



Yealink SIP-T46G Auto Provisioning User Guide

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Introduction

Yealink SIP-T46G 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 shows you how to provision Yealink SIP-T46G IP phones with the minimum settings required. Yealink SIP-T46G 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 SIP-T46G IP phones.

The provisioning process outlined in this document applies to the firmware V71 or later version of Yealink SIP-T46G IP phones.

Getting Started

This section shows you 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, then the MAC-Oriented CFG file name must be 0015651130F9.cfg. The names of the Common CFG file for SIP-T46G IP phones are the same: y000000000028.cfg.

You can ask the distributor or the Yealink FAE for configuration files. The IP phones running software 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 at the back of the phone.

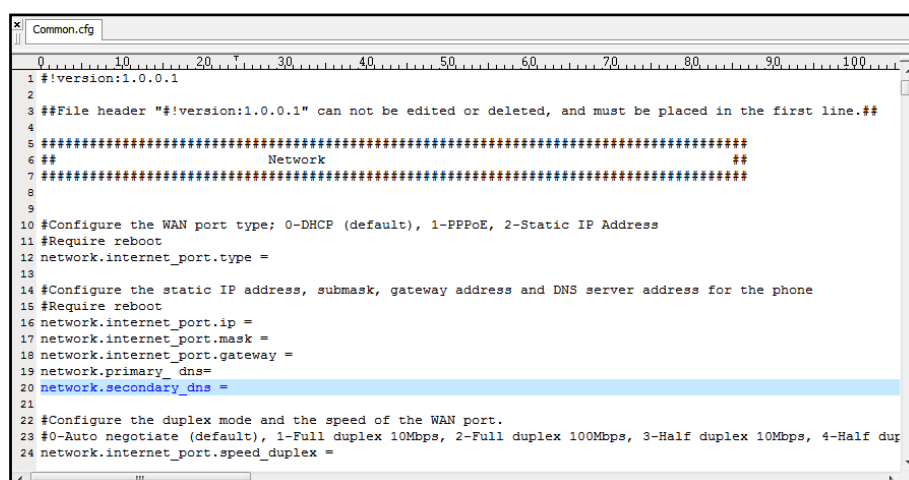
SIP Account Information: This may include SIP credentials such as user name, password and the address of the phone's registration server address. Ask your system administrator for SIP account information.

Managing Configuration Files

Auto provisioning enables 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.

Editing Common CFG File

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



```

Common.cfg
1 #!version:1.0.0.1
2
3 ##File header "#!version:1.0.0.1" can not be edited or deleted, and must be placed in the first line.##
4
5 #####
6 ##              Network              ##
7 #####
8
9
10 #Configure the WAN port type; 0-DHCP (default), 1-PPPoE, 2-Static IP Address
11 #Require reboot
12 network.internet_port.type =
13
14 #Configure the static IP address, submask, gateway address and DNS server address for the phone
15 #Require reboot
16 network.internet_port.ip =
17 network.internet_port.mask =
18 network.internet_port.gateway =
19 network.primary_dns=
20 network.secondary_dns =
21
22 #Configure the duplex mode and the speed of the WAN port.
23 #0-Auto negotiate (default), 1-Full duplex 10Mbps, 2-Full duplex 100Mbps, 3-Half duplex 10Mbps, 4-Half duplex
24 network.internet_port.speed_duplex =
  
```

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 are described as following:

```
#####
```

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

```
#####
```

```
#!version:1.0.0.1
```

```
##File header "#!version:1.0.0.1" can not be edited or deleted, and must be placed in the first line.##
```

```
#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, 5-Full duplex 1000Mbps;

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 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;

auto_provision.mode = 1

#Enable or disable the repeatedly mode feature for the phone to check the new
configuration repeatedly.

auto_provision.repeat.enable = 0

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

auto_provision.repeat.minutes = 1440

# Enable or disable the repeatedly mode feature for the phone to check the new
configuration weekly.

auto_provision.weekly.enable = 0

#Configure the start time of the day for the phone to check new configuration files. The
default value is 00:00.
#If the desired start time of the day is seven forty-five a.m., the value format is 07:45.

auto_provision.weekly.begin_time = 00:00
```

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

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

auto_provision.weekly.end_time = 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;

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

auto_provision.weekly.mask = 0123456

#Configure the URL of the auto provisioning server.

auto_provision.server.url =

#Configure the user name and password for downloading.

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 number. 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, Chinese_S, Turkish, Portuguese, Spanish, Italian,

#French and German

lang.wui =

#Set the language used on the phone LCD screen

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

lang.gui = English

```
# Enable or disable the web server access for HTTPS (0-Disabled or 1-Enabled)
#Require reboot
```

```
wui.https_enable = 1
```

```
# Enable or disable the web server access for HTTP (0-Disabled or 1-Enabled)
#Require reboot
```

```
wui.http_enable = 1
```

```
#Set the HTTP port (80 by default)
#Require reboot
```

```
network.port.http = 80
```

```
#Set the HTTPS port (443 by default)
#Require reboot
```

```
network.port.https = 443
```

```
#Set the new password (admin123) for the administrator
```

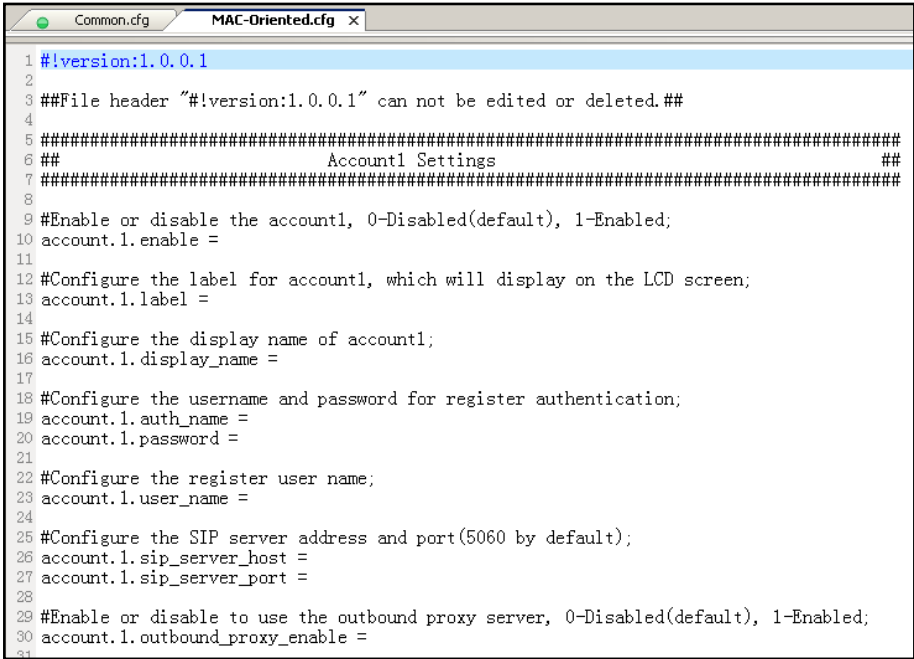
```
security.user_password = admin:admin123
```

```
#Set the new password (user123) for the user
```

```
security.user_password = user:user123
```

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 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. ##  
#Line1 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  
#Line2 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

#Line3 settings

#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

#Line4 settings

#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

#Line5 settings

#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

#Line6 settings

#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 passwords, registration information), you can encrypt the configuration files using the Configuration Conversion Tool. The AES keys must be 16 characters and the supported characters are: 0 ~ 9, A ~ Z, a ~ z, and the special characters # \$ % * +, - . : = ? @ [] ^ _ { } ~. For more information on how to encrypt the configuration files, refer to *Configuration Conversion 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.

Customizing Resource Files

When configuring some specified features, you may need to upload resource files to IP phones, such as personalized ringtone, language, 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 of how to customize the resource files and specify the access URL for the resource files.

Customizing a Ringtone

The 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.

All ringtone files 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 =
```

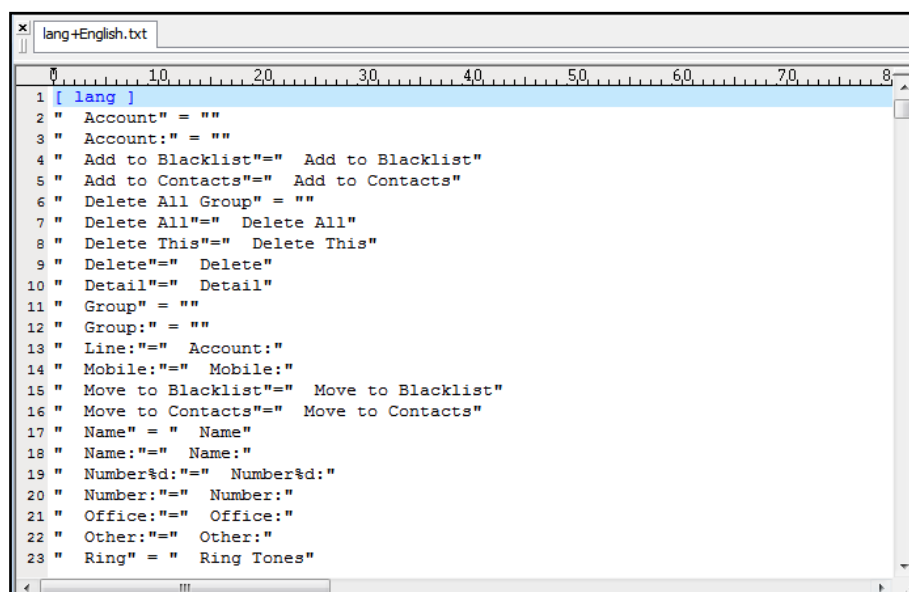
For example, enter "tftp://192.168.1.100/Ring9.wav" in the "ringtone.url =" field. During the auto provisioning process, the phone connects to the provisioning server "192.168.1.100", and downloads the ringtone file "Ring9.wav".

For more information about customizing a ringtone file, refer to [Customizing a Ringtone Using Cool Edit Pro](#) in this guide.

Customizing a LCD Language

You can modify the translation of the languages of 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 root directory of 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.

Customizing a Wallpaper

The 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 SIP-T46G IP phones:

Phone Model	Wallpaper Image Format	Resolution	Size
SIP-T46G	.jpg/.png/.bmp	<=480*272	<=5Mbs

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

```
#####
##          Configure the access URL of the wallpaper          ##
#####
```

wallpaper_upload.url =

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

In addition to specifying the access URL of the wallpaper, you need to configure the phone wallpaper.

#Configure the phone wallpaper.

#If you set the custom image (wallpaper.jpg) as phone wallpaper, the value is:

phone_setting.backgrounds = Config:wallpaper.jpg

Customizing Local Contact File

The 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, remember 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 -1 and 0~5, -1 stands for Auto, and 0~5 stand for line1~line6.
- 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="" default_photo=""/>
```

Where:

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

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

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

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

line="" specifies the line 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.

4. Specify the values within double quotes.

5. Save the change.

After editing the local contact template file, upload the file to the root directory of 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-T46G IP phones:

```
<root_group>
  <group display_name="All Contacts" ring="" />
  <group display_name="Company" ring="" />
  <group display_name="Family" ring="" />
  <group display_name="Friend" ring="" />
  <group display_name="Blacklist" ring="" />
</root_group>
<root_contact>
  <contact display_name="Jone" office_number="1101"
mobile_number="26584933" other_number="1254856" line="0" ring="Auto"
group_id_name="All Contacts"
default_photo="/phone/resource/default/default_contact_image.png"
is_favorate="0" />
  <contact display_name="Joy" office_number="1000"
mobile_number="10244588666" other_number="059257000" line="0"
ring="Auto" group_id_name="All Contacts"
default_photo="/phone/resource/default/default_contact_image.png"
is_favorate="0" />
</root_contact>
```

```
#####
##                                ##
#####
```

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 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, remember 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 IDs. 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 SIP-T46G IP phone 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-T46G 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 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 root directory of the provisioning server and specify the access URL in the configuration files.

When editing a dial-now file, remember 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. 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 SIP-T46G IP phone 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-T46G 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

The IP Phones allow you to update the firmware manually via web user interface, or update the firmware via the auto provisioning in batch. The firmware name of the SIP-T46G IP phones is 28.x.x.x.rom (x is replaced by the actual firmware version).

To update the phones' firmware via auto provisioning in batch, ask the distributor for the firmware file, upload it to the root directory of 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@192.168.1.100/28.71.0.50.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 "28.71.0.50.rom".

Configuring a TFTP Server

Yealink SIP-T46G IP Phones support using 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/>.

We also provide instructions of configuring the FTP and HTTP servers in the [Configuring a FTP server](#) and [Configuring a HTTP Server](#) sections.

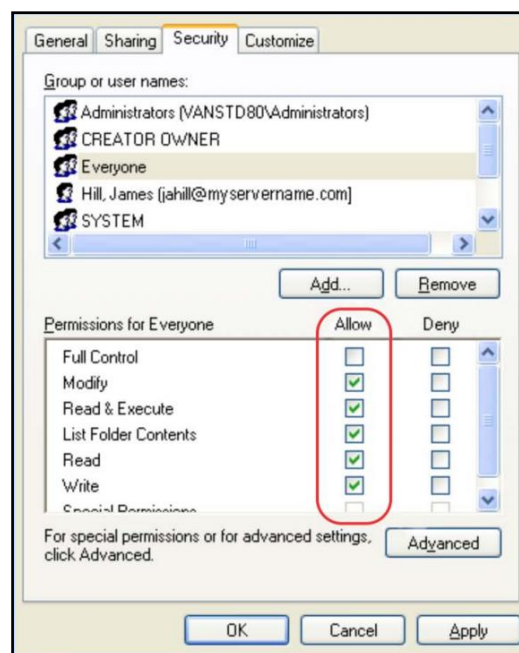
Preparing a Root Directory

To prepare a root directory:

1. Create a TFTP root directory on the local computer.
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:

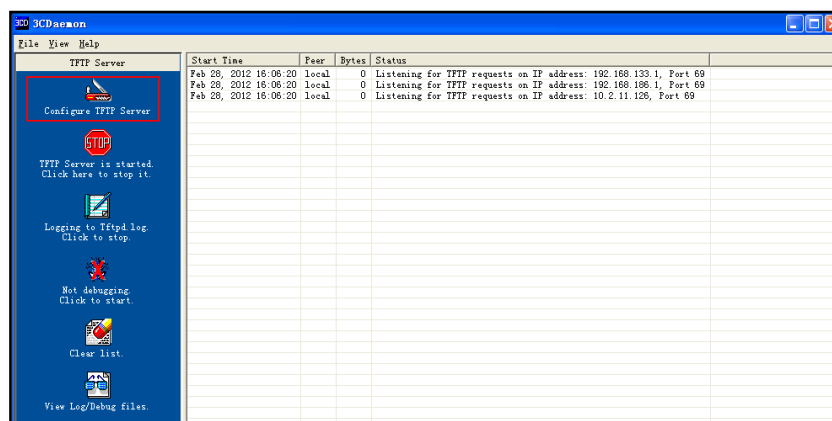


Configuring a TFTP Server

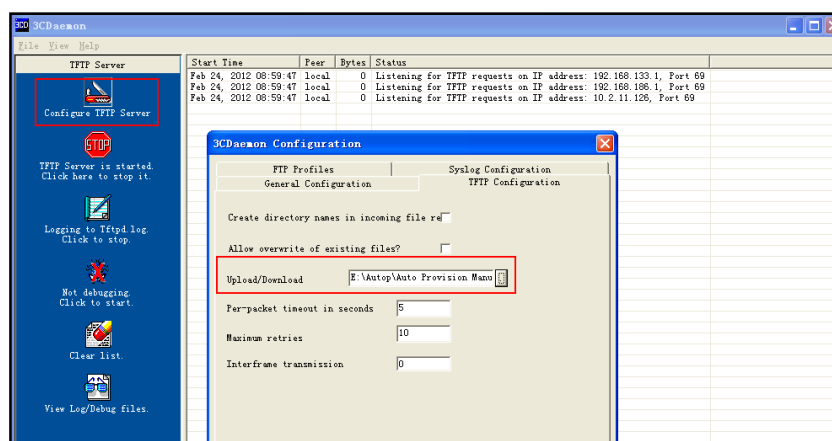
If you have a 3CDaemon application installed on your computer, use it directly.
Otherwise, download and install it.

To configure a TFTP server:

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



2. Select **Configure TFTP Server**. Click the  button to locate the TFTP root directory on the computer:



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 SIP-T46G IP phones support obtaining the provisioning server address in the following ways:

- [Zero Touch](#)
- [Plug and Play \(PnP\) Server](#)
- [DHCP Options](#)
- [Phone Flash](#)

The priority of obtaining the provisioning server address is as 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:

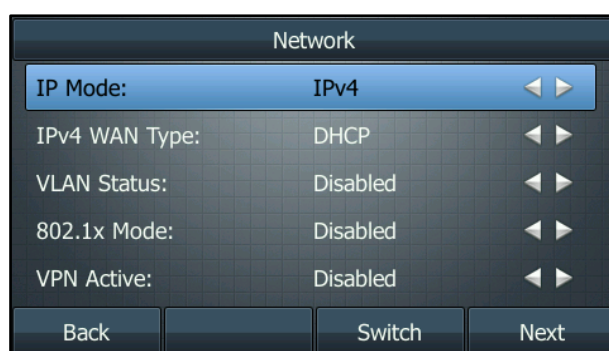
1. Click on **Settings->Auto-Provision**.
2. Select **Enabled** from the pull-down list of **Zero Active**.
3. Configure the waiting time (in seconds) in the **Wait Time (1~100)** filed.

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

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



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



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** interface.

An example of screenshot is shown as below:



Plug and Play (PnP) Server

The IP phones support obtaining 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.

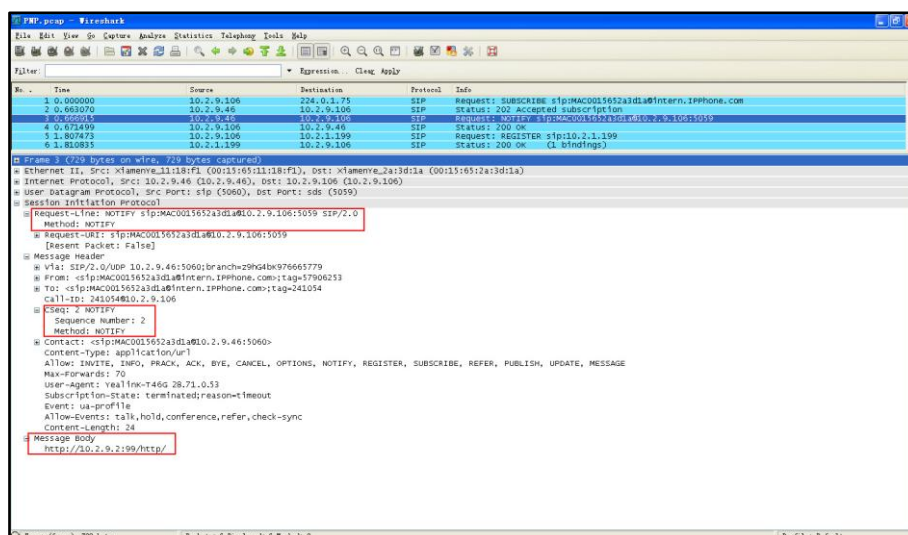
To configure PnP via web user interface:

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

The screenshot shows the Yealink web interface with the 'Settings' tab selected. Under the 'Auto-Provision' section, the 'PNP Active' radio button is set to 'On'. Other configuration options include 'DHCP Active' (On), 'Custom Option' (admin), 'DHCP Option Value' (yealink), 'Server URL', 'User Name', 'Password', 'Common AES Key', 'MAC-Oriented AES Key', 'Zero Active' (Disabled), 'Wait Time' (5), 'Power On' (On), 'Repeatly' (On), 'Interval (Minutes)' (1440), and 'Weekly' (On). A 'NOTE' box on the right indicates 'Settings Auto-Provision'.

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 obtaining 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 or 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.

For more information on configuring a DHCP server, refer to [Configuring a DHCP server](#) on page 47.

To configure the DHCP option via web user interface:

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

The default value is yealink.

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

A valid Custom Option is from 128 to 254. The Custom Option type must be in accordance with the one defined in the DHCP server.

Phone Flash

Yealink IP phones support obtaining 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:

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

- Enter the URL, user name and password of the provisioning server in the **Server SRL**, **User Name** and **Password** fields (the user name and password are optional).

The screenshot shows the Yealink web interface with the 'Auto-Provision' settings page. The settings are as follows:

Setting	Value
PNP Active	☒ On ☐ Off
DHCP Active	☒ On ☐ Off
Custom Option(128~254)	admin
DHCP Option Value	yealink
Server URL	
User Name	
Password	*****
Common AES Key	*****
MAC-Oriented AES Key	*****
Zero Active	Disabled
Wait Time(1~100)	5
Power On	☒ On ☐ Off
Repeatly	☐ On ☒ Off
Interval (Minutes)	1440
Weekly	☐ On ☒ Off

The 'NOTE' section on the right is titled 'Settings Auto-Provision'.

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

Reboot the phone after the above configurations. During startup, the phone will connect to the provisioning server, using the authentication user name and password filled in the **User Name** and **Password** fields. If the phone fails to get any information from the phone flash, the current round of auto provisioning process will end.

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 the phone is during a call, it will keep on asking for the configuration files every 30 seconds for up to 2 hours.

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 web interface with the 'Settings' tab selected. The 'Auto-Provision' section is active, displaying various configuration options. The 'Power On' radio button is selected, indicating that auto-provisioning will occur when the phone is powered on. Other options include PNP Active, DHCP Active, Custom Option, DHCP Option Value, Server URL, User Name, Password, Common AES Key, MAC-Oriented AES Key, Zero Active, Wait Time, Repeatedly, Interval, and Weekly.

Setting	Value
PNP Active	☒ On ☐ Off
DHCP Active	☒ On ☐ Off
Custom Option(128~254)	admin
DHCP Option Value	yealink
Server URL	
User Name	
Password	*****
Common AES Key	*****
MAC-Oriented AES Key	*****
Zero Active	Disabled
Wait Time(1~100)	5
Power On	☒ On ☐ Off
Repeatedly	☐ On ☒ Off
Interval (Minutes)	1440
Weekly	☐ On ☒ Off

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

Log Out

Yealink

Status
Account
Network
DSSKey
Features
Settings
Contacts
Security

Preference

Time & Date

Upgrade

Auto-Provision

Configuration

Dial Plan

Voice

Ring

Tones

Softkey Layout

TR069

Auto-Provision

PNP Active	☒ On ☐ Off	
DHCP Active	☒ On ☐ Off	
Custom Option(128~254)	admin	?
DHCP Option Value	yealink	?
Server URL		?
User Name		
Password		
Common AES Key		?
MAC-Oriented AES Key		?
Zero Active	Disabled	?
Wait Time(1~100)	5	?
Power On	☐ On ☒ Off	
Repeatly	☒ On ☐ Off	
Interval (Minutes)	1440	
Weekly	☐ On ☒ Off	

NOTE

Settings Auto-Provision

- 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:

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

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

The screenshot shows the Yealink web interface with the 'Settings' tab selected. 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 several configuration options:

- 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(1~100): ?
- Power On: ☐ On ☒ Off
- Repeatly: ☐ On ☒ Off
- Interval (Minutes):
- Weekly: ☒ On ☐ Off
- Time: --
- Day of Week:
 - ☒ Sunday
 - ☐ Monday
 - ☐ Tuesday
 - ☐ Wednesday
 - ☐ Thursday
 - ☒ Friday
 - ☐ Saturday

At the bottom of the 'Auto-Provision' section is a button labeled 'Autoprovision Now'. On the right side of the interface, there is a 'NOTE' section titled 'Settings Auto-Provision'.

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 screenshot shows the Yealink web interface for the SIP-T46G phone. The 'Settings' tab is selected, and the 'Auto-Provision' section is active. The configuration fields are as follows:

- 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(1~100): ?
- Power On: ☐ On ☒ Off
- Repeatedly: ☐ On ☒ Off
- Interval (Minutes):
- Weekly: ☐ On ☒ Off
- Time:
- Day of Week: ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

A 'NOTE' box on the right states: 'Settings Auto-Provision'. At the bottom of the settings area, there is a button labeled 'Autoprovision Now'.

The phone will perform the auto provisioning process immediately.

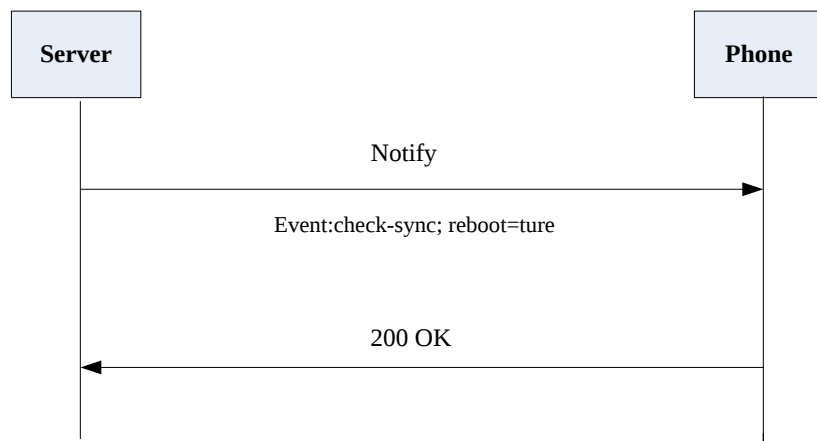
Multi-mode Mixed

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 root directory of 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 root directory of 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 about the specific configurations which require reboot during auto provisioning, refer to the

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 *Yeast SIP IP phone User Guide*.

During the auto provisioning process, you can monitor the downloading request and response message by a WinPcap tool.

Example 1: Yealink IP phone downloads configuration files from the TFTP server.

No.	Time	Source	Destination	Protocol	Info
194	46.954819	10.2.11.119	10.2.11.126	TFTP	Read Request, File: y0000000000028.cfg/000, Transfer type: octet/000
199	46.971859	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 1
200	46.981090	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 1
201	46.981090	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 2
202	46.983900	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 2
203	46.984250	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 3
204	46.986221	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 3
205	46.986388	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 4
206	46.989806	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 4
207	46.990045	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 5
208	46.991397	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 5
209	46.992153	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 6
210	46.993832	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 6
211	46.994354	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 7
212	46.996023	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 7
213	46.996245	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 8
214	47.000310	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 8
215	47.000704	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 9
216	47.003985	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 9
217	47.004139	10.2.11.126	10.2.11.119	TFTP	Data Packet, Block: 10 (last)
218	47.005570	10.2.11.126	10.2.11.119	TFTP	Acknowledgement, Block: 10
246	54.444367	10.2.11.119	10.2.11.126	TFTP	Read Request, File: 0010511185c.cfg/000, Transfer type: octet/000
245	54.462711	10.2.11.126	10.2.11.119	TFTP	Error Code, Code: Access violation, Message: Could not open requested file for reading

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

No.	Time	Source	Destination	Protocol	Info
151	34.500098	10.2.11.126	10.2.11.115	FTP	Response: 220 3Com 3Comman FTP Server Version 2.0
153	34.507326	10.2.11.115	10.2.11.126	FTP	Request: USER lff
154	34.509003	10.2.11.126	10.2.11.115	FTP	Response: 331 user name ok, need password
155	34.513482	10.2.11.115	10.2.11.126	FTP	Request: PASS llllll
156	34.515044	10.2.11.126	10.2.11.115	FTP	Response: 230 user logged in
157	34.523305	10.2.11.115	10.2.11.126	FTP	Request: TYPE I
158	34.524405	10.2.11.126	10.2.11.115	FTP	Response: 200 Type set to I.
159	34.529402	10.2.11.115	10.2.11.126	FTP	Request: PASV
160	34.532097	10.2.11.126	10.2.11.115	FTP	Response: 227 Entering passive mode (10.2.11.126,5,199)
161	34.541081	10.2.11.115	10.2.11.126	FTP	Request: SIZE y0000000000028.cfg
162	34.541289	10.2.11.126	10.2.11.115	FTP	Response: 213 1986
163	34.552631	10.2.11.115	10.2.11.126	FTP	Request: RETR y0000000000028.cfg
164	34.554197	10.2.11.126	10.2.11.115	FTP	Response: 125 using existing data connection
165	34.559326	10.2.11.126	10.2.11.115	FTP	Response: 226 Closing data connection: File transfer successful.
166	36.138570	10.2.11.115	10.2.11.126	FTP	Request: QUIT
167	36.140311	10.2.11.126	10.2.11.115	FTP	Response: 221 Service closing control connection
168	36.140415	10.2.11.115	10.2.11.126	FTP	Request: USER lff
169	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 331 user name ok, need password
170	36.140415	10.2.11.115	10.2.11.126	FTP	Request: PASS llllll
171	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 230 user logged in
172	36.140415	10.2.11.115	10.2.11.126	FTP	Request: TYPE I
173	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 200 Type set to I.
174	36.140415	10.2.11.115	10.2.11.126	FTP	Request: PASV
175	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 227 Entering passive mode (10.2.11.126,5,199)
176	36.140415	10.2.11.115	10.2.11.126	FTP	Request: SIZE 0010511185c.cfg
177	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 213 Error accessing file
178	36.140415	10.2.11.115	10.2.11.126	FTP	Request: RETR 0010511185c.cfg
179	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 550 File unavailable
180	36.140415	10.2.11.115	10.2.11.126	FTP	Request: USER lff
181	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 331 user name ok, need password
182	36.140415	10.2.11.115	10.2.11.126	FTP	Request: PASS llllll
183	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 230 user logged in
184	36.140415	10.2.11.115	10.2.11.126	FTP	Request: TYPE I
185	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 200 Type set to I.
186	36.140415	10.2.11.115	10.2.11.126	FTP	Request: PASV
187	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 227 Entering passive mode (10.2.11.126,5,194)
188	36.140415	10.2.11.115	10.2.11.126	FTP	Request: SIZE 0010511185c.cfg
189	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 213 Error accessing file
190	36.140415	10.2.11.115	10.2.11.126	FTP	Request: RETR 0010511185c.cfg
191	36.140415	10.2.11.126	10.2.11.115	FTP	Response: 550 File unavailable

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 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 shows you how to configure a FTP server using 3CDaemon. You can download the 3CDaemon software at: <http://www.oldversion.com/3Com-Daemon.html>.

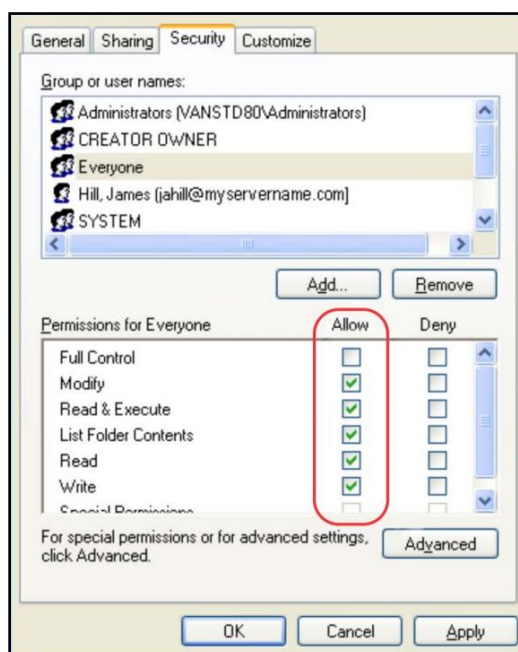
Preparing a Root Directory

To prepare a root directory:

1. Create a FTP root directory on the local computer.
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:



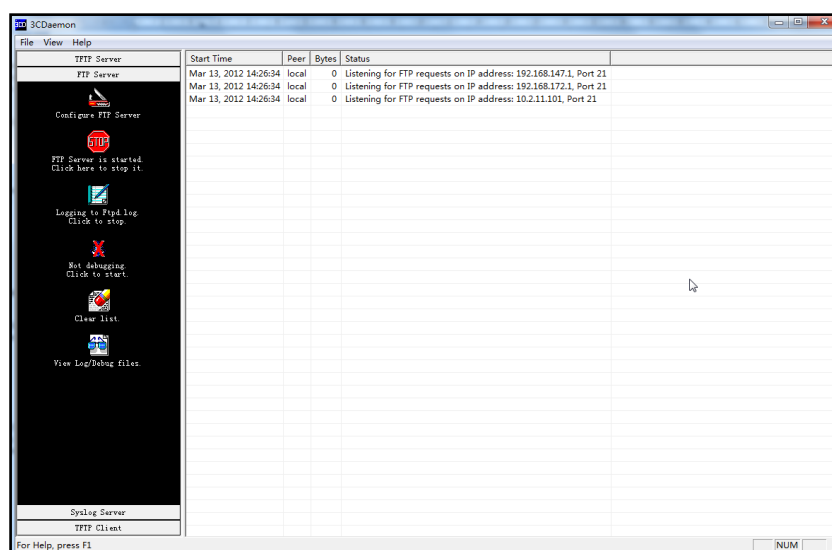
Configuring a FTP server

If you have a 3CDaemon application installed on your computer, open it now, or otherwise, download and install it.

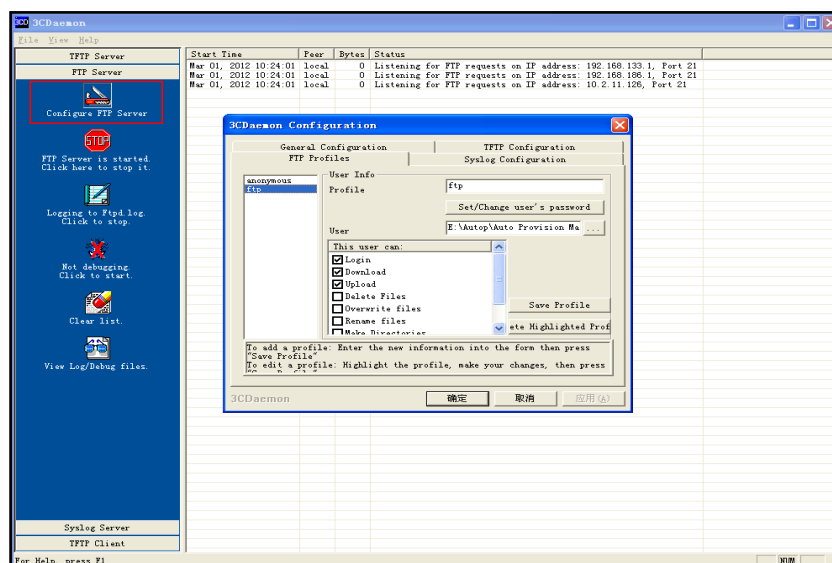
To configure a FTP server:

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

A screenshot is shown as below:



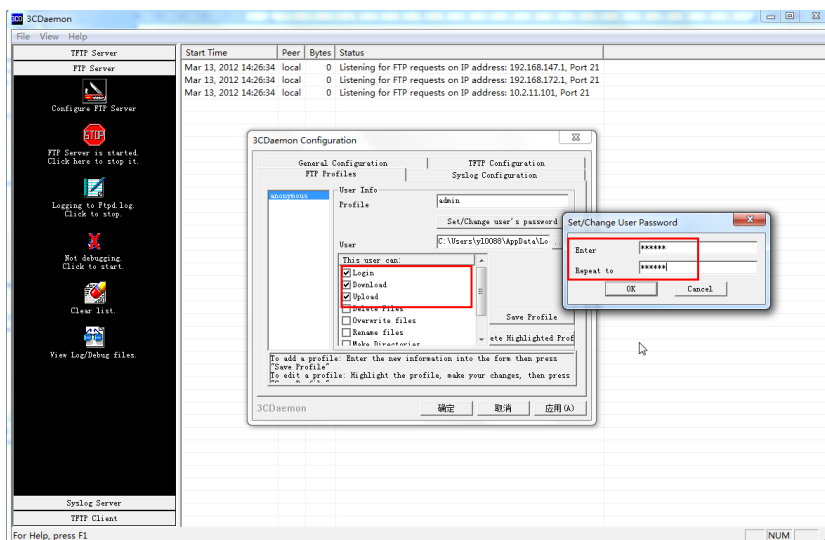
3. Select **Configure FTP Server**.
4. Click the  button to locate the FTP root directory on the computer:



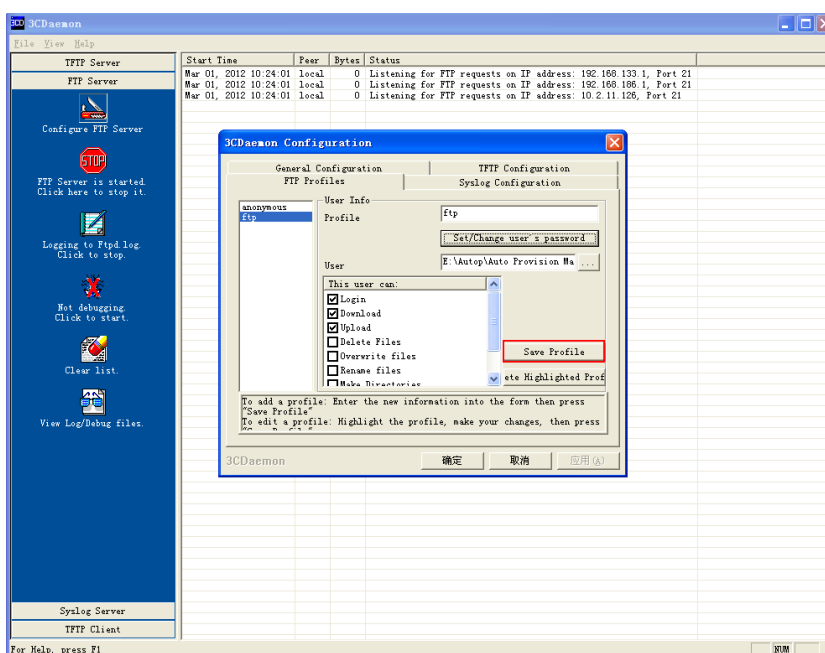
5. Enter the new authentication user name in the **Profile** field.
6. Click the **Set/Change user's password** button to set the password in the pop-up

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 shows you how to configure a HTTP server using HFS tool. You can download the HFS software at: <http://www.snapfiles.com/get/hfs.html>.

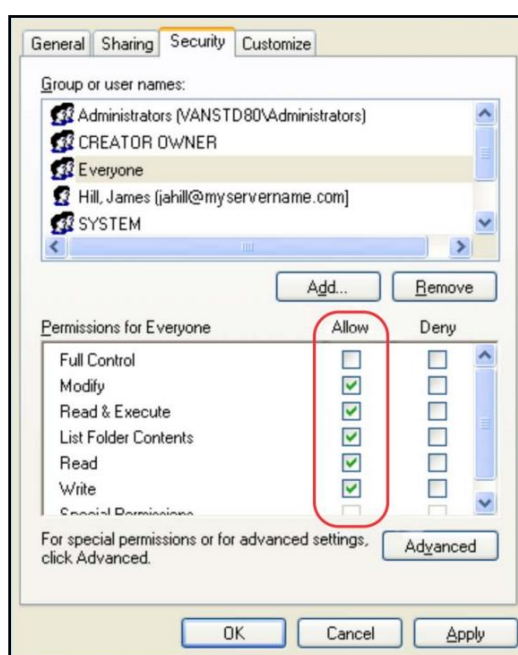
Preparing a Root Directory

To prepare a root directory:

1. Create a HTTP root directory on the local computer.
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:



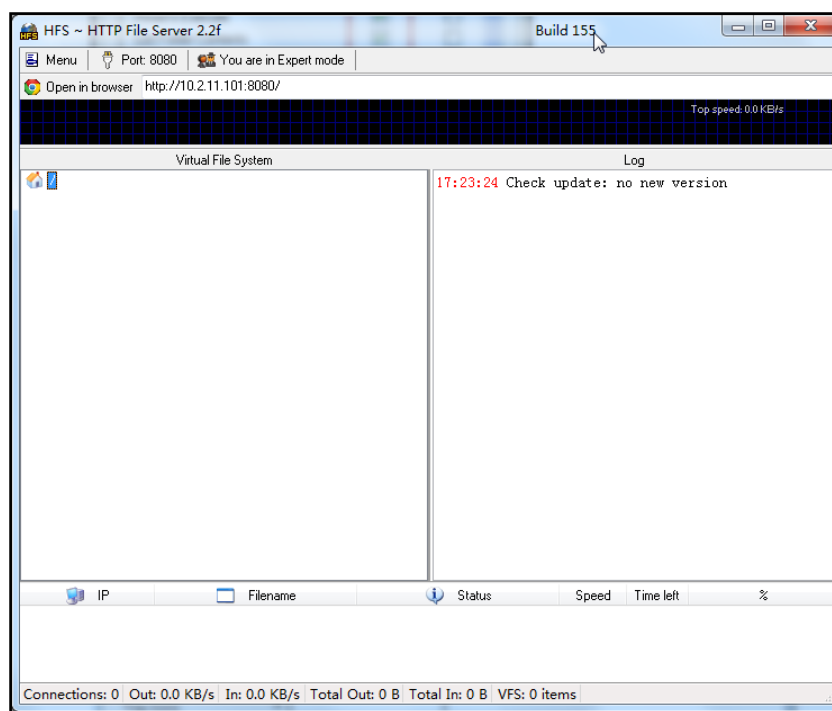
Configuring a HTTP Server

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

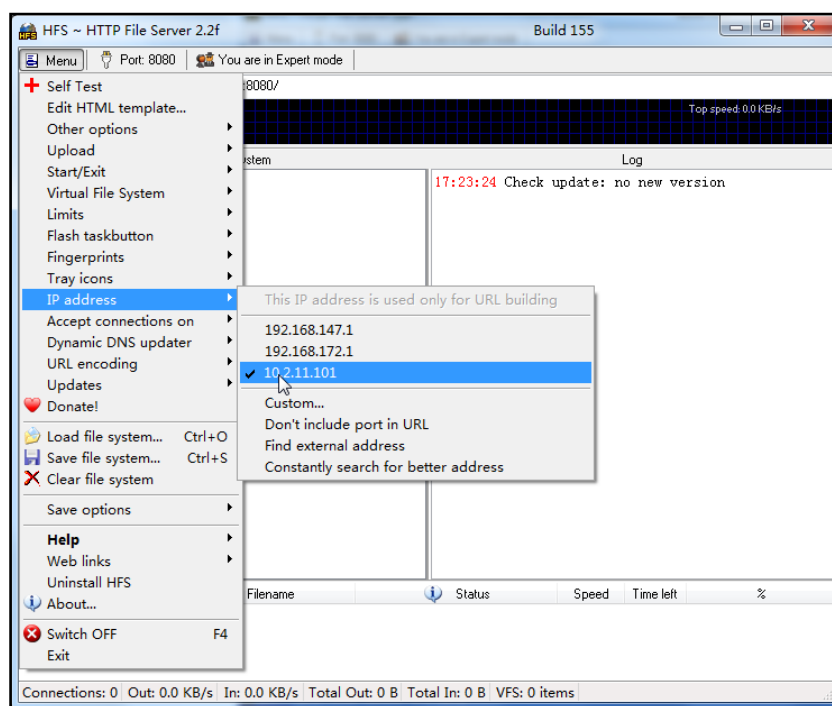
To configure a HTTP server:

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

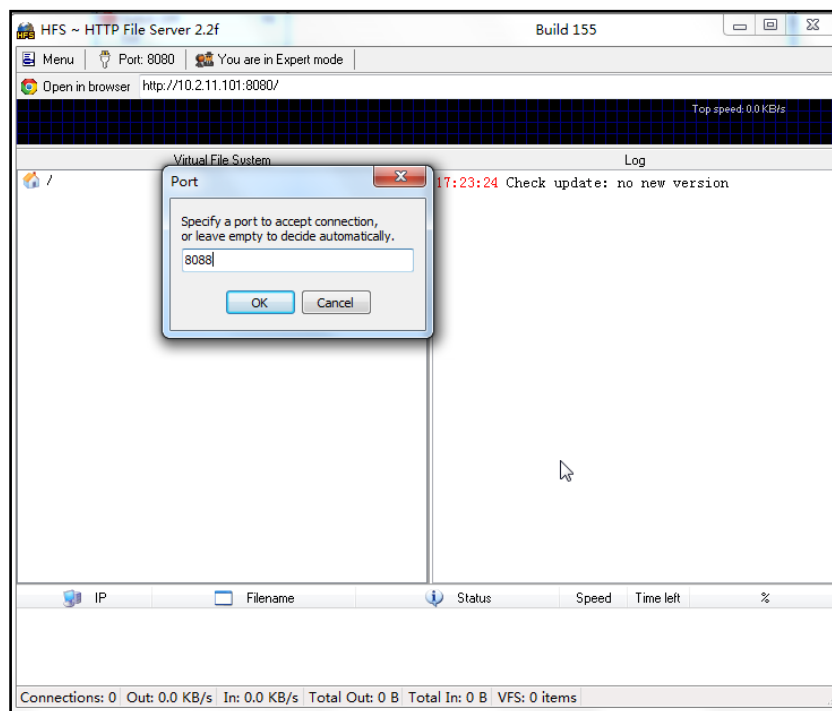
The main configuration page is shown as below:



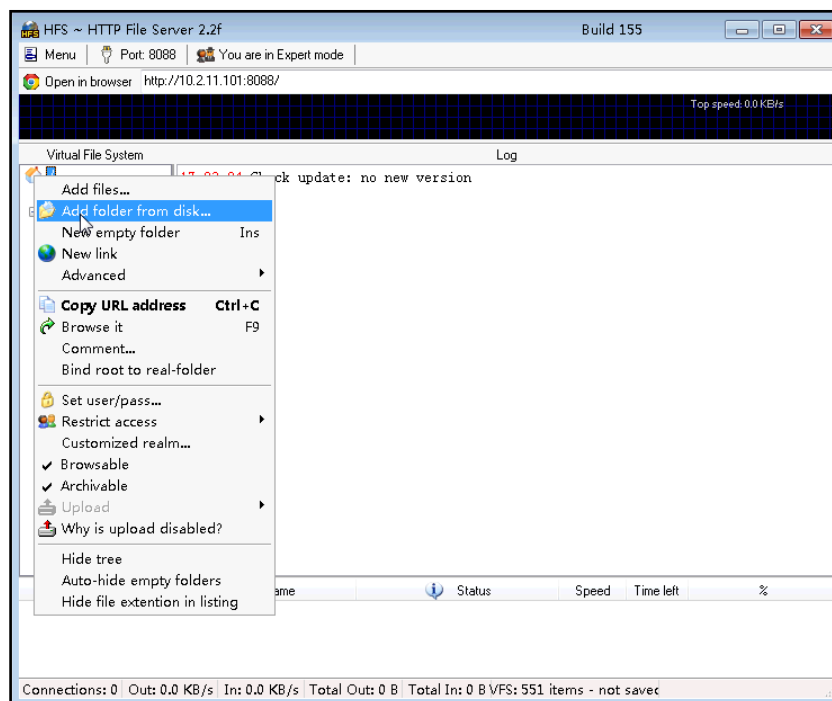
2. Click **Menu** in the main page and select the IP address of the PC from **IP address**.



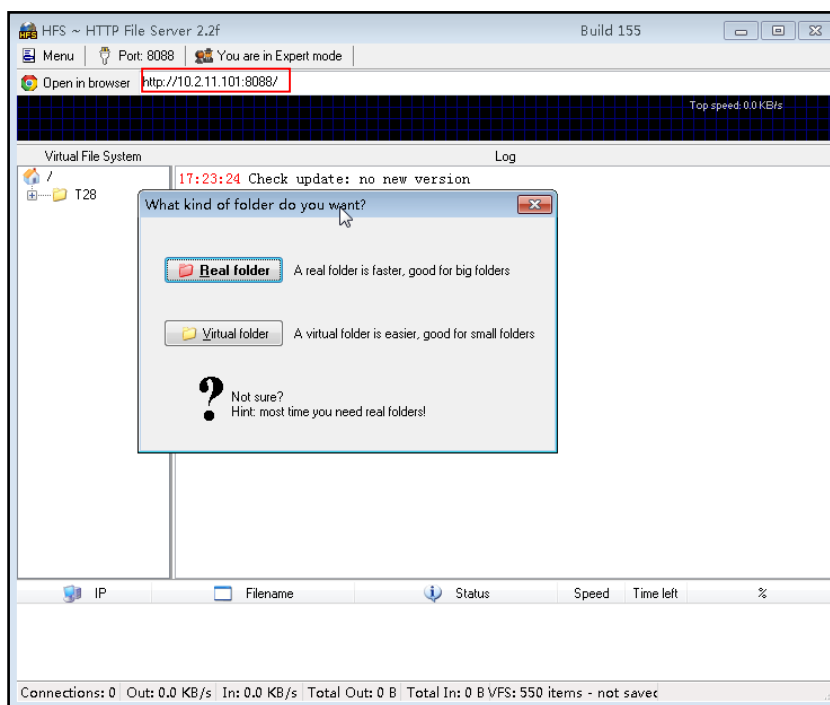
The default HTTP port is 8080. You can also reset the HTTP port (make sure the port isn't used before you reset).



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 the 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 about installing and configuring an Apache HTTPS Server, refer to the network resource.

Configuring a DHCP server

This section shows you 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.

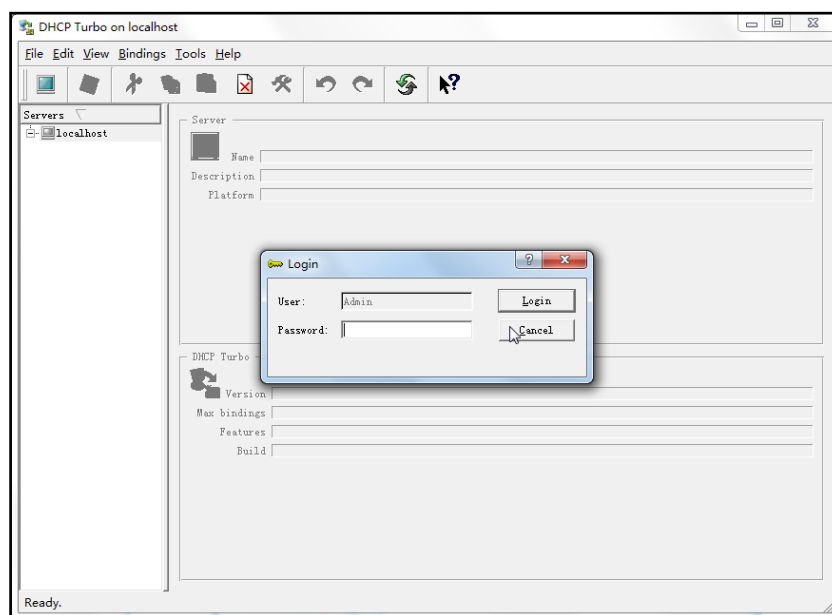
Before configuring the DHCP Turbo, make sure that:

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

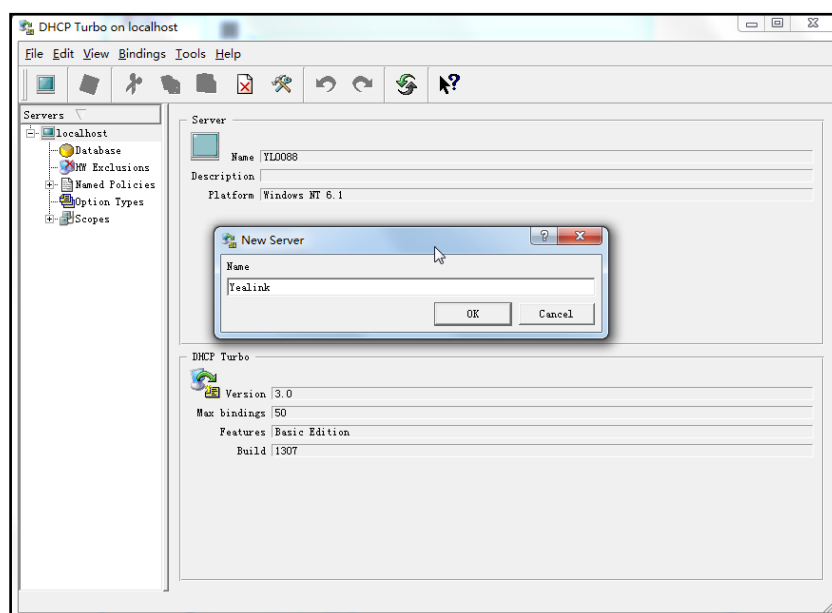
To configure the DHCP Turbo:

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

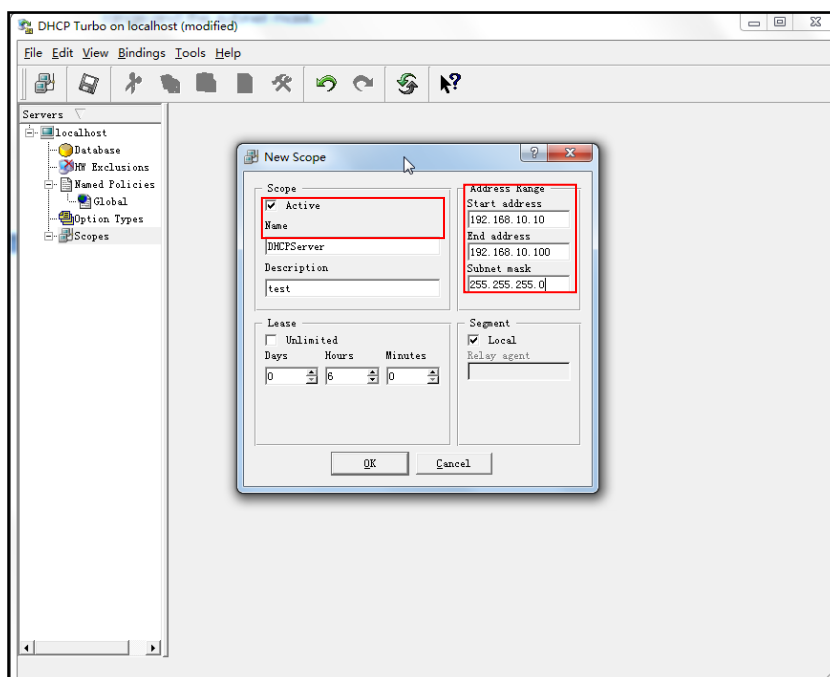
- Click the **Login** button (the login password is blank) to log in.



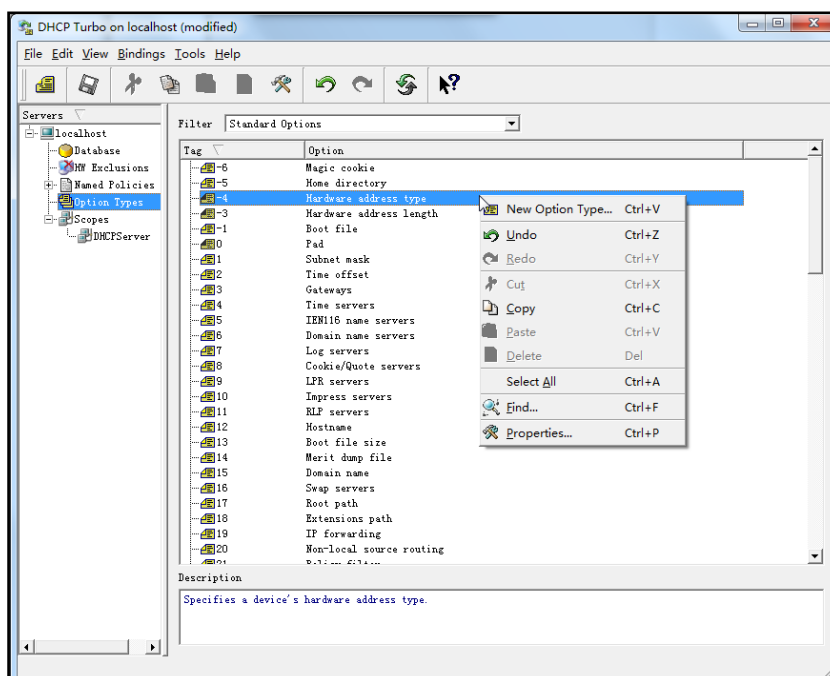
- You can then edit the existing DHCP server, or you can right click the **localhost** and select **"New Server"** to add a new DHCP server.



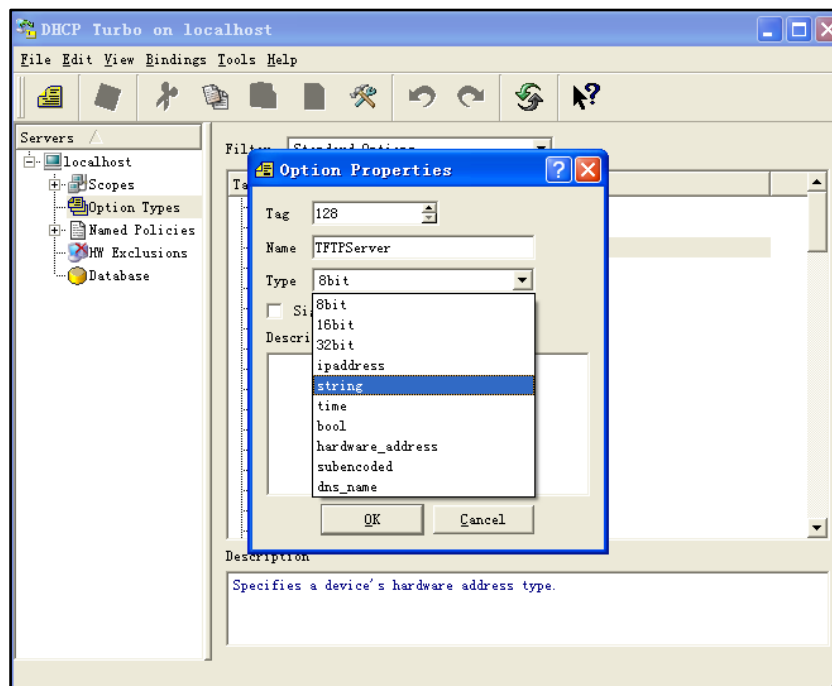
4. Right click the **Scopes** and select **New Scope**.
5. Configure the DHCP server name, the DHCP IP range and the subnet mask.
6. Click **OK** to accept the change.



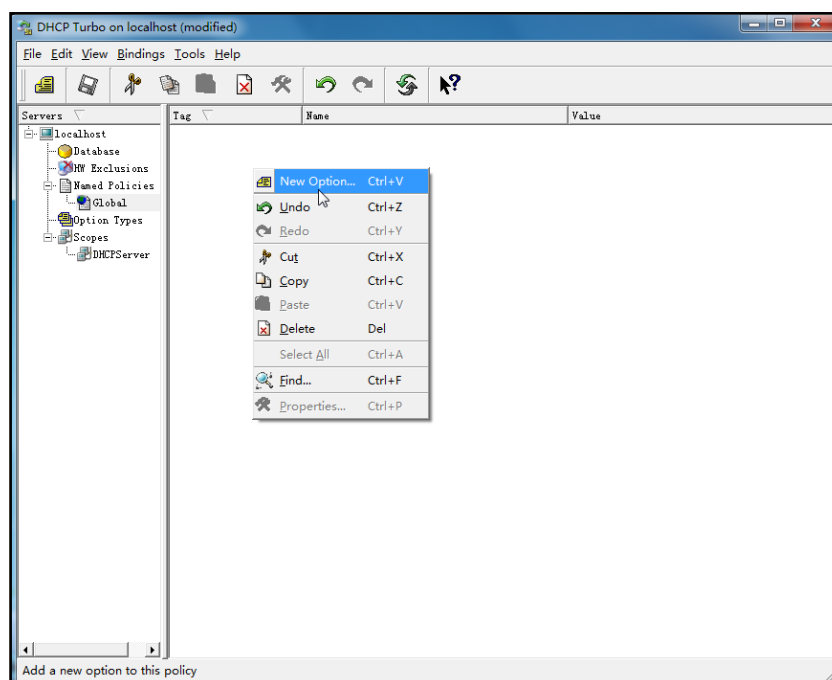
7. You can add a custom option via DHCP Turbo. Select **Option Types**, right click one of the options on the right of the main page, and then select the **New Option Type**.



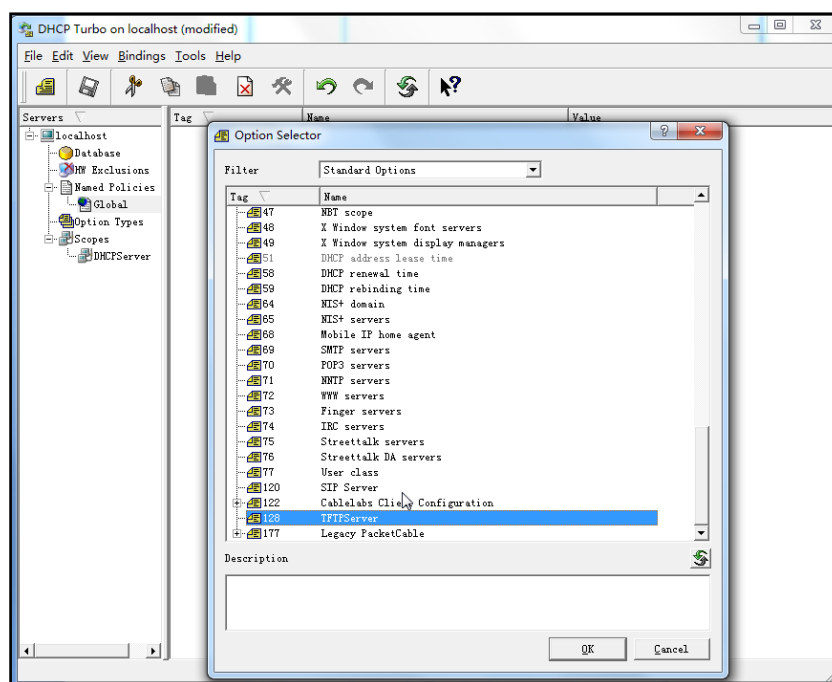
8. Set the custom DHCP option (custom DHCP option tag number ranges from 128 to 254) and select the option type (Yealink supports the **String** and **IP Address** option type only). Click the **OK** button to finish setting the option properties. Click  to save the change.



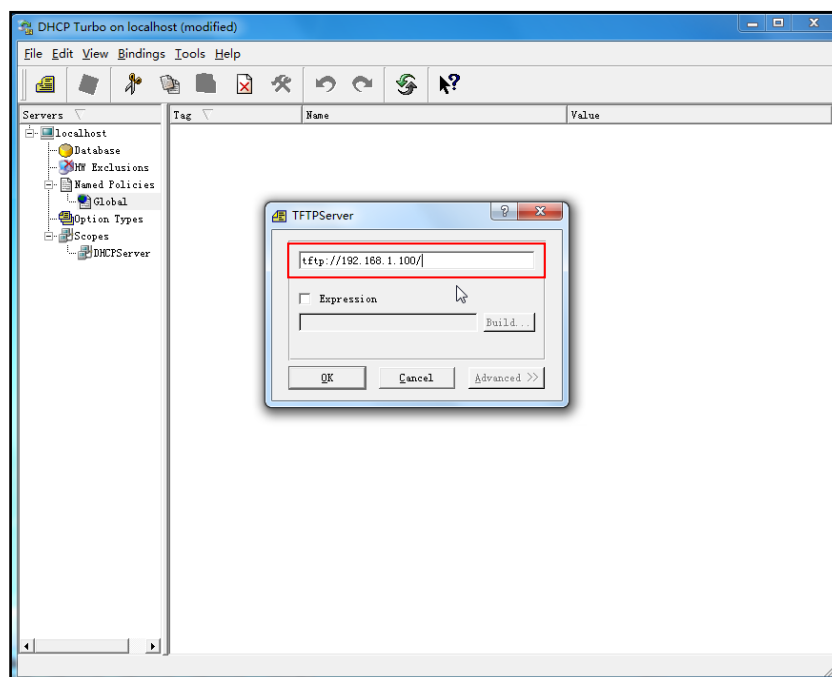
9. Click **Named Policies-->Global**, right click the blank area on the right of the main page and then select **New Option**.



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

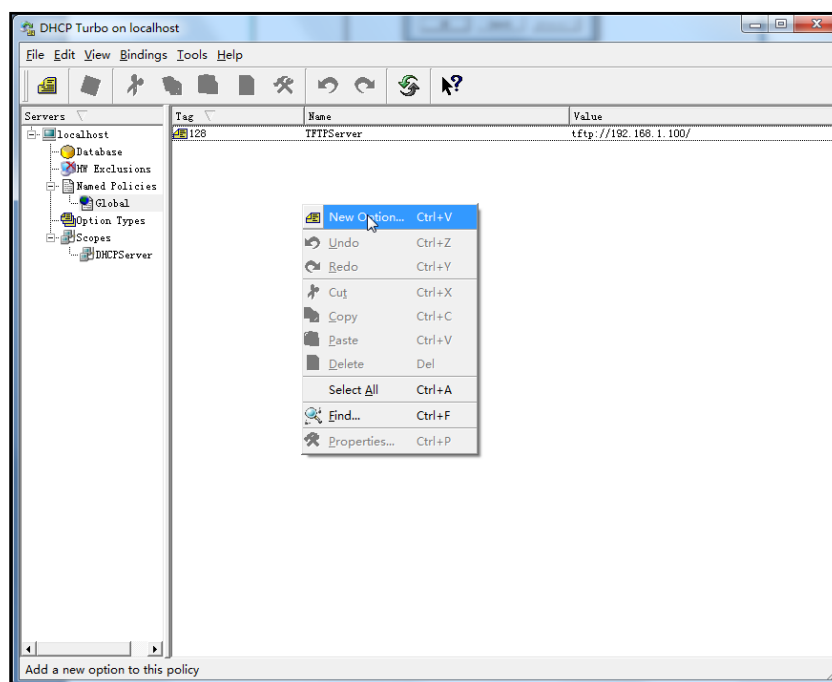


11. Fill the provisioning server address in the input field.
12. Click the **OK** button to finish setting a custom option.
13. Click  to save the change.

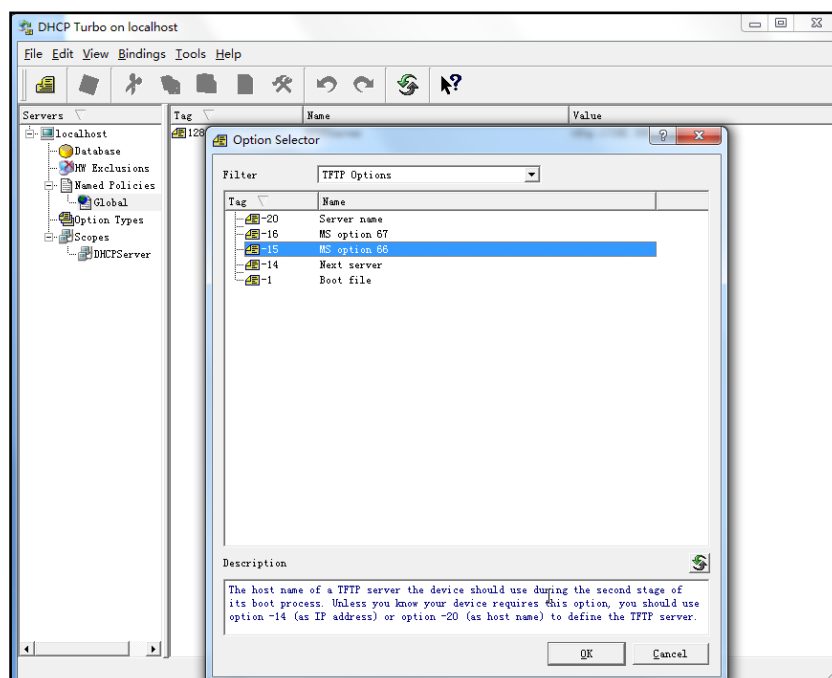


You can add the option 66 via DHCP Turbo. The following shows the detailed processes.

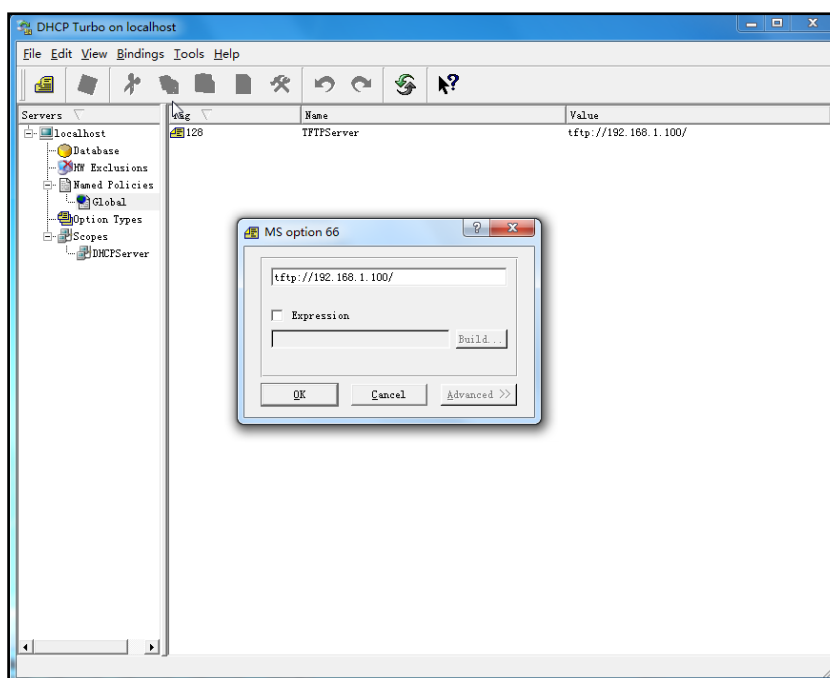
1. Click **Named Policies**-->**Global**, right click the blank area on the right of the main page and then select **New Option**.



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



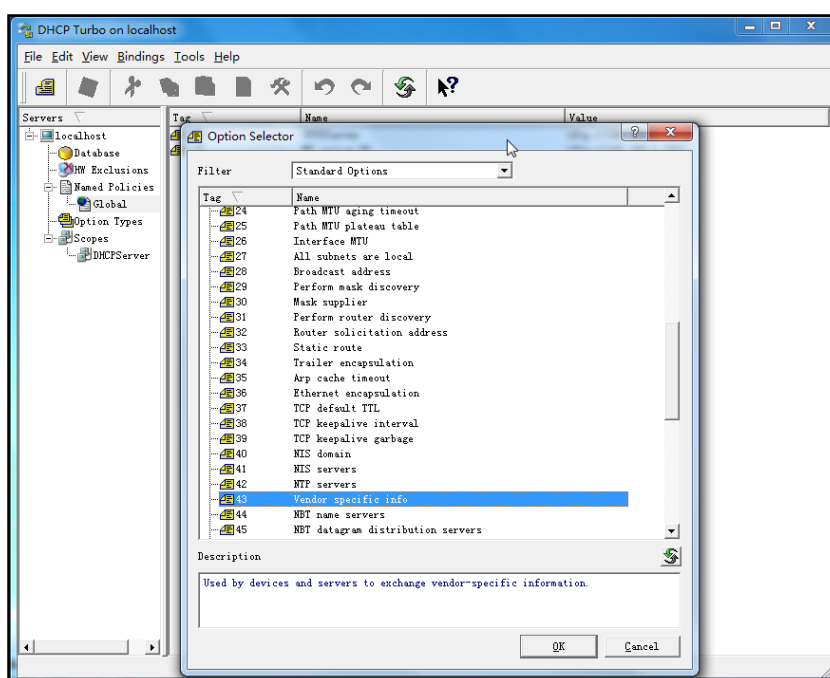
4. Fill the provisioning server address in the input field.



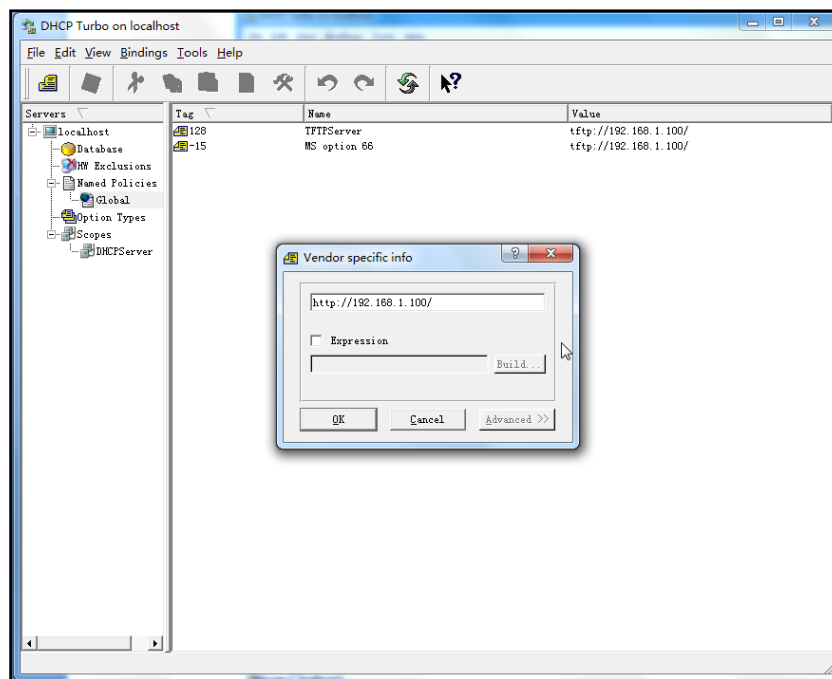
5. Click the **OK** button to finish setting a custom option.
6. Click  to save the change.

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

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

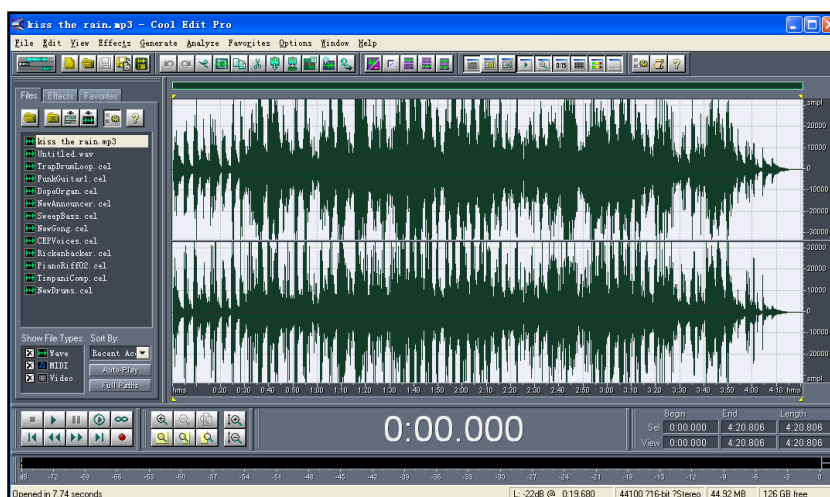
If you have installed the Cool Edit application, double click to open it. Otherwise, you can download the installation package from the website:

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

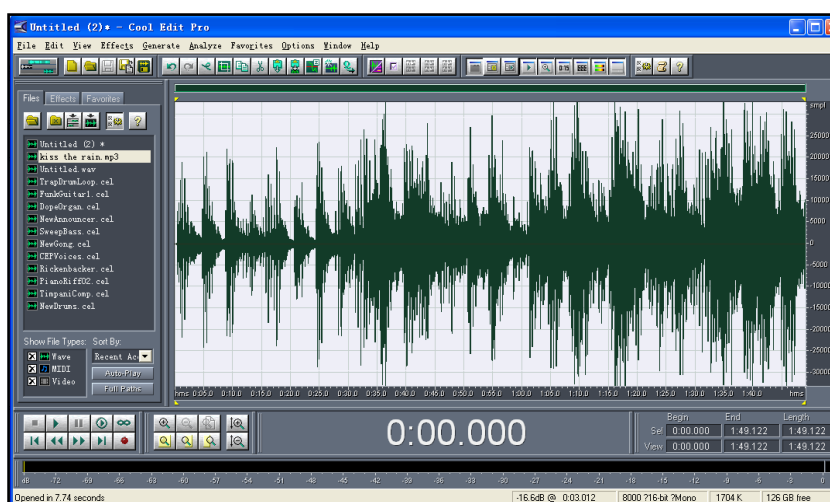
To customize a ringtone using Cool Edit Pro:

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**.

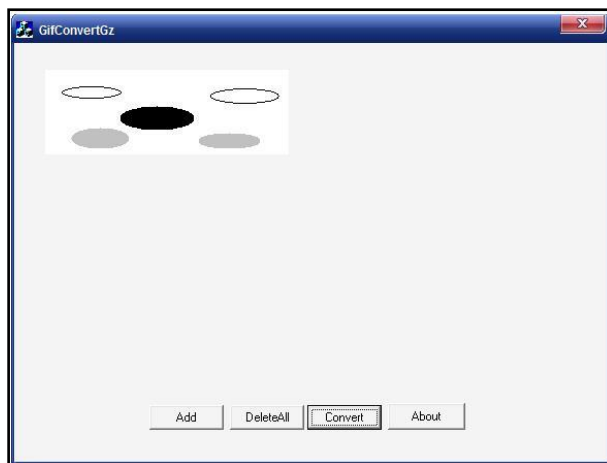
Customizing a Logo File Using PictureExDemo

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

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->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->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->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->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 (WAN) port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	Network->IPv4 Config->Static IP Address->Default 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->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->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->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->IPv4 Config-> PPPoE-> Password
network.ipv6_internet_port_type =	0, 1 or 2	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->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) port type is defined as Static IP Address. The default value is 64. It takes effect after reboot.	Network->IPv6 Config->Static IP Address->IPv6 Prefix (0~128)
network.ipv6_internet_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)	Network->IPv6 Config->Static IP Address->IP

		port type is defined as Static IP Address. The default value is blank. It takes effect after reboot.	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->IPv6 Config->Static IP Address->Default 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->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->IPv6 Config->Static IP Address-> Secondary DNS
network.ipv6_icmp_v6.enable =	0 or 1	It enables or disables the phone to obtain the network parameters from the ICMPv6. 0 -Disabled 1 -Enabled The default value is 1.	Network->Advanced->ICMPv6 Status->Active
network.internet_port.speed_duplex =	0, 1, 2, 3, 4 or 5	It configures the transmission mode and the speed of the Internet (WAN) port. 0 -Auto negotiate 1 -Full duplex 10Mbps 2 -Full duplex 100Mbps 3 -Half duplex 10Mbps 4 -Half duplex 100Mbps	Network->Advanced->Port Link->WAN Port Link

		5-Full duplex 1000Mbps The default value is 0.	
network.pc_port.speed_duplex =	0, 1, 2, 3, 4 or 5	It configures the transmission mode and the speed of the PC (LAN) port when configured as Router. 0 -Auto negotiate 1 -Full duplex 10Mbps 2 -Full duplex 100Mbps 3 -Half duplex 10Mbps 4 -Half duplex 100Mbps 5 -Full duplex 1000Mbps The default value is 0.	Network-> Advanced->Port Link->PC Port Link
network.vlan.internet_port_enable =	0 or 1	It enables or disables VLAN of the Internet (WAN) port. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after reboot.	Network-> Advanced->VLAN->WAN Port->Active
network.vlan.internet_port_vid =	Integer from 1 to 4094	It configures VLAN ID of the Internet (WAN) port. The default value is 1. It takes effect after reboot.	Network-> Advanced->VLAN->WAN Port->VID (1-4094)
network.vlan.internet_port_priority =	Integer from 0 to 7	It configures VLAN priority of the Internet (WAN) port. The default value is 0. It takes effect after reboot.	Network-> Advanced->VLAN->WAN Port->PRIORITY
network.vlan.pc_port_enable =	0 or 1	It enables or disables VLAN of the PC (LAN) port. 0 -Disabled 1 -Enabled The default value is 0. It takes effect after 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
wui.http_enable = 1	0 or 1	It enables or disables the HTTP protocol of the web server. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	Network-> Advanced->Web Server->HTTP
wui.https_enable = 1	0 or 1	It enables or disables the HTTPS protocol of the web server. 0 -Disabled 1 -Enabled The default value is 1. It takes effect after reboot.	Network-> Advanced->Web Server->HTTPS
network.port.http =	Integer from 1 to 65535	It configures the HTTP port of the web server. The default value is 80. It takes effect after reboot.	Network-> Advanced->Web Server->HTTP Port(1~65535)
network.port.https =	Integer from 1 to 65535	It configures the HTTPS port of the web server. The default value is 443. It takes effect after reboot.	Network-> Advanced->Web Server->HTTPS Port(1~65535)
network.port.max_rtpport =	Integer from 1 to 65535	It configures the maximum local RTP port. The default value is 11800. It takes effect after reboot.	Network-> Advanced->Local RTP Port-> Max. RTP Port(1~65535)
network.port.min_rtpport =	Integer from 1 to 65535	It configures the minimum local RTP port. The default value is 11780. It takes effect after reboot.	Network-> Advanced->Local RTP Port->Min. RTP Port(1~65535)
network.qos.rtpots =	Integer from 0 to 63	It configures the voice QoS. The default value is 46. It takes effect after reboot.	Network-> Advanced->Voice QoS->Voice QoS (0~63)

network.qos.siganalto =	Integer from 0 to 63	It configures the SIP QoS. The default value is 26. It takes effect after reboot.	Network-> Advanced->Voice QoS->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-TLS/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. It takes effect after reboot.	Network-> Advanced->LLDP-> Active

network.lldp.packet_interval =	Integer from 1 to 3600	It configures the interval (in seconds) for the phone to broadcast the LLDP request. The default value is 60. It takes effect after 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 1. 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 161. 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 a space. The default value is 0.0.0.0. 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
sip.reg_surge_prevention =	Integer from 0 to 60	It configures the time for the SIP registration. The phone registers an account at random in the time after startup. The default value is 0.	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 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 1 -Enabled The default value is 1.	Settings->Auto-Provision->PNP Active
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_vendor =	String	It configures the vendor name of the device. The default value is yealink.	
auto_provision .repeat.enable =	0 or 1	It enables or disables the repeatedly mode feature for the phone to check the new configuration repeatedly. 0 -Disabled 1 -Enabled The default value is 0.	Settings->Auto-Provision->Repeatedly
auto_provision .repeat.minutes =	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 .weekly.enable =	0 or 1	It enables or disables the weekly mode feature for the phone to check the new configuration weekly. 0 -Disabled 1 -Enabled The default value is 0.	Settings->Auto-Provision->Weekly
auto_provision .weekly.begin_time =	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 .weekly.end_time =	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 .weekly.mask =	0,1,2,3,4,5, 6 or a combination 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.username =	String	It configures the user name for authentication during auto provisioning. The default value is blank.	Settings->Auto-Provision->User Name
auto_provision .server.password =	String	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 by detecting DHCP options. 0 -Disabled 1 -Enabled The default value is 1.	Settings->Auto-Provision->DHCP 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

e =			
auto_provision. .dhcp_option. list_user_options =	Integer from 128 to 254	It configures the custom DHCP option number. 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.	
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.	
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_ho ld =	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_b ound_in_dialo g =	0 or 1	It enables or disables the phone to keep sending the SIP messages to the outbound server in a dialog. 0 -Disabled 1 -Enabled The default value is 1.	Features->General Information->Use Outbound Proxy in Dialog
watch_dog.en able =	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.enabl e =	0 or 1	It enables or disables the redirection feature. 0 -Disabled 1 -Enabled The default value is 0.	

managements erver.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
managements erver.username =	String	It configures the user name for the phone to authenticate with the ACS. It takes effect after reboot.	Settings->TR069-> ACS Username
managements erver.password =	String	It configures the password for the phone to authenticate with the ACS. It takes effect after reboot.	Settings->TR069-> ACS Password
managements erver.url =	URL	It configures the access URL of the ACS. It takes effect after reboot.	Settings->TR069-> ACS URL
managements erver.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
managements erver.connection_request_password =	String	It configures the password for the phone to authenticate the connection requests.	Settings->TR069-> Connection Request Password
managements erver.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 1. It takes effect after reboot.	Settings->TR069-> Enable Periodic Inform
managements erver.periodic_inform_interval =	Integer	It configures the interval (in seconds) for the phone to report its configuration to the ACS. The default value is 60. It takes effect after reboot.	Settings->TR069-> Periodic Inform Interval (seconds)
transfer.semi_attend_transferable =	0 or 1	It enables or disables to display the missed call prompt on the destination party's phone. 0 -Disabled 1 -Enabled	Features->Transfer ->Semi-Attended Transfer

		The default value is 1.	
transfer.blind_tran_on_hook_enable =	0 or 1	It enables or disables the phone to complete the blind transfer through on-hook. 0 -Disabled 1 -Enabled The default value is 1.	Features->Transfer ->Blind Transfer on Hook
transfer.on_hook_trans_enable =	0 or 1	It enables or disables the phone to complete the attended transfer through on-hook. 0 -Disabled 1 -Enabled The default value is 1.	Features->Transfer ->Semi 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 key. 0 -New Call 1 -Attended Transfer 2 -Blind Transfer The default value is 2.	Features->Transfer ->Transfer Mode via Dsskey
transfer.transfer_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.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 60.	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 -> Normal
voice.tone.country =	Custom, Australia, Austria, Brazil, Belgium, China, Czech, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Lithuania, India, Italy, Japan, Mexico, New Zealand, Netherlands,	It configures the tone type for the phone. The default value is Custom.	Settings->Tones-> Select Country

	Norway, Portugal, Spain, Switzerland, Sweden, Russia, United States, Chile		
voice.tone.dial =	String	It customizes the dial tone when the "voice.tone.country" is configured as Custom. The value format is F/D or !F/D. tonelist = element[,element][,element]... Where element = !F1+F2+F3+F4/Duration 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). D: the time duration (in milliseconds, ranges from 0 to 30000ms) of ringing the tone. 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). If you want the IP phone to play tones once, add an exclamation mark "!" before tones (e.g., !250/200, 0/1000, 200+300/500, 600+700+800+1000/2000). The default value is blank.	Settings->Tones->Dial
voice.tone.ring =	String	It customizes the ringtone when the "voice.tone.country" is configured as Custom.	Settings->Tones->Ring Back

		The value format is F/D. The default value is blank.	
voice.tone.busy =	String	It customizes the busy tone when the "voice.tone.country" is configured as Custom. The value format is 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. 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. The default value is blank.	Settings->Tones->Call Waiting
voice.tone.dial recall =	String	It customizes the redial tone when the "voice.tone.country" is configured as Custom. The value format is F/D. The default value is blank.	Settings->Tones->Dial Recall
voice.tone.record =	String	It customizes the recording tone when the "voice.tone.country" is configured as Custom. The value format is F/D. The default value is blank.	Settings->Tones->Record
voice.tone.info =	String	It customizes the info tone when the "voice.tone.country" is configured as Custom. The value format is F/D. The default value is blank.	Settings->Tones->Info
voice.tone.stutter =	String	It customizes the stutter tone when the "voice.tone.country" is configured as Custom. The value format is 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. 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. The default value is blank.	Settings->Tones->Auto Answer
voice.call_preview_mode =	1, 2 or 3	It configures the preview call mode. 1-Ignore: the mixed of tone and RTP 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	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	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	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_name.admin =	String	It configures the login user name of the administrator.	Security->Password
security.user_name.var =	String	It configures the login user name of the var.	
security.user_password =	String	It configures 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 =	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 =	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 =	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 =	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
custom_softkey_ring_back.url =	URL	It customizes the soft key presented on the phone LCD screen when Ringback.	Settings->Softkey Layout

l =			
custom_softkey_talking.url =	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
linekey.X.line = (X ranges from 1 to 27.)	Integer from 0 to 6	It configures the desired line to apply the key feature. 0 -Auto 1 -Line 1 2 -Line 2 ... 6 -Line 6 0 stands for Line1 when assigning the following features: • BLF • Call Park • Directed Pickup • Group Pickup • Voice Mail • Custom Button	DSSKey->Line Key
linekey.X.value = (X ranges from 1 to 27.)	String	It configures the value of the desired feature. E.g. When configuring the DSS key to be BLF, it configures the number of the monitored user.	DSSKey->Line Key
linekey.X.pickup_value = (X ranges from 1 to 27.)	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 27.)	Number	It configures the desired feature for line key X. Valid values are: 0 -N/A(default for linekey7-27) 1 -Conference 2 -Forward 3 -Transfer 4 -Hold 5 -DND 7 -Call Return	DSSKey->Line Key

		8-SMS 9-Directed Pickup 10-Call Park 11-DTMF 12-Voicemail 13-SpeedDial 14-Intercom 15-Line (default for line key 1-6) 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	
linekey.X.xml_phonebook = (X ranges from 1 to 27.)	String	It specifies the desired remote phonebook/local group for the DSS key. It only applies to the XML Group/Local Group features.	DSSKey->Line Key
programmablekey.X.type = (X ranges from 1 to 4.)	Number	It configures the key feature for the programmable key. Valid values are: 0-N/A 2-Forward 5-DND 6-Redial 7-Call Return 8-SMS 9-Call Pickup	DSSKey->Programmable Key

		13-Spead Dial 22-XML Group 28-History 29-Directory 30-Menu 31-Switch Account 32-New SMS 33-Status 43-Local Phonebook 44-Broadsoft Phonebook 45-Local Group 46-Broadsoft Group 47-XML Phonebook	
programablekey.X.line = (X ranges from 1 to 4.)	Integer from 0 to 6	It configures the desired line to apply the programmable key feature. The value 0 stands for Auto (the first available line). 0 also stands for Line1 When assigning pickup feature to the programmable key.	DSSKey-> Programmable Key
programablekey.X.value = (X ranges from 1 to 4.)	String	It configures the value of the programmable key.	DSSKey-> Programmable Key
programablekey.X.xml_phonebook = (X ranges from 1 to 4.)	String	It configures the desired remote phonebook/local group/BSFT phonebook for the programmable key.	DSSKey-> Programmable Key
programablekey.X.label = (X ranges from 1 to 4.)	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.	Number	It configures the key feature of the expansion module key.	DSSKey-> Ext Key

Y ranges from 1 to 40.)			
expansion_module.X.key.Y.line = (X ranges from 1 to 6. Y ranges from 1 to 40.)	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 40.)	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. Y ranges from 1 to 40.)	String	It configures the directed call pickup code. The default value is blank.	DSSKey->Ext Key
expansion_module.X.key.Y.label = (X ranges from 1 to 6. Y ranges from 1 to 40.)	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
phone_setting.page_tip =	0 or 1	It enables or disables the page tips feature for the different states of the line keys. 0 -Disabled	DSSKey->Line key->Enable Page Tips

		1-Enabled The default value is 0.	
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.target =	String	It configures the target number the phone forwards the incoming calls to when busy.	Features->Forward &DND->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	Features->Forward &DND->No Answer Forward->On/Off

		The default value is 0.	
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 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 0.	Features->General Information
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 to when completing startup. The value format is: http://IP address of server/help.xml? variable name=variable value. Valid variable values are:	Features->Action URL->Setup Completed

		• \$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	
action_url.log_on =	URL	It configures the URL the phone sends to when registering an account. Example: action_url.log_on = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Registered
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 =	Features->Action URL->Off Hook

		http://192.168.0.20/help.xml?model=\$model	
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
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. Example: action_url.busy_fwd_on = http://192.168.0.20/help.xml?model=\$model	Features->Action URL->Open Busy Forward
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 NoAnswer 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:	Features->Action URL->Close NoAnswer Forward

		action_url.no_answer_fwd_off = http://192.168.0.20/help.xml?model=\$model	
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
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

		del	
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
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 =	Features->Action URL->IP Changed

		<code>http://192.168.0.20/help.xml?model=\$model</code>	
<code>action_url.forward_incoming_call =</code>	URL	It configures the URL the phone sends to when forwarding an incoming call. Example: <code>action_url.forward_incoming_call = http://192.168.0.20/help.xml?model=\$model</code>	Features->Action URL->Forward Incoming Call
<code>action_url.reject_incoming_call =</code>	URL	It configures the URL the phone sends to when rejecting an incoming call. Example: <code>action_url.reject_incoming_call = http://192.168.0.20/help.xml?model=\$model</code>	Features->Action URL->Reject Incoming Call
<code>action_url.answer_new_incoming_call =</code>	URL	It configures the URL the phone sends to when answering a new incoming call. Example: <code>action_url.answer_new_incoming_call = http://192.168.0.20/help.xml?model=\$model</code>	Features->Action URL->Answer Incoming Call
<code>action_url.transfer_finished =</code>	URL	It configures the URL the phone sends to when completing to transfer a call. Example: <code>action_url.transfer_finished = http://192.168.0.20/help.xml?model=\$model</code>	Features->Action URL->Transfer Finished
<code>action_url.transfer_failed =</code>	URL	It configures the URL the phone sends to when failing to transfer a call. Example: <code>action_url.transfer_failed = http://192.168.0.20/help.xml?model=\$model</code>	Features->Action URL->Transfer Failed
<code>lang.wui =</code>	English, Chinese_S, German, French, Italian, Spanish, Turkish or	It configures the language of the web user interface.	Settings->Preference->Language

	Portuguese		
lang.gui =	English, Chinese_S, 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.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 domain name or IP address 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 domain name or IP address 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. The default value is 1000.	Settings ->Time & Date->Synchronism (Seconds)
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:	Settings ->Time & Date-> Start Date

		- Month/Day/Hour (for By Date) - Month/ Day of Week/ Day of Week Last in Month/ Hour of Day (for By Week) The default value is 1/1/0.	(for DST By Date) Settings ->Time & Date-> DST Start Month/DST Start Day of Week/ DST Start Day of Week Last in Month/ Start Hour of Day (for By DST Week)
local_time.end_time =	MM/DD/H H	It configures the time to end DST. Value formats are: - Month/Day/Hour (for By Date) - Month/ Day of Week/ Day of Week Last in Month/ Hour of Day (for By Week) The default value is 12/31/23.	Settings ->Time & Date-> End Date (for DST 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 DST 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)
local_time.manual_time_enable =	0 or 1	It configures the phone obtain time from NTP server or by manually. 0-Manual 1-NTP The default value is 1.	Settings ->Time & Date->Manual Time
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	Settings ->Time & Date-> Date Format

		5-DD MMM YYYY 6-WWW DD MMM The default value is 0.	
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_enable =	0 or 1	It enables or disables the phone to show the password item on the login wizard during startup. 0-Disabled 1-Enabled The default value is 1.	
hotdesking.startup_sip_server_enable =	0 or 1	It enables or disables the phone to 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.ds skey.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.ds skey_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.ds skey.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.	
hotdesking.ds skey.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.ds skey.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_rin g_tones.alert_i nfo.X.text = (X ranges	0 or 1	It configures the internal ringer text for distinctive ringtone.	Settings->Ring-> Internal Ringer Text

from 1 to 10.)			
distinctive_ringing_tones.alert_info.X.ringer = (X ranges from 1 to 10.)	Integer from 0 to 8	It configures the desired ringtone. The value ranges from 0 to 8, 0 stands for the Default.wav and the digit 1-8 stand 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. The default value is 10.	Features->General Information->Auto- Redial Times (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-Pro vision->Zero Active
zero_touch.wait_time =	Integer from 0 to 100	It configures the waiting time (in seconds) before skipping the zero touch. The default value is 5.	Settings->Auto-Pro vision->Wait Time (1~100)
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.	
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(1-15)
dialplan.area_code.max_len =	Integer from 1 to 15	It configures the maximum length of the number prefixed with the area code The value must be larger than the minimum length. 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. Each line ID 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 Number X
dialplan.block_out.line_id.X = (X ranges from 1 to 10.)	Number	It configures the lines to apply the block out rule. Each line ID should be separated by comma. The default value is blank.	Settings->Dial Plan->Block Out->Account

dialplan.dialnow.rule.X = (X ranges from 1 to 10.)	String	It configures the dial now rule. The default value is blank.	Settings->Dial Plan->Dial-now->Rule
dialplan.dialnow.line_id.X = (X ranges from 1 to 10.)	Number	It configures the lines to apply the dial now rule. Each line ID should be separated by comma. The default value is blank.	Settings->Dial Plan->Dial-now->Account
dialplan.replace.prefix.X = (X ranges from 1 to 10.)	String	It configures the string you want to replace. The default value is blank.	Settings->Dial Plan->Replace Rule->Prefix
dialplan.replace.replace.X = (X ranges from 1 to 10.)	String	It configures the alternate string instead of what the user enters. The default value is blank.	Settings->Dial Plan->Replace Rule->Replace
dialplan.replace.line_id.X =	Number	It configures the lines to apply the replace rule. Each line ID should be separated by comma. The default value is blank.	Settings->Dial Plan->Replace Rule->Account
remote_phonebook.data.X.url = (X ranges from 1 to 5.)	URL	It configures the access URL of the remote phonebook.	Contacts->Remote Phone Book->Remote URL
remote_phonebook.data.X.name = (X ranges from 1 to 5.)	String	It configures the display name of the remote phonebook item.	Contacts->Remote Phone Book->Name
ldap.enable	0 or 1	It enables or disables the LDAP feature on the IP phone. 0-Disabled 1-Enabled The default value is 0.	Contacts->LDAP->Enable LDAP
ldap.name_filter =	String	It configures the criteria for searching the contact name attributes.	Contacts->LDAP->LDAP Name Filter

		Example: ldap.name_filter = (nameattribute=%) The default value is blank.	
ldap.number_filter =	String	It configures the criteria for searching the contact number attributes. Example: ldap.number_filter = (numberattribute=%) The default value is blank.	Contacts->LDAP-> LDAP Number Filter
ldap.host =	IP address or domain name	It configures the access URL of the LDAP server. The default value is blank.	Contacts->LDAP-> Server Address
ldap.port =	Integer	It configures the port of the LDAP server. The default value is 389.	Contacts->LDAP-> Port
ldap.base =	String	It configures the LDAP search base which corresponds to the location of the LDAP phonebook. The default value is blank.	Contacts->LDAP-> Base
ldap.user =	String	It configures the user name for accessing the LDAP server. The default value is blank.	Contacts->LDAP-> User Name
ldap.password =	String	It configures the password for accessing the LDAP server. The default value is blank.	Contacts->LDAP-> Password
ldap.max_hits =	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.	Contacts->LDAP-> Max. Hits(1~32000)
ldap.name_attr =	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.	Contacts->LDAP-> LDAP Name Attributes

ldap.numb_attr =	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.	Contacts->LDAP->LDAP Number Attributes
ldap.display_name =	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.	Contacts->LDAP->LDAP Display Name
ldap.version =	2 or 3	It configures the LDAP version. The default value is 3.	Contacts->LDAP->Protocol
ldap.call_in_lookup =	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.	Contacts->LDAP->Match Incoming Calls
ldap.ldap_sort =	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.	Contacts->LDAP->LDAP Sorting Results
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 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 Refuse

		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.dnd.emergency_enable =	0 or 1	It enables or disables the phone can receive the calls from the authorized number when the DND is enabled. 0 -Disabled 1 -Enabled The default value is 0.	Features->Forward & DND->DND->DND Emergency
features.dnd.emergency_authorized_number =	String	It configures the authorized number when the DND is enabled. Multiplenumbers should be separated by comma. The default value is blank.	Features->Forward & DND->DND->Authorized Number
call_waiting.enable =	0 or 1	It enables or disables the call waiting feature. 0 -Disabled 1 -Enabled	Features->General Information->Call Waiting

		The default value is 1.	
call_waiting.tone =	0 or 1	It enables or disables the phone to play the call waiting tone. 0 -Disabled 1 -Enabled The default value is 1.	Features->Audio->Call Waiting Tone
call_park.enable =	0 or 1	It enables or disables the call park feature. 0 -Disabled 1 -Enabled The default value is 0.	
features.intercom.allow =	0 or 1	It enables or disables the intercom feature. 0 -Disabled 1 -Enabled The default value is 1.	Features->Intercom->Allow 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 =	0 or 1	It enables or disables the phone to perform a remote phonebook search when receiving an incoming call.	Contacts->Remote Phone Book->SRemote Name

		0-Disabled 1-Enabled The default value is 0.	
features.remote_phonebook_flash_time =	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.	Contacts->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 180	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 TRANSFER key. 0-Disabled 1-Enabled	Features->General Information->DTMF Replace Transfer

		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.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.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
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 The default value is 0.	Features->General Information->Send Pound Key
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->Button Sound
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.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.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 Calllog
features.power_led_on =	0 or 1	It configures the power Indicator LED to turn on or turn off. 0 -On 1 -Off	Features->General Information->Close Power Light

		The default value is 0.	
features.auto_answer_delay =	Integer from 1 to 4	It configures the delay time (in seconds) of auto answer. The default value is 1.	
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.	
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 & Speaker The default value is 0.	Features->Audio->Ringer Device for Headset
features.factory_pwd_enable =	0 or 1	It enables or disables to enter the password when long pressing the OK key to reset to factory. 0 -Disabled 1 -Enabled	

		The default value is 0.	
features.pickup p.group_pickup p_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
features.pickup p.group_pickup p_code =	String	It configures the group call pickup code. The default value is blank.	Features->Call Pickup->Group Call Pickup Code
features.pickup p.direct_pickup p_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 p.direct_pickup p_code =	String	It configures the directed call pickup code. The default value is blank.	Features->Call Pickup->Directed Call Pickup Code
features.pickup p.blf_visual_enable =	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 p.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.export_cfg_erase_password =	0 or 1	It enables or disables the phone to export the configuration file with clearing the password. 0 -Disabled 1 -Enabled The default value is 0.	
features.idle_talk_power_led_flash_enable =	0 or 1	It enables or disables the power indicator LED to flash as the normal. 0 -Disabled 1 -Enabled The default value is 0.	
features.voice_mail_tone_enable =	0 or 1	It enables or disables the phone to play the warning tone when receiving a voice mail. 0 -Disabled 1 -Enabled The default value is 1.	
multicast.codec =	String	It configures the codec of multicast paging. The default value is G722.	Features->General Information->Multicast Codec
multicast.receive_priority.enable =	0 or 1	It enables or disables the phone to handle the incoming multicast paging calls when there is a multicast paging call on the phone. 0 -Disabled 1 -Enabled The default value is 1.	Contacts->MulticastIP->Paging Priority Active
multicast.receive_priority.priority =	Integer from 0 to 10	It configures the priority of multicast paging calls. The default value is 10.	Contacts->MulticastIP->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. The default value is blank.	Contacts->MulticastIP->Listening Address
multicast.listen_address.X.label =	String	It configures the label displayed on the LCD screen when receiving the multicast paging.	Contacts->MulticastIP->Label

(X ranges from 1 to 10)		The default value is blank.	
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 .phone_lock_enable =	0 or 1	It enables or disables the keypad lock feature. 0 -Disabled 1 -Enabled The default value is 0.	Features->Phone Lock->Keypad Lock Enable
phone_setting .lock =	0, 1 or 2	It configures the keypad lock type. 0 -Menu Key 1 -Function Key 2 -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. The default value is 123.	Features->Phone Lock->Phone-Unlock PIN(0~15 Digital)
phone_setting .phone_lock.lock_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 =	Default.wav, Ring1.wav, Ring2.wav, Ring8.wav	It configures the ringtone for the phone. Example: phone_setting.ring_type = Ring1.wav The default value is Default.wav.	Settings->Preference->Ring Type
phone_setting .active_backlight =	Integer from 1 to	It configures the level of the active backlight intensity.	Settings->Preference->Backlight On

ght_level =	10	The default value is 8.	Intensity
phone_setting .inactive_back light_level =	0 or 1	It decides whether the IP phone turns off or dusky the backlight of the LCD screen after a period of inactivity. 0 -Off 1 -Low The default value is 1.	Settings->Preference->Backlight Idle Intensity
phone_setting .backlight_time =	1, 60, 120, 300, 600 or 1800	It configures the backlight time (in seconds). 1 -Always on The default value is 1.	Settings->Preference->Backlight Time
phone_setting .ring_for_transfer =	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. 0 -Disabled 1 -Enabled The default value is 0.	Features->General Information->Logon Wizard
phone_setting .is_deal180 =	0 or 1	It enables or disables the phone to deal with the 180 SIP message received after the 183 SIP message. 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 =	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 the using mode of the headset key. 0 -Disabled	

		1-Enabled 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 or 110.	Features->Phone Lock->Emergency
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 the customized ringtones files.	
gui_lang.url =	URL	It configures the access URL of the language file.	
gui_lang.delete =	URL	It deletes all the customized languages files.	
wallpaper_upload.url =	URL	It configures the access URL of the wallpaper image.	
trusted_certificates.url =	URL	It configures the access URL of the trusted certificate file.	
trusted_certificates.delete =	URL	It deletes all trusted certificates file.	
server_certificates.url =	URL	It configures the access URL of the server certificate file.	
server_certificates.delete =	URL	It deletes all the server certificates file.	
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. data_photo_t ar.url =	URL	It configures the access URL of the local contact photo.	
local_contact. group_list_url =	URL	It configures the access URL of the contact group file.	
web_item_lev el.url =	URL	It configures the access URL of the file, which defines access range of the 3-level permissions. It takes effect after reboot.	
favorite_settin g.url =	URL	It configures the access URL of the favorite setting file.	
super_search. url =	URL	It configures the access URL of the Search Source List setting file.	
account.X.ena ble = (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.lab el = (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.aler t_info_url_ena ble = (X ranges from 1 to 6.)	0 or 1	It enables or disables to use the alert info URL. 0 -Disabled 1 -Enabled The default value is 0.	

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.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.register_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.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 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 =	0, 1, 2 or 3	It configures the transport type with the SIP server Y for account X. 0-UDP	Account->Register ->Transport

(X ranges from 1 to 6. Y ranges from 1 to 2.)		1-TCP 2-TLS 3-DNS-NAPTR The default value is 0.	
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
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
account.X.outbound_host = (X ranges from 1 to 6.)	IP address or domain name	It configures the domain name or IP address 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
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.reject_anonymous_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.reject_anonymous_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. The default value is blank.	Features->Forward & DND->DND-> DND On Code

from 1 to 6.)			
account.X.dnd .off_code = (X ranges from 1 to 6.)	String	It configures the DND off code for account X. The default value is blank.	Features->Forward & DND->DND ->DND Off Code
account.X.alw ays_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
account.X.alw ays_fwd.target = (X ranges from 1 to 6.)	String	It configures the target number the phone forwards all incoming calls to or account X. The default value is blank.	Features->Forward & DND->Always Forward->Target
account.X.bus y_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.bus y_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. The default value is blank.	Features->Forward & DND->Busy Forward->Target
account.X.tim eout_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.tim eout_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. The default value is blank.	Features->Forward & DND->No Answer Forward-> Target
account.X.tim eout_fwd.time	Integer from 0 to	It configures the waiting ring time before forwarding for account X.	Features->Forward & DND->No

out = (X ranges from 1 to 6.)	120	The default value is 12.	Answer Forward-> After Ring Times
account.X.alw ays_fwd.off_c ode = (X ranges from 1 to 6.)	String	It configures the always forward off code for account X. The default value is blank.	Features->Forward & DND->Always Forward ->Off Code
account.X.alw ays_fwd.on_c ode = (X ranges from 1 to 6.)	String	It configures the always forward on code for account X. The default value is blank.	Features->Forward & DND->Always Forward->On Code
account.X.bus y_fwd.off_cod e = (X ranges from 1 to 6.)	String	It configures the busy forward off code for account X. The default value is blank.	Features->Forward & DND->Busy Forward ->Off Code
account.X.bus y_fwd.on_cod e = (X ranges from 1 to 6.)	String	It configures the busy forward on code for account X. The default value is blank.	Features->Forward & DND->Busy Forward->On Call
account.X.tim eout_fwd.off_c ode = (X ranges from 1 to 6.)	String	It configures the no answer forward off code for account X. The default value is blank.	Features->Forward & DND->No Answer Forward ->Off Code
account.X.tim eout_fwd.on_c ode = (X ranges from 1 to 6.)	String	It configures the no answer forward on code for account X. The default value is blank.	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 5062.	Account-> Advanced->Local SIP Port
account.X.100 rel_enable =	0 or 1	It enables or disables the 100 reliable retransmission feature for account X.	Account-> Advanced->

(X ranges from 1 to 6.)		0-Disabled 1-Enabled The default value is 0.	Retransmission
account.X.subscribe_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.subscribe_mwi_expires = (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 5-RPID-FROM The default value is 0.	Account-> Advanced->CID Source
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-RPID-FROM 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->Enable Session Timer
account.X.session_timer.exp	Integer from 1 to	It configures the interval (in seconds) for refreshing the SIP session for account X.	Account-> Advanced->Sessio

ires = (X ranges from 1 to 6.)	9999	The default value is 1800.	n Expires(Seconds)
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
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->Use user=phone
account.X.srtplib_encryption = (X ranges from 1 to 6.)	0, 1 or 2	It configures whether to use voice encryption service for account X. 0-Forbin SRTP 1-Force SRTP 2-Choice SRTP 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	Account-> Advanced-> Dialog Info Call Pickup

from 1 to 6.)		1-Enabled The default value is 0.	
account.X.group_pickup_code = (X ranges from 1 to 6.)	String	It configures the group pickup code for account X. The default value is blank.	Account-> Advanced->Group Call Pickup Code
account.X.direct_pickup_code = (X ranges from 1 to 6.)	String	It configures the directed pickup code for account X. The default value is blank.	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_calllog = (X ranges from 1 to 6.)	0 or 1	It enables or disables the phone to record the missed calls 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	Account-> Advanced->SIP Send Line

		1-Enabled The default value is 0.	
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 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.blf_list_uri = (X ranges from 1 to 6.)	URI	It configures the BLF list URI for account X. The default value is blank.	Account-> Advanced->BLF List URI
account.X.blf_list_code = (X ranges from 1 to 6.)	String	It configures the directed call pickup code for account X. The default value is blank.	Account-> Advanced->BLF List Pickup Code
account.X.blf_list_barge_in_code =	String	It configures the barge in code for account X. The default value is blank.	Account-> Advanced->BLF List Barge In Code
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.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
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.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 3 -Telephone-Event The default value is 0.	Account-> Advanced->DTMF Info Type
account.X.nat.nat_traversal	0 or 1	It enables or disables the NAT traversal for account X.	Account->Register ->NAT

= (X ranges from 1 to 6.)		0-Disabled 1-STUN The default value is 0.	
account.X.nat.stun_server = (X ranges from 1 to 6.)	IP address or domain name	It configures the domain name or IP address 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, 1, 2 or 3	It enables or disables NAT keep-alive for account X. 0-Disabled 1-Default 2-Options 3-Notify 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
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)
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.distinctive_ringtones = (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 0 to 13.)	0 or 1	It enables or disables the specified codec for account X. 0 -Disabled 1 -Enabled The default value is 1.	Account->Codecs
account.X.codec.Y.payload_type = (X ranges from 1 to 6. Y ranges from 0 to 13.)	PCMU PCMA G729 G722 G723_53 G723_63 G726_16 G726_24 G726_32 G726_40 iLBC iLBC_13_3 iLBC_15_2 GSM	It configures the codec for account X. The default value is PCMU.	Account->Codecs
account.X.codec.Y.priority =	Integer from 0 to	It configures the priority of the enabled codec for account X.	Account->Codecs

(X ranges from 1 to 6. Y ranges from 0 to 13.)	10	The default value is 1.	
account.X.codec.Y.rtpmap = (X ranges from 1 to 6. Y ranges from 0 to 13.)	Integer	It configures rtpmap of the audio codec for account X. The default value is 0.	
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 the ACD feature for account X. 0 -Disabled 1 -Enabled The default value is 0.	
account.X.acd.available = (X ranges from 1 to 6.)	0 or 1	It enables or disables the IP phone to display the available or unavailable soft key after the phone logs into the ACD system. 0 -Disabled 1 -Enabled	

		The default value is 0.	
account.X.ac d.user_id = (X ranges from 1 to 6.)	String	It configures the user ID used to log in the ACD system. The default value is blank.	
account.X.ac d.password = (X ranges from 1 to 6.)	String	It configures the password used to log in the ACD system. The default value is blank.	

If you want to clean the value of item, set it to be %NULL% or !NULL!.

For example:

security.user_password = admin:%NULL%

It will configure the password of admin as NULL.