Cisco SPA Phones User Guide

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1 Introduction

Cisco SPA Phones User Guide

This User Guide is written as general guide on how to set up the Cisco SPA phone models: SPA301, SPA501G, SPA502G, SPA504G, SPA508G, SPA509G and SPA525G to work with PBXware 3.1.

2 Requirements

1. Identify Cisco SPA Phone Model

- To start and successfully complete registration of your Cisco SPA phone you need to know which phone model you will setup.
- From the back of each Cisco SPA phone there are exact model information that

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you should check. Although different phone models can have exactly the same requirements and installation procedure, phone models can also have significantly different requirements and installation procedure, so that ignorance of your own model may result in the inability to successfully set up your phone.

2. Phone firmware

- Make sure that your phone is loaded with appropriate firmware version.

model	firmware
SPA301	7.4.9c
SPA501G	7.4.9c
SPA502G	7.4.9c
SPA504G	7.4.9c
SPA508G	7.4.9c
SPA509G	7.4.9c
SPA525G	7.4.9c

- For Cisco SPA phone model SPA301 lift the handset and enter ****, enter **150** and press **#**, the phone firmware (software version) will be recited.
- For Cisco SPA phone models SPA502G, SPA504G, SPA508G, SPA509G press the **Setup** button, scroll to **Product Info** and press **select**, scroll to **Software Version**, the firmware version number is displayed.
- For Cisco SPA phone model SPA501G press the **Setup** button, enter **150**, then press **#**, the firmware version will be recited.
- For Cisco SPA phone model SPA525G press the **Setup** button, scroll to **Status** and press **Select**, select **Product Information**, scroll to **Software Version**, press **Select.**

3. DHCP server

- Fully configured and operational DHCP server.

4. PBXware version

- In order to find out the PBXware version, please login to PBXware and navigate to Settings: About. On the top of "About" page is a code similar to this one "PBXware Edition: Business, Release: 3.1 (041373f), Running: 1.4.24-gc-75ee203", where

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"Release" denotes the exact version of your PBXware.

3 Installation

This chapter describes how to install and connect the phone to the electrical power and data network as well as how to apply factory settings.

The following topics are covered:

- Power adapter
- Power over Ethernet (PoE)
- Factory Settings

3.1 Power Adapter

1. Connect the Network and Power

- Connect the DC plug on the power adapter to the DC port on the phone and connect the other end of the power adapter into an electrical power outlet.

- Connect the ethernet cable between the Internet port on the phone and the network port on a router or switch to access LAN.
  NOTE *If you are using Power over Ethernet (PoE), you don't need to connect the AC adapter. Make sure the Ethernet cable and router or switch is Power over Ethernet (PoE) compliant.*

3.2 Power over Ethernet (PoE)

1. Connect the Network (only)

Using a regular ethernet cable, your phone can be powered from a Power over Ethernet (PoE) compliant router or switch.

- Connect the Ethernet cable between the Internet port on the phone and an available port on the in-line power router or switch.
  NOTE *If you are using Power over Ethernet (PoE), you don't need to connect the AC adapter. Make sure the Ethernet cable and router or switch is Power over Ethernet (PoE) compliant.*

3.3 IP Address

1. Find out your Cisco SPA phone IP Address

- For Cisco SPA phone mode SPA301 lift the handset and enter ****, enter **110** and press **#**, the IP address will be recited.

- For Cisco SPA phone models SPA502G, SPA504G, SPA508G, SPA509G press the

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Setup button, scroll to **Network** and press **select**, scroll to view current IP address.

- For Cisco SPA phone model SPA501G press the **Setup** button, enter **110**, then press **#**, the IP address will be recited.
- For Cisco SPA phone model SPA525G press the **Setup** button, select **Status**, scroll to **Network Status**, press **Select**.

3.4 Factory Settings

1. Reset to factory settings

This step is not required for out-of-the-box phones, however, if the phone has been already used then it is a must.

- Open a new browser window and enter your phone IP address in order to access the phone web administration interface login screen. Example: http://192.168.1.22
- Login to phone web administration interface with your username and password. Please note, factory default login details are username: admin and password: admin.
- For Cisco SPA phone mode SPA301 lift the handset and enter ****, enter **7373** and press **#**, press **1** to confirm, hang up to exit and begin the restore process, phone will be reset to the factory default settings.
- For Cisco SPA phone models SPA502G, SPA504G, SPA508G, SPA509G press the **Setup** button, scroll to **Factory Reset** and press **select**, phone will be reset to the factory default settings.
- For Cisco SPA phone model SPA501G press the **Setup** button, enter **73738**, then press **#**, enter **1** to confirm, hang up to exit and begin the restore process, phone will be reset to the factory default settings.
- For Cisco SPA phone model SPA525G press the **Setup** button, select **Device Administration**, scroll to **Factory Reset**, press **Select**, phone will be reset to the factory default settings.
- Wait sometime prior for device to reboot.
  NOTE *Do not unplug or remove power to the phone while it is updating firmware and configurations.*

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4 Registering Phone

This chapter describes how to identify Cisco SPA phone model, requirements that must be met and how to register the phone using manual configuration or auto provisioning.

The following topics are covered:

- Manual Configuration
- Auto Provisioning

4.1 Manual Configuration

This chapter describes how to set UAD settings, create PBXware extension and register the phone.

The following topics are covered:

- UAD Settings
- Creating Extension
- Registering Phone

4.1.1 UAD Settings

1. Login to PBXware web administration interface

- Open a new browser window and enter the IP address in order to access the PBXware web administration login screen. Example: http://192.168.1.10
- Login to PBXware with your e-mail address and password.

2. UAD settings

- Navigate to **Settings:UAD**.
- Make sure Cisco SPA UAD is enabled. To check the UAD status click on the **edit** icon corresponding to your Cisco SPA phone.
- Make sure **Status** is set to **Active**, **Auto provisioning** is set to **No**, and **DHCP** is set to **Yes**.

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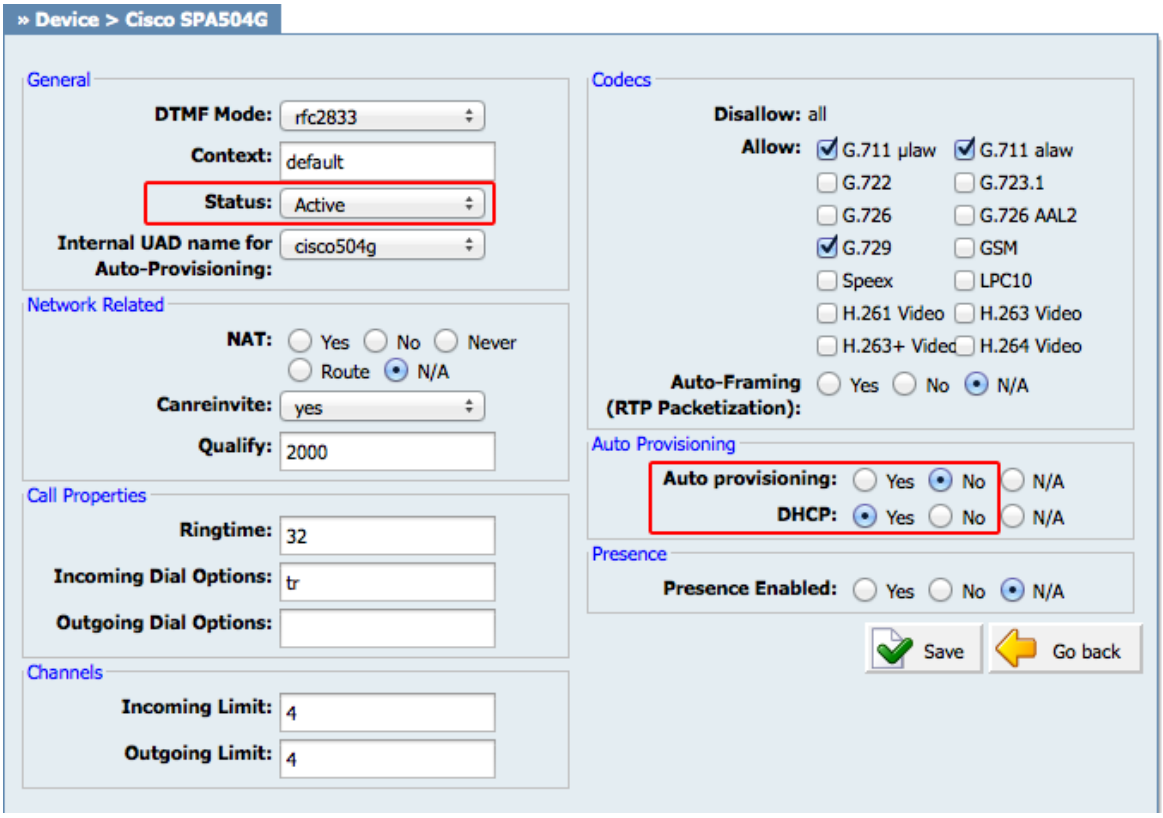

- Click on the **Save** button to save changes.

4.1.2 Creating Extension

1. Add Extension

- Navigate to **Extensions**. Click on **Add Extension**.
- The standard options window will be shown below.
- Select Cisco SPA phone model from the **UAD** select box.
- Select Location: **Local** or **Remote**.
  Local is for all extensions registered on the LAN and **Remote** is for all extensions registered from remote networks, WAN, Internet etc.
- Click on the **Next step** button.

2. Extension values

Enter values into the required field text boxes.

REQUIRED FIELDS

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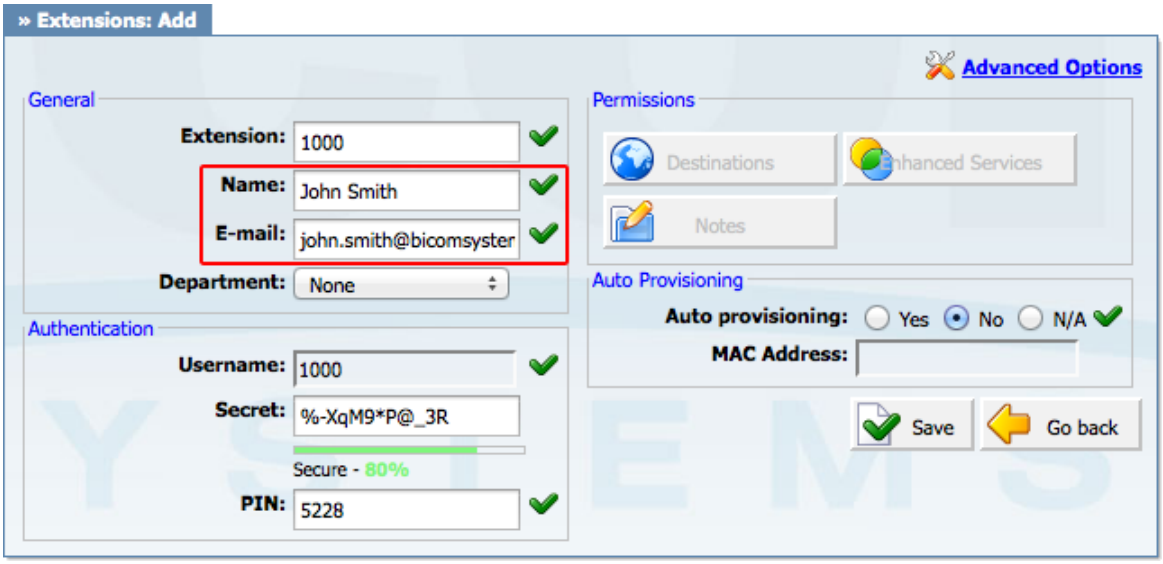
- **Name**
  Enter a name for the extension being created. Example: **John Smith**.

- **E-mail**
  Enter the e-mail address associated with this extension. This e-mail address will receive all system notification messages. Example: **john.smith@bicomsystems.com**



- Click on the **Save** button.

- Optionally, click on the **Save & E-mail** button. Account details will be sent to the e-mail address associated with this extension.

OPTIONAL FIELDS

- **Extension**
  An auto-generated extension number based on the next available sequential number. An extension value can be changed. Example: 1003.

- **Secret**
  A secret value associated with the UAD is auto-generated in order to allow the UAD to successfully register with the system. The secret value can be changed, however it is STRONGLY recommended not to change the system generated value to a simple value like "1234" or "1003" etc.

- **PIN**
  An auto-generated PIN will allow access to voicemail and online self-care.

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4.1.3 Registering Phone

This chapter describes how to register Cisco SPA phone using **Hostname or IP Address**, or **DNS SRV**.

The following topics are covered:

- Hostname or IP Address
- DNS SRV

4.1.3.1 Hostname or IP Address

1. Login to phone web administration interface

- Open a new browser window and enter your phone IP address in order to access the phone web administration interface login screen. Example: **http://192.168.1.22**.
- Login to phone web administration interface with your username and password. Please note, factory default login details are username: **admin** and password: **admin**.
- Click on **Admin Login** and then on **Advanced**.
- Click on **Ext 1** or **Ext 2, Ext 3** and **Ext 4**.
- Enter or set the following details into the respective fields.

REQUIRED FIELDS

- **Line Enable**
  Make sure the **Yes** is selected.
- **Proxy**
  Enter the Hostname or IP Address of the PBXware.

  - Example for Hostname: **voip.bicomsystems.com**
  - Example for IP Address: **192.168.1.10**
- **User ID**
  PBXware extension number. Example: **1003**.
- **Password**
  The Secret of the extension as received in the e-mail associated with this extension. Example: **_%Z4M3*Ts9y7**. A password is generated automatically for each newly created extension.

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- Click on the **Submit All Changes** button.

- You'll have to wait sometime prior for the device to reboot. If everything is done as above described, you should have successfully registered your phone to PBXware. Dial ***123** to verify registration.

4.1.3.2 DNS SRV

This chapter describes how to use a **DNS SRV** record which specifies the location of the PBXware. ***NOTE*** *Your DNS Server needs to be configured correctly for this to work. Bicom Systems can provide service to set up this for you.*

1. Login to phone web administration interface.

- Open a new browser window and enter your phone IP address in order to access the phone web administration interface login screen. Example: **http://192.168.1.22**.

- Login to phone web administration interface with your username and password. Please note, factory default login details are username: **admin** and password: **admin**.

- Click on **Admin Login** and then on **Advanced**.

- Click on **Ext 1** or **Ext 2, Ext 3** and **Ext 4**.

- Enter or set the following details into the respective fields.

REQUIRED FIELDS

- **Line Enable**
  Make sure the **Yes** is selected.

- **Proxy**
  In the **Proxy** field enter the Hostname.

  - Example for the Hostname: **bicomsystems.com**

- Make sure you replace Hostname from this example with your PBXware Hostname.

- Make sure DNS server is configured to automatically route registration request to a PBXware which is actually under another domain name, example: **newbicomsystems.com**.

- **Use DNS SRV**
  Select **Yes**.

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- **DNS SRV Auto Prefix**
  Select **Yes**.

- **User ID**
  PBXware extension number. Example: 1003.

- **Password**
  The Secret of the extension as received in the e-mail associated with this extension. Example: **_%Z4M3*Ts9y7**. A password is generated automatically for each newly created extension.

- Click on the **Submit All Changes** button.

- You'll have to wait sometime prior for the device to reboot. If everything is done as above described, you should have successfully registered your phone to PBXware. Dial *123 to verify registration.

4.2 Auto Provisioning

This chapter describes how to set UAD settings, create PBXware extension and register the phone using DHCP or Static IP address.

The following topics are covered:

- UAD Settings
- Creating Extension
- Registering Phone

4.2.1 UAD Settings

1. Login to PBXware web administration interface

- Open a new browser window and enter the IP address in order to access the PBXware web administration login screen. Example: **http://192.168.1.10**.

- Login to PBXware with your e-mail address and password.

2. UAD settings

- Navigate to **Settings:UAD**.

- Make sure Cisco SPA UAD is enabled. To check the UAD status click on the **edit** icon corresponding to your Cisco SPA phone.

- Make sure **Status** is set to **Active**, **Auto provisioning** is set to **Yes**, and **DHCP** is set to **Yes**.

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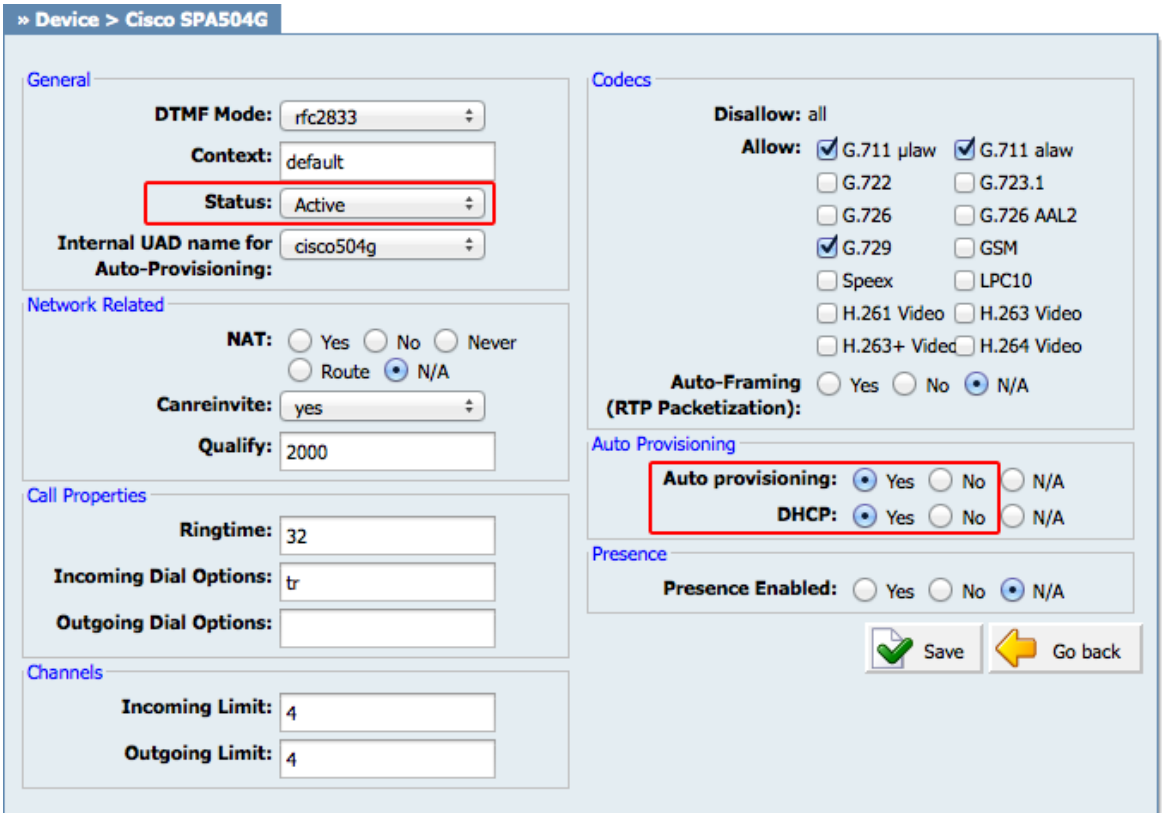

- Click on the **Save** button to save changes.

4.2.2 Creating Extension

1. Add Extension

- Navigate to **Extensions**. Click on **Add Extension**.
- The standard options window will be shown below.
- Select Cisco SPA phone model from the **UAD** select box.
- Select Location: **Local** or **Remote**.
  Local is for all extensions registered on the LAN and **Remote** is for all extensions registered from remote networks, WAN, Internet etc.
- Click on the **Next step** button.

2. Extension values

Enter values into the required field text boxes.

REQUIRED FIELDS

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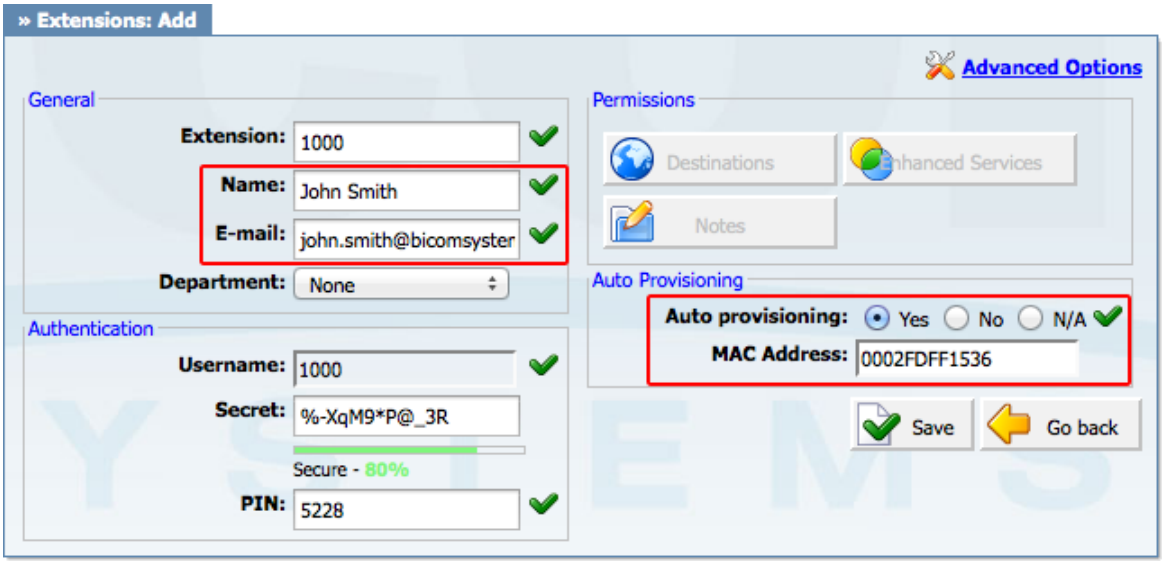
- **Name**
  Enter a name for the extension being created. Example: **John Smith**.

- **E-mail**
  Enter the e-mail address associated with this extension. This e-mail address will receive all system notification messages. Example: **john.smith@bicomsystems.com**

- **Auto Provisioning**
  Set to **Yes**.

- **MAC Address**
  Enter Cisco SPA phone MAC address. Example: **0002FDFF1536**. MAC address can be found at the back of the phone.



- Click on the **Save** button.

4.2.3 Registering Phone

This chapter describes how to register Cisco SPA phone using **DHCP**, **TFTP, HTTP & HTTPS** or **DNS SRV**.

The following topics are covered:

- DHCP
- TFTP or HTTP & HTTPS
- DNS SRV

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4.2.3.1 DHCP

1. Configure DHCP

- Make sure your DHCP router is configured to use **option 66** to automatically instruct phones with the URL for auto provisioning. For more information refer to your router documentation or contact your network administrator.

2. Phone first boot or user initiated reboot

Auto provisioning process will start during phone first boot or after reboot process has been initiated by user. DHCP server will instruct the phone where from to pickup appropriate configuration file. If everything is done as above described, you should have successfully registered your phone to PBXware. Dial *123 to verify registration.

4.2.3.2 TFTP or HTTP & HTTPS

1. Login to phone web administration interface

If there is no DHCP in your network, you can still auto provision your Cisco SPA phone. Please refer to your Cisco SPA phone model User Guide for instruction about setting static IP address. After you configure your Cisco SPA phone to use a static IP address, continue with the following steps.

- Open a new browser window and enter your phone IP address in order to access the phone web administration interface login screen. Example: **http://192.168.1.22**
- Login to the phone web administration interface with your username and password. Please note, factory default login details are username: **admin** and password: **admin**.
- Click on **Admin Login** and then on **Advanced**.
- Click on **Provisioning** tab.
- You can use **TFTP** or **HTTP & HTTPS** protocols in order to Auto Provision your Cisco SPA phone.
- Choose which protocol you want to use:

  - TFTP
  - HTTP & HTTPS

4.2.3.2.1 TFTP

- In the **Profile Rule** field enter **tftp://** followed by **Hostname** or **IP Address**, followed then by **/$MA.cfg.**

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- Example for Hostname: **tftp://voip.bicomsystems.com/$MA.cfg**
- Example for IP Address: **tftp://192.168.1.10/$MA.cfg**

- Make sure you replace Hostname or IP Address from this example with your PBXware Hostname or IP address.
- Click on **Submit All Changes** and wait 35 seconds. The phone may reboot.
- Reboot the phone and wait for the phone to reboot once again.
- Auto provisioning process will start during phone reboot process, phone will pickup appropriate configuration file from PBXware. If everything is done as above described, you should have successfully registered your phone to PBXware. Dial ***123** to verify registration.

4.2.3.2.2 HTTP & HTTPS

This chapter describes how to use HTTP & HTTPS protocols in order to register Cisco SPA phone. ***NOTE*** *Your PBXware needs to be configured correctly for this to work.* Contact your PBXware administrator. *Bicom Systems can provide service to set up this for you.*

- In the **Profile Rule** field enter **http://** or **https://** followed by **Hostname** or **IP Address**, followed then by **/tftp/**

  - Example for Hostname using HTTP: **http://voip.bicomsystems.com/tftp/**
  - Example for Hostname using HTTPS: **https://voip.bicomsystems.com/tftp/**
  - Example for IP Address using HTTP: **http://192.168.1.10/tftp/**
  - Example for IP Address USING HTTPS: **https://192.168.1.10/tftp/**

- Make sure you replace Hostname or IP Address from this example with your PBXware Hostname or IP address.
- Click on **Submit All Changes** and wait 35 seconds. The phone may reboot.
- Reboot the phone and wait for the phone to reboot once again.
- Auto provisioning process will start during phone reboot process, phone will pickup appropriate configuration file from PBXware. If everything is done as above

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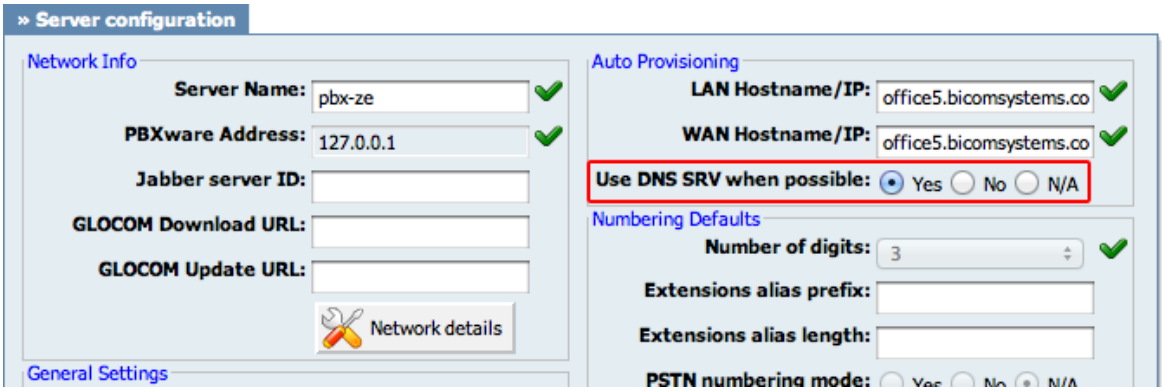
described, you should have successfully registered your phone to PBXware. Dial ***123** to verify registration.

4.2.3.3 DNS SRV

This chapter describes how to use a DNS SRV record which specifies the location of the PBXware. ***NOTE*** *Your DNS Server needs to be configured correctly for this to work. Bicom Systems can provide service to set up this for you.*

1. Check if the DNS SRV is enabled in your PBXware

- Contact your PBXware administrator to find out if the **DNS SRV** is enabled in your PBXware, or if you have access to the PBXware you can check this yourself.
- Open a new browser window and enter the IP address in order to access the PBXware web administration login screen. Example: **http://192.168.1.10**
- Login to PBXware with your e-mail address and password.
- Navigate to **Settings: Servers**. Click on the server corresponding **edit** button.
- In **Auto Provisioning group**, make sure **Use DNS SRV when possible:** is set to **Yes.** If it is set to **No** or **N/A**, set to **Yes** and click on the **Save** button.
  NOTE *You must re-save all your extensions configured for Auto Provisioning.*



2. Login to phone web administration interface

If there is no DHCP in your network, you can still auto provision your Cisco SPA phone. Please refer to your Cisco SPA phone model User Guide for instruction about setting static IP address. After you configure your Cisco SPA phone to use a static IP address, continue with the following steps.

- Open a new browser window and enter your phone IP address in order to access the phone web administration interface login screen. Example: **http://192.168.1.22**

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- Login to phone web administration interface with your username and password. Please note, factory default login details are username: admin and password: admin.
- Click on **Admin Login** and then on **Advanced**.
- Click on **Provisioning** tab.
- **Profile Rule**
  In the **Profile Rule** field enter the Hostname.
  - Example for the Hostname: **bicomsystems.com**
- Make sure you replace Hostname from this example with your PBXware Hostname.
- Make sure DNS server is configured to automatically route registration request to a PBXware which is actually under another domain name, example: **newbicomsystems.com**.
- Click on **Submit All Changes** and wait 35 seconds. The phone may reboot.
- Reboot the phone.
- For Cisco SPA phone mode SPA301 lift the handset and enter ****, enter **73266** and press **#**, the phone will be rebooted.
- For Cisco SPA phone models SPA502G, SPA504G, SPA508G, SPA509G press the **Setup** button, scroll to **Reboot** and press **select**, the phone will be rebooted.
- For Cisco SPA phone model SPA501G press the **Setup** button, enter **73266**, then press **#**, the phone will be rebooted.
- For Cisco SPA phone model SPA525G press the **Setup** button, scroll to **Reboot** and press **select**, the phone will be rebooted.
- Auto provisioning process will start during phone reboot process, phone will pickup appropriate configuration file from PBXware. If everything is done as above described, you should have successfully registered your phone to PBXware. Dial ***123** to verify registration.

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