



Flyingvoice Phones Auto Provisioning Guide

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Introduction

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

This guide provides instructions on how to provision the Flyingvoice phones. Flyingvoice phones support FTP, TFTP, HTTP, and HTTPS protocols for auto provisioning.

Supported Phones

The following table lists product names and available firmware versions for IP phones that use auto provisioning process outlined in this guide.

Product Name	Boot File (Available Firmware Version)
FIP10(P), FIP11CP, FIP13G, FIP14G, FIP15G, FIP16, FIP15GPlus, FIP16Plus, P10, P10P, P10G, P10W, P10LTE, P11, P11P, P11G, P11W, P11LTE, P20, P20P, P20G, P21, P21P, P22P, P22G, P23G, P23GW, i86-01, i86-02, i86-03, i86V-01, i86V-02, i86-PCBA, i11, i12, i13, i11V, i12V	V0.5.15 or later

Getting Started

Obtaining Template Files

Please contact the Flyingvoice technical support to get the template configuration files for auto provision.

The template configuration files include Boot file, CFG configuration file, and Resource File.

Boot file: You can use a boot file to specify which configuration files to be downloaded and customize the download sequence of configuration files. There are two kinds of boot files include Common boot file(y000000000000.boot) and MAC-Oriented boot file. The Common boot file(y000000000000.boot) works on all phones, the MAC-Oriented boot file only works on the phone with a specific MAC address.

CFG file: The CFG file contains all parameters that affect the features of the phone. There are two CFG files include Common CFG file(y000000000000.cfg), the model-based CFG file f00000xxxxxx.cfg and MAC-Oriented CFG file.

You can create and name as many configuration files as you want (for example, account.cfg, sip.cfg, features.cfg) to cooperate with the boot file . The custom configuration files can contain the configuration parameters of the same feature modules for all phones.

Resource file: Resource files include Local phonbook file(xml) and remote phonebook file(xml), the resource file is optional, but if the particular feature is being employed, these files are required.

Obtaining Phone Information

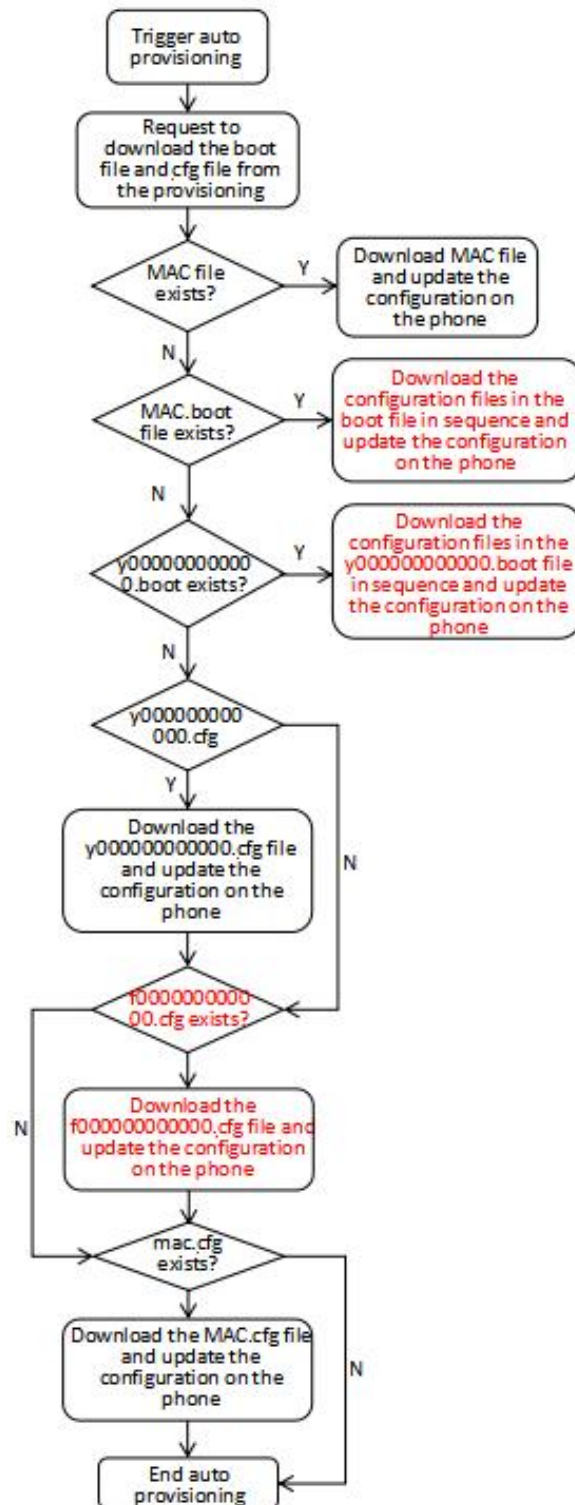
Before provisioning, you also need the IP phone information. For example, MAC address and the SIP account information of the IP phone.

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

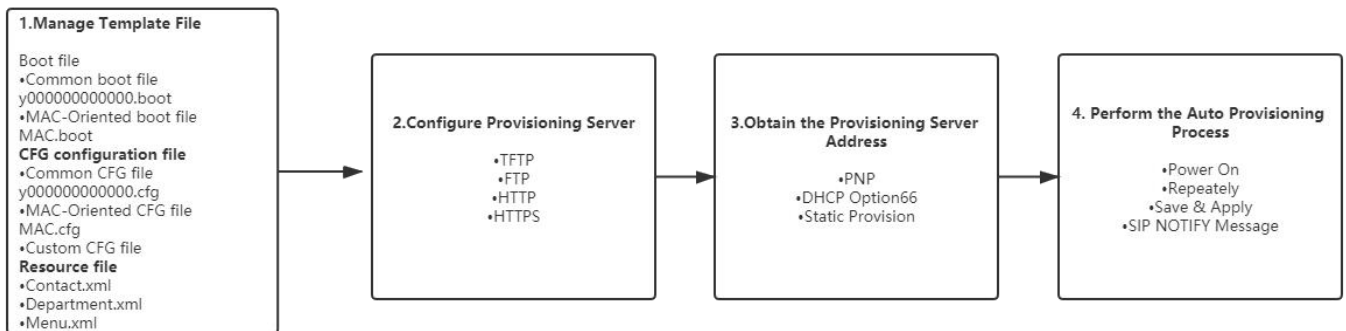
SIP Account Information: This may include SIP credentials such as user name, password and IP address of the SIP server. Ask your system administrator for SIP account information.

Provisioning Flyingvoice Phones

Auto Provisioning Process



Major Tasks for Auto Provisioning



Auto Provision Configuration Instance

This section shows an instance of auto provision configuration on a TFTP server.

1. Manage boot files.

Edit the common boot file y0000000000000000.boot, enter the name of your customized cfg configuration file.

```
y0000000000000000.boot
1 include:config <time.cfg>
2 include:config "xxx.cfg"
```

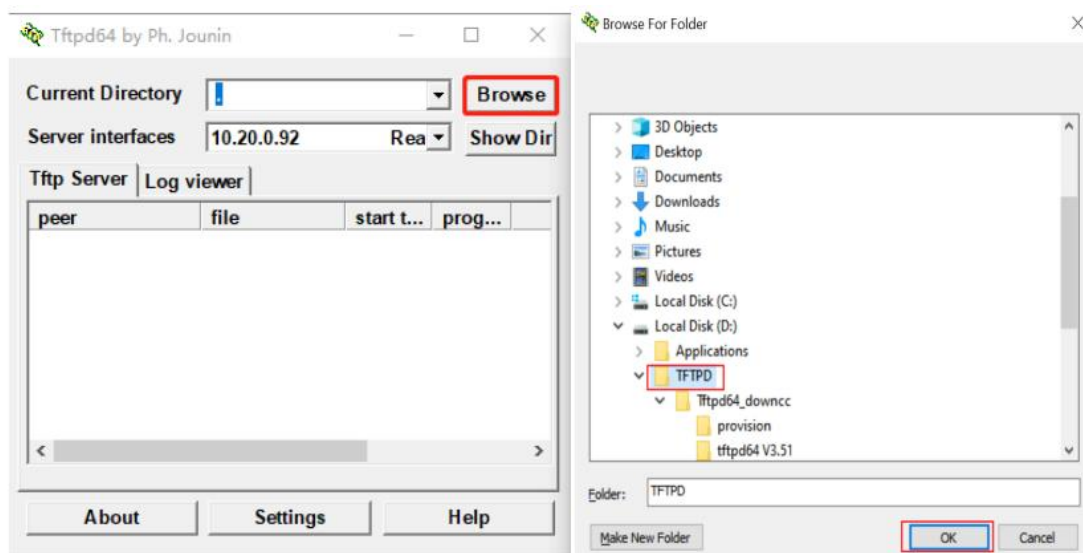
2. Manage configuration files.

Edit the desired configuration parameters in the CFG file(time.cfg) you want the IP phone to download. You can copy the parameters from the common cfg file.

```
time.cfg
1  ##Time Zone ranges from -11 to +14.
2  local_time.time_zone=+8
3  local_time.ntp_server1=cn.pool.ntp.org
4  local_time.ntp_server2=cn.pool.ntp.org
5
6  ##Time format: 0-12 hours, 1-24 hours.
7  local_time.time_format=0
8
9  ##Date format: 0-WWW MMM DD, 1-DD-MMM-YY, 2-YYYY-MM-DD, 3-DD/MM/YYYY, 4-MM/DD/YY, 5-DD MMM YYYY, 6-WWW DD MMM.
10 local_time.date_format=0
```

3. Configure the TFTP server.

- 1) Create a root directory on your local system. For example, D:\TFTPD Directory.
- 2) Place the boot files, cfg files and resource files to the TFTP root directory.
- 3) Start the TFTP server, click Browser, select the directory that you created, press OK.



- 4) The server's URL format is "**tftp://IP/**" (The "IP" here means the server's IP address, such as "tftp://10.20.0.92/"), this is where the phone downloads the configuration file.

4. Configure the provisioning server address on the IP phone.

- 1) Log in to the phone's web management page.
- 2) Go to **Administration > Provision > Configuration Profile**, type in the access URL of the provisioning server in the Profile Rule field.

Status	Network	Wireless	SIP Account	Phone	Administration		
Management	Firmware Upgrade	Scheduled Tasks	Certificates	Provision	TR-069	Diagnosis	

Provision

Configuration Profile

Provision Enable	Enable ▾
PNP Active	Enable ▾
Resync on Reset	Enable ▾
Resync Random Delay (sec)	40
Resync Periodic (sec)	3600
Resync Error Retry Delay (sec)	3600
Forced Resync Delay (sec)	14400
Resync after Upgrade	Enable ▾
Resync from SIP	Enable ▾
Option 66	Enable ▾
Option 67	Disable ▾
Config File Name	\$(MA)
User Agent	
HTTP Authentication	Digest ▾
User Name	FLY10619900045
Password	FLY10619900045
Profile Rule	tftp://10.20.0.92/

- Click **Save & Apply** on the bottom of the page to trig the phone to perform auto provisioning.

Firmware Upgrade

Enable Upgrade	Enable ▾
Upgrade Error Retry Delay (sec)	3600
Upgrade Rule	

Save & Apply Save Cancel Reboot

- Check whether the phone updates the settings on the web page or on the phone screen.

Managing Boot Files

Flyingvoice phones can download CFG files referenced in the boot files. Before provisioning, you may need to edit and customize your boot files. Flyingvoice supports the

following two types of boot files:

- MAC-Oriented boot file (for example 0021f2000001.boot)
- Common boot file(y00000000000000.boot)

You can edit the template boot file directly or create a new boot file as required. Open each boot file with a text editor such as Notepad++.

Editing Common Boot File

The common boot file is effective for all phones. It uses a fixed name "y00000000000000.boot" as the file name.

The following figure shows the contents of the common boot file:

```
include:config <xxx.cfg>
include:config "xxx.cfg"
```

The following table lists guidelines you need to know when editing the boot file:

Item	Guidelines
#	<p>The line beginning with “#” is considered to be a comment.</p> <p>You can use “#” to make any comment in the boot file.</p>
<p>include:config <xxx.cfg></p> <p>include:config "xxx.cfg"</p>	<ol style="list-style-type: none">1) Each “include” statement can specify a URL where a configuration file is stored. The configuration file format must be *.cfg.2) The URL in <> or “” supports the following two forms:

	<ul style="list-style-type: none"> • Relative URL (relative to the boot file): <p>For example, sip.cfg, HTTP Directory/sip.cfg</p> <ul style="list-style-type: none"> • Absolute URL: <p>For example, http://10.20.0.88/HTTP Directory/sip.cfg</p> <p>The URL must point to a specific CFG file. The CFG files are downloaded in the order listed (top to bottom). The parameters in the newly downloaded configuration files will override the duplicate parameters in files downloaded earlier.</p> <p>The “include” statement can be repeated as many times as needed.</p>
--	---

Creating MAC-Oriented Boot File

The MAC-Oriented boot file is only effective for the specific phone. It uses the 12-digit MAC address of the IP phone as the file name. For example, if the MAC address of the IP phone is 0021f2000001, the MAC-Oriented boot file has to be named as 0021f2000001.boot(case-sensitive) respectively. If you want to create a MAC-Oriented boot file for your phone, follow these steps:

To create a MAC-Oriented boot file:

1. Create a boot file for your phone, name it with the MAC address.
2. Copy the contents from the common boot file and specify the configuration files to be downloaded. One or more configuration files can be referenced in the boot file. The following takes two configuration files as an example.

```
include:config <test.cfg>  
include:config "http://10.20.0.92/mac.cfg"
```

3. Save the changes and close the MAC-Oriented boot file. You can also make a copy of the common boot file, rename it and then edit it.

Managing Configuration Files

Auto provisioning enables Flyingvoice phones to update themselves automatically via downloading Common CFG, MAC-Oriented CFG, and custom CFG files. Before provisioning, you may need to edit and customize your configuration files.

You can edit the template configuration files directly or create a new CFG file as required. Open each configuration file with a text editor such as Notepad++.

Editing Common CFG File

The Common CFG file is effective for all phones. It uses a fixed name "y0000000000000.cfg" as the file name, the common CFG includes the configuration parameters for all phones, such as firmware upgrade, phonebook, and volume settings.

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

```
#####
##          Provision          ##
#####
auto_provision.server.auth_method=
auto_provision.server.url=

auto_provision.server.username=
auto_provision.server.password=

#####
##          Feature General    ##
#####
##Define the "*" or "*" key as the send key; 0-Disabled, 1-# key(default), 2-* key;
features.pound_key.mode=

#####
##          Line Key          ##
#####
#####
##linekey.X.*: (FIP10(P)/FIP12WP: X ranges from 1 to 2. FIP11C(P): X ranges from 1 to 6. FIP13G: X ranges from 1 to 9. FIP14G: X ranges from 1 to 21. FIP15G: X ranges from 1 to 24)
##linekey.X.type: 0-N/A, 5-DND, 9-Pickup(pickup/DirectPickup), 10-Call Park, 11-DTMF, 13-Speed Dial, 14-Intercom, 15-Line, 16-BLF, 20-Private Hold, 23-Group Pickup, 24-Paging

linekey.1.type=
linekey.1.line=
linekey.1.value=
linekey.1.label=
linekey.1.pickup_value=

linekey.2.type=
linekey.2.line=
linekey.2.value=
linekey.2.label=
```

The following table lists guidelines you need to know when editing the common CFG

file:

Item	Guidelines
Filename	The file name must be y0000000000000.
#	The line beginning with “#” is considered to be a comment.
Line formats and Rules	<p>Each line must use the following format and adhere to the following rules:</p> <p>Configuration Parameter=Valid Value</p> <ul style="list-style-type: none"> · Separate each configuration parameter and value with an equal sign. · Set only one configuration parameter per line. · Put the configuration parameter and value on the same line, and do not break the line.

Editing Model-Based CFG File

The model-based CFG file is effective for specific models of phones. It uses f00000+(7 digits phone model name, if the number is less than 7 digits, add leading 0s.) as the file name. For example, if the phone model is FIP10, the model-based CFG file has to be named as f0000000fip10.cfg(case-sensitive).

The model-based CFG includes the configuration parameters for specific models of phones, such as firmware upgrade and redirection to a specific model's auto provision server..

The following figure shows the content of the model-based CFG fie.

```
auto_provision.server.url=https://acs.flyingvoice.net/fip10/  
firmware.url=https://acs.flyingvoice.net/fip10/firmware/fip10.bin
```

The following table lists guidelines you need to know when editing the model-based CFG file:

Item	Guidelines
Filename	The file name matches the WAN port MAC address of the phone.
#	The line beginning with “#” is considered to be a comment.

Line formats and Rules	<p>Each line must use the following format and adhere to the following rules:</p> <p>Configuration Parameter=Valid Value</p> <ul style="list-style-type: none"> • Separate each configuration parameter and value with an equal sign. • Set only one configuration parameter per line. • Put the configuration parameter and value on the same line, and do not break the line.
------------------------------	--

Editing MAC-Oriented CFG File

The MAC-Oriented CFG file is only effective for the specific phone. It uses the 12-digit MAC address of the IP phone as the file name. For example, if the MAC address of the IP phone is 0021f2000001, the MAC-Oriented CFG file has to be named as 0021f2000001.cfg(case-sensitive) respectively.

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

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

```

##account.X*:(FIP10(P)/FIP12WP/FIP16: X ranges from 1 to 2. FIP11C(P): X ranges from 1 to 3. FIP13G: X ranges from 1 to 4. FIP14G: X ranges from 1 to 8. FIP15G: X ranges from 1 to 16.
#####
## Account Register ##
#####
#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 username 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.
account.1.sip_server_host=

#Specify the port for the SIP server. The default value is 5060.
account.1.sip_server_port=

#Specify the IP address or domain name of the outbound proxy server.
account.1.outbound_host=

#Specify the server port, the default value is 5060.
account.1.outbound_port=

```

The following table lists guidelines you need to know when editing the MAC-Oriented CFG file:

Item	Guidelines
Filename	The filename matches the MAC address of your phone.
#	The line beginning with “#” is considered to be a comment.
Line formats and Rules	<p>Each line must use the following format and adhere to the following rules:</p> <p style="text-align: center;">Configuration Parameter=Valid Value</p> <ul style="list-style-type: none"> · Separate each configuration parameter and value with an equal sign. · Set only one configuration parameter per line. · Put the configuration parameter and value on the same line, and do not break the line.

Creating a New CFG File

If you want to create a new CFG file for your phone, follow these steps:

To create a new CFG file:

1. Create a CFG file for your phone. Ensure the file complies with the guidelines that are listed in [Editing Common CFG File](#) or [Editing MAC-Oriented CFG File](#).
2. Copy configuration parameters from the template configuration files and set valid values for them.

```
local_contact.data.url=http://10.20.0.92/testcontact.xml  
wui.http_enable=1  
wui.https_enable=1  
lang.gui=Chinese_S
```

3. Save the changes and close the CFG file.

You can also make a copy of the template configuration file, rename it and then edit it.

Managing Resource Files

Before provisioning, you may need to edit and customize your resource files.

You can edit the template resource files directly or create a new resource file as required.

Open each resource file with a text editor such as Notepad++.

Customizing Resource Files

The resource files are effective for all phones of the same model or the specific phone. If the resource file is to be used for all IP phones of the same model, the access URL of resource file had better be specified in the common CFG file. However, if you want to specify the desired phone to use the resource file, the access URL of the resource file should be specified in the MAC-Oriented CFG file.

Configuring a Provisioning Server

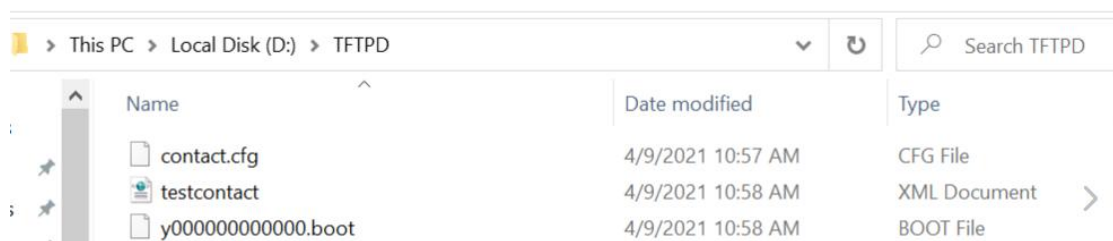
Flyingvoice phones support using FTP, TFTP, HTTP, and HTTPS protocols to download boot files and configuration files. You can use one of these protocols for provisioning. The following section provides instructions on how to configure a TFTP server. We recommend that you use TFTP32 as the TFTP server.

TFTP32 is a free application for Windows. You can download TFTP32 online: http://tftpd32.jounin.net/tftpd32_download.html.

Configuring TFTP Server

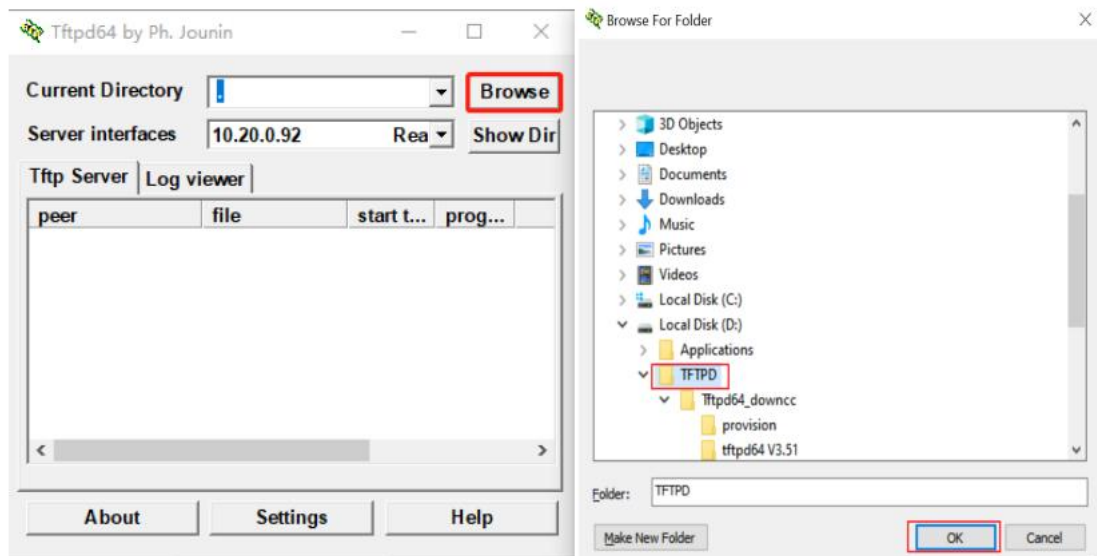
To prepare a root directory

1. Create a TFTP root directory on the local system (for example, D:\TFTP Directory).
2. Place the boot files, configuration files and resource files to this root directory.



To configure a TFTP server

Start the TFTP server, click Browser, select the directory that you created, press OK.



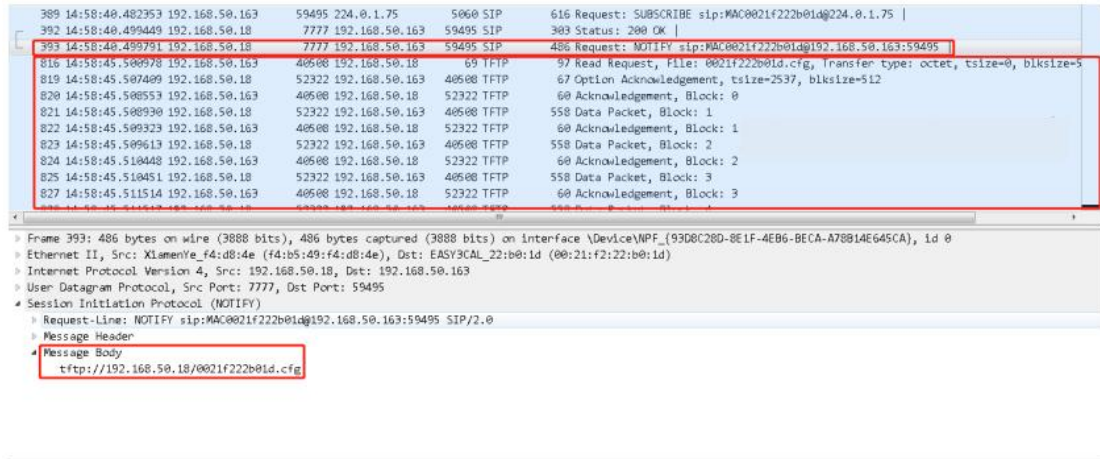
The server's URL format is "**tftp://IP/**" (The "IP" here means the server's IP address, such as "tftp://10.20.0.92/") , this is where the phone download the configuration file.

Obtaining the Provisioning Server Address

Plug and Play (PnP) Server

Flyigvoice phones support obtaining the provisioning server address from the PnP server. The phone sends the PnP SUBSCRIBE message to the broadcast address 224.0.1.75 to obtain the provisioning server address during startup. The PNP feature is enabled by default.

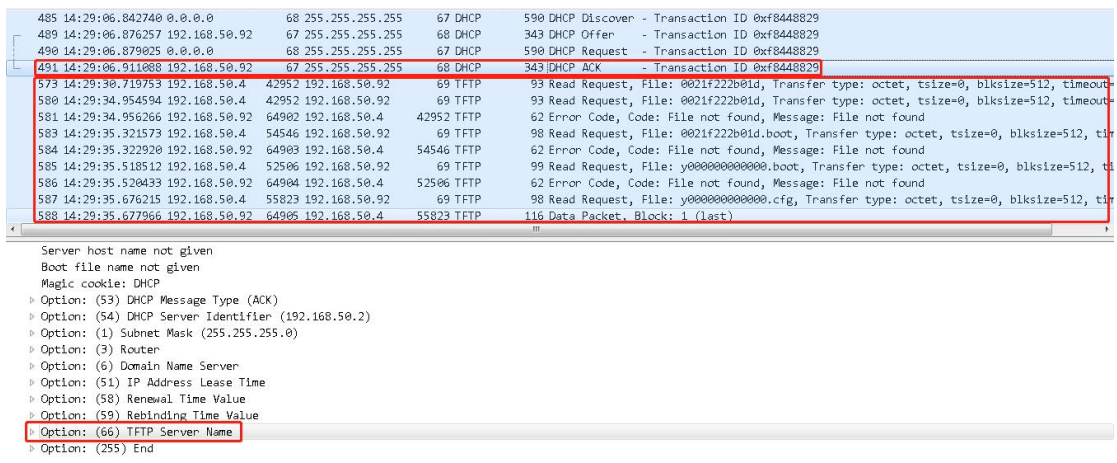
The following figure indicates the phone obtain the provision server's address from the NOTIFY message from the PNP server.



DHCP Option66

Flyingvoice phones can obtain the provisioning server address by detecting DHCP option 66 during startup. And DHCP Option 66 is enabled by default.

The following figure indicates the phone obtain the provision server's address by detecting DHCP option 66.



Static Provision

Flyingvoice phones can obtain the provisioning server address by static provision.

You can follow the steps below to configure the phone.

1. Log into the phone's web management page.
2. Go to **Administration > Provision > Configuration Profile**, type in the access URL of the provisioning server in the Profile Rule field.

The screenshot shows the phone's web management interface. At the top, there is a navigation bar with tabs: Status, Network, Wireless, SIP Account, Phone, Administration, and a sub-bar with Management, Firmware Upgrade, Scheduled Tasks, Certificates, Provision, TR-069, and Diagnosis. The 'Administration' tab and 'Provision' sub-tab are highlighted with red boxes. Below this, the 'Provision' section is active, and the 'Configuration Profile' sub-section is highlighted with a red box. The 'Configuration Profile' settings are as follows:

Setting	Value
Provision Enable	Enable
PNP Active	Enable
Resync on Reset	Enable
Resync Random Delay (sec)	40
Resync Periodic (sec)	3600
Resync Error Retry Delay (sec)	3600
Forced Resync Delay (sec)	14400
Resync after Upgrade	Enable
Resync from SIP	Enable
Option 66	Enable
Option 67	Disable
Config File Name	\$(MA)
User Agent	
HTTP Authentication	Digest
User Name	FLY10619900045
Password	FLY10619900045
Profile Rule	tftp://10.20.0.92/

3. Click **Save & Apply** on the bottom of the page to trig the phone to perform auto provisioning.

The screenshot shows the 'Firmware Upgrade' section of the phone's web management interface. The settings are as follows:

Setting	Value
Enable Upgrade	Enable
Upgrade Error Retry Delay (sec)	3600
Upgrade Rule	

At the bottom of the page, there is a row of buttons: Save & Apply, Save, Cancel, and Reboot. The 'Save & Apply' button is highlighted with a red box.

After that, the phone will connect to the provisioning server and perform the auto provisioning through one of the following methods: power on, repeatedly, click save and apply, SIP NOTIFY message. For more information on these methods, refer to the section

[Triggering the IP Phone to Perform Auto Provisioning.](#)

Triggering the Phone to Perform Auto Provision

Power On

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

Status	Network	Wireless	SIP Account	Phone	Administration		
Management	Firmware Upgrade	Scheduled Tasks	Certificates	Provision	TR-069	Diagnosis	

Provision	
Configuration Profile	
Provision Enable	Enable ▾
PNP Active	Enable ▾
Resync on Reset	Enable ▾
Resync Random Delay (sec)	40
Resync Periodic (sec)	3600
Resync Error Retry Delay (sec)	3600
Forced Resync Delay (sec)	14400
Resync after Upgrade	Enable ▾
Resync from SIP	Enable ▾
Option 66	Enable ▾
Option 67	Disable ▾
Config File Name	\$(MA)
User Agent	
HTTP Authentication	Digest ▾
User Name	FLY10619900045
Password	FLY10619900045
Profile Rule	tftp://192.168.50.92/

Repeatedly

The IP phone performs the auto provisioning at regular intervals. You can configure the interval for the repeatedly mode. The default interval is 3600 seconds.

Status	Network	Wireless	SIP Account	Phone	Administration
Management	Firmware Upgrade	Scheduled Tasks	Certificates	Provision	TR-069
Diagnosis					

Provision

Configuration Profile

Provision Enable	Enable ▾
PNP Active	Enable ▾
Resync on Reset	Enable ▾
Resync Random Delay (sec)	40
Resync Periodic (sec)	3600
Resync Error Retry Delay (sec)	3600
Forced Resync Delay (sec)	14400
Resync after Upgrade	Enable ▾
Resync from SIP	Enable ▾
Option 66	Enable ▾
Option 67	Disable ▾
Config File Name	\$(MA)
User Agent	
HTTP Authentication	Digest ▾
User Name	FLY10619900045
Password	FLY10619900045
Profile Rule	tftp://192.168.50.92/

Update Now/Save & Apply

The IP phone performs the auto provisioning when you click Update Now/Save & Apply on the provision page.

Repeatedly	Disable ▾
Resync Periodic (sec)	3600
Resync Error Retry Delay (sec)	3600
Forced Resync Delay (sec)	14400
Flexible Auto Provision	Disable ▾
Flexible Interval Days	30
Flexible Time	00 : 00 - 00 : 00
Resync after Upgrade	Enable ▾
Resync from SIP	Enable ▾
Option 66	Enable ▾
Option 67	Disable ▾
Config File Name	\$(MA)
User Agent	
HTTP Authentication	Digest ▾
User Name	FLY13022A00006
Password	FLY13022A00006
Profile Rule	https://rps.flyingvoice.net/config/\$(MA)?mac=\$(MA)&serial

Configuration Profile2

User Agent	
HTTP Authentication	Digest ▾
User Name	FLY13022A00006
Password	FLY13022A00006
Profile Rule	https://prv4.flyingvoice.net/config/\$(MA)?mac=\$(MA)&serial

Firmware Upgrade

Enable Upgrade	Enable ▾
Upgrade Error Retry Delay (sec)	3600
Upgrade Rule	

Update Now
Save & Apply
Save
Cancel
Reboot

Flexible Auto Provision

The phone performs the auto provisioning at a flexible time on any day within a specific period. The random day is calculated based on the phone's MAC address. You can specify an interval and configure what time of day triggers a phone to perform the auto provisioning.

For example, you can configure the phone to check for and update new configurations every 30 days between 1:00 and 6:00 AM. The phone will perform the auto provisioning at a flexible time (e.g. 03:47) on a flexible date (e.g. 18th) based on its MAC address.

Note that if the auto provisioning (e.g. Update Now) occurs during this specific time period,

Go to **Administration->Provision** page to enable Flexible Auto Provision and enter the appropriate value in the Flexible Interval and Flexible Time field.

SIP NOTIFY Message

```

1 13:44:49.414 192.168.20.2      52969 224.0.1.75       SIP          5060        566 Request: SUBSCRIBE sip:MAC0021f22abd9@224.0.1.75 |
2 13:45:37.118 192.168.20.165    7778 192.168.20.2         SIP          5060        298 Request: NOTIFY sip:flyingvoice@192.168.20.2:5060 |
3 13:45:37.143 192.168.20.2      5060 192.168.20.165       SIP          7778        378 Status: 200 OK |
5 13:47:28.176 192.168.20.2      48637 224.0.1.75           SIP          5060        566 Request: SUBSCRIBE sip:MAC0021f22abd9@224.0.1.75 |

> Frame 2: 298 bytes on wire (2384 bits), 298 bytes captured (2384 bits) on interface eth0
> Ethernet II, Src: XsionYe_f4:0a:7a (fa:b5:49:f4:0a:7a), Dst: EASY3CAL_22:ab:d9 (d8:01:00:02:ab:d9)
> Internet Protocol Version 4, Src: 192.168.20.165, Dst: 192.168.20.2
> User Datagram Protocol, Src Port: 7778, Dst Port: 5060
< Session Initiation Protocol (NOTIFY)
  < Request-Line: NOTIFY sip:flyingvoice@192.168.20.2:5060 SIP/2.0
  < Message Header
    > Via: SIP/2.0/UDP 192.168.20.165:7778
    > To: sip:flyingvoice@192.168.20.2:5060
    > From: sip:pbb@192.168.20.165
    > Cseq: 10 NOTIFY
    > Call-ID: 1234@192.168.20.165
    [Generated Call-ID: 1234@192.168.20.165]
    Event: check-sync;reboot=true
    Content-Length: 0

```

Downloading and Verifying Configurations

Downloading Boot, Configuration and Resource Files

After obtaining the provisioning server address in one of the ways introduced above, the phone will request to download the boot files and configuration files from the provisioning server when it is triggered to perform auto provisioning.

For more information about auto provisioning, refer to [Auto Provisioning Process](#).

If the access URLs of the resource files have been specified in the configuration files, the phone will try to download the resource files.

Resolving and Updating Configurations

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

Verifying Configurations

After auto provisioning, you can then verify the update via phone user interface or web user interface of the phone.

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 as a cryptographic hash function that produces a 128-bit (16-byte) hash value.

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

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

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

HTTPS: Hypertext Transfer Protocol Secure (HTTPS) is a combination of Hypertext Transfer

Protocol (HTTP) with SSL/TLS protocol. It provides encrypted communication and secure identification of a network web server.

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

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

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

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

Appendix

Configuring an FTP Server

Wftpd and FileZilla are free FTP application software for Windows. This section mainly provides instructions on how to configure an FTP server using wftpd for Windows.

You can download wftpd online:

https://download.apponic.com/E8fPrPTuPFzY_HHyQrJ6XGarF_FlfbaVayxxBqFSjtrm-6ZSp4EXGnHu09pCJ1XXoM6Qy-LCJNDmpJUBJ3vIRAoRS57LAfpSrlhIS_mZe69LszeDel1WImvk2DdQH-BL2KM7iwUfXL0IOejAj21yWqNRjBUtK_wKkhQ/

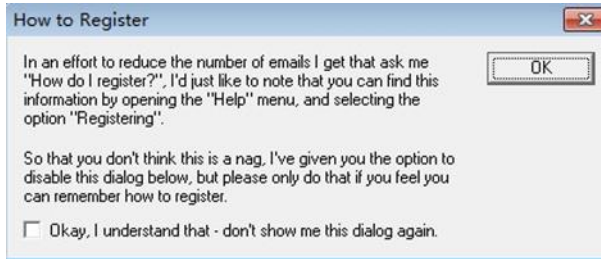
To prepare a root directory

1. Create an FTP root directory on the local system (for example, D:\FTP Directory).
2. Place the boot files and configuration files to this root directory.

To configure a FTP server

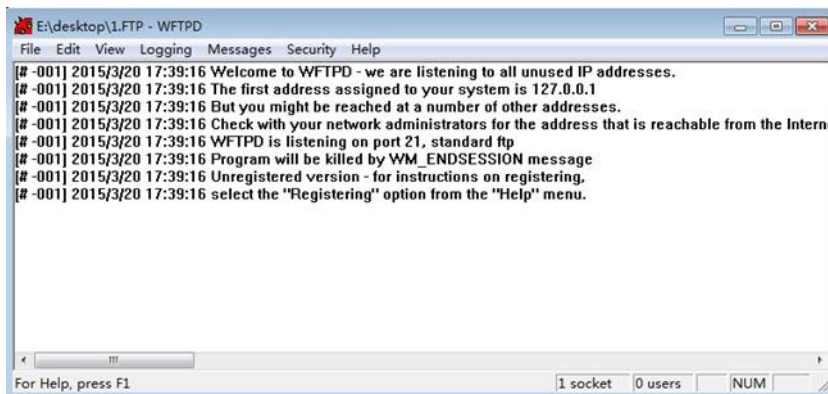
1. Download the compressed file of the wftpd application to your local directory and extract it.
2. Double click the Wftpd.exe.

The dialogue box of how to register is shown as below:

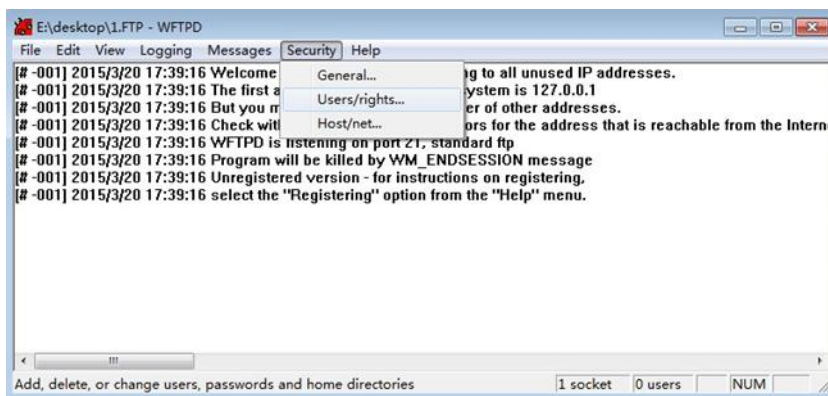


3. Check the check box and click OK in the pop-up box.

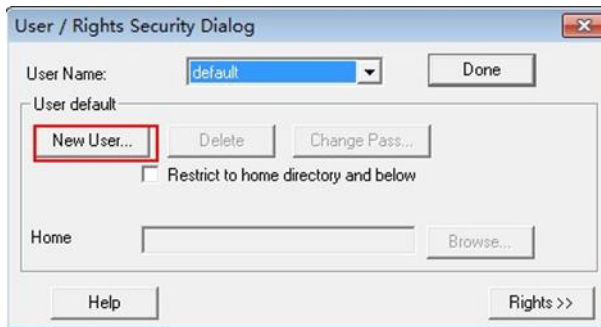
The log file of the wftpd application is shown as below:



4. Click Security->Users/rights



5. Click New User.



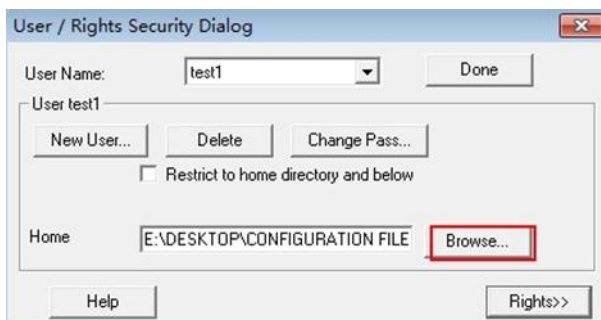
6. Enter a user name (for example, test1) in the User Name field and then click OK.



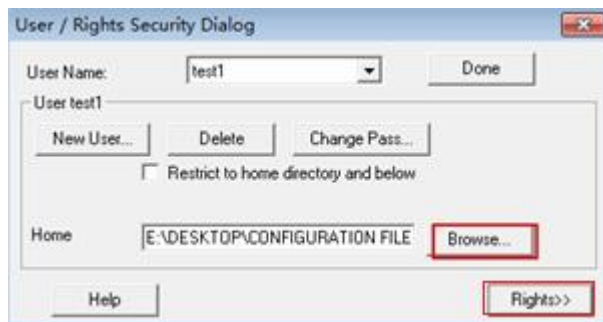
7. Enter the password of the user (for example, test1) created above in the New Password and Verify Password field respectively, and then click OK.



8. Click Browse to locate the FTP root directory in your local system.



-
9. Click Rights>> and assign the desired permission for the user (for example, test1) created above.



10. Check the check boxes of Read, Create Files/Dirs, List Directories and Overwrite/Delete to make sure the FTP user has the read and write permission.



11. Click Done to save the settings and finish the configurations.

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://test1:123456@10.3.6.234/") is where the IP phone downloads boot files and configuration files from.

Configuring an HTTP Server

This section provides instructions on how to configure an HTTP server using HFS tool. You can download the HFS software online: <http://www.rejetto.com/hfs/hfs24rc06.exe>.

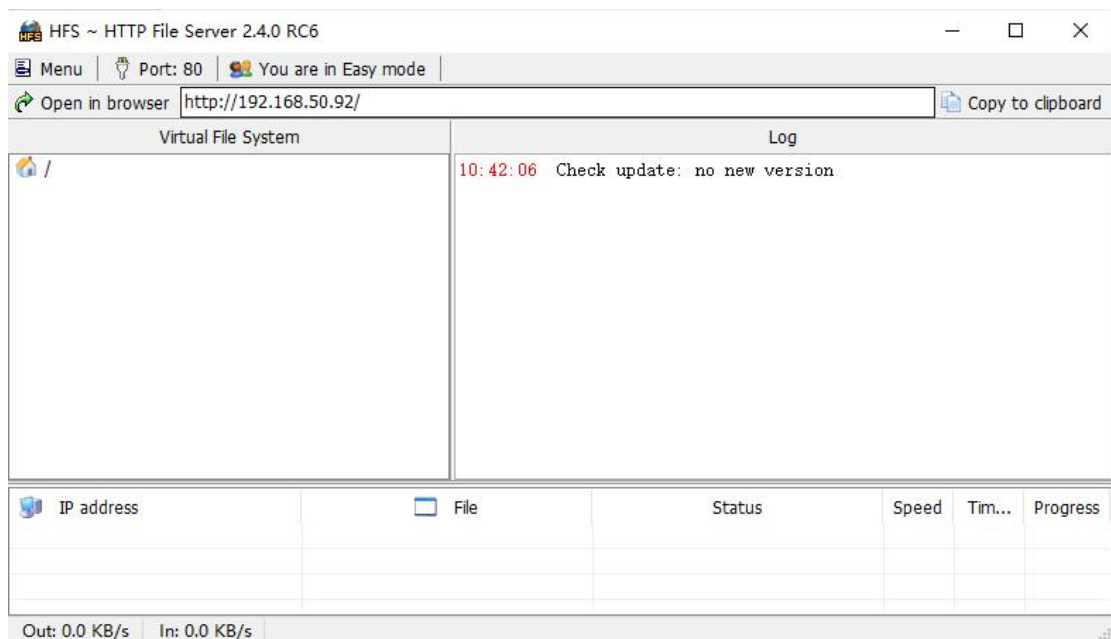
To prepare a root directory:

1. Create an HTTP root directory on the local system (for example, D:\HTTP Directory).
2. Place the boot files and configuration files to this root directory.

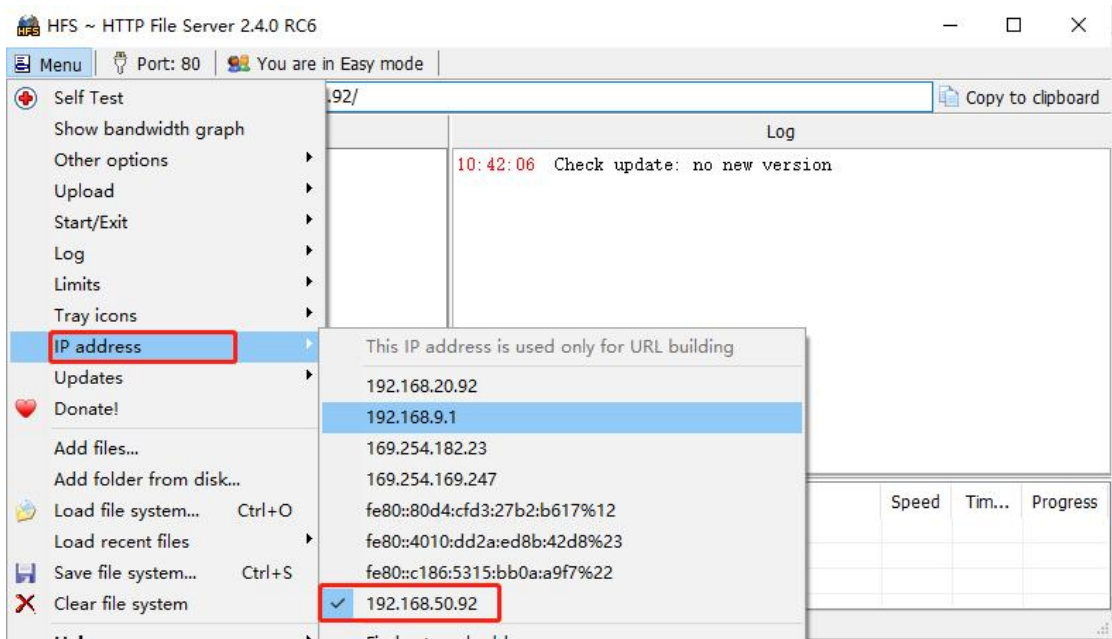
To configure an HTTP server

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

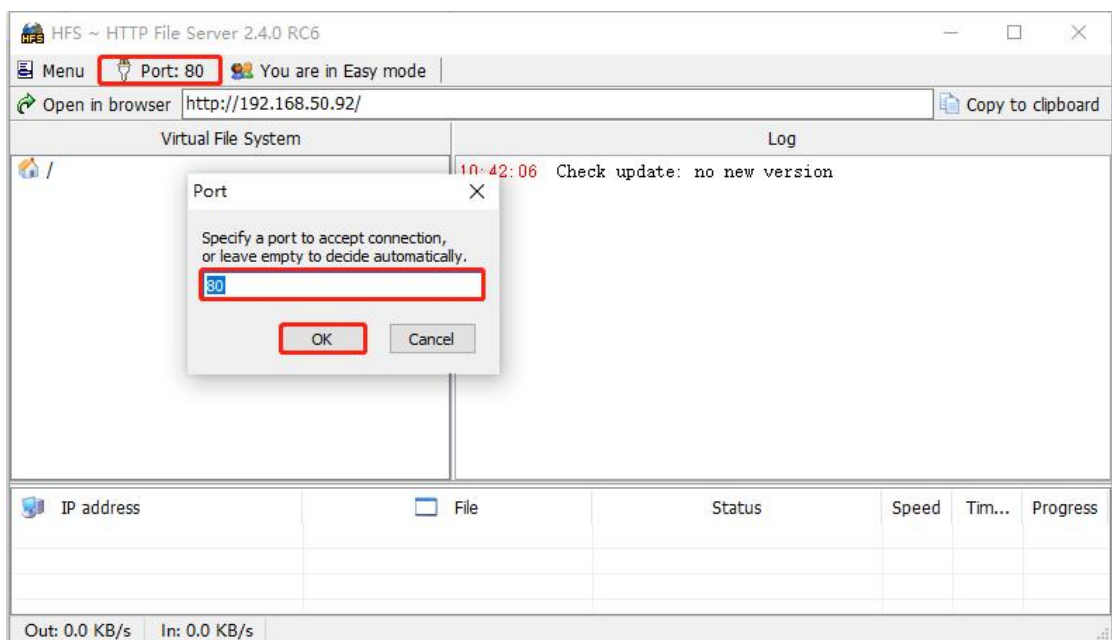
The main configuration page is shown as below:




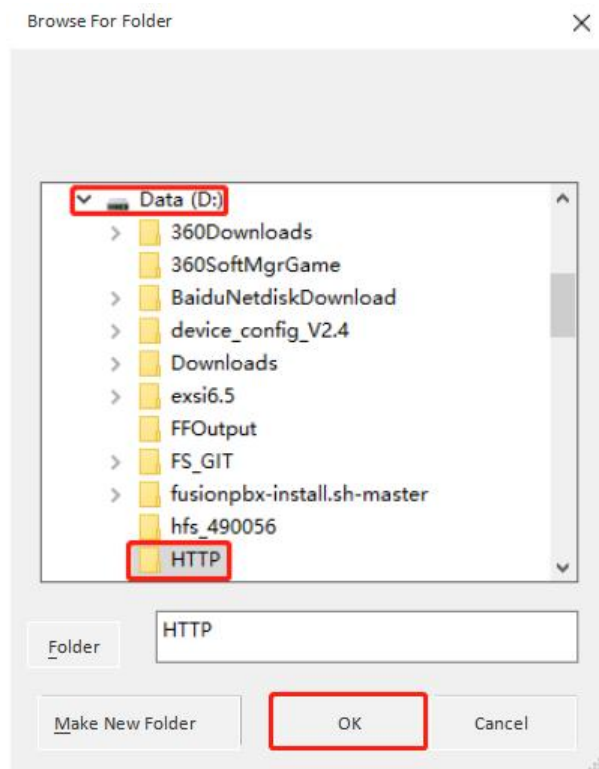
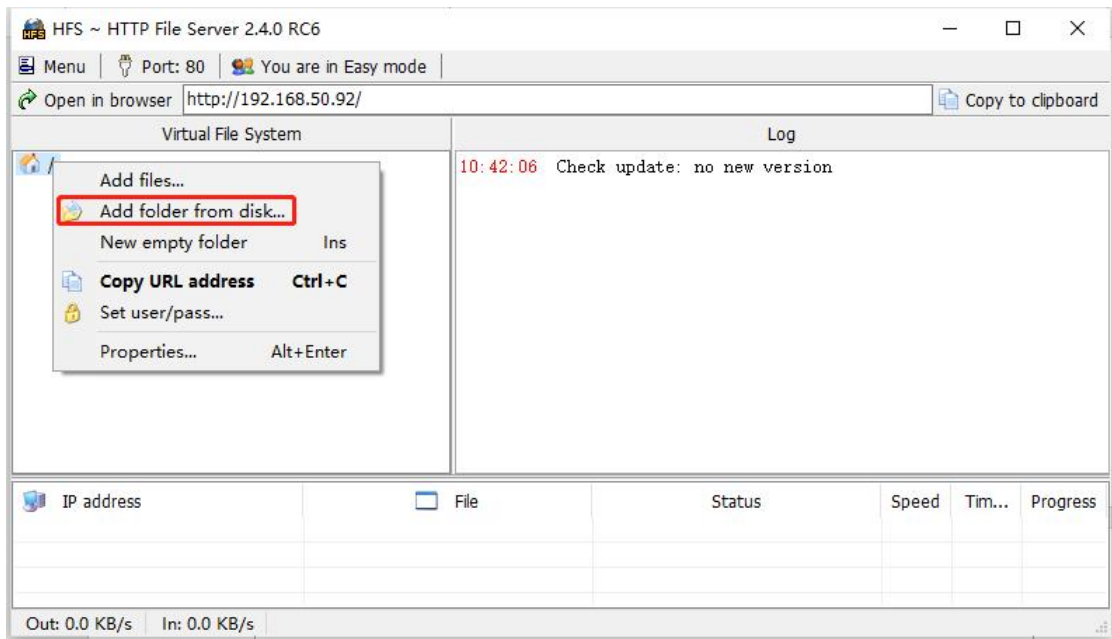
2. Click Menu in the main page and select the IP address of the PC from IP address.



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

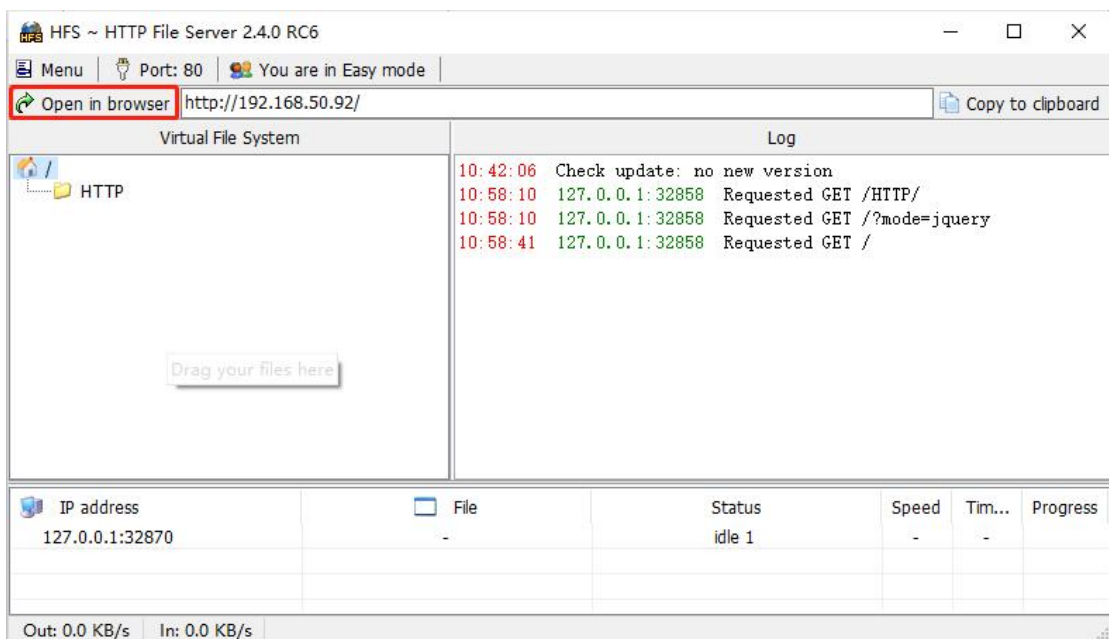


3. Right click the icon  on the left of the main page, select Add folder from disk to add the HTTP Server root directory.





4. Check the server URL (for example, <http://10.2.11.101:8088/ProvisioningDir>) by clicking "Open in browser".



5. (Optional.) Right-click the root directory name (for example, ProvisioningDir), and then select Set user/pass...
6. (Optional.) Enter the desired user name and password for the root directory in the corresponding fields and then click OK

Insert the requested user/pass

Username test1

Password ●●●●●●●

Re-type password ●●●●●●●

Ok Reset