

# CONVERTING CISCO 7940 PHONES TO WORK WITH ASTERISK / ELASTIX

This is the third part to host Cisco Phone Files on Linux TFTP Server, so that the phones could work with Elastix or Asterisk

**In order to achieve the task we need to perform the following tasks:**

## **Convert SCCP to SIP:**

The reason i am writing this article is to draw a clear picture of simple method used to convert SCCP cisco protocol to SIP protocol so that we could use Cisco Phones with Opensource PBX such as Elastix/ Asterisk.

My Article is based on Simple steps and by following it properly you would be able to convert the protocol in no time. But first let me show you some important keys:

### **1. To Initiate Factory Settings for Cisco Phones:**

Power up Cisco Phone and while the phone is powering up press # key for few sec untill a message appears saying something like ""Factory Sequence Initiated"" now within a minute time press 123456789\*0# keys and then press 2

The above will reset the phone to Factory Settings.

### **2. To Erase Configuration:**

Press Settings Button on the phone and the go to Network Settings from there scroll down untill you find "" Erase Configuration "" line. Now unlock the phone by press \*\*# keys and then press ""Yes"" and then press ""Save""

### **3. To Unlock Cisco Configuration:**

Sometimes cisco phones are lock , you can see that in the main menu, where it clearly says unlock config. So in order to unlock it select it and it will ask for password. By default its "cisco" without quotes.

However if it doesn't say anything such as unlock or lock, you can always do the following:

Press \*\*# while on the line.

Now lets proceed with changing the SCCP protocol to SIP.

Things which you would require are:

1. TFTP Server [we have already created it in our first part, but if you want to use windows , the goo done is tftpd32 (link <http://www.jounin.net/download/Tftpd32-4.00-setup.exe>)
2. Computer with IP address of your choice, but make sure you will use same subnet on the phone.
3. SIP Files which you can download from Cisco but if in case you don't have one you can download files from this link

link <http://www.4shared.com/archive/BU06lOUj/7940SIPfirmware.html>

Now Copy the Firmware you just downloaded from above link in TFTP root directory first (IF you don't know how to do it just google it or shoot me an email at [learning@itpings.com](mailto:learning@itpings.com))

5. IP phone Connected with the above switch

**Very Important Please Note:**

1. Note the MAC address of your phone and create a file such as SIP<MAC-ADDRESS-Of-Phone>.xml.cnf.ext by copying the default file present in the firmware. In Linux you can use cp command to achieve the required.
2. Create one more file SIP<MAC-ADDRESS-Of-Phone> by copying the default file present in your firmware. This file contains the extension and password of your Extension.
3. Change settings in SIPDefault.cnf

As below:

Proxyserver1\_address: < IP Address of SIP Server>

Proxy\_register: 1

Nat\_enable: "1" [important if its not enabled , it gives out inv error on cisco phones]

All of these firmware files should be in default directory of TFTP Sever in our case it is in /var/lib/tftpboot

**Now Let proceed with Converting SCCP to SIP**

**Follow the below Steps:**

1. Press Settings button on Cisco Phone and go to Network Settings then Go to the line where it says "" DHCP Server Enable "" unlock it and set it to ""NO"" press Save
2. Go to the Alternate TFTP line and change it to YES press Save
3. Now go to the line which says IP address and Give it an IP address from the same subnet as your computer
4. Change the subnet mask to 255.255.255.0 if you are using Class C IP address.
5. Change TFTP Server to IP address of the computer where your TFTP32 resides.
6. Save the changes and exit
7. Start TFTP Server on Linux or TFTP32 on Computer and restart Cisco Phone.
8. Phone will start flashing process and soon you would be able to confirm the firmware to be converted to SIP.

Please do comment if you wish to get more information. Check out [www.cisco.com](http://www.cisco.com) for more details and DuckGoGo for SCCP or SIP.

Thanks,

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