Monday
 - ☒ Tuesday
 - ☒ Wednesday
 - ☒ Thursday
 - ☒ Friday
 - ☒ Saturday

A 'NOTE' box on the right states: 'Auto Provision The auto provision parameters for administrator.'

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

Update Mode

The update mode is used to set the desired time for the phone to perform 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 perform normally. Otherwise, the process will complete, due to timeout.

Power On

The phone will perform auto provisioning process when the phone is powered on.

To activate the Power On mode via web user interface:

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

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

The screenshot shows the Yealink T28 web interface. The top navigation bar includes 'Status', 'Account', 'Network', 'DSSKey', 'Features', 'Settings', 'Directory', and 'Security'. The left sidebar lists various settings categories: Preference, Time & Date, Upgrade, Auto Provision (selected), Configuration, Dial Plan, Voice, Ring, Tones, Softkey Layout, and TR069. The main content area is titled 'Auto Provision' and contains the following settings:

- PNP Active: ☒ On ☐ Off
- DHCP Active: ☒ On ☐ Off
- Custom Option(128~254): ?
- DHCP Option Value: ?
- Server URL: ?
- User Name: ?
- Password: ?
- Common AES Key: ?
- MAC-Oriented AES Key: ?
- Zero Active: ?
- Wait Time (0~100s): ?
- Power On: ☒ On ☐ Off
- Repeatedly: ☐ On ☒ Off
- Interval (Minutes):
- Weekly: ☐ On ☒ Off
- Time: : -- :
- Day of Week:
 - ☒ Sunday
 - ☒ Monday
 - ☒ Tuesday
 - ☒ Wednesday
 - ☒ Thursday
 - ☒ Friday
 - ☒ Saturday

On the right side, there is a 'NOTE' section titled 'Auto Provision' with the text: 'The auto provision parameters for administrator.'

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

Repeatedly

The phone will perform 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.

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

The screenshot shows the Yealink T28 web interface. The 'Settings' tab is selected, and the 'Auto Provision' sub-tab is active. The 'Interval (Minutes)' field is set to 1440. The 'Weekly' mode is selected with the 'On' radio button. The 'Time' field is set to 00:00-00:00, and the 'Day of Week' is set to Sunday through Saturday. The 'Auto Provision' section includes fields for PNP Active, DHCP Active, Custom Option(128~254), DHCP Option Value, Server URL, User Name, Password, Common AES Key, MAC-Oriented AES Key, Zero Active, Wait Time (0~100s), Power On, Repeatedly, Interval (Minutes), Weekly, Time, and Day of Week.

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

Weekly

The phone will perform auto provisioning process at the fixed time every week. You can configure what time of day and which day of 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 on every Friday and Sunday.

To activate the Weekly mode via web user interface:

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

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

The screenshot shows the Yealink T23 web interface with the 'Settings' tab selected. The 'Auto Provision' section is active, displaying various configuration options. The 'Day of Week' field is checked for all days from Sunday to Saturday. The 'NOTE' section on the right states: 'Auto Provision The auto provision parameters for administrator.'

Field	Value
PNP Active	<input checked="" type="radio"/> On <input type="radio"/> Off
DHCP Active	<input checked="" type="radio"/> On <input type="radio"/> Off
Custom Option(128~254)	<input type="text" value=""/>
DHCP Option Value	<input type="text" value="yealink"/>
Server URL	<input type="text" value=""/>
User Name	<input type="text" value=""/>
Password	<input type="password" value=""/>
Common AES Key	<input type="password" value=""/>
MAC-Oriented AES Key	<input type="password" value=""/>
Zero Active	<input type="text" value="Disabled"/>
Wait Time (0~100s)	<input type="text" value="5"/>
Power On	<input checked="" type="radio"/> On <input type="radio"/> Off
Repeatedly	<input type="radio"/> On <input checked="" type="radio"/> Off
Interval (Minutes)	<input type="text" value="1440"/>
Weekly	<input checked="" type="radio"/> On <input type="radio"/> Off
Time	<input type="text" value="02 : 00 -- 03 : 00"/>
Day of Week	<input checked="" type="checkbox"/> Sunday <input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Tuesday <input checked="" type="checkbox"/> Wednesday <input checked="" type="checkbox"/> Thursday <input checked="" type="checkbox"/> Friday <input checked="" type="checkbox"/> Saturday

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

Auto Provision Now

You can use Auto Provision Now mode to manually trigger the phone to perform 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.

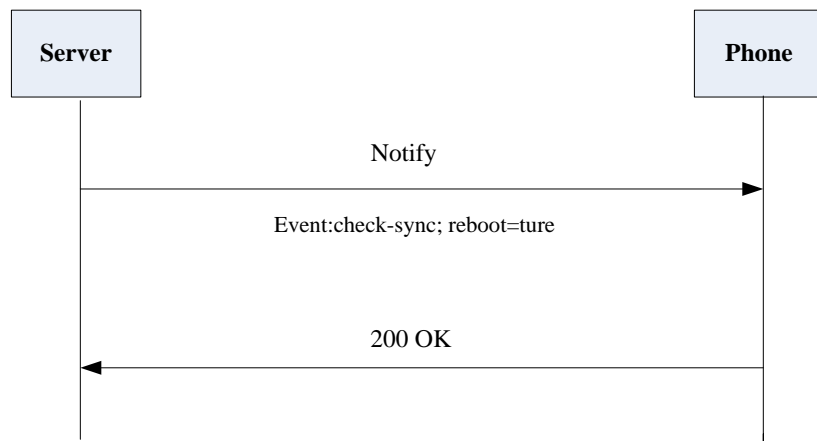
Multi-mode Mixed

You can activate more than one update modes 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 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 obtained a provisioning server address from one of the ways introduced above, the phone will connect to the provisioning server and download the configuration files. During the 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 the configuration files, the phone will then try to download and update the resource files.

Resolving and Updating the 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 completing the auto provisioning process. For update of some specific configurations which require reboot before taking effect, for example, network configurations, the phone will reboot to make the configurations effective after completing auto provisioning.

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 the configuration files have been AES encrypted, the phone uses the Common AES key to decrypt the Common CFG file and the MAC-Oriented AES key to decrypt the CFG files after downloading the configuration files.

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

For more information on the specific configurations which require reboot during auto provisioning, refer to [Description of Configuration Parameters in CFG Files](#) on page 61.

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 request and response messages by a WinPcap tool.

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

Wireshark capture showing TFTP traffic. The packet list displays a series of TFTP Read Requests and Acknowledgements. The packet details pane shows the 'Bootstrap Protocol' section with the following fields:

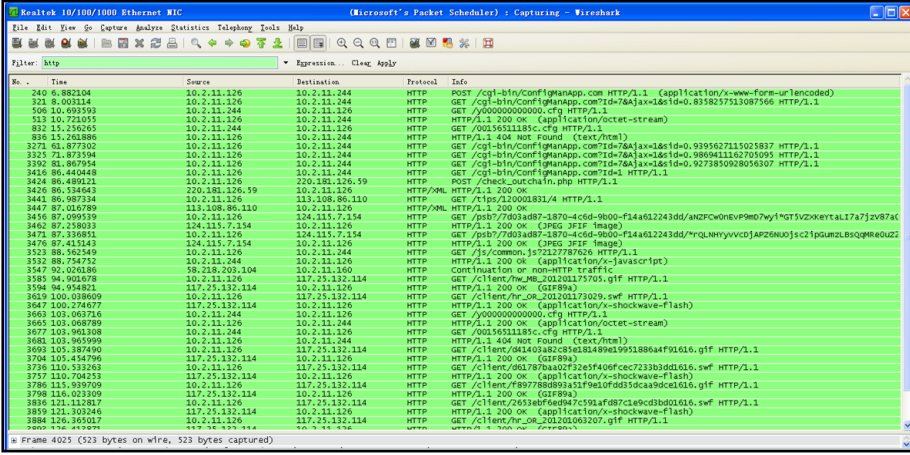
- Message type: Root reply (2)
- Hardware type: Ethernet
- Hardware address length: 6
- Hops: 0
- Transaction ID: 0xbcc0503
- Seconds elapsed: 0
- Bootp flags: 0x0000 (unicast)
- Client IP address: 0.0.0.0 (0.0.0.0)
- Your (client) IP address: 10.2.11.244 (10.2.11.244)
- Next server IP address: 0.0.0.0 (0.0.0.0)
- Relay agent IP address: 0.0.0.0 (0.0.0.0)
- Client MAC address: x1amennr.11:18:5c (00:13:05:11:18:5c)
- Client hardware address padding: 000000000000000000
- Server host name not given
- Boot file name not given

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

Wireshark capture showing FTP traffic. The packet list displays a series of FTP commands and responses. The packet details pane shows the 'FTP' section with the following fields:

- Request: USER lff
- Response: 331 user name ok, need password
- Request: PASS 111111
- Response: 230 user logged in
- Request: TYPE I
- Response: 200 Type set to I.
- Request: PASV
- Response: 227 Entering passive mode (10.2.11.126,5,189)
- Request: SIZE y000000000000.cfg
- Response: 213 1986
- Request: RETR y000000000000.cfg
- Response: 125 Using existing data connection
- Request: QUIT
- Response: 221 Service closing control connection

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



The image shows a Wireshark packet capture of HTTP traffic. The filter is set to 'http'. The packet list shows 32 packets. The packet details pane shows the selected packet (No. 323) is an HTTP GET request for '/cgi-bin/ConfigMnApp.com?Id=7&ajax=1&cid=0.8358257513087566' from 10.2.11.126 to 10.2.11.244. The packet bytes pane shows the raw data of the HTTP request.

No.	Time	Source	Destination	Protocol	Info
240	6.882104	10.2.11.126	10.2.11.244	HTTP	POST /cgi-bin/ConfigMnApp.com HTTP/1.1 (application/x-www-form-urlencoded)
323	8.003114	10.2.11.126	10.2.11.244	HTTP	GET /cgi-bin/ConfigMnApp.com?Id=7&ajax=1&cid=0.8358257513087566 HTTP/1.1
506	10.499593	10.2.11.244	10.2.11.126	HTTP	GET /y000000000000.cfm HTTP/1.1
513	10.721055	10.2.11.126	10.2.11.244	HTTP	HTTP/1.1 200 OK (application/octet-stream)
832	15.232693	10.2.11.244	10.2.11.126	HTTP	GET /00256511185.cfm HTTP/1.1
836	15.261886	10.2.11.126	10.2.11.244	HTTP	HTTP/1.1 404 Not Found (text/html)
2273	61.877302	10.2.11.126	10.2.11.244	HTTP	GET /cgi-bin/ConfigMnApp.com?Id=7&ajax=1&cid=0.9205627113021887 HTTP/1.1
3325	71.873594	10.2.11.126	10.2.11.244	HTTP	GET /cgi-bin/ConfigMnApp.com?Id=7&ajax=1&cid=0.9895411162705995 HTTP/1.1
3390	81.867954	10.2.11.126	10.2.11.244	HTTP	GET /cgi-bin/ConfigMnApp.com?Id=7&ajax=1&cid=0.927385928056307 HTTP/1.1
3416	86.440448	10.2.11.126	10.2.11.244	HTTP	GET /cgi-bin/ConfigMnApp.com?Id=7 HTTP/1.1
3424	86.489121	10.2.11.126	220.182.126.59	HTTP	POST /check_outchain.php HTTP/1.1
3426	86.534643	220.182.126.59	10.2.11.126	HTTP/1.1	HTTP/1.1 200 OK
3443	86.987334	10.2.11.126	113.108.86.110	HTTP	GET /t1ps/210001831/4 HTTP/1.1
3447	87.018789	113.108.86.110	10.2.11.126	HTTP/1.1	HTTP/1.1 200 OK
3456	87.099539	10.2.11.126	124.115.7.154	HTTP	GET /psb7/7903ad87-1870-4c6d-9b00-f14a612243dd/ANZCw0nevP9m07uy1n0t3v20kxatL7a7j2v87AC HTTP/1.1 200 OK (JPEG image)
3462	87.258033	124.115.7.154	10.2.11.126	HTTP	HTTP/1.1 200 OK (JPEG image)
3473	87.336851	10.2.11.126	124.115.7.154	HTTP	GET /psb7/7903ad87-1870-4c6d-9b00-f14a612243dd/rvQLNHyvVVCjAP26ku0Jsc21poumZLBSqMre0uZ HTTP/1.1 200 OK (JPEG image)
3476	87.415143	124.115.7.154	10.2.11.126	HTTP	HTTP/1.1 200 OK (JPEG image)
3521	88.561549	10.2.11.126	10.2.11.244	HTTP	GET /js/common.js?1217787626 HTTP/1.1
3532	88.754752	10.2.11.244	10.2.11.126	HTTP	HTTP/1.1 200 OK (application/x-javascript)
3547	92.020386	18.208.201.104	10.2.11.126	HTTP	Continuation or non-HTTP traffic
3581	94.901678	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/hr_mb_201201173705.gif HTTP/1.1
3584	94.954821	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (GIF image)
3630	100.038609	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/hr_or_201201173029.swf HTTP/1.1
3647	100.274677	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (application/x-shockwave-flash)
3661	103.063716	10.2.11.244	10.2.11.126	HTTP	GET /y000000000000.cfm HTTP/1.1
3665	103.068789	10.2.11.126	10.2.11.244	HTTP	HTTP/1.1 200 OK (application/octet-stream)
3677	103.901808	10.2.11.244	10.2.11.126	HTTP	GET /00156511185.cfm HTTP/1.1
3681	103.965999	10.2.11.126	10.2.11.244	HTTP	HTTP/1.1 404 Not Found (text/html)
3693	103.987490	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/081403a8c8d3d3d4f8d931886a4f01616.gif HTTP/1.1
3704	105.454796	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (GIF image)
3736	110.532033	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/081793a4073a5f60f6ec7233b3d3d616.swf HTTP/1.1
3757	110.704253	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (application/x-shockwave-flash)
3786	115.993939	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/08978898931f2e0f0835c4a9cc1616.gif HTTP/1.1
3798	116.023309	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (GIF image)
3836	121.112847	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/2653a0f6a947c391af8b7c1e9cd3b02d16.swf HTTP/1.1
3850	121.303246	117.25.132.114	10.2.11.126	HTTP	HTTP/1.1 200 OK (application/x-shockwave-flash)
3884	126.365027	10.2.11.126	117.25.132.114	HTTP	GET /c1ent/hr_or_201201063207.gif HTTP/1.1

Troubleshooting

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

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

Why does the phone fail to download the configuration files?

- Ensure that the Auto Provisioning feature is enabled.
- Check that the provisioning server and the network are reachable.
- Check that authentication credentials configured on the phone are correct.
- Ensure that the configuration files exist on the provisioning server.

Why does the provisioning server return a HTTP 404?

- Check that the provisioning server is properly set up.
- Check that the path configuration (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.
- Check that the configurations of network are properly set in the configuration files.

Why is the permission denied when uploading files to a FTP server?

- Ensure that the root directory of the FTP server contains the full directory path.
- On the provisioning server, check the file permissions, if necessary, change the file permission.

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 via DHCP server.

Why doesn't the phone download the ringtone?

- Make sure that the file format of the ringtone is *.wav

- Make sure that the size of the ringtone file is no larger than that the phone supports.
- Check the properties of the ringtone for the phone are correct.
- Ensure the network is available and the root directory is right for downloading.
- Ensure that the ringtone file exists on the provisioning server.

Why doesn't the phone update the configurations?

- Ensure the configuration files are different from the last ones.
- Ensure the phone has downloaded the configuration files.
- Ensure 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 a FTP Server

This section provides instruction on how to configure a FTP server using 3CDaemon. You can download the 3CDaemon software at:

<http://www.oldversion.com/3Com-Daemon.html>.

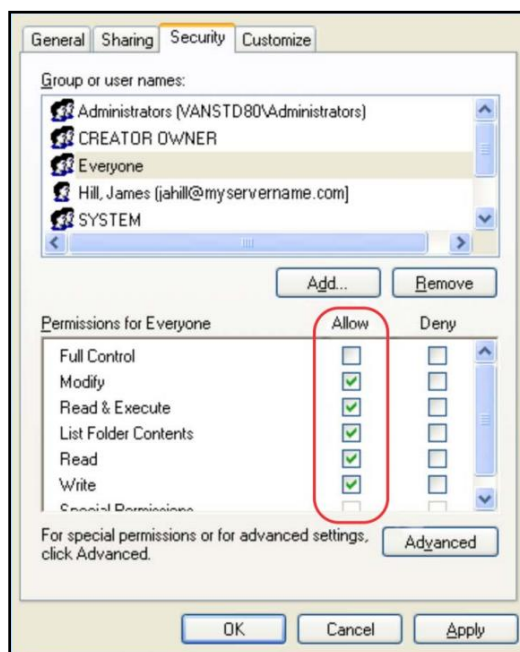
Preparing a Root Directory

To prepare a root directory:

1. Create a 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 files. Security permissions vary by organization.

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



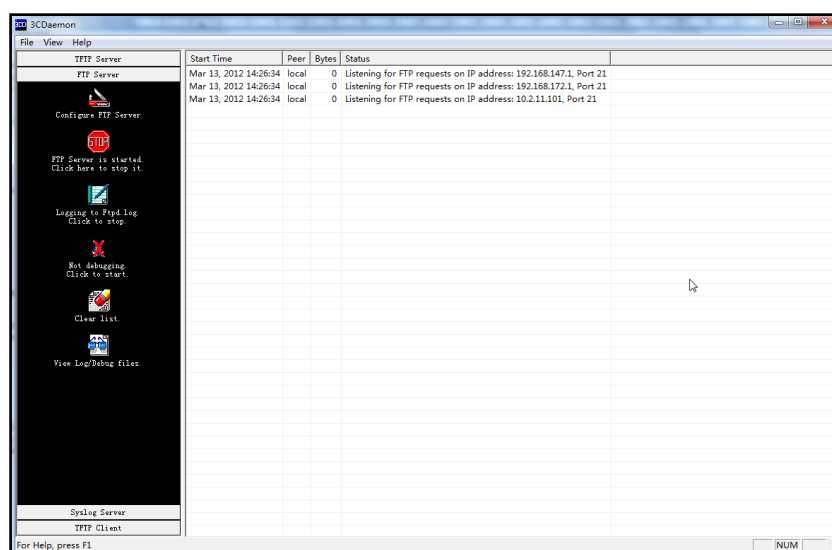
Configuring a FTP server


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

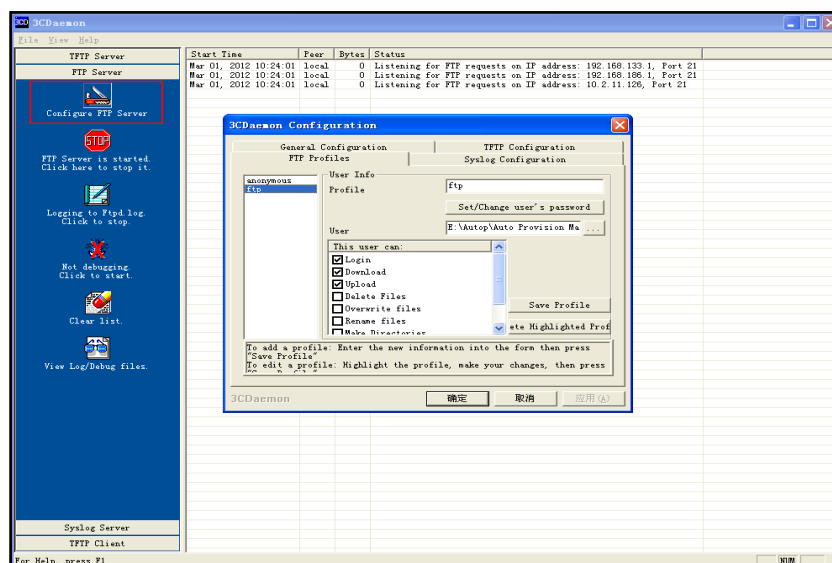
To configure a FTP server:

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:



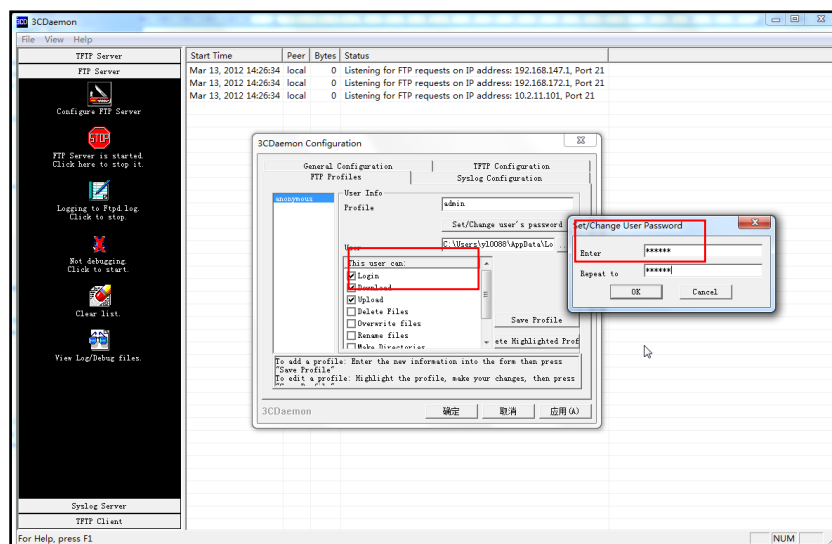
3. Select **Configure FTP Server**.
4. Click the  button to locate the FTP root directory from your local system:



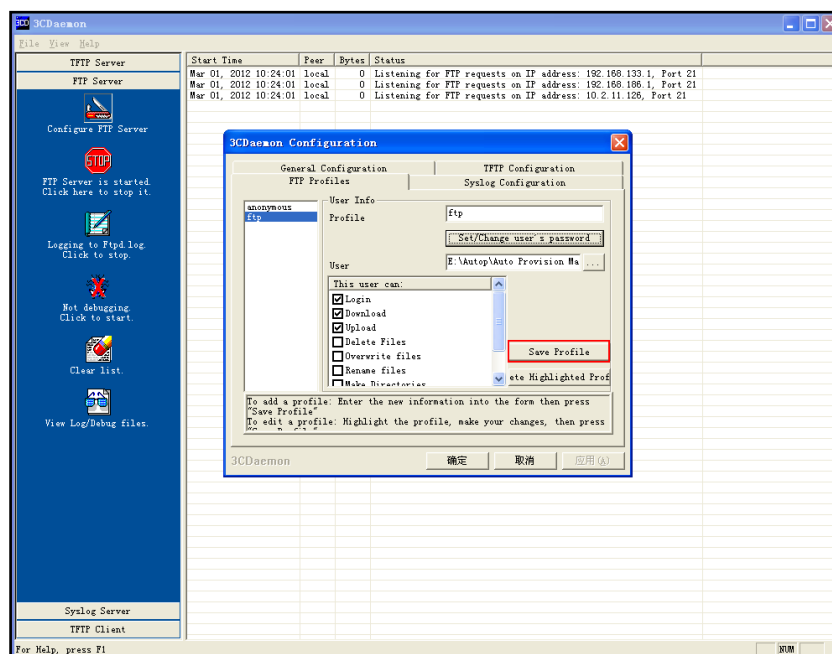
5. Enter the new authentication user name in the **Profile** field.
6. Click the **Set/Change user's password** button to set the password in the pop-up

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 capable of FTP download.

Configuring a HTTP Server

This section provides instruction on how to configure a HTTP server using HFS tool. You can download the HFS software at: <http://www.snapfiles.com/get/hfs.html>.

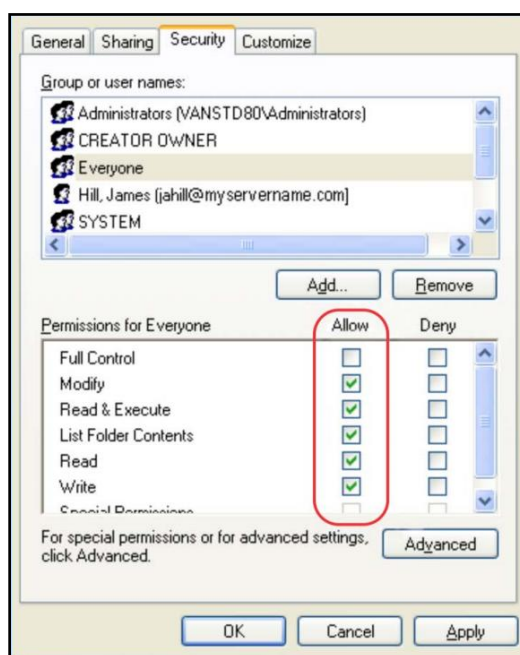
Preparing a Root Directory

To prepare a root directory:

1. Create a HTTP root directory on the local system.
2. Place the 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 files. Security permissions vary by organization.

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



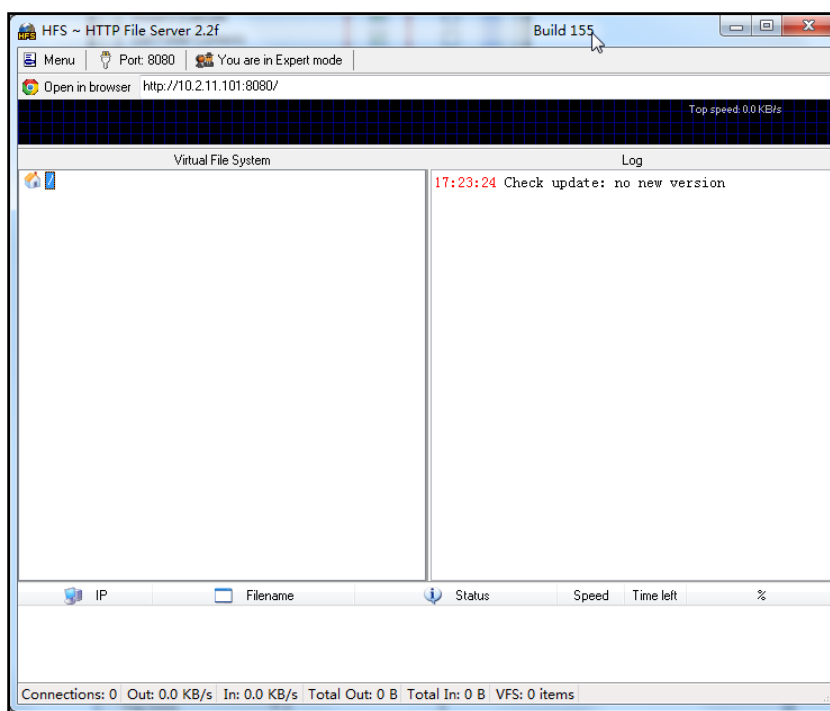
Configuring a HTTP Server

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

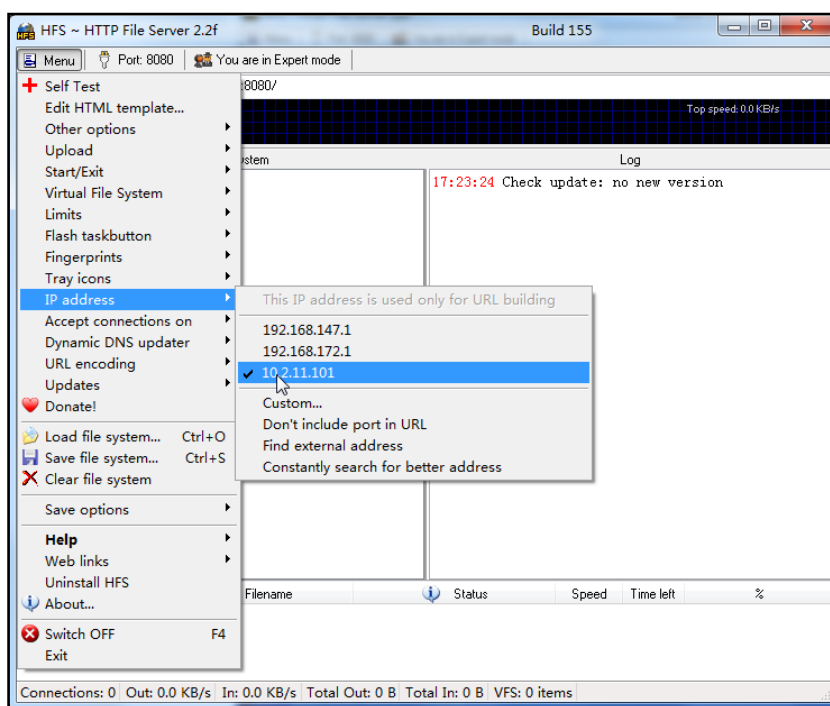
To configure a HTTP server:

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

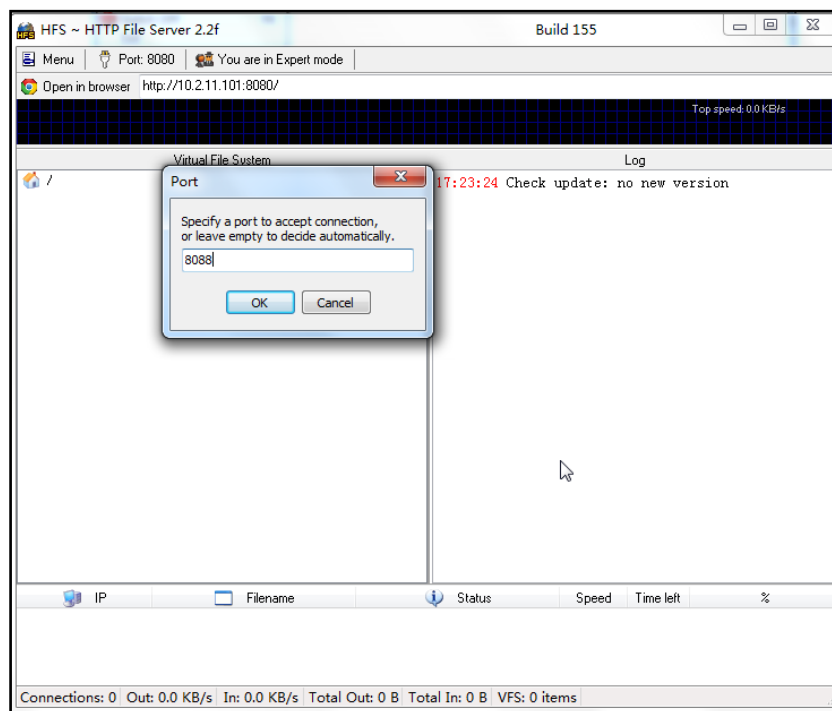
The main configuration page is shown as below:




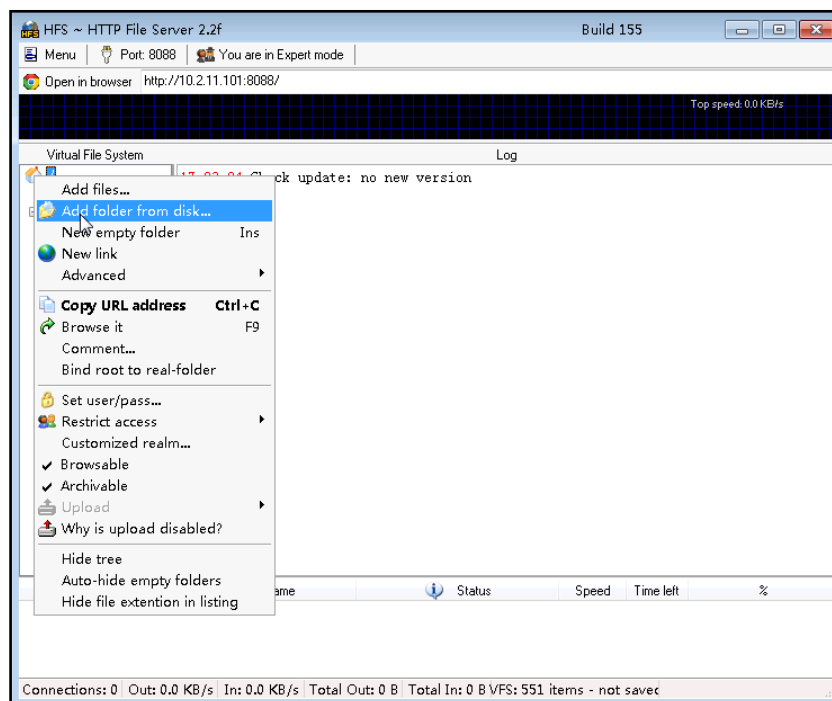
2. Click **Menu** in the main page and select the IP address of the PC from **IP address**.



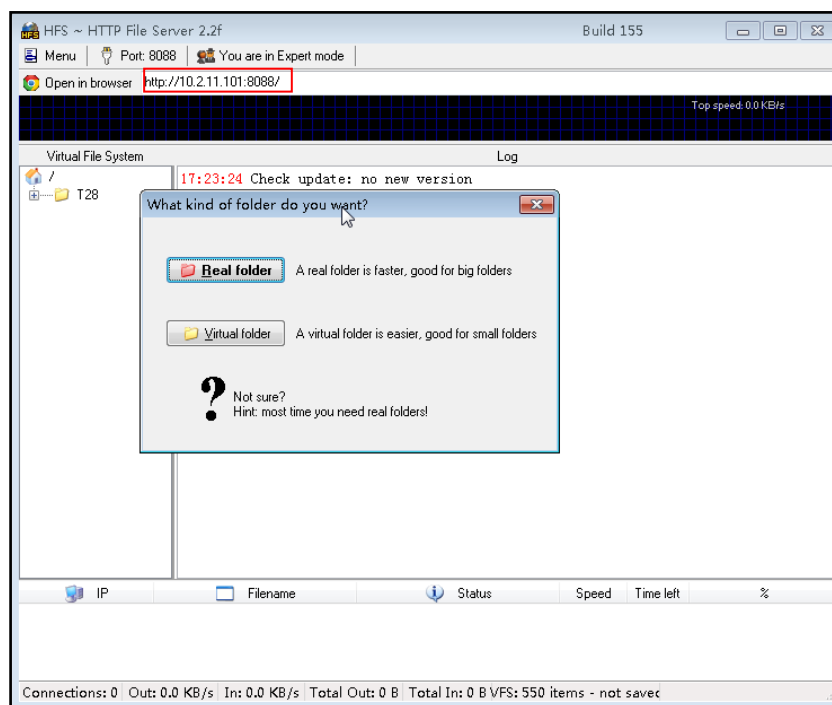
The default HTTP port is 8080. You can also reset the HTTP port (make sure there is no port conflict).



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. Select the kind of folder which you want.



5. Check the server URL "http:// IP:Port/" in the "Open in browser" address bar (For example, the server URL "http:// 10.2.11.101:8088/" is showed on the screenshot) . We recommend that you can fill the server URL in the address bar of the web browser and then press <Enter> key to check the HTTP server before provisioning.

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 instruction on how to configure a DHCP server for windows using DHCP Turbo. You can download this software from website at:

<http://www.tucows.com/preview/265297> and install it following the setup wizard.

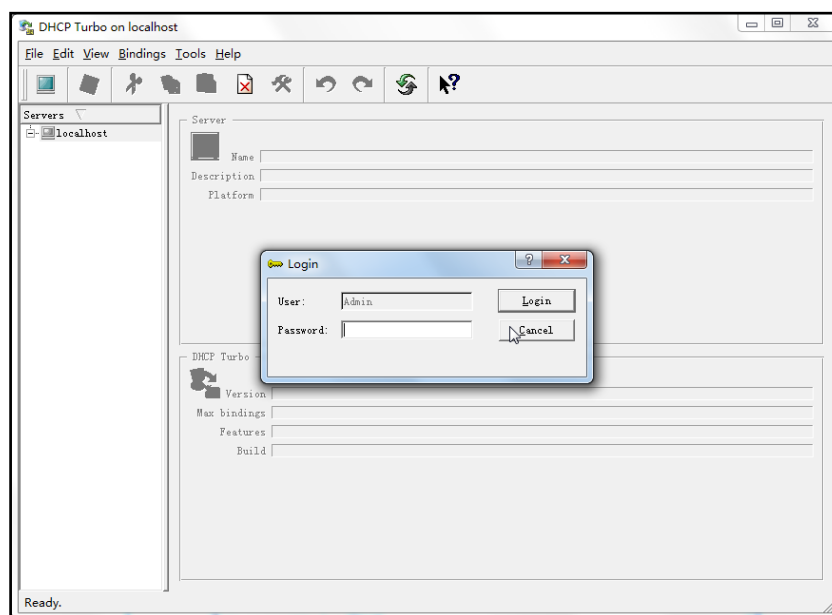
Before configuring the DHCP Turbo, make sure that:

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

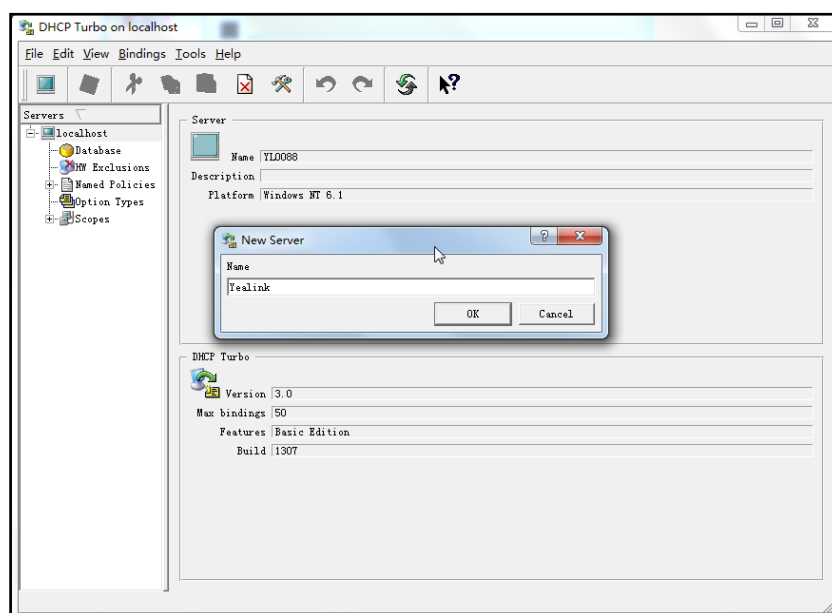
To configure the DHCP Turbo:

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

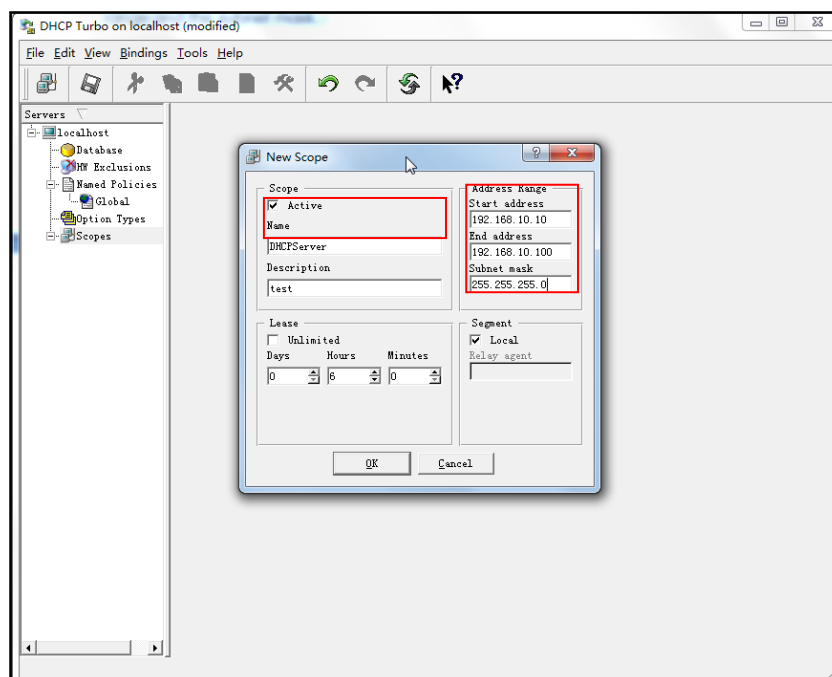
2. Click the **Login** button (the login password is blank) to log in.



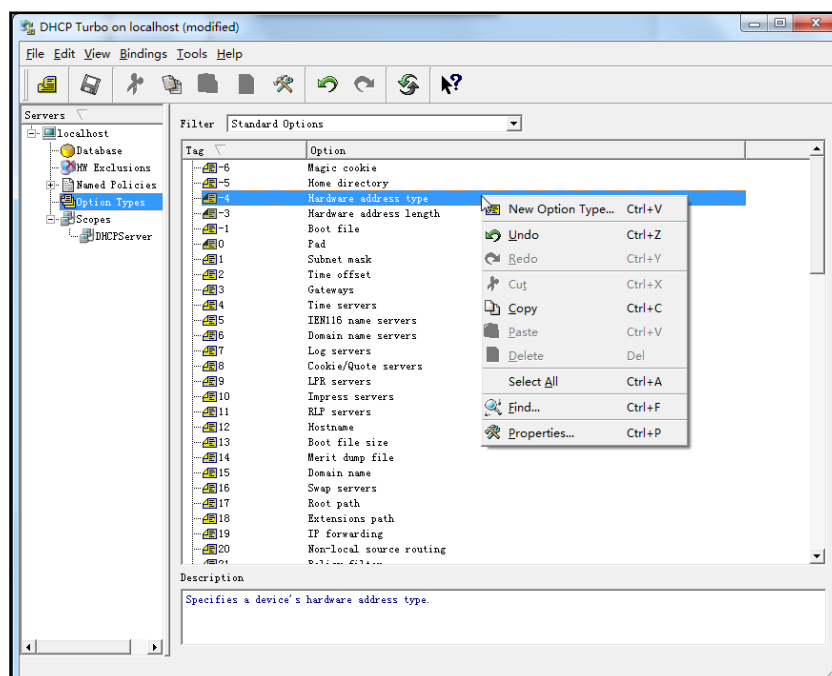
3. You can then edit the existing DHCP server, or you can right click the **localhost** and select **"New Server"** to add a new DHCP server.




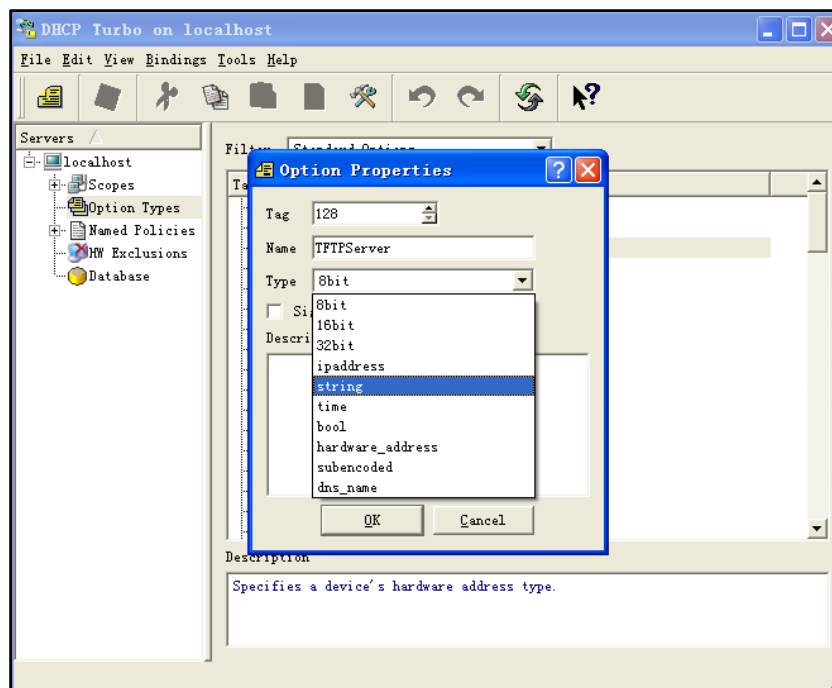
4. Right click the **Scopes** and select **New Scope**.
5. Configure the DHCP server name, the DHCP IP range and the subnet mask.
6. Click **OK** to accept the change.



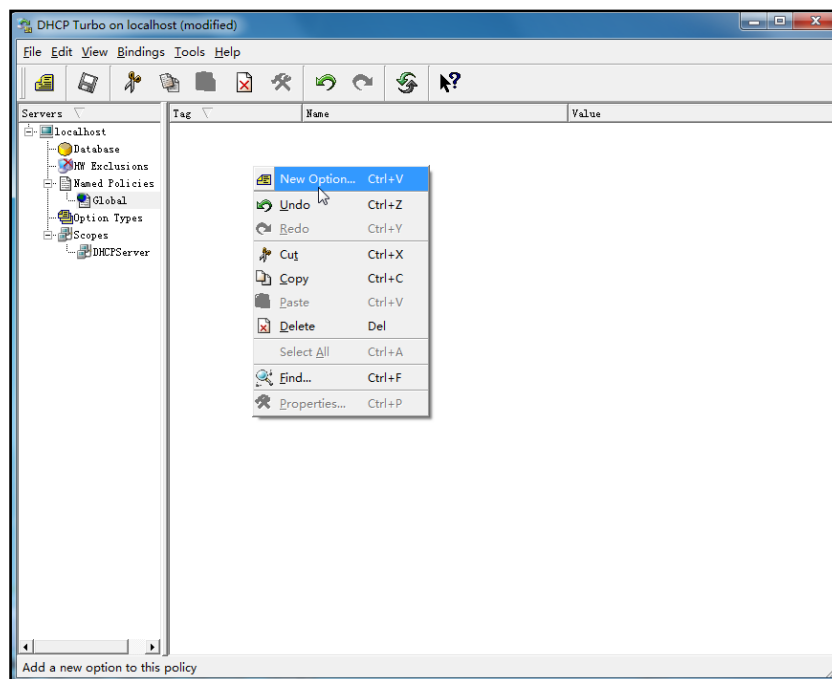
7. You can add a custom option via DHCP Turbo. Select **Option Types**, right click one of the options on the right of the main page, and then select the **New Option Type**.



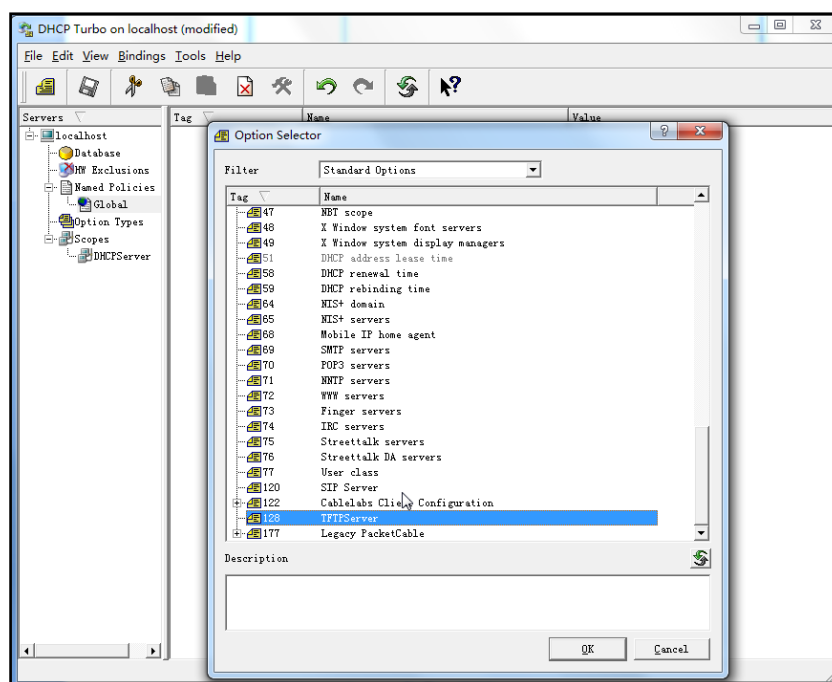
8. Set the custom DHCP option (custom DHCP option tag number ranges from 128 to 254) and select the option type (Yealink supports the **String** and **IP Address** option type only). Click the **OK** button to finish setting the option properties. Click  to save the change.




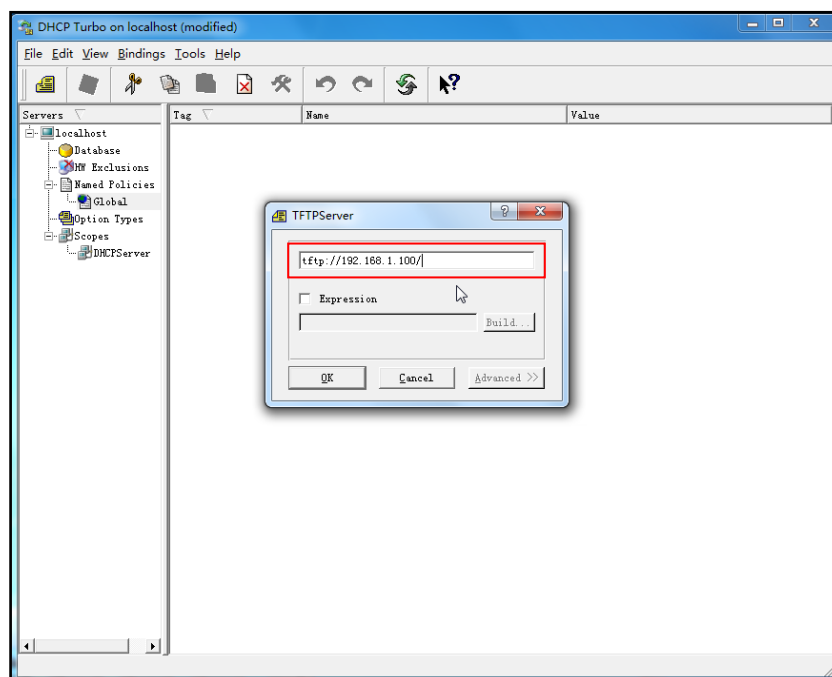
9. Click **Named Policies-->Global**, right click the blank area on the right of the main page and then select **New Option**.



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

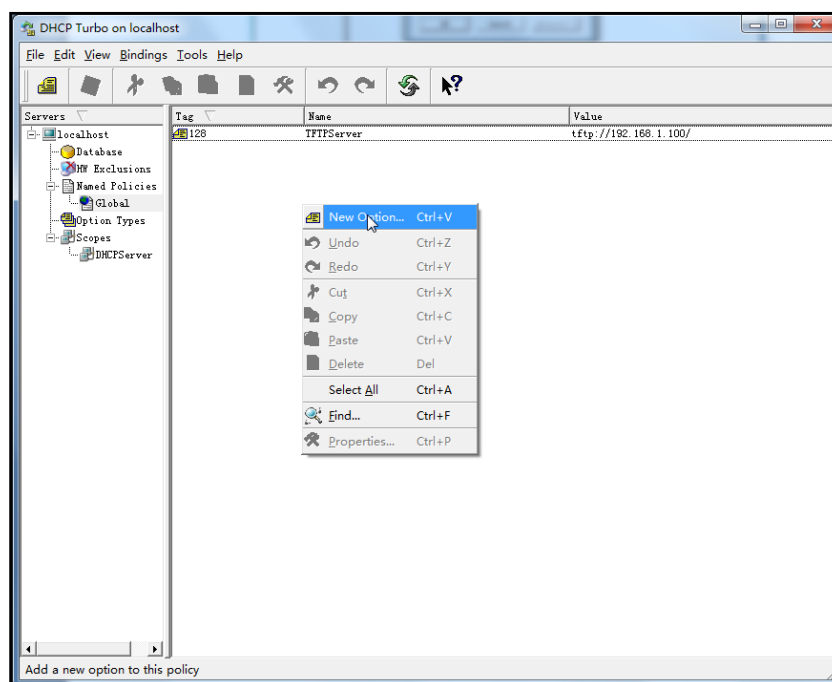


11. Fill the provisioning server address in the input field.
12. Click the **OK** button to finish setting a custom option.
13. Click  to save the change.

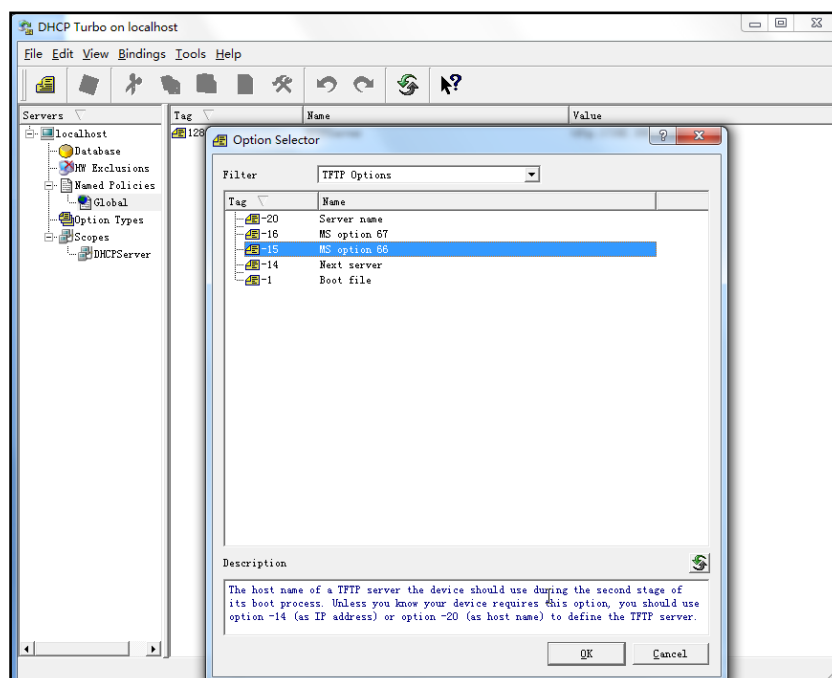


You can add the option 66 via DHCP Turbo. The following shows the detailed processes.

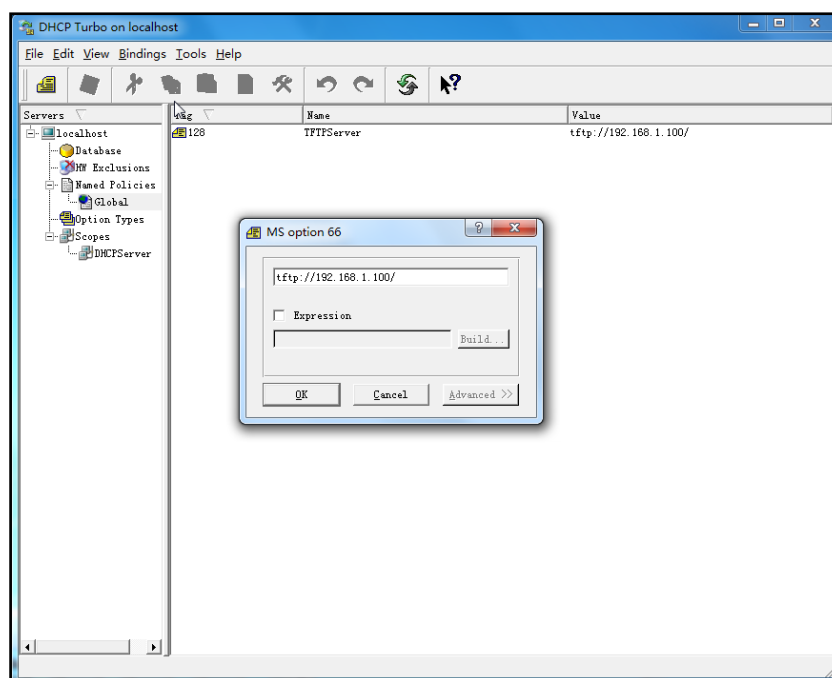
1. Click **Named Policies**-->**Global**, right click the blank area on the right of the main page and then select **New Option**.




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



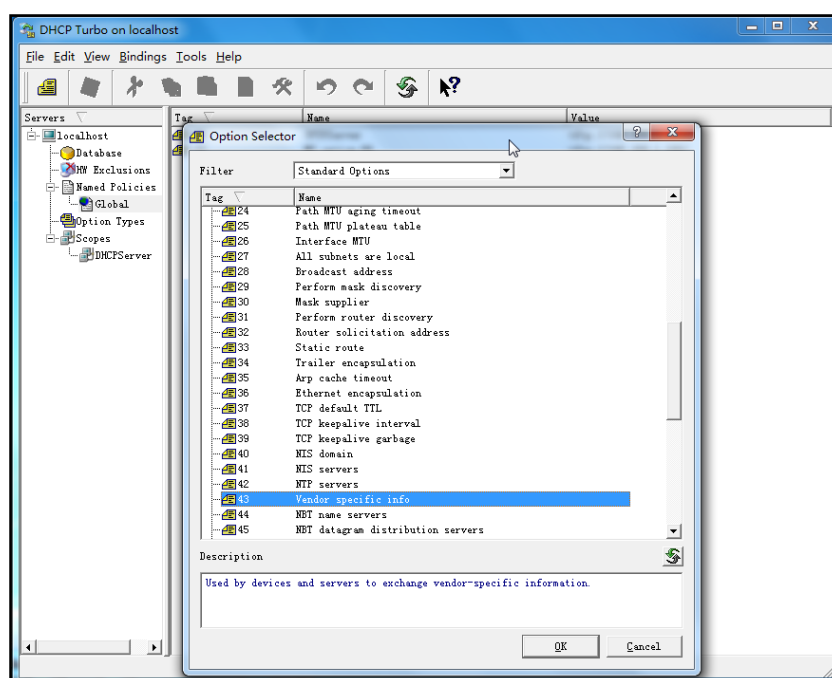
- Fill the provisioning server address in the input field.



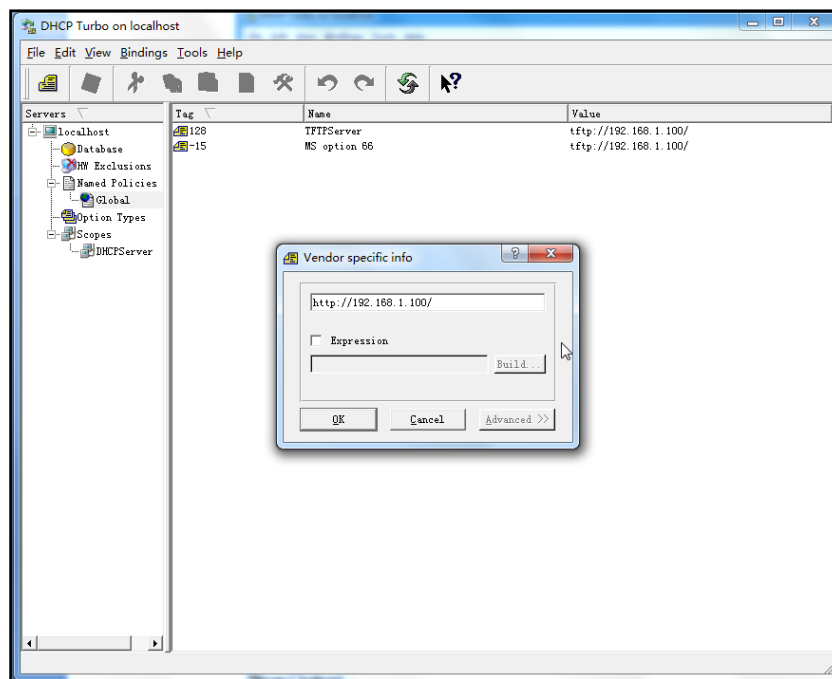
- Click the **OK** button to finish setting a custom option.
- Click  to save the change.


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

- Click **Named Policies-->Global**, right click the blank area on the right of the main page and then select **New Option**.
- Select the **Standard Options** from the pull-down list of **Filter**.
- Scroll down and double click the **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 Ringtone Using Cool Edit Pro

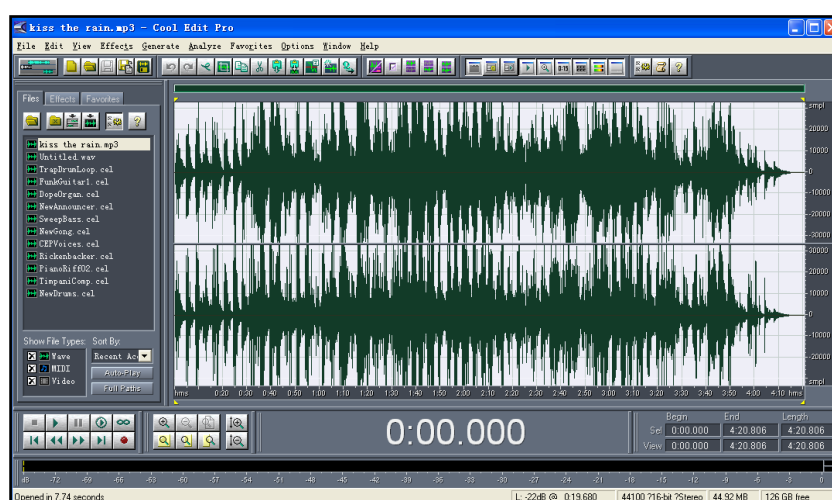
If you have installed the Cool Edit application, double click to open it. Otherwise, you can download the installation package from the website:

http://www.toggle.com/lv/group/view/kl36218/Cool_Edit_Pro.htm and install it.

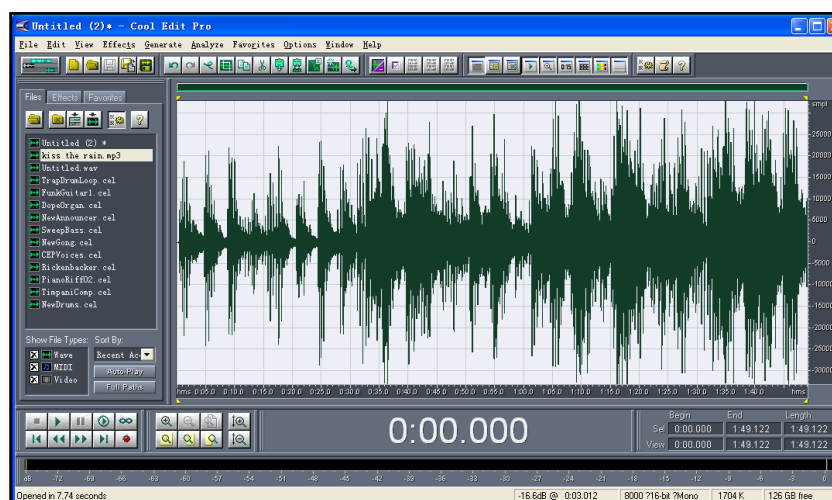
To customize a ringtone using Cool Edit Pro:

1. Open the **Cool Edit Pro** application.
2. Click **File** to open an audio file.
3. Locate the ringtone 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.



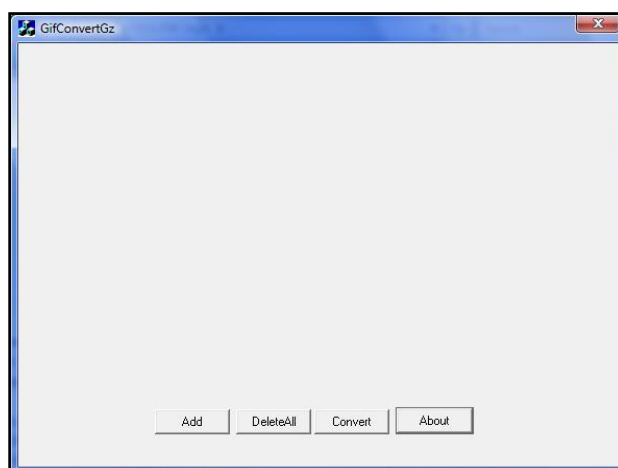
7. Select **File->Save as** to save the new audio file. On the Save waveform page,

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

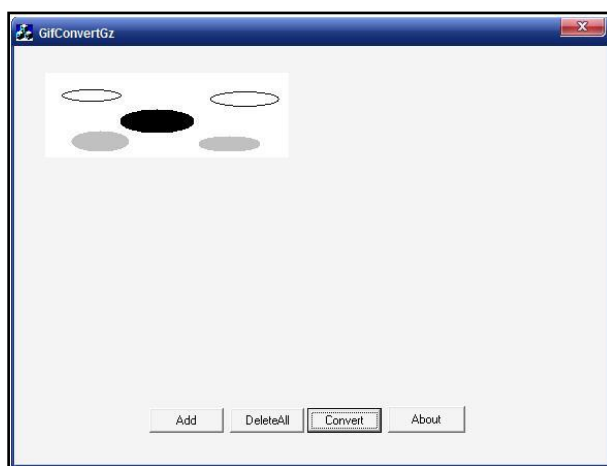
Customizing a Logo File Using PictureExDemo

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 clear the configuration of a parameter, set the value of the parameter to be !NULL!. For example, security.user_password = admin:!NULL!. After completing auto provisioning, the password of the admin will be cleared. If you want to reset the configuration of a parameter, set it to be %NULL%. For example, programablekey.3.type = %NULL%. After completing auto provisioning, the value of the programmable key 3 will be reset to DND.

Parameter	Permitted Values	Descriptions	Web Setting Path
network.ip_address_mode =	0, 1 or 2	It defines the IP address mode. 0 -IPv4 1 -IPv6 2 -IPv4&IPv6 The default value is 0. It takes effect after reboot.	Network->Basic->Internet Port->Mode (IPv4/IPv6)
network.internet_port.type =	0, 1 or 2	It defines the IPv4 Internet (WAN) port type when the IP address mode is defined as IPv4 or IPv4&IPv6. 0 -DHCP 1 -PPPoE 2 -Static IP Address The default value is 0. It takes effect after reboot.	Network->Basic->IPv4 Config
network.internet_port.ip =	IP address	It configures the IPv4 address when the IP address mode is defined as IPv4 or IPv4&IPv6 and the IPv4 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->Static IP Address->IP Address
network.internet_port.mask =	IP address	It configures the IPv4 subnet mask when the IP address mode is defined as IPv4 or IPv4&IPv6 and the IPv4 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->Static IP Address->Subnet Mask
network.internet_port.gateway	IP Address	It configures the IPv4 default gateway when the IP address mode is defined as IPv4 or IPv4&IPv6 and the IPv4 Internet	Network->Basic->IPv4 Config->Static IP Address->

Parameter	Permitted Values	Descriptions	Web Setting Path
ay =		(WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Gateway
network.primary_dns =	IP address	It configures the primary IPv4 DNS server when the IP address mode is defined as IPv4 or IPv4&IPv6 and the IPv4 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->Static IP Address->Primary DNS
network.secondary_dns =	IP address	It configures the secondary IPv4 DNS server when the IP address mode is defined as IPv4 or IPv4&IPv6 and the IPv4 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->Static IP Address->Secondary DNS
network.pppoe.user =	String	It configures the user name for PPPoE connection. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->PPPoE->User Name
network.pppoe.password =	String	It configures the password for PPPoE connection. The default value is blank. It takes effect after reboot.	Network->Basic->IPv4 Config->PPPoE->Password
network.ipv6_internet_port_type =	0 or 1	It defines the IPv6 Internet (WAN) port type when the IP address mode is defined as IPv6 or IPv4&IPv6. 0-DHCP 1-Static IP Address The default value is 0. It takes effect after reboot.	Network->Basic->IPv6 Config
network.ipv6_prefix =	Integer from 0 to 128	It configures the IPv6 prefix when the IP address mode is defined as IPv6 or IPv4&IPv6 and the IPv6 Internet (WAN)	Network->Basic->IPv6 Config->Static IP Address->IPv6

Parameter	Permitted Values	Descriptions	Web Setting Path
		port type is defined as Static IP Address. The default value is 64. It takes effect after reboot.	Prefix (0~128)
network.ipv6_internet_port.ip =	IP address	It configures the IPv6 address when the IP address mode is defined as IPv6 or IPv4&IPv6 and the IPv6 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv6 Config->Static IP Address->IP Address
network.ipv6_internet_port.gateway =	IP address	It configures the IPv6 default gateway when the IP address mode is defined as IPv6 or IPv4&IPv6 and the IPv6 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv6 Config->Static IP Address->Gateway
network.ipv6_primary_dns =	IP address	It configures the primary IPv6 DNS server when the IP address mode is defined as IPv6 or IPv4&IPv6 and the IPv6 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->Basic->IPv6 Config->Static IP Address->Primary DNS
network.ipv6_secondary_dns =	IP address	It configures the secondary IPv6 DNS server when the IP address mode is defined as IPv6 or IPv4&IPv6 and the IPv6 Internet (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network-> Basic-> IPv6 Config->Static IP Address->Secondary DNS
network.bridge_mode =	0 or 1	It defines the PC (LAN) port type. 0-Router 1-Bridge The default value is 1. It takes effect after reboot.	Network->PC Port ->PC Port Config

Parameter	Permitted Values	Descriptions	Web Setting Path
network.pc_port.enable =	0 or 1	It enables or disables the PC port. 0 -Disabled 1 -Auto-Negotiation The default value is 1. It takes effect after reboot.	Network->PC Port ->PC Port Active
network.pc_port.ip =	IP address	It configures the IP address of the PC (LAN) port when the PC (LAN) port is defined as Router. The default value is blank. It takes effect after reboot.	Network->PC Port ->PC Port Config ->As Router->IP Address
network.pc_port.mask =	IP address	It configures the mask of the PC (LAN) port when the PC (LAN) port is defined as Router. The default value is blank. It takes effect after reboot.	Network->PC Port ->PC Port Config ->As Router ->Subnet Mask
network.pc_port.dhcp_server =	0 or 1	It enables or disables the phone to act as a DHCP server when configured as Router. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	Network->PC Port ->PC Port Config ->As Router ->Enable DHCP Server
network.dhcp.start_ip =	IP address	It configures the start IP address of the DHCP IP segment. The default value is 10.0.0.10.	Network->PC Port ->PC Port Config ->As Router->Start IP Address
network.dhcp.end_ip =	IP address	It configures the end IP address of the DHCP IP segment. The default value is 10.0.0.100.	Network->PC Port ->PC Port Config ->As Router->End IP Address
network.dhcp.update_dns_enable =	0 or 1	It enables or disables the phone to use the DNS address obtained from the DHCP server. 0 -Disabled 1 -Enabled The default value is 1.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		It takes effect after reboot.	
network.internet_port.speed_duplex =	0, 1, 2, 3 or 4	<p>It configures the transmission mode and the speed of the Internet (WAN) port.</p> <p>0-Auto negotiate 1-Full duplex 10Mbps 2-Full duplex 100Mbps 3-Half duplex 10Mbps 4-Half duplex 100Mbps</p> <p>The default value is 0.</p>	Network->Advanced->Port Link-> WAN Port Link
network.pc_port.speed_duplex =	0, 1, 2, 3 or 4	<p>It configures the transmission mode and the speed of the PC (LAN) port when configured as Router.</p> <p>0-Auto negotiate 1-Full duplex 10Mbps 2-Full duplex 100Mbps 3-Half duplex 10Mbps 4-Half duplex 100Mbps</p> <p>The default value is 0.</p>	Network->Advanced->Port Link->PC Port Link
network.vlan.internet_port_enable =	0 or 1	<p>It enables or disables VLAN of the Internet (WAN) port.</p> <p>0-Disabled 1-Enabled</p> <p>The default value is 0.</p> <p>It takes effect after reboot.</p>	Network->Advanced->VLAN->WAN Port->Active
network.vlan.internet_port_vid =	Integer from 1 to 4094	<p>It configures VLAN ID of the Internet (WAN) port.</p> <p>The default value is 1.</p> <p>It takes effect after reboot.</p>	Network->Advanced->VLAN->WAN Port->VID (1-4094)
network.vlan.internet_port_priority =	Integer from 0 to 7	<p>It configures VLAN priority of the Internet (WAN) port.</p> <p>The default value is 0.</p> <p>It takes effect after reboot.</p>	Network->Advanced->VLAN->WAN Port->Priority

Parameter	Permitted Values	Descriptions	Web Setting Path
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 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 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 reboot.	Network-> Advanced->VLAN >PC Port->Priority
network.vlan.dhcp_enable =	0 or 1	It configures the phone to obtain the VLAN from the DHCP. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	Network-> Advanced->VLAN >DHCP VLAN-> Active
network.vlan.dhcp_option =	Integer from 0 to 255	It configures the DHCP option value used to obtain the VLAN settings. You can configure at most five option values, multiple values should be separated by comma. The default value is 132. It takes effect after reboot.	Network-> Advanced->VLAN >DHCP VLAN-> Option
network.vlan.pc_port_mode =	0 or 1	It configures the way the phone processes the packet from PC port to WAN port. 0 -Forward the packets directly. 1 -Tag the untagged packets and forward them or forward the tagged packets directly. The default value is 0. It takes effect after reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
wui.http_enable =	0 or 1	<p>It enables or disables the phone to access its web user interface using HTTP protocol.</p> <p>0-Disabled 1-Enabled</p> <p>The default value is 1.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Web Server->HTTP
wui.https_enable =	0 or 1	<p>It enables or disables the phone to access its web user interface using HTTPS protocol.</p> <p>0-Disabled 1-Enabled</p> <p>The default value is 1.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Web Server->HTTPS
network.port.http =	Integer from 1 to 65535	<p>It configures the HTTP port used to access the web user interface of the IP phone.</p> <p>The default value is 80.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Web Server->HTTP Port (1~65535)
network.port.https =	Integer from 1 to 65535	<p>It configures the HTTPS port used to access the web user interface of the IP phone.</p> <p>The default value is 443.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Web Server->HTTPS Port (1~65535)
network.port.max_rtpport =	Integer from 1 to 65535	<p>It configures the maximum local RTP port.</p> <p>The default value is 11800.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Local RTP Port-> Max RTP Port (1~65535)
network.port.min_rtpport =	Integer from 1 to 65535	<p>It configures the minimum local RTP port.</p> <p>The default value is 11780.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Local RTP Port->Min RTP Port (1~65535)
network.qos.rtpptos =	Integer from 0 to 63	<p>It configures the voice QoS.</p> <p>The default value is 46.</p> <p>It takes effect after reboot.</p>	Network->Advanced->Voice QoS (0~63)

Parameter	Permitted Values	Descriptions	Web Setting Path
network.qos.sip.natlos =	Integer from 0 to 63	It configures the SIP QoS. The default value is 26. It takes effect after 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 reboot.	Network-> Advanced->802.1x ->Mode 802.1x
network.802_1x.identity =	String	It configures the user name for 802.1x authentication. The default value is blank. It takes effect after reboot.	Network-> Advanced->802.1x ->Identity
network.802_1x.md5_password =	String	It configures the password for 802.1x authentication. The default value is blank. It takes effect after reboot.	Network-> Advanced->802.1x ->MD5 Password
network.802_1x.root_cert_url =	URL	It configures the access URL of the root certificates.	Network-> Advanced->802.1x ->CA Certificates
network.802_1x.client_cert_url =	URL	It configures the access URL of the client certificates.	Network-> Advanced->802.1x ->Device Certificates
network.vpn_enable =	0 or 1	It enables or disables the VPN feature. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Network-> Advanced->VPN-> Active
network.lldp.enable =	0 or 1	It enables or disables the LLDP feature. 0 -Disabled 1 -Enabled The default value is 1.	Network-> Advanced->LLDP-> Active

Parameter	Permitted Values	Descriptions	Web Setting Path
		It takes effect after reboot.	
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 reboot.	Network-> Advanced->LLDP-> Packet Interval (1~3600s)
network.snmp.enable =	0 or 1	It enables or disables the SNMP feature. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Network-> Advanced->SNMP ->Active
network.snmp.port =	Integer from 0 to 65535	It configures the SNMP port. The default value is blank. It takes effect after reboot.	Network-> Advanced->SNMP ->Port (0~65535)
network.snmp.trust_ip =	IP address	It configures the IP address(es) of the trusted SNMP server. Multiple IP addresses should be separated by space. The default value is blank. It takes effect after reboot.	Network-> Advanced->SNMP ->Trusted Address
network.span_to_pc_port =	0 or 1	It enables or disables the span from WAN port to PC port feature. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Network-> Advanced->Span to PC->Span to PC Port
network.promiscuous_mode.enable =	0 or 1	It enables or disables the phone to use the promiscuous mode of the network card. 0 -Disabled 1 -Enabled The default value is 0 (for SIP-T2xP). It takes effect after reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
sip.reg_surge_prevention =	Integer from 0 to 60	It configures the time (in seconds) for the SIP registration. The phone registers an account at random in the time after startup. The default value is 0. It takes effect after reboot.	Network-> Advanced-> Registration Random-> Registration Random (0~60s)
network.sip.tag_mac_to_ua.enable =	0 or 1	It enables or disables the phone to add the MAC address to the User-Agent header. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	
syslog.server =	IP address	It configures the IP address of the syslog server when exporting log to the syslog server. The default value is blank. It takes effect after reboot.	Settings-> Configuration-> Server Name
syslog.log_level =	Integer from 0 to 6	It configures the syslog level. The default value is 3. It takes effect after reboot.	Settings-> Configuration-> System Log Level
auto_provision.mode =	0 or 1	It configures the mode for triggering the auto provisioning process. 0 -Disabled 1 -Power on 4 -Repeatedly 5 -Weekly 6 -Power on + Repeatedly 7 -Power on + Weekly The default value is 1.	Settings->Auto Provision
auto_provision.pnp_enable =	0 or 1	It enables or disables the Plug and Play feature. The phone broadcasts the PnP SUBSCRIBE message to obtain a provisioning server address during startup. 0 -Disabled	Settings->Auto Provision->PNP Active

Parameter	Permitted Values	Descriptions	Web Setting Path
		1-Enabled The default value is 1.	
auto_provision .pnp_domain_ name =	String	It configures the domain name of the PnP server. The default value is 224.0.1.75.	
auto_provision .pnp_event_v endor =	String	It configures the vendor name of the device. The default value is yealink.	
auto_provision .schedule.peri odic_minute =	Integer from 1 to 43200	It configures the interval (in minutes) for the phone to check the new configuration repeatedly. The default value is 1440.	Settings->Auto Provision->Interval (Minutes)
auto_provision .schedule.time _from =	Time Format	It configures the begin time of day for the phone to check the new configuration weekly. The default value is 00:00.	Settings->Auto Provision->Time
auto_provision .schedule.time _to =	Time Format	It configures the end time of day for the phone to check the new configuration weekly. The default value is 00:00.	Settings->Auto Provision->Time
auto_provision .schedule.day ofweek =	0,1,2,3,4,5, 6 or a combinati on of these digits	It configures the days of week for the phone to check the new configuration weekly. The default value is 0123456.	Settings->Auto Provision->Day of Week
auto_provision .server.url =	URL	It configures the URL of the auto provisioning server. The default value is blank.	Settings->Auto Provision->Server URL
auto_provision .server.userna me =	String	It configures the user name for authentication during auto provisioning. The default value is blank.	Settings->Auto Provision->User Name
auto_provision .server.passw ord =	String	It configures the password for authentication during auto provisioning. The default value is blank.	Settings->Auto Provision->Password
auto_provision .dhcp_enable	0 or 1	It enables or disables the phone to obtain the provisioning server address	Settings->Auto Provision->DHCP

Parameter	Permitted Values	Descriptions	Web Setting Path
=		by detecting DHCP options. 0 -Disabled 1 -Enabled The default value is 1.	Active
auto_provision. .dhcp_option. option60_value =	String	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. .dhcp_option.list_user_options =	Integer from 128 to 254	It configures the custom DHCP option value. The default value is blank.	Settings->Auto Provision->Custom Option (128~254)
auto_provision. .aes_key_16.common =	String	It configures the AES key (16 characters) 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 =	String	It configures the AES key (16 characters) 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
autoprovision. X.name = (X ranges from 1 to 50.)	String	It configures the name of the code for triggering auto provisioning. The maximum length is 100. The default value is blank. It takes effect after reboot.	
autoprovision. X.code = (X ranges from 1 to 50.)	String	It configures the code for triggering auto provisioning. The default value is blank. It takes effect after reboot.	
autoprovision. X.url = (X ranges from 1 to 50.)	URL	It configures the URL of auto provisioning server. The default value is blank. It takes effect after reboot.	

Parameter	Permitted Values	Descriptions	Web Setting Path
autoprovision. X.user = (X ranges from 1 to 50.)	String	It configures the user name of auto provisioning server. The default value is blank. It takes effect after reboot.	
autoprovision. X.password = (X ranges from 1 to 50.)	String	It configures the password of auto provisioning server. The default value is blank. It takes effect after reboot.	
autoprovision. X.com_aes = (X ranges from 1 to 50.)	String	It configures the AES key (16 characters) for decrypting the Common CFG file. The default value is blank. It takes effect after reboot.	
autoprovision. X.mac_aes = (X ranges from 1 to 50.)	String	It configures the AES key (16 characters) for decrypting the MAC-Oriented CFG file. The default value is blank. It takes effect after reboot.	
features.group_listen_in_talking_enable =	0 or 1	It enables or disables the group listening feature. 0 -Disabled 1 -Enabled The default value is 1.	
sip.use_23_as_pound =	0 or 1	It enables or disables the phone to convert the pound sign into "%23" when dialing out. 0 -Disabled 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_dialo	0 or 1	It enables or disables the phone to keep sending the SIP messages to the	Features->General Information->Use

Parameter	Permitted Values	Descriptions	Web Setting Path
g =		outbound server in a dialog. 0 -Disabled 1 -Enabled The default value is 1.	Outbound Proxy In Dialog
watch_dog.enable =	0 or 1	It enables or disables the Watch Dog feature. 0 -Disabled 1 -Enabled The default value is 1.	Settings->Preference->Watch Dog
redirect.enable =	0 or 1	It enables or disables the redirection feature. 0 -Disabled 1 -Enabled The default value is 0.	
managementserver.enable =	0 or 1	It enables or disables the TR069 feature. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Settings->TR069->Enable TR069
managementserver.username =	String	It configures the user name for the phone to authenticate with the ACS. It takes effect after reboot.	Settings->TR069->ACS Username
managementserver.password =	String	It configures the password for the phone to authenticate with the ACS. It takes effect after reboot.	Settings->TR069->ACS Password
managementserver.url =	URL	It configures the access URL of the ACS. It takes effect after reboot.	Settings->TR069->ACS URL
managementserver.periodic_inform_enable =	0 or 1	It enables or disables the phone to report its configuration to the ACS. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Settings->TR069->Enable Periodic Inform
managementserver.periodic	Integer	It configures the interval (in seconds) for the phone to report its configuration to	Settings->TR069->Periodic Inform

Parameter	Permitted Values	Descriptions	Web Setting Path
_inform_interval =		the ACS. The default value is 60. It takes effect after reboot.	Interval (seconds)
managementserver.connection_request_username =	String	It configures the user name for the phone to authenticate the connection requests. It takes effect after reboot.	Settings->TR069->Connection Request Username
managementserver.connection_request_password =	String	It configures the password for the phone to authenticate the connection requests.	Settings->TR069->Connection Request Password
transfer.semi_attend_transfer_enable =	0 or 1	It enables or disables to display the missed call prompt on the destination party's phone. 0 -Disabled 1 -Enabled The default value is 1.	Features->Transfer ->Semi-Attended Transfer
transfer.blind_transfer_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_transfer_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 Attended Transfer On Hook
transfer.dsskey_deal_type =	0,1 or 2	It defines implementation type of the DSS key which is configured as a transfer or BLF key. 0 -New Call 1 -Attended Transfer 2 -Blind Transfer The default value is 2.	Features->Transfer ->Transfer Mode Via Dsskey

Parameter	Permitted Values	Descriptions	Web Setting Path
transfer.multi_call_trans_enable =	0 or 1	It enables or disables the phone to enter the transfer to interface during two 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.trans_others_after_conf_enable =	0 or 1	It enables or disables the other two parties remain connected when the conference initiator drops the conference call. 0 -Disabled 1 -Enabled The default value is 0.	Features->Transfer -> Transfer on Conference Hang up
voice.vad =	0 or 1	It enables or disables the voice activity detection. 0 -Disbaled 1 -Enabled The default value is 0.	Settings->Voice->Echo Cancellation ->VAD
voice.cng =	0 or 1	It enables or disables the comfortable noise generator. 0 -Disabled 1 -Enabled The default value is 1.	Settings->Voice->Echo Cancellation ->CNG
voice.echo_cancellation =	0 or 1	It enables or disables the echo canceller. 0 -Disabled 1 -Enabled The default value is 1.	Settings->Voice->Echo Cancellation ->ECHO
voice.side_tone =	Integer from -48 to 0	It configures the volume of the side tone. The default value is -3.	
voice.handfree_send =	Integer from 1 to 53	It configures the sending volume of speaker. The default value is 35. It takes effect after reboot.	Features->Audio->Handfree Send Volume (1~53)

Parameter	Permitted Values	Descriptions	Web Setting Path
voice.handset_send =	Integer from 1 to 53	It configures the sending volume of handset. The default value is 25. It takes effect after reboot.	Features->Audio->Handset Send Volume (1~53)
voice.headset_send =	Integer from 1 to 53	It configures the sending volume of headset. The default value is 30. It takes effect after reboot.	Features->Audio->Headset Send Volume (1~53)
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	It configures the minimum delay (in milliseconds) of jitter buffer. The default value is 0.	Settings->Voice->JITTER BUFFER->Min Delay
voice.jib.max =	Integer	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	It configures the normal delay (in milliseconds) of jitter buffer. The default value is 120.	Settings->Voice->JITTER BUFFER->Nominal
voice.tone.country =	Custom, Australia, Austria, Brazil, Belgium, China, Czech, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Lithuania,	It configures the tone type for the phone. The default value is Custom.	Settings->Tones->Select Country

Parameter	Permitted Values	Descriptions	Web Setting Path
	India, Italy, Japan, Mexico, New Zealand, Netherlands, Norway, Portugal, Spain, Switzerland, Sweden, Russia, United States, Chile		
voice.tone.dial =	String	<p>It customizes the dial tone when the "voice.tone.country" is configured as Custom.</p> <p>The value format is F/D or !F/D.</p> <p>tonelist = element[,element] [,element]...</p> <p>Where</p> <p>element = !F1+F2+F3+F4/Duration</p> <p>F: the frequency of the tone (ranges from 200 to 7000 Hz). If set to 0 (0Hz), it means that the phone does not play tone. A tone can be composited at most four different frequencies (value format: F1+F2+F3+F4).</p> <p>D: the time duration (in milliseconds, ranges from 0 to 30000ms) of ringing the tone.</p> <p>You can configure at most eight different tones for one condition, each tone separated by comma (e.g., 250/200, 0/1000, 200+300/500, 600+700+800+1000/2000).</p> <p>If you want the IP phone to play tones</p>	Settings->Tones->Dial

Parameter	Permitted Values	Descriptions	Web Setting Path
		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 ringtone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Ring Back
voice.tone.busy =	String	It customizes the busy tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Busy
voice.tone.congestion =	String	It customizes the tone of network congestion when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Congestion
voice.tone.call waiting =	String	It customizes the call waiting tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Call Waiting
voice.tone.dialrecall =	String	It customizes the call back tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Dial Recall
voice.tone.info =	String	It customizes the info tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Info

Parameter	Permitted Values	Descriptions	Web Setting Path
voice.tone.stutter =	String	It customizes the stutter tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Stutter
voice.tone.message =	String	It customizes the message tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Message
voice.tone.autoanswer =	String	It customizes the auto answer tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. The default value is blank.	Settings->Tones->Auto Answer
voice.handfree.spk_vol =	Integer from 0 to 15	It configures the receiving volume of speaker. The default value is 8.	
voice.handset.spk_vol =	Integer from 0 to 15	It configures the receiving volume of handset. The default value is 8.	
voice.headset.spk_vol =	Integer from 0 to 15	It configures the receiving volume of headset. The default value is 8.	
voice.handfree.tone_vol =	Integer from 0 to 15	It configures the dial tone volume of speaker. The default value is 8.	
voice.handset.tone_vol =	Integer from 0 to 15	It configures the dial tone volume of handset. The default value is 8.	
voice.headset.tone_vol =	Integer from 0 to 15	It configures the dial tone volume of headset. The default value is 8.	
voice.call_preview_mode =	1, 2 or 3	It configures the preview call mode. 1-Ignore: the mixed of tone and RTP	

Parameter	Permitted Values	Descriptions	Web Setting Path
		2-Force: discard the RTP and play the tone 3-Skip: skip the tone to play the RTP The default value is 1.	
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.	Security->Trusted Certificates->Only Accept Trusted Certificates
security.ca_cert =	0, 1 or 2	It specifies the type of certificates the IP phone used to authenticate the connecting server. 0-Default certificates 1-Custom certificates 2-All certificates The default value is 0. It takes effect after reboot.	Security->Trusted Certificates->CA Certificates
security.cn_validation =	0 or 1	It enables or disables the IP phone to mandatorily validate the CommonName or subjectAltName of the certificate sent by the connecting server. 0-Disabled 1-Enabled The default value is 0. It takes effect after reboot.	Security->Trusted Certificates->Common Name Validation
security.dev_cert =	0 or 1	It specifies the type of certificates the IP phone sends for authentication. 0-Default certificates 1-Custom certificates The default value is 0. It takes effect after reboot.	Security->Server Certificates->Device Certificates
security.user_name.user =	String	It configures the login user name of the user.	Security->Password
security.user_n	String	It configures the login user name of the	Security->Password

Parameter	Permitted Values	Descriptions	Web Setting Path
ame.admin =		administrator.	
security.user_name.var =	String	It configures the login user name of the var.	Security->Password
security.user_password =	String	It changes the login password of the user, var and administrator. The valid value format is username:password.	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 reboot.	
custom_softkey_call_failed.url = (not applicable to T20P IP phone)	URL	It configures the access URL of the customized file for the soft key presenting on the phone LCD screen when Call failed.	Settings->Softkey Layout
custom_softkey_call_in.url = (not applicable to T20P IP phone)	URL	It configures the access URL of the customized file for the soft key presented on the phone LCD screen when Call in.	Settings->Softkey Layout
custom_softkey_connecting.url = (not applicable to T20P IP phone)	URL	It configures the access URL of the customized file for the soft key presented on the phone LCD screen when Connecting.	Settings->Softkey Layout
custom_softkey_dialing.url = (not applicable to T20P IP phone)	URL	It configures the access URL of the customized file for the soft key presented on the phone LCD screen when Dialing.	Settings->Softkey Layout

Parameter	Permitted Values	Descriptions	Web Setting Path
custom_softkey_ring_back.url = (not applicable to T20P IP phone)	URL	It customizes the soft key presented on the phone LCD screen when Ringback.	Settings->Softkey Layout
custom_softkey_talking.url = (not applicable to T20P IP phone)	URL	It configures the access URL of the customized file for the soft key presented on the phone LCD screen when Talking.	Settings->Softkey Layout
memorykey.X.line = (X ranges from 1 to 10.) (not applicable to T22P and T20P IP phones)	Integer from 0 to 5	It configures the desired line to apply the key feature. 0-Line 1 1-Line 2 ... 5-Line 6	DSSKey->Memory Key
memorykey.X.value = (X ranges from 1 to 10.) (not applicable to T22P and T20P IP phones)	String	It configures the value of the desired feature. For example, when configuring the DSS key to be BLF, it configures the number of the monitored user.	DSSKey->Memory Key
memorykey.X.pickup_value = (X ranges from 1 to 10.) (not applicable to T22P and T20P IP phones)	String	It configures the pickup code for the BLF feature. The default value is blank.	DSSKey->Memory Key
memorykey.X.type =	Number	It configures the desired feature for memory key X.	DSSKey->Memory Key

Parameter	Permitted Values	Descriptions	Web Setting Path
(X ranges from 1 to 10.) (not applicable to T22P and T20P IP phones)		Valid values are: 0 -N/A(default for memory key) 1 -Conference 2 -Forward 3 -Transfer 4 -Hold 5 -DND 7 -Call Return 8 -SMS 9 -Directed Pickup 10 -Call Park 11 -DTMF 12 -Voicemail 13 -SpeedDial 14 -Intercom 15 -Line(default for line key) 16 -BLF 17 -URL 18 -Group Listening 22 -XML Group 23 -Group Pickup 24 -Paging 25 -Record 27 -XML Browser 34 -Hot Desking 35 -URL Record 38 -LDAP 40 -Prefix 41 -Zero Touch 42 -ACD 45 -Local Group 61 -Directory	
memorykey.X. xml_phonebook =	String	It specifies the desired remote phonebook/local group for the DSS key. It only applies to the XML Group/Local	DSSKey->Memory Key

Parameter	Permitted Values	Descriptions	Web Setting Path
(X ranges from 1 to 10.) (not applicable to T22P and T20P IP phones)		Group features.	
linekey.X.line = (X ranges from 1 to 6.)	Integer from 0 to 5	It configures the desired line to apply the key feature. 0 -Line 1 1 -Line 2 ... 5 -Line 6	DSSKey->Line Key
linekey.X.value = (X ranges from 1 to 6.)	String	It configures the value for some key features. The default value is blank.	DSSKey->Line Key
linekey.X.pickup_value = (X ranges from 1 to 6.)	String	It configures the pickup code for the BLF feature. The default value is blank.	DSSKey->Line Key
linekey.X.type = (X ranges from 1 to 6.)	Number	It configures the key feature for the line key. 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	DSSKey->Line Key

Parameter	Permitted Values	Descriptions	Web Setting Path
		14 -Intercom 15 -Line(default for line key1-6) 16 -BLF 17 -URL 18 -Group Listening 22 -XML Group 23 -Group Pickup 24 -Paging 25 -Record 27 -XML Browser 34 -Hot Desking 35 -URL Record 38 -LDAP 40 -Prefix 41 -Zero Touch 42 -ACD 45 -Local Group 48 -Custom Button 50 -Keypad Lock 61 -Directory	
linekey.X.xml_phonebook = (X ranges from 1 to 6.)	String	It specifies the desired remote phonebook/local group for the DSS key. The default value is blank.	DSSKey->Line Key
linekey.X.label = (X ranges from 1 to 6.)	String	It configures the label displaying on the LCD screen for each line key. The default value is blank.	DSSKey->Line Key
programmablekey.X.type = (X ranges from 1 to 14.)	Number	It configures the key feature for the programmable key. Valid values are: 0 -N/A 2 -Forward 5 -DND 6 -Redial	DSSKey->Programmable Key

Parameter	Permitted Values	Descriptions	Web Setting Path
		7 -Call Return 8 -SMS 9 -Directed Pickup 13 -Speed Dial 22 -XML Group 23 -Group Pickup 27 -XML Browser 28 -History 30 -Menu 31 -Switch Account 32 -New SMS 33 -Status 38 -LDAP 40 -PTT 41 -Zero Touch 43 -Local Directory 44 -Network Directory 45 -Local Group 46 -Network Group 47 -XML Directory 50 -Keypad Lock 61 -Directory	
programablekey.X.line = (X ranges from 1 to 14.)	Integer from 0 to 5	It configures the desired line to apply the programmable key feature. 0 -Line 1 1 -Line 2 ... 5 -Line 6	DSSKey-> Programmable Key
programablekey.X.value = (X ranges from 1 to 14)	String	It configures the value of the programmable key.	DSSKey-> Programmable Key
programablekey.X.xml_phonebook =	String	It configures the desired remote phonebook/local group/BSFT phonebook for the programmable key.	DSSKey-> Programmable Key

Parameter	Permitted Values	Descriptions	Web Setting Path
(X ranges from 1 to 14.)			
programmablekey.X.history_type = (X ranges from 1 to 14.)	Number	It configures the history type of programmable key.	DSSKey->Programmable Key
programmablekey.X.label = (X ranges from 1 to 14.)	String	It configures the label displaying on the LCD screen for each programmable key.	DSSKey->Programmable Key
expansion_module.X.key.Y.type = (X ranges from 1 to 6. Y ranges from 1 to 39.)	Number	It configures the key feature of the expansion module key.	DSSKey->Ext Key
expansion_module.X.key.Y.line = (X ranges from 1 to 6. Y ranges from 1 to 39.)	Number	It configures the desired line to apply this expansion module key feature. The valid values are the same as those of "linekey.X.line".	DSSKey->Ext Key
expansion_module.X.key.Y.value = (X ranges from 1 to 6. Y ranges from 1 to 39.)	String	It configures the value of the expansion module key.	DSSKey->Ext Key
expansion_module.X.key.Y.pickup_value = (X ranges from 1 to 6.	String	It configures the directed call pickup code. The default value is blank.	DSSKey->Ext Key

Parameter	Permitted Values	Descriptions	Web Setting Path
Y ranges from 1 to 39.)			
expansion_module.X.key.Y.label = (X ranges from 1 to 6. Y ranges from 1 to 39.)	String	It configures the label displaying on the LCD screen of the expansion module for each key.	DSSKey->Ext Key
expansion_module.X.key.Y.xml_phonebook =	String	It specifies the desired remote phonebook/local group/BSFT phonebook for the DSS key. It applies to the XML Group/Local Group/BroadSoft Group features.	DSSKey->Ext Key
forward.always.enable =	0 or 1	It enables or disables the always forward feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->Forward &DND->Always Forward->On/Off
forward.always.target =	String	It configures the target number the phone forwards all incoming calls to.	Features->Forward &DND->Always Forward->Target
forward.always.on_code =	String	It configures the always forward on code.	Features->Forward &DND->Always Forward->On Code
forward.always.off_code =	String	It configures the always forward off code.	Features->Forward &DND->Always Forward->Off Code
forward.busy.enable =	0 or 1	It enables or disables the busy forward feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->Forward &DND->Busy Forward->On/Off
forward.busy.t	String	It configures the target number the phone forwards the incoming calls to	Features->Forward &DND->Busy

Parameter	Permitted Values	Descriptions	Web Setting Path
target =		when busy.	Forward->Target
forward.busy.on_code =	String	It configures the busy forward on code.	Features->Forward &DND->Busy Forward->On Code
forward.busy.off_code =	String	It configures the busy forward off code.	Features->Forward &DND->Busy Forward->Off Code
forward.no_answer.enable =	0 or 1	It enables or disables the 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	It configures the target number the phone forwards the incoming calls to after a period of ring time.	Features->Forward &DND->No Answer Forward->Target
forward.no_answer.timeout =	Integer from 0 to 20	It configures the waiting ring time (n*6) before forwarding. The default value is 2.	Features->Forward &DND->No Answer Forward->After Ring Times
forward.no_answer.on_code =	String	It configures the no answer forward on code.	Features->Forward &DND->No Answer Forward->On Code
forward.no_answer.off_code =	String	It configures the no answer forward off code.	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 the international number. 0 -Disabled 1 -Enabled The default value is 1.	Features->General Information->Fwd International

Parameter	Permitted Values	Descriptions	Web Setting Path
acd.auto_available =	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 =	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	It configures the URL the phone sends when completing startup. The value format is: http(s)://IP address of server/help.xml? variable name=variable value. Valid variable values are: <ul style="list-style-type: none"> • \$mac • \$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?model=\$model	Features->Action URL->Setup Completed
action_url.log_on =	URL	It configures the URL the phone sends to when registering an account. Example: action_url.log_on =	Features->Action URL->Registered

Parameter	Permitted Values	Descriptions	Web Setting Path
		http://192.168.0.20/help.xml?model=\$model	
action_url.log_off =	URL	It configures the URL the phone sends to when logging out an account. Example: action_url.log_off = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Unregistered
action_url.register_failed =	URL	It configures the URL the phone sends to when failing to register an account. Example: action_url.register_failed = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Register Failed
action_url.off_hook =	URL	It configures the URL the phone sends to when off hook. Example: action_url.off_hook = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Off Hook
action_url.on_hook =	URL	It configures the URL the phone sends to when on hook. Example: action_url.on_hook = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->On Hook
action_url.incoming_call =	URL	It configures the URL the phone sends to when receiving an incoming call. Example: action_url.incoming_call = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Incoming Call
action_url.outgoing_call =	URL	It configures the URL the phone sends to when placing a call. Example: action_url.outgoing_call = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Outgoing Call

Parameter	Permitted Values	Descriptions	Web Setting Path
		del	
action_url.call_established =	URL	It configures the URL the phone sends to when establishing a call. Example: action_url.call_established = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Established
action_url.dnd_on =	URL	It configures the URL the phone sends to when the DND feature is enabled. Example: action_url.dnd_on = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Open DND
action_url.dnd_off =	URL	It configures the URL the phone sends to when the DND feature is disabled. Example: action_url.dnd_off = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Close DND
action_url.always_fwd_on =	URL	It configures the URL the phone sends to when the always forward feature is enabled. Example: action_url.always_fwd_on = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Open Always Forward
action_url.always_fwd_off =	URL	It configures the URL the phone sends to when the always forward feature is disabled. Example: action_url.always_fwd_off = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Close Always Forward
action_url.busy_fwd_on =	URL	It configures the URL the phone sends to when the busy forward feature is enabled.	Features->Action URL->Open Busy Forward

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

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

Parameter	Permitted Values	Descriptions	Web Setting Path
action_url.call_terminated =	URL	It configures the URL the phone sends to when terminating the call. Example: action_url.call_terminated = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Terminated
action_url.busy_to_idle =	URL	It configures the URL the phone sends to when changing the state of the phone from busy to idle. Example: action_url.busy_to_idle = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Busy To Idle
action_url.idle_to_busy =	URL	It configures the URL the phone sends to when changing the state of the phone from idle to busy. Example: action_url.idle_to_busy = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Idle To Busy
action_url.ip_change =	URL	It configures the URL the phone sends to when changing the IP address of the phone. Example: action_url.ip_change = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->IP Changed
action_url.forward_incoming_call =	URL	It configures the URL the phone sends to when forwarding an incoming call. Example: action_url.forward_incoming_call = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Forward Incoming Call
action_url.reject_incoming_call =	URL	It configures the URL the phone sends to when rejecting an incoming call. Example: action_url.reject_incoming_call =	Features->Action URL->Reject Incoming Call

Parameter	Permitted Values	Descriptions	Web Setting Path
		http://192.168.0.20/help.xml?model=\$model	
action_url.answer_new_incoming_call =	URL	It configures the URL the phone sends to when answering a new incoming call. Example: action_url.answer_new_incoming_call = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Answer New-In Call
action_url.transfer_finished =	URL	It configures the URL the phone sends to when completing to transfer a call. Example: action_url.transfer_finished = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Transfer Finished
action_url.transfer_failed =	URL	It configures the URL the phone sends to when failing to transfer a call. Example: action_url.transfer_failed = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Transfer Failed
action_url.call_interrupt =	URL	It configures the URL the phone sends to when canceling the call in the connecting interface. Example: action_url.call_interrupt = http://192.168.0.20/help.xml?model=\$model	
action_url.call_remote_busy =	URL	It configures the URL the phone sends to when the callee rejects the incoming call from the IP phone. Example: action_url.call_remote_busy = http://192.168.0.20/help.xml?model=\$model	
action_url.call_remote_canceled =	URL	It configures the URL the phone sends to when the caller cancels the incoming call to the IP phone.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		Example: action_url.call_remote_canceled =	
lang.wui =	English, German, French, Italian, Spanish, Turkish or Portuguese	It configures the language of the web user interface.	Settings->Preference->Language
lang.gui =	English, German, French, Turkish, Italian, Polish, Spanish or Portuguese	It configures the language displaying on the phone user interface. The default value is English.	
local_time.manual_ntp_server_prior =	0 or 1	It specifies whether to use the NTP server address obtained from the DHCP server preferentially. 0-Use the NTP server address obtained from the DHCP server preferentially. 1-Use the manual NTP server address preferentially	
local_time.time_zone =	String	It configures the time zone. The default value is +8.	Settings->Time & Date->Time Zone
local_time.time_zone_name =	String	It configures time zone name. The default time zone name is China(Beijing).	Settings->Time & Date->Time Zone
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	It configures the update interval (in seconds) when using the NTP server.	Settings->Time & Date->Synchronis

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 1000.	m (1~86400s)
local_time.summer_time =	0, 1 or 2	It enables or disables the daylight saving time (DST) feature. 0 -Disabled 1 -Enabled 2 -Automatic The default value is 2.	Settings->Time & Date-> Daylight Saving Time
local_time.dst_time_type =	0 or 1	It configures the DST type when the DST feature is enabled. 0 -By Date 1 -By Week The default value is 0.	Settings->Time & Date->Fixed Type
local_time.start_time =	MM/DD/H H	It configures the time to start DST. Value formats are: <ul style="list-style-type: none"> 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.	Settings->Time & Date->Start Date (for By Date) Settings->Time & Date->DST Start Month/DST Start Day of Week/DST Start Day of Week Last in Month/ Start Hour of Day (for By Week)
local_time.end_time =	MM/DD/H H	It configures the time to end DST. Value formats are: <ul style="list-style-type: none"> 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.	Settings->Time & Date-> End Date (for By Date) Settings ->Time & Date->DST Stop Month/DST Stop Day of Week/DST Stop Day of Week Last in Month/Stop Hour of Day (for By Week)
local_time.offset_time =	Integer from -300 to 300	It configures the offset time (in seconds). The default value is blank.	Settings->Time & Date->Offset (minutes)

Parameter	Permitted Values	Descriptions	Web Setting Path
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	It configures the date format. Valid values are: 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.	Settings->Time & Date->Date Format
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 the time zone 0. 0 -Disabled 1 -Enabled The default value is 0.	Settings->Time & Date->DHCP Time
hotdesking.startup_register_name_enable =	0 or 1	It enables or disables the phone to show the register name item on the 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 show the user name item on the login wizard during startup. 0 -Disabled 1 -Enabled The default value is 1.	
hotdesking.startup_password =	0 or 1	It enables or disables the phone to show the password item on the login wizard	

Parameter	Permitted Values	Descriptions	Web Setting Path
rd_enable =		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 show the SIP server item on the login wizard during startup. 0 -Disabled 1 -Enabled The default value is 1.	
hotdesking.startup_outbound_enable =	0 or 1	It enables or disables the phone to show the outbound server item on the login wizard during startup. 0 -Disabled 1 -Enabled The default value is 0.	
hotdesking.dskey.register_name_enable =	0 or 1	It enables or disables the phone to show the register name item on the login wizard when 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 show the user name item on the 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 show the password item on the login wizard when pressing the Hot Desking key. 0 -Disabled 1 -Enabled The default value is 1.	

Parameter	Permitted Values	Descriptions	Web Setting Path
hotdesking.dskey.sip_server_enable =	0 or 1	It enables or disables the phone to show the SIP server item on the login wizard when pressing the Hot Desking key. 0 -Disabled 1 -Enabled The default value is 1.	
hotdesking.dskey.outbound_enable =	0 or 1	It enables or disables the phone to show the outbound server item on the login wizard when pressing the Hot Desking key. 0 -Disabled 1 -Enabled The default value is 0.	
distinctive_ringing_tones.alert_info.X.text = (X ranges from 1 to 10.)	0 or 1	It configures the internal ringer text for distinctive ringtone.	Settings->Ring->Internal Ringer Text
distinctive_ringing_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 ringtone.	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.	Features->General Information->Auto Redial Times

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 10.	(1~300)
zero_touch.enable =	0 or 1	It enables or disables the zero touch. It allows you to configure the network and provisioning server address via phone user interface during startup. 0 -Disabled 1 -Enabled The default value is 0.	Settings->Auto Provision->Zero Active
zero_touch.wait_time =	Integer from 0 to 100	It configures the wait time (in seconds) before skipping the zero touch. The default value is 5.	Settings->Auto-Provision->Wait Time (0~100s)
push_xml.server =	URL	It configures the URL of the push XML server.	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 interface when in the 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 addresses or any	It configures the phone to receive the action URI request from the specified IP address. Multiple IP addresses should be separated by comma.	Features->Remote Control->Action URI allow IP List
dialplan.area_code.code =	Integer	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

Parameter	Permitted Values	Descriptions	Web Setting Path
			(1-15)
dialplan.area_code.max_length =	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. The default value is 15.	Settings->Dial Plan->Area Code->Max Length (1-15)
dialplan.area_code.line_id = (X ranges from 1 to 6.)	Number	It configures the lines to apply the area code. Multiple line IDs should be separated by comma. The default value is blank.	Settings->Dial Plan->Area Code->Account
dialplan.block_out.number.X = (X ranges from 1 to 10.)	Number or String	It configures the block out number. The default value is blank.	Settings->Dial Plan->Block Out->BlockOut NumberX
dialplan.block_out.line_id.X = (X ranges from 1 to 10.)	Number	It configures the lines to apply the block out rule. Multiple line IDs should be separated by comma. The default value is blank.	Settings->Dial Plan->Block Out->Account
dialnow.item.X = (X ranges from 1 to 100.)	String	It configures the dialnow rule. Valid format is: dialnow.item.X = Dial-now rule, Line ID	Settings->Dial Plan->Dial-now
dialplan.item.X = (X ranges from 1 to 100.)	String	It configures the replace rule. Valid format is: dialplan.item.X = Enabled,Prefix,Replaced,LineID	Settings->Dial Plan->Replace Rule
remote_phonebook.data.X.url = (X ranges from 1 to 5.) (not applicable to	URL	It configures the access URL of the remote phonebook.	Directory->Remote Phone Book->Remote URL

Parameter	Permitted Values	Descriptions	Web Setting Path
T20P IP phone)			
remote_phone_book.data.X.name = (X ranges from 1 to 5.) (not applicable to T20P IP phone)	String	It configures the display name of the remote phonebook item.	Directory->Remote Phone Book->Display Name
ldap.name_filter = (not applicable to T20P IP phone)	String	It configures the criteria for searching the contact name attributes. Example: ldap.name_filter = (nameattribute=%) The default value is blank.	Directory->LDAP->LDAP Name Filter
ldap.number_filter = (not applicable to T20P IP phone)	String	It configures the criteria for searching the contact number attributes. Example: ldap.number_filter = (numberattribute=%) The default value is blank.	Directory->LDAP->LDAP Number Filter
ldap.host = (not applicable to T20P IP phone)	IP address or domain name	It configures the access URL of the LDAP server. The default value is blank.	Directory->LDAP->Server Address
ldap.port = (not applicable to T20P IP phone)	Integer	It configures the port of the LDAP server. The default value is 389.	Directory->LDAP->Port
ldap.base = (not applicable to T20P IP phone)	String	It configures the LDAP search base which corresponds to the location of the LDAP phonebook. The default value is blank.	Directory->LDAP->Base
ldap.user = (not applicable to T20P IP phone)	String	It configures the user name for accessing the LDAP server. The default value is blank.	Directory->LDAP->Username

Parameter	Permitted Values	Descriptions	Web Setting Path
T20P IP phone)			
ldap.password = (not applicable to T20P IP phone)	String	It configures the password for accessing the LDAP server. The default value is blank.	Directory->LDAP->Password
ldap.max_hits = (not applicable to T20P IP phone)	Integer from 1 to 32000	It configures the maximum of the search results returned by the LDAP server to be displayed. The default value is 50.	Directory->LDAP->Max. Hits (1~32000)
ldap.name_attr = (not applicable to T20P IP phone)	String	It configures the name attributes of each record to be returned by the LDAP server. Each attribute is separated by space. Example: ldap.name_attr =sn cn The default value is blank.	Directory->LDAP->LDAP Name Attributes
ldap.numb_attr = (not applicable to T20P IP phone)	String	It configures the number attributes of each record to be returned by the LDAP server. Each attribute is separated by space. Example: ldap.numb_attr = Mobile iPhone The default value is blank.	Directory->LDAP->LDAP Number Attributes
ldap.display_name = (not applicable to T20P IP phone)	String	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 T20P IP phone)	2 or 3	It configures the LDAP version. The default value is 3.	Directory->LDAP->Protocol

Parameter	Permitted Values	Descriptions	Web Setting Path
applicable to T20P IP phone)			
ldap.call_in_lookup = (not applicable to T20P IP phone)	0 or 1	It enables or disables the phone to perform an LDAP search when receiving an incoming call. 0 -Disabled 1 -Enabled The default value is 0.	Directory->LDAP->LDAP Lookup For Incoming Call
ldap.ldap_sort = (not applicable to T20P IP phone)	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
ldap.search_timeout = (not applicable to T20P IP phone)	Integer	It configures the timeout (in seconds) of the LDAP query. The default value is blank.	
features.rtcp_xr_enable =	0 or 1	It enables or disables the VPM RTCP_XR feature. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	
features.dnd_refuse_code =	404, 480 or 486	It configures the return code when DND mode is activated. 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 the return code when refusing a call. 404 -No Found	Features->General Information->Return Code When Refuse

Parameter	Permitted Values	Descriptions	Web Setting Path
		480 -Temporarily not available 486 -Busy here The default value is 486.	
features.call_completion_enable =	0 or 1	It enables or disables the call completion feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->Call Completion
features.fwd_mode =	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 =	0 or 1	It configures the DND mode. 0 -Phone 1 -Custom The default value is 0.	Features->Forward &DND->DND->Mode
features.dnd_on_code =	String	It configures the DND on code when the DND mode is configured as Phone.	Features->Forward &DND->DND->DND On Code
features.dnd_off_code =	String	It configures the DND off code when the DND mode is configured as Phone.	Features->Forward &DND->DND->DND Off Code
features.fwd_diversion_enable =	0 or 1	It enables or disables the 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 the 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	Features->Audio->Call Waiting Tone

Parameter	Permitted Values	Descriptions	Web Setting Path
		1-Enabled The default value is 1.	
call_waiting.on_code =	String	It configures the call waiting on code. The default value is blank.	Features->General Information->Call Waiting On Code
call_waiting.off_code =	String	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 intercom feature. 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
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 1.	Features->Intercom ->Intercom Barge
features.remote_phonebook.enable = (not applicable to T20P IP phone)	0 or 1	It enables or disables the phone to perform a remote phonebook search when receiving an incoming call. 0-Disabled 1-Enabled	Directory->Remote Phone Book->Sremote Name

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
features.remote_phonebook.flash_time = (not applicable to T20P IP phone)	Integer from 120 to 2592000	It configures the interval (in seconds) for the phone to update the data of the remote phonebook from the remote phonebook server. The default value is 3600.	Directory->Remote Phone Book->Sremote Name Flash Time (Seconds)
features.hotline_number =	number	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 The default value is 0.	Features->General Information->Suppress DTMF Display
features.dtmf_hide_delay =	0 or 1	It enables or disables the IP phone to display the DTMF digits for a short period before displaying as asterisks. 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_transfer =	String	It configures DTMF sequences. It can be consisted of digits, alphabets, * and #. The default value is blank.	Features->General Information->Transfer Send DTMF
features.dtmf_replace_transfer =	0 or 1	It enables or disables the phone to send DTMF sequences during a call when pressing the transfer soft key or the TRAN key.	Features->General Information->DTMF Replace Transfer

Parameter	Permitted Values	Descriptions	Web Setting Path
		0 -Disabled 1 -Enabled The default value is 0.	
features.headset_prior =	0 or 1	It enables or disables the headset prior feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->Headset Prior
features.hold_trans_delay =	Integer	It configures the delay time (in milliseconds) before transferring a call. The default value is 0.	
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.auto_release_bla_line =	0 or 1	It enables or disables the server to release the BLA line automatically. 0 -Disabled 1 -Enabled The default value is 0.	
features.headset_training =	0 or 1	It enables or disables the dual headset feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->Dual-Headset
features.busy_tone_delay =	0, 3 or 5	It configures the duration time (in seconds) of the busy tone. The default value is 0.	Features->General Information->Busy Tone Delay (Seconds)
features.send_pound_key =	0 or 1	It configures the phone whether to send a pound key when pressing double pound keys. 0 -Send one pound key 1 -Do not send any pound key	Features->General Information->Send Pound Key

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0.	
features.pound_key.mode =	0, 1 or 2	It configures the "#" or "*" key as the send key. 0 -Disabled 1 -# key 2 -* key The default value is 1.	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
features.play_hold_tone.enable =	0 or 1	It enables or disables the phone to play a warning tone when there is a held call. 0 -Disabled 1 -Enabled The default value is 1.	Features->General Information->Play Hold Tone
features.play_hold_tone.delay =	Integer	It configures the interval (in seconds) of playing a warning tone. The default value is 30.	Features->General Information->Play Hold Tone Delay
features.redial_tone =	Integer	It customizes the redial tone.	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 interface differently from the phone with no active accounts. 0 -Disabled 1 -Enabled The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
features.password_dial.enable =	0 or 1	It enables or disables the phone to encrypt the digits of the dialed number. The encrypted digits are displayed as asterisks on the LCD screen. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->PswDial
features.password_dial.prefix =	String	It configures the prefix numbers displayed before the encrypted digits.	Features->General Information->PswPrefix
features.password_dial.length =	Integer	It configures the length of encrypted digits.	Features->General Information->PswLength
features.history_save_display =	0 or 1	It enables or disables the phone to display the Save Call Log option on the web user interface. 0 -Disabled 1 -Enabled The default value is 1.	
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 Callog
features.power_led_on =	0 or 1	It configures the phone to turn on or turn off the power Indicator LED. 0 -On 1 -Off The default value is 0.	Features->General Information->Close Power Light
features.dsskey_blind_transfer =	0 or 1	It enables or disables the phone to perform a blind transfer by pressing the predefined transfer DSS key. 0 -Disabled 1 -Enabled The default value is 1.	

Parameter	Permitted Values	Descriptions	Web Setting Path
features.relog_offtime =	Integer from 1 to 1000	It configures the time out (in minutes) of logging the web user interface. The default value is 5.	
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.emergency_ring =	String	It configures the ringtone of emergency calls.	
features.allow_mute =	0 or 1	It enables or disables the phone to mute the call during an active call. 0 -Disabled 1 -Enabled The default value is 1.	Features->General Information->Allow Mute
features.ringer_device.is_use_headset =	0 or 1	It configures the ringer device when receiving an incoming. 0 -Use Speaker 1 -Use Headset 2 -Use Headset Group The default value is 0.	Features->Audio->Ringer Device for Headset
features.factory_pwd_enable =		It enables or disables the phone to prompt for the administrator password when you long press the OK key to reset the phone to factory. 0 -Disabled 1 -Enabled The default value is 0.	
features.pickup.group_pickup_enable =	0 or 1	It enables or disables the phone to display the GPickup soft key when the phone is off-hook. 0 -Disabled 1 -Enabled The default value is 0.	Features->Call Pickup->Group Call Pickup

Parameter	Permitted Values	Descriptions	Web Setting Path
features.pickup_group_pickup_code =	String	It configures the group call pickup code.	Features->Call Pickup->Group Call Pickup Code
features.pickup_direct_pickup_enable =	0 or 1	It enables or disables the phone to display the DPickup soft key when the phone is off-hook. 0 -Disabled 1 -Enabled The default value is 0.	Features->Call Pickup->Directed Call Pickup
features.pickup_direct_pickup_code =	String	It configures the directed call pickup code.	Features->Call Pickup->Directed Call Pickup Code
features.pickup_blf_visual_enable = (not applicable to T20 IP phone)	0 or 1	It enables or disables the phone to display a visual alert when the monitored phone is ringing. 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 phone is ringing. 0 -Disabled 1 -Enabled The default value is 0.	Features->Call Pickup->Audio Alert for BLF Pickup
features.blf_and_callpark_idle_led_enable =	0 or 1	It enables or disables the phone to turn off the BLF key LED when the monitored user is idle. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->LED Off in Idle
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.	

Parameter	Permitted Values	Descriptions	Web Setting Path
features.export_cfg_erase_password	0 or 1	It enables or disables the phone to clear password when exporting the configuration. 0 -Disabled 1 -Enabled The default value is 1.	
features.separate_display_division	0 or 1	It enables or disables the display name and number to display in two lines. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	
multicast.codec =	String	It configures the codec of multicast paging.	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.	Directory->Multicast IP->Paging Barge
multicast.listen_address.X.ip_address = (X ranges from 1 to 10.)	String	It configures the listening multicast IP address and port number for the phone.	Directory->Multicast IP->Listening Address
multicast.listen_address.X.label = (X ranges from 1 to 10)	String	It configures the label displayed on the LCD screen when receiving the multicast paging.	Directory->Multicast IP->Label

Parameter	Permitted Values	Descriptions	Web Setting Path
phone_setting .menu_show_status =	0, 1	It enables or disables the phone to display the "Status" item when in the Main Menu interface. 0 -Disabled 1 -Enabled The default value is 1.	
phone_setting .ok_enter_status =	0 or 1	It enables or disables the phone to enter the status interface by pressing the OK key when the phone is idle. 0 -Disabled 1 -Enabled The default value is 1.	
phone_setting .predial_auto_dial =	0 or 1	It enables or disables the phone to automatically dial out the entered digits in the pre-dialing interface. 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 any other key. The default value is 4.	Settings->Preference->Inter Digit Time (1~14s)
phone_setting .flash_hook_timer =	Integer from 0 to 799	It configures the duration time (in milliseconds) for flashing the hook to end a call. The default value is 1.	
phone_setting .lock =	0, 1, 2 or 3	It configures the keypad lock type. 0 -Disabled. 1 -Menu Key 2 -Function Key 3 -All Keys The default value is 0.	Features->Phone Lock->Keypad Lock Type
phone_setting .phone_lock.unlock_pin =	Integer	It configures the password for unlocking the keypad.	Features->Phone Lock->Phone Unlock PIN (0~15)

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 123.	Digit)
phone_setting .phone_lock.lo ck_time_out =	Integer from 0 to 3600	It configures the interval (in seconds) to automatically lock the phone. The default value is 0.	Features->Phone Lock->Phone Lock Time Out (0~3600s)
phone_setting .ring_type =	Ring1.wav, Ring2.wav, Ring8.wav	It configures the ringtone for the phone. Example: phone_setting.ring_type = Ring1.wav The default value is Ring1.wav.	Settings->Preferenc e->Ring Type
phone_setting .contrast = (applicable to T28P IP phone only)	Integer from 1 to 10	It configures the contrast of the LCD screen. The default value is 6.	Settings->Preferenc e->Contrast
phone_setting .lcd_logo.mod e = (not applicable to T20P IP phone)	0, 1 or 2	It configures the logo mode of the LCD screen. 0 -Disabled 1 -System logo 2 -Custom logo The default value is 0. The T28P IP phone only supports to display a system logo or custom logo on the idle LCD screen. The default value is 1.	Features->General Information->Use Logo
phone_setting .active_backli ght_level =	Integer from 1 to 10	It configures the level of the active backlight intensity. The default value is 2.	Settings->Preferenc e->Backlight Idle Intensity
phone_setting .backlight_tim e =	1, 60, 120, 300, 600 or 1800	It configures the backlight time (in seconds). 1 -Always on The default value is 1.	Settings->Preferenc e->Backlight Time (seconds)
phone_setting .ring_for_tranf ailed =	Ring1.wav. ... Ring8.wav	It configures the ringtone when the phone fails to transfer a call.	
phone_setting .logon_wizard	0 or 1	It enables or disables the phone to show the logon wizard during startup.	Features->General Information->

Parameter	Permitted Values	Descriptions	Web Setting Path
=		0 -Disabled 1 -Enabled The default value is 0.	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. 0 -Disabled 1 -Enabled The default value is 1.	Features->General Information->180 Ring Workaround
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
phone_setting .custom_softkey_enable = (not applicable to T20P IP phone)	0 or 1	It enables or disables customizing the softkey layout. 0 -Disabled 1 -Enabled The default value is 0.	Settings->Softkey Layout->Custom Softkey
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_number =	Phone number	It configures the emergency numbers. Each emergency number should be separated by a comma. The default value is 112,911,110.	Features->Phone Lock->Emergency
phone_setting .end_call_network_disconnect.enable =	0 or 1	It configures the phone whether to end the call when the network is unavailable. 0 -End the call 1 -Do not end the call	

Parameter	Permitted Values	Descriptions	Web Setting Path
phone_setting .show_code403 =	String	It configures the display message on the LCD screen when receiving a 403 message. If leaving the field blank, the phone will display the value sent from the server when receiving the 403 message. The default value is blank.	
phone_setting .user_enable =	0 or 1	It enables or disables the user access level. 0 -Disabled 1 -Enabled The default value is 1.	
directory_setting.url =	URL	It configures the access URL of the customized directory list file.	Directory->Setting->Directory
super_search.url =	URL	It configures the access URL of the customized search source list in dialing file.	Directory->Setting->Search Source List In Dialing
firmware.url =	URL	It configures the access URL of firmware file.	
ringtone.url =	URL	It configures the access URL of the customized ringtone file.	
ringtone.delete =	URL	It deletes all customized ringtone files.	
gui_lang.url =	URL	It configures the access URL of the language file.	
gui_lang.delete =	URL	It deletes all customized language files.	
lcd_logo.url = (not applicable to T20P IP phone)	URL	It configures the access URL of logo file.	
lcd_logo.delete = (not applicable to T20P IP phone)	URL	It deletes all customized logo files.	

Parameter	Permitted Values	Descriptions	Web Setting Path
trusted_certificates.url =	URL	It configures the access URL of the trusted certificate file.	
trusted_certificates.delete =	URL	It deletes all trusted certificate files.	
server_certificates.url =	URL	It configures the access URL of the server certificate file.	
server_certificates.delete =	URL	It deletes all server certificate files.	
local_contact.data.url =	URL	It configures the access URL of the local contact file.	
auto_dst.url =	URL	It configures the access URL of the DST Time file.	
dialplan_dialnow.url =	URL	It configures the access URL of the dial-now rule file.	
dialplan_replace_rule.url =	URL	It configures the access URL of the replace rule file.	
custom_factory_configuration.url =	URL	It configures the access URL of the customized factory configuration file.	
configuration.url =	URL	It configures the access URL for downloading the customized factory configuration file.	
call_list.url =	URL	It configures the access URL for downloading the call list. It takes effect after reboot.	
openvpn.url =	URL	It configures the access URL of the openVPN .tar file.	
custom_mac_cfg.url =	URL	It configures the access URL of the custom MAC-Oriented CFG file.	
local_contact.group_list_url =	URL	It configures the access URL of the contact group file.	
web_item_level.url =	URL	It configures the access URL of the file, which defines access range of the 3-level permissions.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		It takes effect after reboot.	
account.X.enable = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	String	It configures the label displayed on the LCD screen for account X. The default value is blank.	Account->Register ->Label
account.X.display_name = (X ranges from 1 to 6.)	String	It configures the display name for account X. The default value is blank.	Account->Register ->Display Name
account.X.auth_name = (X ranges from 1 to 6.)	String	It configures the user name for register authentication for account X. The default value is blank.	Account->Register ->User Name
account.X.use_r_name = (X ranges from 1 to 6.)	String	It configures the register user name for account X. The default value is blank.	Account->Register ->Register Name
account.X.password = (X ranges from 1 to 6.)	String	It configures the password for register authentication for account X. The default value is blank.	Account->Register ->Password
account.X.failback_mode = (X ranges from 1 to 6.)	0, 1, 2 or 3	It specifies the method used by the phone to reconnect the primary server when encountering a failover, if the SIP server is configured with a domain name for account X. 0 -newRequests 1 -DNSTTL 2 -Registration 3 -duration The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.reregister_enable = (X ranges from 1 to 6.)	0 or 1	It specifies whether the phone need to re-register the account when encountering an INVITE failover, if the SIP server is configured with a domain name for account X. 0- Not need to re-register 1- Need to re-register The default value is 0.	
account.X.retry_counts = (X ranges from 1 to 6.)	Integer from 0 to 65535	It configures retry times for the phone after the server has no response to the phone's request for account X. The default value is 3.	
account.X.failback_timeout = (X ranges from 1 to 6.)	Integer 0, from 60 to 65535	It configures the time (in seconds) for the phone to retry to use the primary server after failing over to the current working server when the "account.X.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.	
account.X.naptr_build = (X ranges from 1 to 6.)	0 or 1	It configures the way of SRV query when there is no result from the NAPTR query. 0- SRV query using UDP only 1- SRV query using TCP or TLS. The default value is 0.	
account.X.failback.redundancy_type = (X ranges from 1 to 6.)	0 or 1	It configures the registration mode for the phone. 0- Concurrent registration 1- Successive registration The default value is 0.	
account.X.failback.timeout = (X ranges from 1 to 6.)	10~2147483647	It configures the time interval (in seconds) for the phone to detect whether the working server is available by sending the registration request. It is only applicable to successive registration mode.	

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 120.	
account.X.sip_server.Y.address = (X ranges from 1 to 6. Y ranges from 1 to 2.)	IP address or domain name	It configures the IP address or domain name of server Y for account X.	Account->Register ->SIP Server Y->Server Host
account.X.sip_server.Y.port = (X ranges from 1 to 6. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the port of server Y for account X. The default value is 5060.	Account->Register ->SIP Server Y->Port
account.X.sip_server.Y.expires = (X ranges from 1 to 6. Y ranges from 1 to 2.)	Integer from 30 to 2147483647	It configures the registration expiration time to SIP server Y for account X. The default value is 3600.	Account->Register ->SIP Server Y->Server Expires
account.X.sip_server.Y.transport_type = (X ranges from 1 to 6. Y ranges from 1 to 2.)	0, 1, 2 or 3	It configures the transport type with the SIP server Y for account X. 0-UDP 1-TCP 2-TLS 3-DNS-NAPTR The default value is 0.	Account->Register ->Transport
account.X.sip_server.Y.retry_counts = (X ranges from 1 to 6. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the times for the phone to retransmit the request when the SIP server Y is unavailable or there is no respond 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
account.X.sip_server.Y.failback_mode = (X ranges from 1 to 6. Y ranges from 1 to 2.)	0, 1, 2 or 3	It specifies the method used by the phone to reconnect the primary server when encountering a failure, if the SIP server Y is configured with a domain name for account X. 0 -newRequests 1 -DNSTTL 2 -Registration 3 -duration The default value is 0.	
account.X.sip_server.Y.failback_timeout = (X ranges from 1 to 6. Y ranges from 1 to 2.)	Integer from 0 to 65535	It configures the time (in seconds) for the phone to retry to use the primary server after failing over to the current working server when the "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.	
account.X.sip_server.Y.register_on_enable = (X ranges from 1 to 6. Y ranges from 1 to 2.)	0 or 1	It enables or disables the phone to send registration request to a secondary server when encountering a failover. 0 -Disabled 1 -Enabled The default value is 0.	
account.X.static_cache_priority = (X ranges from 1 to 6.)	0 or 1	It configures whether preferentially to use the DNS cache for domain name resolution of the SIP server. 0 -Use Domain name server preferentially 1 -Use DNS cache preferentially The default value is 1.	
account.X.dns_cache_type = (X ranges	0, 1 or 2	It specifies the content that the DNS cache record. 0 -Do not use DNS cache. 1 -Use DNS cache, but do not record the	

Parameter	Permitted Values	Descriptions	Web Setting Path
from 1 to 6.)		additional record. 2 -Use DNS cache and record the additional record. The default value is 1.	
account.X.dns_cache_a.Y.name = (X ranges from 1 to 6.)	String	It configures the domain name of A record Y in the DNS cache for account X.	
account.X.dns_cache_a.Y.ip = (X ranges from 1 to 6.)	IP address	It configures the IP address that the domain name of A record Y maps to in the DNS cache for account X.	
account.X.dns_cache_a.Y.ttl = (X ranges from 1 to 6.)	Integer from 300 to 2147483647	It specifies 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.	
account.X.dns_cache_srv.Y.name = (X ranges from 1 to 6.)	Domain name	It configures the domain name of SRV record Y in the DNS cache for account X.	
account.X.dns_cache_srv.Y.port = (X ranges from 1 to 6.)	Integer from 0 to 65535	It identifies the port to be used in SRV record Y for account X.	
account.X.dns_cache_srv.Y.priority = (X ranges from 1 to 6.)	Integer from 0 to 65535	It specifies the priority for the specific host entry in SRV record Y for account X. Lower priority is more preferred. The default value is 0.	
account.X.dns_cache_srv.Y.target =	Domain name	It specifies the actual host for an A query for account X.	

Parameter	Permitted Values	Descriptions	Web Setting Path
(X ranges from 1 to 6.)			
account.X.dns_cache_srv.Y.weight = (X ranges from 1 to 6.)	Integer from 0 to 65535	It specifies 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.	
account.X.dns_cache_srv.Y.ttl = (X ranges from 1 to 6.)	Integer from 300 to 2147483647	It specifies the time interval that SRV record Y may be cached before the record should be consulted again for account X. The default value is 300.	
account.X.dns_cache_naptr.Y.name = (X ranges from 1 to 6.)	Domain name	It specifies the domain name to which NAPTR record Y refers in the DNS cache for account X.	
account.X.dns_cache_naptr.Y.flags = (X ranges from 1 to 6.)	S, A, U or P	It specifies the flag of NAPTR record Y in the DNS cache for account X. (Only supports "S") 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	
account.X.dns_cache_naptr.Y.order = (X ranges from 1 to 6.)	Integer from 0 to 65535	It specifies the preferential treatment for NAPTR record Y for account X. Lower order is more preferred. The default value is 0.	
account.X.dns_cache_naptr.Y.preference = (X ranges from 1 to 6.)	Integer from 0 to 65535	It specifies the preference of NAPTR record Y with equal order value for account X. Lower preference is more preferred. The default value is 0.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.dns_cache_naptr. Y.replace = (X ranges from 1 to 6.)	Domain name	It specifies a DNS name to be used for the next SRV query in NAPTR record Y for account X.	
account.X.dns_cache_naptr. Y.service = (X ranges from 1 to 6.)	String	It specifies the service available for SIP in NAPTR record Y for account X.	
account.X.dns_cache_naptr. Y.ttl = (X ranges from 1 to 6.)	Integer from 300 to 2147483647	It specifies 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.	
account.X.srv_ttl_timer_enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to refresh the DNS-SRV query record at the regular time. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	
account.X.dns_srv_type = (X ranges from 1 to 6.)	0, 1, 2 or 3	It specifies the way of the DNS-SRV query. 0 -DNS-SRV query using UDP, TCP or TLS 1 -DNS-SRV query using UDP only 2 -DNS-SRV query using TCP only 3 -DNS-SRV query using TLS only The default value is 0. It takes effect after reboot.	
account.X.outbound_proxy_enable = (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
account.X.outbound_host = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	Integer	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 = (X ranges from 1 to 6.)	String	It configures the voice mail number for account X. The default value is blank.	Account->Advanced->Voice Mail
account.X.proxy_require = (X ranges from 1 to 6.)	String	It configures the proxy server for account X. The default value is blank.	Account->Basic->Proxy Require
account.X.sip_trust_ctrl = (X ranges from 1 to 6.)	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.	
account.X.anonymous_call = (X ranges from 1 to 6.)	0 or 1	It enables or disables the anonymous call feature for account X. 0 -Disabled 1 -Enabled The default value is 0.	Account->Basic->Anonymous Call
account.X.anonymous_call_oncode = (X ranges from 1 to 6.)	String	It configures the code for activating the anonymous call feature for account X. The default value is blank.	Account->Basic->Anonymous Call->On Code
account.X.anonymous_call_offcode = (X ranges from 1 to 6.)	String	It configures the code for deactivating the anonymous call feature for account X. The default value is blank.	Account->Basic->Anonymous Call->Off Code

Parameter	Permitted Values	Descriptions	Web Setting Path
from 1 to 6.)			
account.X.reject_anonymous_call = (X ranges from 1 to 6.)	0 or 1	It enables or disables the anonymous call rejection feature for account X. 0 -Disabled 1 -Enabled The default value is 0.	Account->Basic->Anonymous Call Rejection
account.X.anonymous_reject_oncode = (X ranges from 1 to 6.)	String	It configures the code of activating the anonymous call rejection feature for account X. The default value is blank.	Account->Basic->Anonymous Call Rejection->On Code
account.X.anonymous_reject_offcode = (X ranges from 1 to 6.)	String	It configures the code of deactivating the anonymous call rejection feature for account X. The default value is blank.	Account->Basic->Anonymous Call Rejection->Off Code
account.X.dnd.enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the DND feature for account X. 0 -Enabled 1 -Disabled The default value is 0.	Features->Forward & DND->DND ->Account
account.X.dnd.on_code = (X ranges from 1 to 6.)	String	It configures the DND on code for account X.	Features->Forward & DND->DND On Code
account.X.dnd.off_code = (X ranges from 1 to 6.)	String	It configures the DND off code for account X.	Features->Forward & DND->DND Off Code
account.X.always_fwd.enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the always forward feature for account X. 0 -Enabled 1 -Disabled The default value is 0.	Features->Forward & DND->Always Forward->On/Off

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.always_fwd.target = (X ranges from 1 to 6.)	String	It configures the target number the phone forwards all incoming calls to or account X.	Features->Forward & DND->Always Forward->Target
account.X.busy_fwd.enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the busy forward feature for account X. 0 -Enabled 1 -Disabled The default value is 0.	Features->Forward & DND->Busy Forward->On/Off
account.X.busy_fwd.target = (X ranges from 1 to 6.)	String	It configures the target number the phone forwards the incoming calls to when busy for account X.	Features->Forward & DND->Busy Forward->Target
account.X.timeout_fwd.enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the no answer forward feature for account X. 0 -Enabled 1 -Disabled The default value is 0.	Features->Forward & DND->No Answer Forward->On/Off
account.X.timeout_fwd.target = (X ranges from 1 to 6.)	String	It configures the target number the phone forwards the incoming calls to after a period of ring time for account X.	Features->Forward & DND->No Answer Forward->Target
account.X.timeout_fwd.time out = (X ranges from 1 to 6.)	Integer from 0 to 20	It configures the waiting ring time before forwarding for account X. The default value is 2.	Features->Forward & DND->No Answer Forward->After Ring Times
account.X.last_type = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to record the last call forward type for account X. The default value is 0.	
account.X.always_fwd.off_c	String	It configures the always forward off code for account X.	Features->Forward & DND->Always

Parameter	Permitted Values	Descriptions	Web Setting Path
ode = (X ranges from 1 to 6.)			Forward ->Off Code
account.X.always_fwd.on_code = (X ranges from 1 to 6.)	String	It configures the always forward on code for account X.	Features->Forward & DND->Always Forward->On Code
account.X.busy_fwd.off_code = (X ranges from 1 to 6.)	String	It configures the busy forward off code for account X.	Features->Forward & DND->Busy Forward ->Off Code
account.X.busy_fwd.on_code = (X ranges from 1 to 6.)	String	It configures the busy forward on code for account X.	Features->Forward & DND->Busy Forward->On Code
account.X.timeout_fwd.off_code = (X ranges from 1 to 6.)	String	It configures the no answer forward off code for account X.	Features->Forward & DND->No Answer Forward ->Off Code
account.X.timeout_fwd.on_code = (X ranges from 1 to 6.)	String	It configures the no answer forward on code for account X.	Features->Forward & DND->No Answer Forward ->On Code
account.X.sip_listen_port = (X ranges from 1 to 6.)	Integer	It configures the SIP port for account X. The default value is 5060.	Account->Advanced->Local SIP Port
account.X.expires = (X ranges from 1 to 6.)	Integer	It configures the register expiry time (in seconds) for account X. The default value is 3600.	

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.100 rel_enable = (X ranges from 1 to 6.)	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.pre condition = (X ranges from 1 to 6.)	0 or 1	It enables or disables the resource reservation protocol (RSVP) for account X. 0 -Disabled 1 -Enabled The default value is 0.	
account.X.sub scribe_register = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to subscribe the register status for account X. 0 -Disabled 1 -Enabled The default value is 0.	
account.X.sub scribe_mwi = (X ranges from 1 to 6.)	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
account.X.sub scribe_mwi_e xpires = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	0, 1, 2, 3, 4 or 5	It configures the presentation of the caller identity when receiving an incoming call for account X. 0 -FROM 1 -PAI 2 -PAI-FROM 3 -PRID-PAI-FROM 4 -PAI-RPID-FROM,	Account-> Advanced->Caller ID Source

Parameter	Permitted Values	Descriptions	Web Setting Path
		5-RPID-FROM The default value is 0.	
account.X.cid_source_privacy (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to deal with PRIVACY header field in the 180 or 200 OK message for account X. 0-Disabled 1-Enabled The default value is 0.	
account.X.cid_source_ppi = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to deal with the PPI header field when receiving an incoming call for account X. 0-Disabled 1-Enabled The default value is 0.	
account.X.cp_source = (X ranges from 1 to 6.)	0, 1 or 2	It configures the presentation of the callee identity for account X. 0-PAI-RPID 1-Dialed Digits 2-RFC4916 The default value is 1.	
account.X.session_timer.enable = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	Integer from 300 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 (300~7200s)
account.X.session_timer.refresher = (X ranges from 1 to 6.)	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
account.X.enable_user_equal_phone = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	0, 1 or 2	It configures whether to use voice encryption service for account X. 0 -Disabled 1 -Forced 2 -Negotiated The default value is 0.	Account-> Advanced->RTP Encryption (SRTP)
account.X.ptime = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	String	It configures the BLA number for account X. The default value is blank.	Account-> Advanced->BLA Number
account.X.bla_subscribe_period = (X ranges from 1 to 6.)	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
account.X.dialoginfo_callpickup = (X ranges from 1 to 6.)	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
account.X.group_pickup_code = (X ranges from 1 to 6.)	String	It configures the group pickup code for account X.	Account-> Advanced->Group Call Pickup Code

Parameter	Permitted Values	Descriptions	Web Setting Path
from 1 to 6.)			
account.X.direct_pickup_code = (X ranges from 1 to 6.)	String	It configures the directed pickup code for account X.	Account->Advanced->Directed Call Pickup Code
account.X.auto_answer = (X ranges from 1 to 6.)	0 or 1	It enables or disables the auto answer feature for account X. 0 -Disabled 1 -Enabled The default value is 0.	Account->Basic->Auto-Answer
account.X.missed_call_log = (X ranges from 1 to 6.)	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_vm = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to subscribe to the voice mail for the message waiting indicator for account X. 0 -Disabled 1 -Enabled The default value is 0.	Account->Advanced->Subscribe MWI To Voice Mail
account.X.register_mac = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	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

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.reg_fail_retry_interval = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	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
account.X.conf_uri = (X ranges from 1 to 6.)	String	It configures the network conference URI for account X. The default value is blank.	Account-> Advanced-> Conference URI
account.X.blf.subscribe_period = (X ranges from 1 to 6.)	Integer	It configures the period (in seconds) of the BLF subscription for account X. The default value is 1800.	
account.X.blf.subscribe_event (X ranges from 1 to 6.)	0 or 1	It configures the type of the BLF subscription for account X. 0 -Dialog 1 -Presence The default value is 0.	
account.X.subscribe_acd_expires = (X ranges from 1 to 6.)	Integer from 120 to 3600	It configures the period (in seconds) of ACD subscription for account X. The default value is 3600.	Account-> Advanced->ACD Subscrip Period (120~3600s)
account.X.sip_server_type = (X ranges from 1 to 6.)	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

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.enable_signal_encode = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to encode SIP signal using RC4 encryption algorithm for account X. 0 -Disabled 1 -Enabled (RC4) The default value is 0.	
account.X.signal_encode_key = (X ranges from 1 to 6.)	String	It configures the key for the IP phone to encode the SIP signal with RC4 for account X. The default value is blank.	Account->Advanced->Signal Encode Key
account.X.music_server_uri =	String	It configures the URI of the Music On Hold server for account X.	Account->Advanced->Music Server URI
account.X.dtmf.type = (X ranges from 1 to 6.)	0, 1, 2 or 3	It configures the DTMF type for account X. 0 -INBAND 1 -RFC2833 2 -SIP INFO 3 -AUTO+SIP INFO The default value is 1.	Account->Advanced->DTMF Type
account.X.dtmf.dtmf_payload = (X ranges from 1 to 6.)	Integer from 96 to 127	It configures the RFC2833 payload for account X. The default value is 101.	Account->Advanced->DTMF Payload Type (96~255)
account.X.dns_query_timeout =	Integer from 1 to 9	It configures the timeout (in seconds) of DNS query for account X. The default value is 8.	
account.X.dtmf.info_type = (X ranges from 1 to 6.)	0, 1, 2 or 3	It configures the DTMF info type when the DTMF type is configured as "SIP INFO" or "AUTO+SIP INFO" for account X. 0 -Disabled 1 -DTMF-Relay 2 -DTMF	Account->Advanced->DTMF Info Type

Parameter	Permitted Values	Descriptions	Web Setting Path
		3 -Telephone-Event The default value is 0.	
account.X.nat.nat_traversal = (X ranges from 1 to 6.)	0 or 1	It enables or disables the NAT traversal for account X. 0 -Disabled 1 -STUN The default value is 0.	Account->Register ->NAT
account.X.nat.stun_server = (X ranges from 1 to 6.)	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 = (X ranges from 1 to 6.)	Integer	It configures the port of the STUN server for account X. The default value is 3478.	Account->Register ->STUN Server ->Port
account.X.nat.udp_update_enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables NAT keep-alive for account X. 0 -Disabled 1 -Enabled The default value is 1.	Account-> Advanced->Keep Alive Type
account.X.nat.udp_update_time = (X ranges from 1 to 6.)	Integer	It configures the keep-alive interval (in seconds) for account X. The default value is 30.	Account-> Advanced->Keep Alive Interval (Seconds)
account.X.nat.rport = (X ranges from 1 to 6.)	0 or 1	It enables or disables the NAT Rport feature for account X. 0 -Disabled 1 -Enabled The default value is 0.	Account-> Advanced->RPort
account.X.advanced.timer_t1 = (X ranges from 1 to 6.)	Float	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)

Parameter	Permitted Values	Descriptions	Web Setting Path
account.X.advanced.timer_t2 = (X ranges from 1 to 6.)	Float	It configures the session timer T2 (in seconds) for account X. The default value is 4.	Account->Advanced->SIP Session Timer T2 (2~40s)
account.X.advanced.timer_t4 = (X ranges from 1 to 6.)	Float	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 = (X ranges from 1 to 6.)	0 or 1	It enables or disables the distinctive ringtones feature for account X. 0 -Disabled 1 -Enabled The default value is 1.	Account->Advanced->Distinctive Ring Tones
account.X.ringtone.ring_type = (X ranges from 1 to 6.)	Common, Ring1.wav, Ring2.wav, Ring8.wav	It configures a ringtone for account X. Example: account.X.ringtone.ring_type = Ring1.wav The default value is Common.	Account->Basic->Ring Type
account.X.codec.Y.enable = (X ranges from 1 to 6. Y ranges from 1 to 12.)	0 or 1	It enables or disables the specified codec for account X. 0 -Disabled 1 -Enabled	Account->Codec
account.X.codec.Y.payload_type = (X ranges from 1 to 6. Y ranges from 1 to 12.)	PCMU PCMA G729 G722 G723_53 G723_63 G726_16 G726_24 G726_32	It configures the codec for account X.	Account->Codec

Parameter	Permitted Values	Descriptions	Web Setting Path
	G726_40 iLBC GSM		
account.X.codec.Y.priority = (X ranges from 1 to 6. Y ranges from 1 to 12.)	Integer from 0 to 12	It configures the priority of the enabled codec for account X.	Account->Codec
account.X.codec.Y.rtpmap = (X ranges from 1 to 6. Y ranges from 1 to 12.)	Integer from 0 to 127	It configures rtpmap of the audio codec for account X.	
account.X.unregister_on_reboot = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to log out the account X and then register the account X after reboot. 0 -Disabled 1 -Enabled The default value is 0.	Account-> Advanced-> Unregister When Reboot
account.X.compact_header_enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to support compact SIP header for account X. The default value is 0.	
account.X.music_on_hold_type = (X ranges from 1 to 6.)	0 or 1	It configures the type of the Music On Hold server for account X. 0 -Calling the music server before holding 1 -Calling the music server after holding The default value is 1.	
account.X.acd.enable = (X ranges from 1 to 6.)	0 or 1	It enables or disables ACD feature for Account X. 0 -Disabled 1 -Enabled	

Parameter	Permitted Values	Descriptions	Web Setting Path
		The default value is 0. It takes effect after reboot.	
account.X.acd .available = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to display the available and unavailable soft keys after the phone logs in the ACD system. 0 -Disabled 1 -Enabled The default value is 0.	