# Cisco IP Phone 7940G Setup Document

|  |  |
| --- | --- |
| History |  |
| Brite Cheng - Create | 13-05-2008 |

### Configure IP Phone

The aim of IP Phone configuration is to set the right address of TFTP server for letting the machine get the new firmware and configure file automatically.

Steps:

1. Press “settings” button to open the “settings” menu.
2. Select “Network Configuration”, and find the “DHCP Enabled”, then set it to “NO”. This step is to avoid the TFTP server address affected by your DHCP server. The TFTP server would be set to be the same as your DHCP server if you connect the phone to router.
3. Go back to the top of “Network Setup” menu, and set the IP address, subnet mask, TFTP server, router, and DNS server, etc.

Notes:

1. You can press “**\*\*#**” to unlock the item for edit.
2. You can also reset the phone to factory setting. When you restart the phone, press “#” until you see a message telling you that you are resetting the machine. Then you can press “123456789\*0#” to reload the factory setting.
3. Be careful of your firmware password. You have to use it to unlock the menu whenever you try to update the settings. Moreover, after your upgrading the firmware, the menu is set to be locked as default.
4. The password to unlock the menu in *Beijing* office is “**cisco**”.

### Convert to SIP IP Phone

The default device protocol for Cisco 7940 is SCCP. This protocol is only working with Cisco Call Manager. So if you want to connect the phone to Trixbox, you have to convert it to using SIP.

Steps:

1. You can get the newest SIP image for the IP Phone from Cisco website, but you will need a service account.

Here is another link to download the latest image. <http://www.xs4all.nl/~graver1/cisco/SIP-7960/P0S3-08-8-00.zip>

The firmware is kind of zip file, containing 5 files. For example, in firmware 8.8:

P0S3-08-8-00.loads

P0S3-08-8-00.sb2

P003-08-8-00.bin

P003-08-8-00.sbn

OS79XX.txt

P0S3-08-8-00 is the version of the firmware image.

OS79XX.txt tells the Cisco 7940 which binary to download from the TFTP server. So you should change its content to “*P0S3-08-8-00*”.

1. Upload the 5 files to the TFTP server. Usually you can find the TFTP folder under the root, with the name “tftpboot”.
2. For the IP phone to update its firmware automatically, you will need to create a single configure file. The file is only of current device. So if you have many phones to upgrade, you will need to create the file for every single one.

The configure file’s name should be started with “SEP”, and followed by its MAC address, which you can find in the “Network Setup” menu.

E.g. SEP0008A3464DF4.cnf.xml

<Default>

<callManagerGroup>

<members>

<member priority="0">

<callManager>

<ports>

<ethernetPhonePort>2000</ethernetPhonePort>

<mgcpPorts>

<listen>2427</listen>

<keepAlive>2428</keepAlive>

</mgcpPorts>

</ports>

<processNodeName>**192.168.20.3**</processNodeName>

</callManager>

</member>

</members>

</callManagerGroup>

<loadInformation model="IP Phone 7940">**P0S3-08-8-00**</loadInformation>

</Default>

Note: P0S3-08-8-00 is the version of the image. “processNodeName” is not necessary.

1. Restart the phone; you will see the message of upgrading the firmware. After the upgrading, you will find the “SIP” logo at the top right of the LCD.

### Create Configuration file for SIP

There would be one SIP default configure file for all the IP phones. It defines several global settings in this file, like some security rules, date format, proxy server and the dial plan. Furthermore, a single configure file for every phone is also needed. This file contains the information of phone label and the account of every line.

Steps:

1. Setup the SIPDefault.cnf
2. Image\_version should be the image version of current firmware. This must be consisting with the current firmware.

e.g.

# Image Version

image\_version: "P0S3-08-8-00"

1. Proxy server should be the one in which you install the Trixbox. The default port is 5060.

e.g.

# Outbound Proxy info

outbound\_proxy: "192.168.20.3"

outbound\_proxy\_port: "5060"

1. The NAT transversal is not enabled by default. If you are using NAT or firewall, please make sure this is enabled, or your IP phone will not be able to connect to other phones

e.g.

# NAT/Firewall Traversal

nat\_enable: "1"

nat\_address: ""

1. The default dialplan is in dialplan.xml, and it allows every inbound and outbound. You can modify it or change to another dialplan via :

# XML file that specifies the dialplan desired

dial\_template: "dialplan"

1. You can customize the logo on the IP phone via

# URL for branding logo

logo\_url: <http://192.168.20.3/SSW.bmp>

The typical size of the logo image is 90\*56 and the format is BMP. As the LCD of 7940G is monochrome, please do not use colour image.

1. SIP configure file for every phone
2. The file’s name should be started with “SIP” and then followed by the phone’s MAC address. E.g. SIP0008A3464DF4.cnf
3. The phone label will be displayed to the left of “SIP” logo.
4. In the section of account setting:
5. “line1\_name” include the name to be displayed on the phone
6. “line1\_authname” enter the name of the authentication ID (your extension) that you have created earlier in Trixbox to be assigned to that particular device. (Please make sure you select “SIP Generic Device” when you create the extension)
7. “line1\_password”, you should enter the IP phone password that you entered in the "secret" field of your extension.

For more info, you can visit Cisco 7900 series products page <http://www.cisco.com/en/US/products/hw/phones/ps379/index.html> and VOIP wiki <http://www.voip-info.org/wiki/>