User Access Level of Web/Phone/Handset User Interface

Overview

User access level feature is used to achieve different access levels for different authorized users. It is useful for protecting the IP phone from unauthorized configuration and popularly used for the Hosted PBX solution. The following describes how to customize the access permission for configurations on the web user interface and phone/handset user interface.

This guide applies to the following Yealink IP phones:

- SIP-T58A, SIP VP-T49G, CP860, CP960 and W56P IP phones running firmware version 80 or later
- SIP-T48G/S, SIP-T46G/S, SIP-T42G/S, SIP-T41P/S, SIP-T40P/G, SIP-T29G, SIP-T27G, SIP-T23P/G, SIP-T21(P) E2, SIP-T19(P) E2, CP920, W52P and W60P IP phones running firmware version 81 or later
- VP59, CP930W-Base, W53P and W80B running firmware version 83 or later
- SIP-T57W, SIP-T54W, SIP-T53W, SIP-T53, SIP-T48U, SIP-T46U, SIP-T43U and SIP-T42U IP phones running firmware version 84 or later
- SIP-T33P, SIP-T33G, SIP-T31P, SIP-T31G, SIP-T31, SIP-T30P and SIP-T30 IP phones running firmware version 85 or later

Scenario

For a Hosted PBX solution, IP phones are provided to customers for free but required a minimum consumption monthly. All PBX services associated features on the deployed IP phones are preconfigured to avoid customers from using other Hosted PBX's service, and the Hosted PBX system administrator can restrict the user access permission using user access level feature. For example, the Hosted PBX system administrator restricts the write permission of the account associated configurations. This means customers can only read these configurations on both web user interface and phone/handset user interface.

Introduction

Yealink IP phones support access levels of admin, var, and user. The following describes the detailed information of each access level:

- **Admin:** The administrator access level. With this access level, all configurations on both web user interface and phone/handset user interface can be read and written. The

authentication identity for this access level is **admin**. And the default password is **admin**.

- **Var:** The value-added reseller access level. Generally, with this access level, most configurations on the web user interface and phone/handset user interface can be read and written. The authentication identity for this access level is **var**. And the default password is **var**.
- **User:** The end user access level. Generally, only a few configurations are allowed to be written and read for access user. The authentication identity for this access level is **user**. And the default password is **user**.

Specification

Access permissions of all configuration items available on Yealink IP phones' web user interface and phone/handset user interface can be defined in a fixed WebItemsLevel.cfg file. Each configuration item in the file is formatted as:

ItemName = X_1X_2

The valid values of X_1, X_2 include 0, 1, 2 and 3.

X_1 is used for specifying the access level. The access levels: 2 = admin, 1 = var, 0 = user, 3 = none.

X_2 is used for defining the access permission. 2 means the configuration item is read-only for X_1 and higher access levels, the highest is always writable. 1 means the configuration item is read-only for X_1 access level and writable for higher access levels. 0 means the configuration item is writable for X_1 and higher access levels. 3 means the configuration item is read-only for X_1 and higher access levels.

The following table lists the possible values of X_1X_2 and the configuration results with different access levels:

(W: writable; R: read-only; N: hidden)

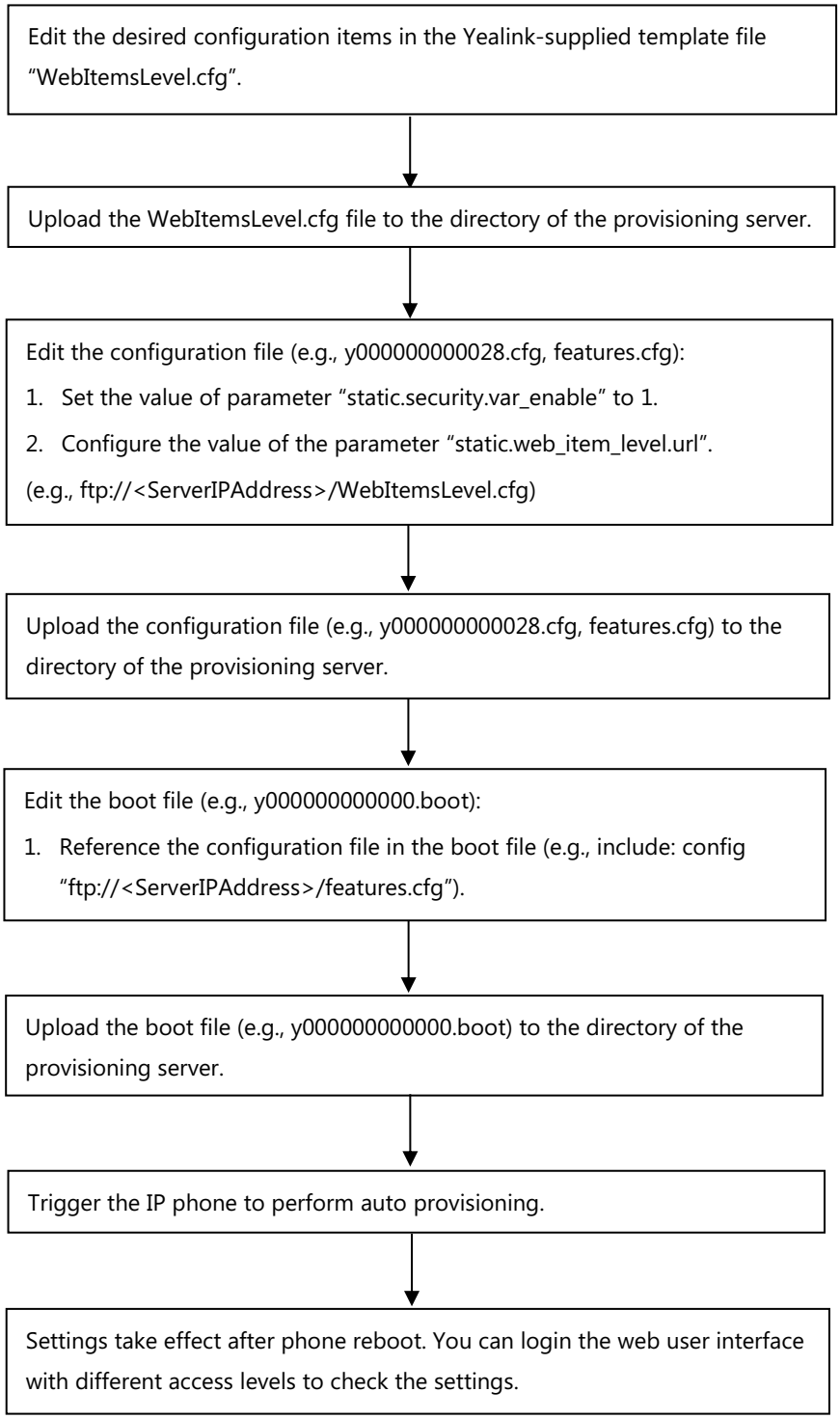
Results / Values of X_1X_2	admin (2)	var (1)	user (0)
0	WR	WR	WR
1	WR	WR	N
2	WR	N	N
3	N	N	N
00	WR	WR	WR
01	WR	WR	R
02	WR	R	R
03	R	R	R
10	WR	WR	N

Results / Values of X_1X_2	admin (2)	var (1)	user (0)
11	WR	R	N
12	WR	R	N
13	R	R	N
20	WR	N	N
21	WR	N	N
22	WR	N	N
23	R	N	N
30/31/32/33	N	N	N

Application

This section will introduce procedures to configure access permission of the web user interface in detail. The flow chart of configuring user access level is shown as below:

Note: The boot file is only applicable to the IP phones running new firmware version (new auto provisioning mechanism). The parameter varies from firmware version to firmware version (refer to Configuring Yealink IP Phones).



Customizing WebItemsLevel.cfg

You can ask Yealink Field Application Engineer for the template file “WebItemsLevel.cfg”, or you can download it online:
http://support.yealink.com/documentFront/forwardToDocumentFrontDisplayPage.

We recommend you only edit the desired configuration items in the supplied “WebItemsLevel.cfg" file, and keep other configuration items constant.

WebItemsLevel.cfg downloaded via auto provisioning will override that in the phone flash. Access level of any configuration item missed (including configuration value left blank) in the downloaded WebItemsLevel.cfg file will be changed to user by default.

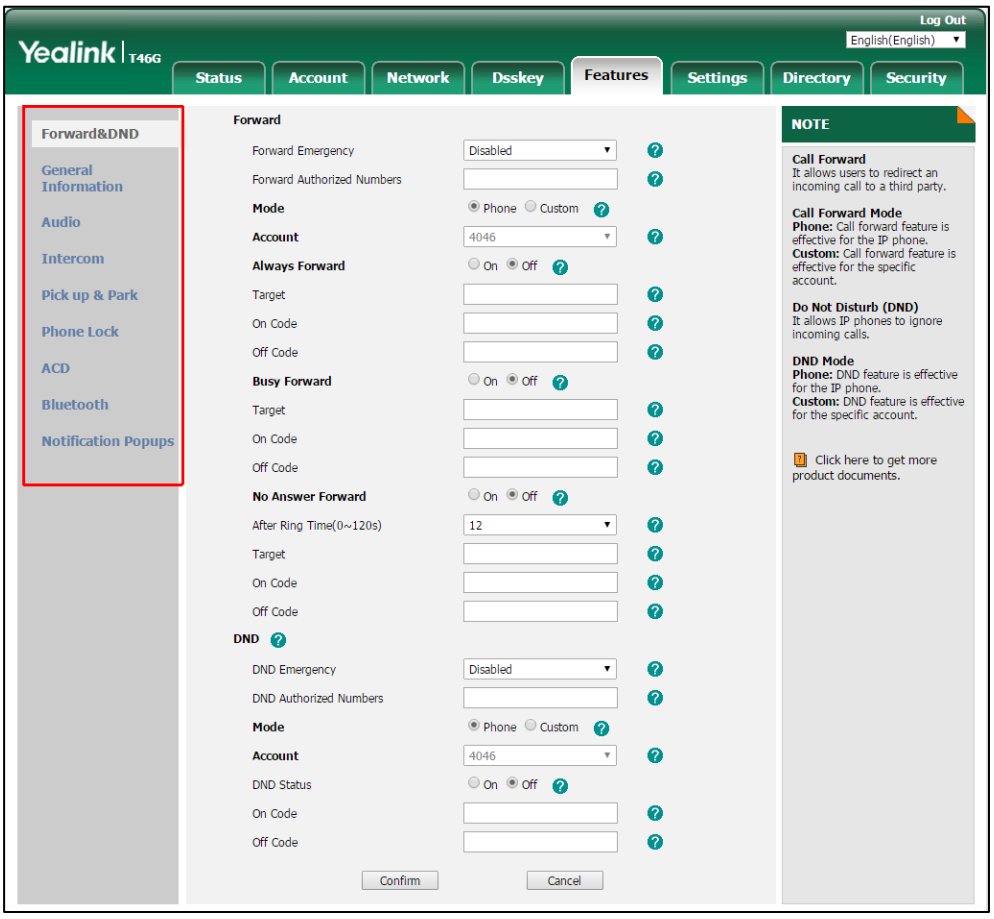
Web User Interface

The following shows configuration segments for the web user interface in the WebItemsLevel.cfg file for reference:

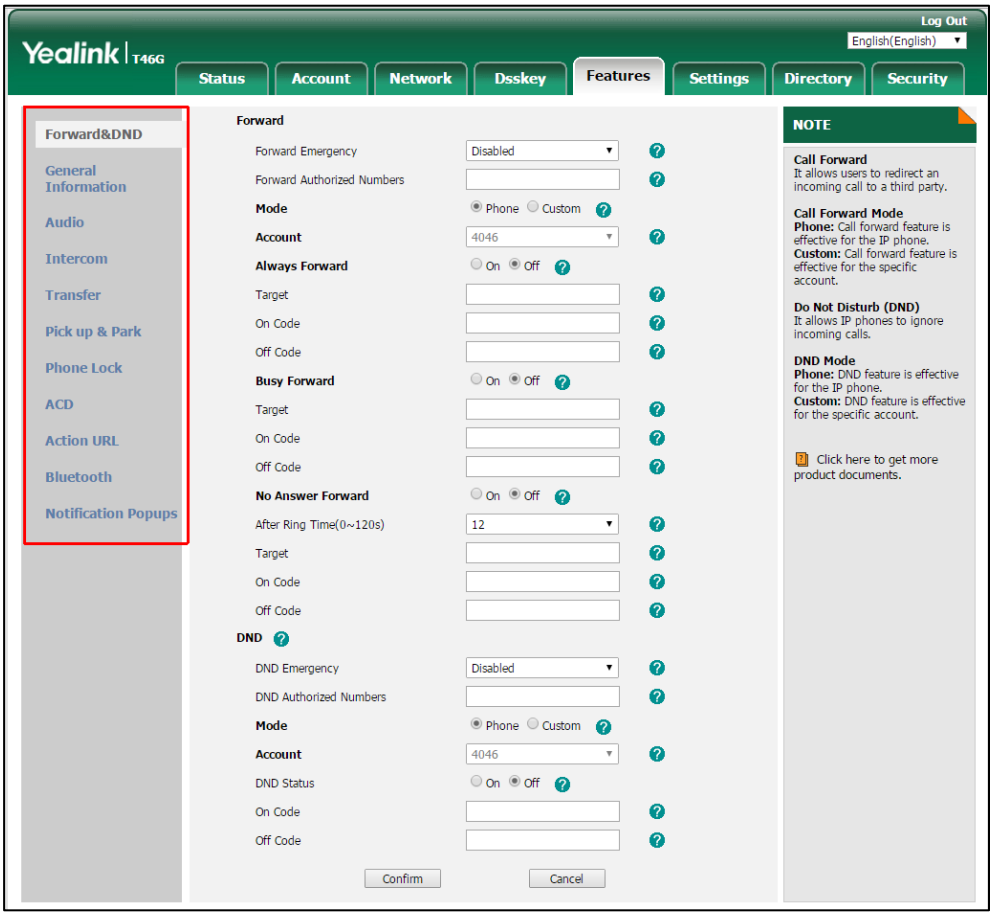
Sample 1: Configuration items in the WebItemsLevel.cfg for navigation bar settings of the Features page:

```
[ Features ]
features-forward = 0
features-general = 0
features-audio = 0
features-intercom = 0
features-transfer = 1
features-callpickup = 0
features-remote = 2
features-phonelock = 0
features-acd = 0
features-sms = 2
features-actionurl = 1
features-bluetooth = 0
features-powerled = 2
features-notifypop = 0
```

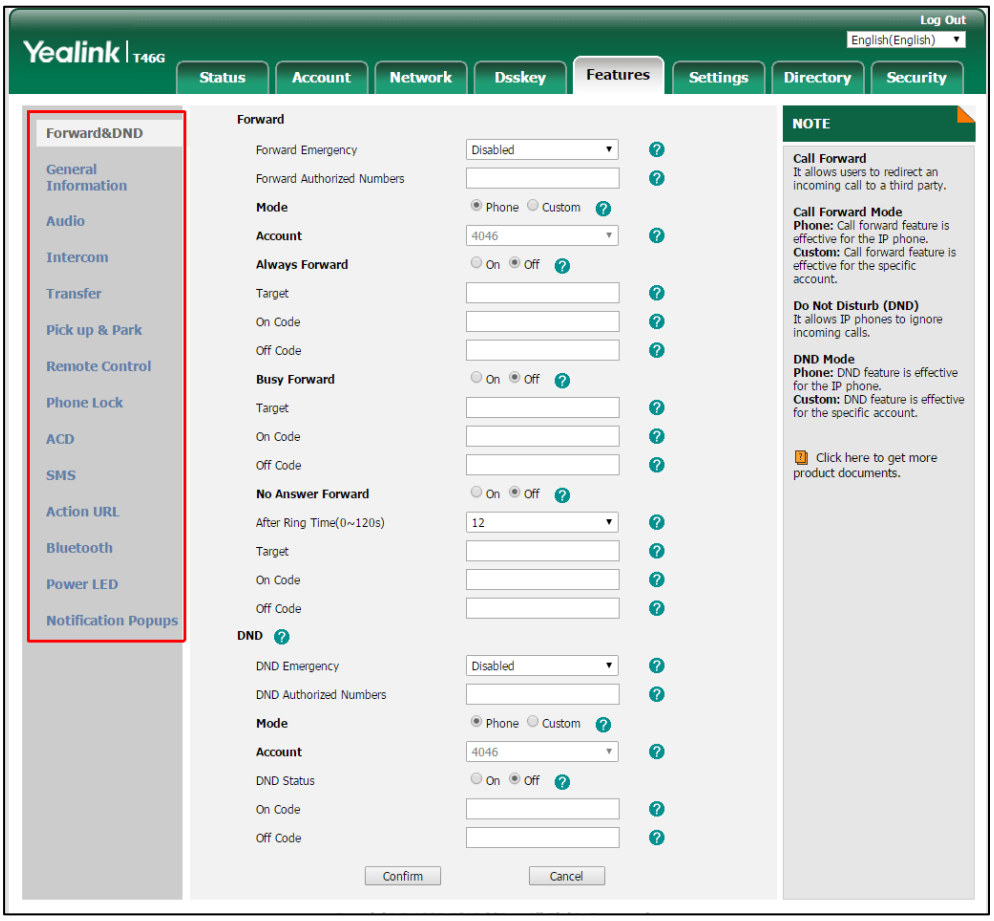
According to the above configuration of access level, when logging in the web user interface with user access level, the web user interface displays as below:



When logging in the web user interface with var access level, the web user interface displays as below:



When logging in the web user interface with admin access level, the web user interface displays as below:



Note: Configuration items for navigation bar are not writable on both web user interface and phone/handset user interface. So, configuration items for navigation bar can be configured only using the format “ItemName = X”.

If the access permission of the first navigation configuration item for each main page is restricted, the access to the main web page will be denied.

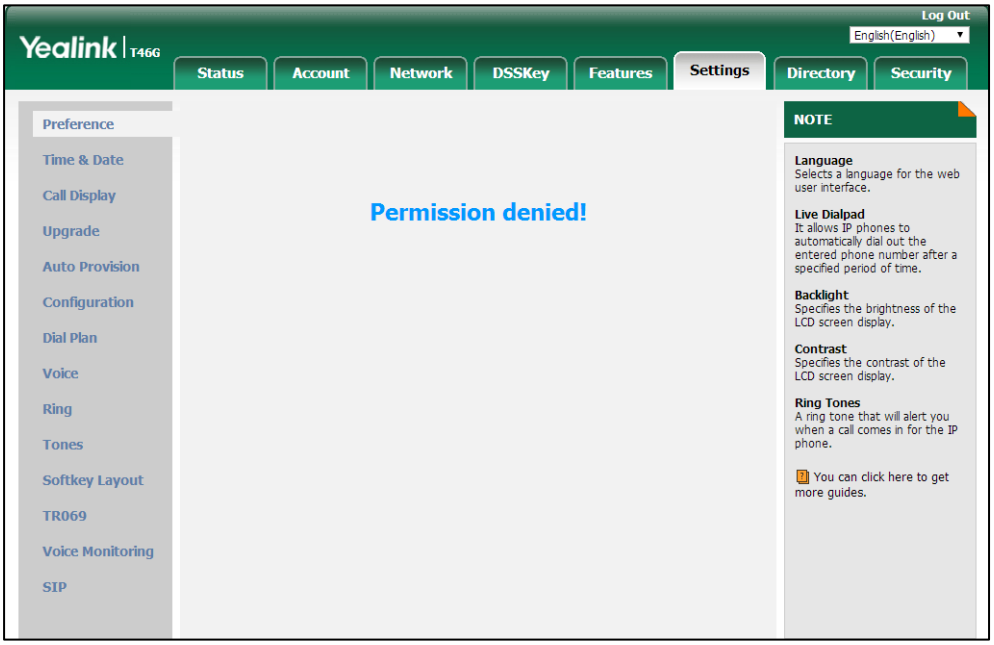
The following table lists the first navigation configuration items for each main page:

Main Page	First Navigation Item	Configuration Item
Account	Register	account-register
Network	Basic	network-basic
DSSKey/Dsskey (not applicable to W52P/W53P/W56P/W60P/CP930W-Base/W80B)	Line Key 1-6 (for CP960), Line Key 1-10 (for VP59/SIP-T58A), Line Key 1-11 (for SIP VP-T49G/SIP-T57W/T48U/T48G/T48S), Line Key 1-9 (for SIP-T54W/T46U/T46G/T46S/T29G), Line Key 1-7 (for	linekey

Main Page	First Navigation Item	Configuration Item
	SIP-T53W/T53/T43U/T27G), Line Key 1-5 (for SIP-T42U/T42G/T42S/T41P/T41S), Line Key 1-3 (for SIP-T33P/T33G), Line Key (for SIP-T40P/T40G/T31P/T31G/T31/T23P/T23G), Line Key (for SIP-T21(P) E2), Programmable key (for SIP-T30P/T30/T19(P) E2/CP860/CP920) Shortcut Key 1-6 (for CP960)	
Features	Forward&DND	features-forward
Settings	Preference	settings-preference
Directory	Local Directory	contacts-basic
Security	Password	password

For example, set the value of the configuration item “settings-preference” to be 1.

When logging into with user access level, the access to the Settings web page will be denied.

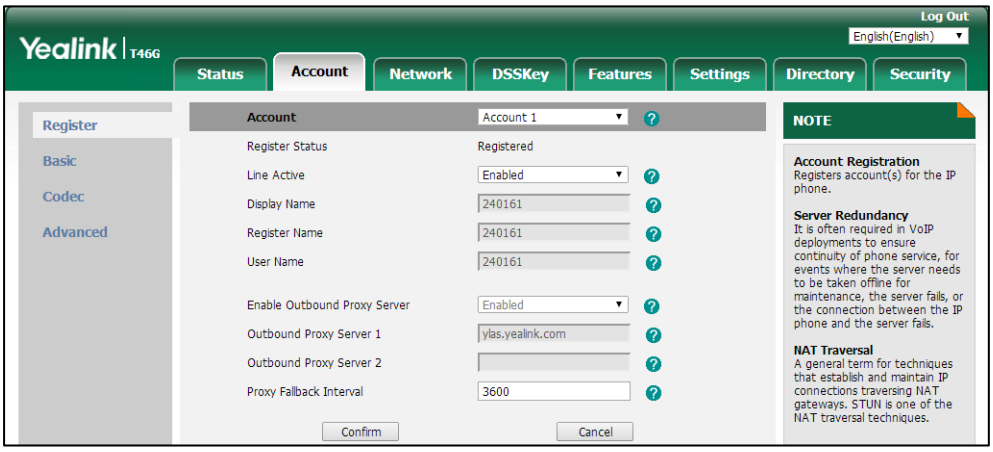


Sample2: Configuration items in the WebItemsLevel.cfg for the Register settings of Account page:

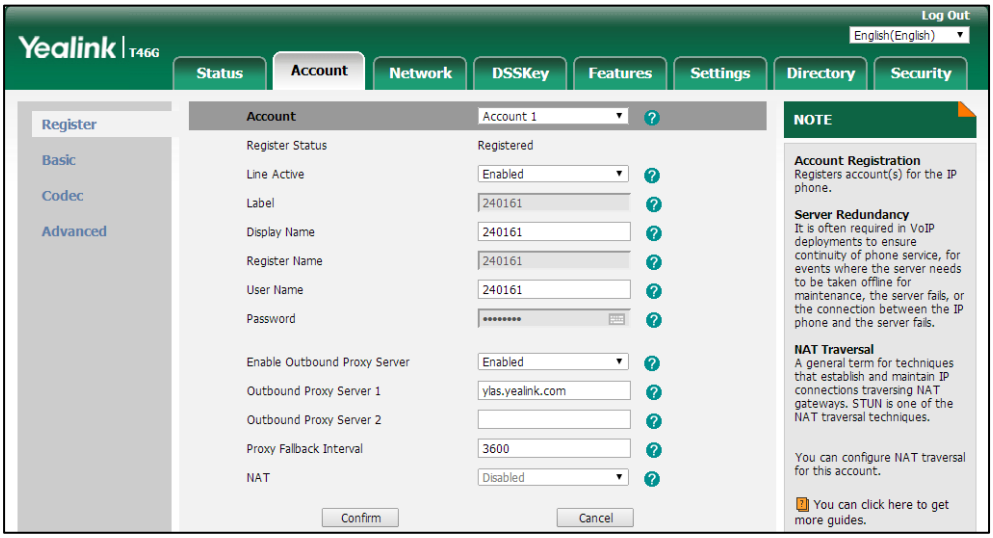
```
[ Account-Register ]
switch-account = 0
account_status = 0
line_active = 0
```

```
account_label = 11
display_name = 01
register_name = 03
user_name = 01
account_password = 12
enabled-outbound-proxy-server = 01
outbound-proxy-server = 01
backup-outbound-proxy-server = 01
NAT_traversal = 12
sip_server = 2
sip_server2 = 2
outbound-proxy-server-port = 2
backup-outbound-proxy-server-port = 2
```

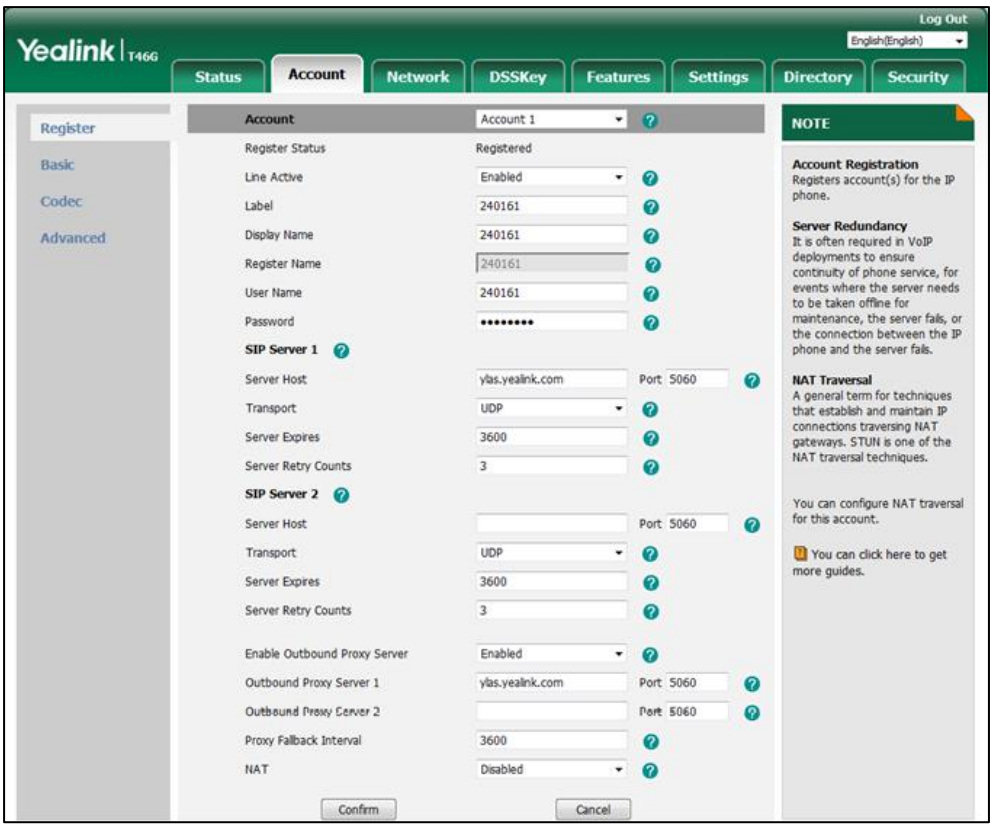
According to the above configuration of access level, when logging in the web user interface with user access level, the web user interface displays as below:



When logging in the web user interface with var access level, the web user interface displays as below:



When logging in the web user interface with admin access level, the web user interface displays as below:



For more information on parameters of the WebItemsLevel.cfg file, refer to the latest *Yealink SIP IP Phones Description of Configuration Parameters for User Access Level.xlsx* for your phone on Yealink Technical Support.

Phone/Handset User Interface

For DECT IP phones

The following shows configuration segments for the handset user interface in the WebItemsLevel.cfg file for reference:

If you set the access permission of the high level, it will have an impact on that of the low level. In the following examples, the Settings menu has a higher level than other submenus.

Example: Configuration items in the WebItemsLevel.cfg for Telephony submenu settings:

```
[ GUI ]
Auto_Answer = 01
Auto_Intercom = 02
Default_Line = 03
Incoming_Lines = 02
Speed_Dial = 0
```

Blacklist = 1

According to the above configuration of the access level:

For user access level, the Blacklist submenu is hidden. The Auto Answer, Auto Intercom, Default Line and Incoming Lines submenus are read-only. Only the Speed Dial submenu is writable.

For var access level, the Auto Intercom, Default Line and Incoming Lines submenus are read-only. The Auto Answer, Speed Dial and Blacklist submenus are writable.

For admin access level, only the Default Line submenu is read-only, the others are writable.

For more information on parameters of the WebItemsLevel.cfg file, refer to the latest *Yealink SIP IP Phones Description of Configuration Parameters for User Access Level.xlsx* for your phone on Yealink Technical Support.

For other IP phones

The following shows configuration segments for the phone user interface in the WebItemsLevel.cfg file for reference:

If you set the access permission of the high level, it will have an impact on that of the low level. In the following examples, the call forward menu has a higher level than always forward/busy forward/no answer forward submenu.

Example1: Configuration items in the WebItemsLevel.cfg for call forward menu and its submenu settings:

```
[ GUI ]
callcontrol_forward = 02
always-forward = 10
busy-forward = 00
NoAnswer-forward = 00
```

Note: The configuration of busy forward is the same as the one of the no answer forward, so the following figures take busy forward as an example.

According to the above configuration of access level, when logging in to the phone user interface with user access level, the access permission of each submenu is displayed as below:

Always forward submenu is hidden for user access level:

Busy forward/no answer forward submenu is read-only for user access level:

When logging in to the phone user interface with var access level, the access permission of each submenu is displayed as below:

Always forward submenu is read-only for var access level:

Busy forward/no answer forward submenu is read-only for var access level:

When logging in to the phone user interface with admin access level, the phone user interface displays as below:

Always forward submenu is writable for admin access level:

Busy forward/no answer forward submenu is writable for admin access level:

Example2: Configuration items in the WebItemsLevel.cfg for call forward menu and its submenu settings:

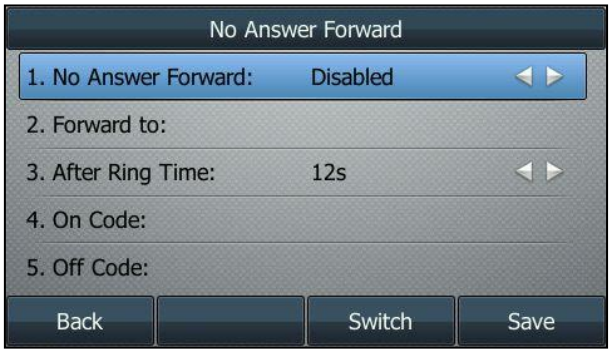
```
[ GUI ]
callcontrol_forward = 00
always-forward = 01
busy-forward = 02
NoAnswer-forward = 00
```

According to the above configuration of access level, when logging in to the phone user interface with user access level, the access permission of each submenu is displayed as below:

Always forward submenu is read-only for user access level:

The busy forward submenu is read-only for the user access level:

No answer forward submenu is writable for user access level:

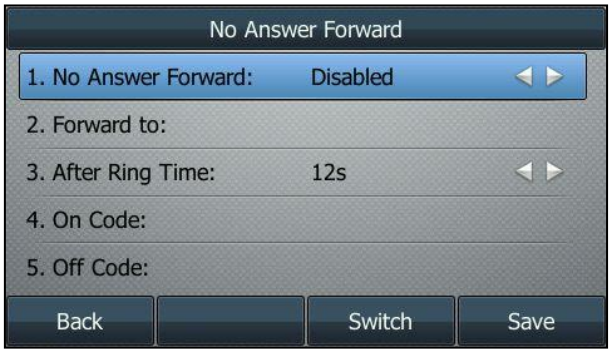


When logging in to the phone user interface with var access level, the access permission of each submenu is displayed as below:

Always forward submenu is writable for var access level:

The busy forward submenu is read-only for var access level:

No answer forward submenu is writable for var access level:

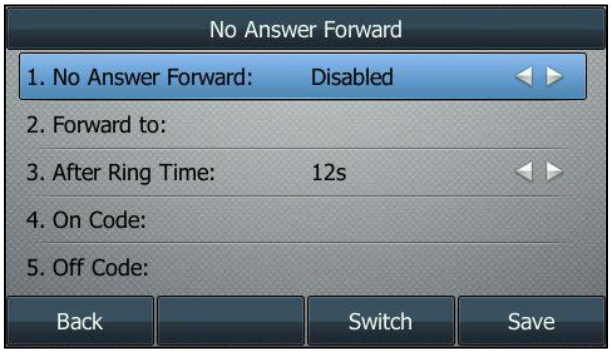


When logging in to the phone user interface with admin access level, the phone user interface displays as below:

Always forward submenu is writable for admin access level:

The busy forward submenu is writable for admin access level:

No answer forward submenu is writable for admin access level:



Configuring Yealink IP Phones

User access level feature is disabled for all IP phones in neutral firmware version by default. Before using this feature, you need to enable it through auto provisioning introduced as following. User access level feature is configurable only via configuration files.

For SIP VP-T49G IP phone:

To configure user access level feature for Yealink IP phones:

1. Edit the following parameters in the configuration file (e.g., y000000000051.cfg).

Parameters	Permitted Values	Default
security.var_enable	**0 or 1**	**0**
Description: This parameter is used to enable or disable the login of the web/phone user interface with different access levels. **0**-Disabled		

Parameters	Permitted Values	Default
1-Enabled **Note**: It takes effect after reboot. **Web User Interface:** None **Phone User Interface:** None		
security.default_access_level	**0, 1 or 2**	**0**
Description: This parameter is used to configure the default access level to access the phone user interface. **0**-user **1**-var **2**-admin **Note**: It works only if the value of the parameter "security.var_enable" is set to 1 (Enabled). It takes effect after reboot. **Web User Interface:** None **Phone User Interface:** None		
web_item_level.url	**FTP, TFTP, HTTP or HTTPS download URL**	**Blank**
Description: This parameter is used to configure the access URL of the WebItemsLevel.cfg file. **Note**: It takes effect after reboot. **Web User Interface:** None **Phone User Interface:** None		

The parameter settings in the configuration file for reference are shown as below:

security.var_enable = 1

web_item_level.url = ftp://192.168.1.100/WebItemsLevel.cfg

security.default_access_level = 1

2. Upload the configuration file to the directory of the provisioning server.

3. Configure the access URL of the provisioning server for the IP phone.
4. Trigger the IP phone to perform auto provisioning.

For more information on auto provisioning, refer to the latest Auto Provisioning Guide on Yealink Technical Support.

For other IP phones:

To configure user access level feature for Yealink IP phones:

1. Edit the following parameters in the configuration file (e.g., features.cfg).

Parameters	Permitted Values	Default
static.security.var_enable	**0 or 1**	**0**
Description: This parameter is used to enable or disable the login of the web/phone/handset user interface with different access levels. **0**-Disabled **1**-Enabled **Note**: It takes effect after reboot. **Web User Interface:** None **Phone User Interface:** None		
static.security.default_access_level	**0, 1 or 2**	**0**
Description: This parameter is used to configure the default access level to access the phone/handset user interface. **0**-user **1**-var **2**-admin **Note**: It works only if the value of the parameter “static.security.var_enable” is set to 1 (Enabled). It takes effect after reboot. **Web User Interface:** None **Phone/Handset User Interface:** None		

Parameters	Permitted Values	Default
static.web_item_level.url	**FTP, TFTP, HTTP or HTTPS download URL**	**Blank**
Description: This parameter is used to configure the access URL of the WebItemsLevel.cfg file. **Note**: It takes effect after reboot. **Web User Interface:** None **Phone/Handset User Interface:** None		

The parameter settings in the configuration file for reference are shown as below:

static.security.var_enable = 1

static.web_item_level.url = ftp://192.168.1.100/WebItemsLevel.cfg

static.security.default_access_level = 1

2. Upload the configuration file to the directory of the provisioning server.
3. Reference the configuration file in the boot file (e.g., y000000000000.boot).

   include:config “ftp://192.168.1.100/features.cfg”
4. Upload the boot file to the directory of the provisioning server.
5. Configure the access URL of the provisioning server for the IP phone.
6. Trigger the IP phone to perform auto provisioning.

The boot file is only applicable to IP phones running new firmware version (new auto provisioning mechanism). For more information on auto provisioning, refer to the latest Auto Provisioning Guide on Yealink Technical Support.

Logging in the Web/Phone/Handset User Interface with Different Access Levels

When the user access level is enabled, you can log in the web/phone/handset user interface with different access levels.

To login the web user interface with different access levels:

1. Press the **OK**/ √ key when the phone is idle to obtain the IP address.

   For CP930W-Base, W52P, W53P, W56P, and W60P, press the **OK**->**Status**->**Base** to obtain the IP address.

   For W80B, press the **OK**->**Status**->**DM** or **Menu**->**Status**->**DM Status** to obtain the IP address.

2. Enter the IP address (e.g., http://192.168.0.10 or 192.168.0.10) in the address bar of the web browser on your PC and then press the **Enter** key.
3. Enter the user name (admin/var/user) and password (admin/var/user) in the login page.
4. Click **Confirm/Login** to log in.

When logging in with different access levels, you can see different permissions of the web user interface.

To login the phone user interface with different access levels:

1. Press **Menu**->**UserMode**.
2. Press ◀ or ▶ , or the **Switch** soft key to select the desired access level in the **User Type** field.
3. Enter the password in the **Password** field.

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

You can see different permissions of the phone user interface when logging in with different access levels.

To login the handset user interface with different access levels:

1. Press **OK**->**User Mode**.
2. Press ◀ or ▶ to select the desired access level in the **User Type** field.
3. Enter the password in the **Password** field.
4. Press the **Save** soft key to accept the change.

You can see different permissions of the handset user interface when logging in with different access levels.

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