Cisco SPA5xx IP Phone PBX setup

November 4, 2021

1. Find the IP address of your phone by looking for your phone in the list under your AREDN node's Port Forwarding, DHCP, And Services tab. It will be listed under the "Current DHCP Leases" list

2. Open a web browser and enter you phone's IP address.

3. Click on Admin login then the advanced tab

4. Click on "System" Tab and enter a host name you want for your phone and change the NTP server as shown. You can also setup an admin password if you like.

Info	**System**	SIP	Provisioning	Regional	Phone	Ext 1	Ext 2	Ext 3	Ext 4	Ext 5	User	Att Console	TR-069

Attendant Console Status   User Login   basic | advanced

System Configuration

Restricted Access Domains:			
Enable Web Server:	yes ∨	Web Server Port:	80
Enable Web Admin Access:	yes ∨	Admin Password:	**************
User Password:		User Web Password:	
SPA525-protocol:	SIP ∨	SPA525-auto-detect-sccp:	yes ∨
SPA525-readonly:	no ∨	Phone-UI-user-mode:	no ∨
WiFi User Access Mode:	yes ∨		

Power Settings

PoE Power Required:	Normal ∨

Internet Connection Type

Connection Type:	DHCP ∨

Static IP Settings

Static IP:		NetMask:	
Gateway:		Lan MTU:	1500
Duplex Mode:	Auto ∨		

PPPoE Settings

PPPoE Login Name:		PPPoE Login Password:	
PPPoE Service Name:			

Optional Network Configuration

HostName:	VE7LSE-PHONE	Domain:	
Primary DNS:		Secondary DNS:	
DNS Server Order:	Manual,DHCP ∨	Syslog Server:	
Debug Server:		Debug Level:	3 ∨
Layer 2 Logging:	no ∨	NTP Enable:	yes ∨
Primary NTP Server:	ca.pool.ntp.org	Secondary NTP Server:	
Enable Bonjour:	no ∨	SSL Key Negotiation:	RSA ∨
Enable SSLv3:	no ∨		

5. Click on Regional tab next. Match the setting that are highlighted. If we are in daylights savings time say yes, if not say no.

Feature Dial Services Codes:			
Vertical Service Announcement Codes			
Service Annc Base Number:			
Service Annc Extension Codes:			
Outbound Call Codec Selection Codes			
Prefer G711u Code:	*017110	Force G711u Code:	*027110
Prefer G711a Code:	*017111	Force G711a Code:	*027111
Prefer G722 Code:	*01722	Force G722 Code:	*02722
Prefer G726r32 Code:	*0172632	Force G726r32 Code:	*0272632
Prefer G729a Code:	*01729	Force G729a Code:	*02729
Time			
Time Zone:	GMT-08:00 ⌄	Time Offset (HH/mm):	
Ignore DHCP Time Offset:	yes ⌄		
Daylight Saving Time Rule:	start=3/-1/7/2;end=10/-1/7/2;save=1		
Daylight Saving Time Enable:	yes ⌄		
Language			
Dictionary Server Script:			
Language Selection:	English-US	Locale:	en-US ⌄
Miscellaneous			
DTMF Playback Level:	-16	DTMF Playback Length:	.1
Inband DTMF Boost:	12dB ⌄	Show DTMF Digits When Connected:	No ⌄

[Undo All Changes] [Submit All Changes]

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6. At this point, save your settings.
   Click on the "Phone" Tab. Choose what you want your station name and display name to be. *97 is voicemail. Your line key 1 will be 1 and short name can be what you want your line 1 key to be called. This can be your call sign and the extension number you were assigned. You can also setup multiple phone lines attached to other PBX systems like Ham Shack Hotline etc. If you have that info for your other lines, you would add it into your "line key 2/ 3/ 4" settings.

IP Phone SPA525G2
Cisco Systems, Inc.

| Voice | Wi-Fi | Bluetooth | Personal Address Book | Call History | Speed Dials | Firmware Upgrade |

Info System SIP Provisioning Regional **Phone** Ext 1 Ext 2 Ext 3 Ext 4 Ext 5 User Att Console TR-069

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General

| Station Name: | VE7LSE | Station Display Name: | VE7LSE |
| Voice Mail Number: | *97 | | |

BluePhone

Bluetooth Mode:	Phone	Line:	5
Short Name:		User Friendly ID:	
PIN Code:	*************		

Line Key 1

Extension:	1	Short Name:	VE7LSE 2202
Share Call Appearance:	private		
Extended Function:			

Line Key 2

Extension:	2	Short Name:	VE7LSE 3302
Share Call Appearance:	private		
Extended Function:			

Line Key 3

Extension:	Disabled	Short Name:	VE7ODG 2201
Share Call Appearance:	private		
Extended Function:	fnc=sd+cp+blf;sub=2201@$PROXY		

7. To program your spare line keys to act as speed dial buttons follow the highlighted settings as a template for your extra line keys. Note the extension numbers for the contacts you want to add by finding them in the local phone directory. https://scarcs.ca/howto/aredn/voip
These numbers correspond with the entry you would make. The conference call number is 2400 as in the example. Save your settings.

Line Key 3		
Extension:	Disabled ▾	Short Name: VE7ODG 2201
Share Call Appearance:	private ▾	
Extended Function:	fnc=sd+cp+blf;sub=2201@$PROXY	

Line Key 4		
Extension:	Disabled ▾	Short Name: VA7DXX 2203
Share Call Appearance:	private ▾	
Extended Function:	fnc=blf+sd+cp;sub=2203@$PROXY	

Line Key 5		
Extension:	Disabled ▾	Short Name: CONF 2400
Share Call Appearance:	private ▾	
Extended Function:	fnc=blf+sd+cp;sub=2400@$PROXY	

8. Click on the "EXT 1" Tab. Enter the Proxy seen here. Enter your Display name you want. Enter your extension number and password assigned to you. Save your settings. The phone will reboot. You should then see your line 1 key light up green and any of the speed dial keys light up green. If not check your settings again for any typos. If you need help troubleshooting, send an email over the https://groups.io/g/Mid-Island-AREDN-Mesh-Network and someone will help you out.

Proxy and Registration

Proxy:	10.246.225.227		
Outbound Proxy:			
Alternate Proxy:			
Alternate Outbound Proxy:	0		
Use Outbound Proxy:	no	Use OB Proxy In Dialog:	yes
Register:	yes	Make Call Without Reg:	no
Register Expires:	3600	Ans Call Without Reg:	no
Use DNS SRV:	no	DNS SRV Auto Prefix:	no
Proxy Fallback Intvl:	3600	Proxy Redundancy Method:	Normal
Dual Registration:	no	Auto Register When Failover:	no

Subscriber Information

Display Name:	VE7LSE	User ID:	2202
Password:	*************	Use Auth ID:	no
Auth ID:		Reversed Auth Realm:	0
Mini Certificate:			
SRTP Private Key:			
Resident Online Number:		SIP URI:	

Audio Configuration

9. Click "ATT Console" and match the highlighted setting.

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| Info | System | SIP | Provisioning | Regional | Phone | Ext 1 | Ext 2 | Ext 3 | Ext 4 | Ext 5 | User | **Att Console** | TR-069 |

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General

Subscribe Expires:	1800	Subscribe Retry Interval:	30
Unit 1 Enable:	yes	Subscribe Delay:	1
Unit 2 Enable:	yes	Server Type:	Asterisk
Test Mode Enable:	no	Attendant Console Call Pickup Code:	*8
Attendant Console Call Park Code:	*68	Attendant Console Call unPark Code:	*88
BLF List URI:			
Use Line Keys For BLF List:	no	Call Pickup Audio Notification:	no
Attendant Console Font Size:	10	Attendant Console LCD Contrast:	12
BXfer To Starcode Enable:	no	BXfer On Speed Dial Enable:	yes
BLF Label Display Mode:	Name		

10. If you have an Attendance Console (sidecar) and would like to program the speed dial buttons, follow the example here. Make sure you change the extension number and the name for the contact you want to add. The printout for the SPA500S Sidecar can be found here: https://scarcs.ca/howto/aredn/voip

Unit 1	
Unit 1 Key 1:	fnc=sd+cp+blf;sub=2222@$PROXY;nme=VE7GEC-GAB-ECC-2222
Unit 1 Key 2:	fnc=sd+cp+blf;sub=2228@$PROXY;nme=VE7UY-2228
Unit 1 Key 3:	fnc=sd+cp+blf;sub=2204@$PROXY;nme=VE7TOP-2204
Unit 1 Key 4:	fnc=sd+cp+blf;sub=2205@$PROXY;nme=VE7FAA-2205
Unit 1 Key 5:	fnc=sd+cp+blf;sub=2215@$PROXY;nme=VE7GDE-2215
Unit 1 Key 6:	fnc=sd+cp+blf;sub=2207@$PROXY;nme=VA7WPM-2207
Unit 1 Key 7:	fnc=sd+cp+blf;sub=2220@$PROXY;nme=VE7KGV-2220
Unit 1 Key 8:	fnc=sd+cp+blf;sub=2218@$PROXY;nme=VE7PMD-2218
Unit 1 Key 9:	fnc=sd+cp+blf;sub=2225@$PROXY;nme=VA7FI-2225
Unit 1 Key 10:	fnc=sd+cp+blf;sub=2236@$PROXY;nme=VE7KOD-2236
Unit 1 Key 11:	fnc=sd+cp+blf;sub=2235@$PROXY;nme=VA7ILO-2235
Unit 1 Key 12:	fnc=sd+cp+blf;sub=2219@$PROXY;nme=VA7MLZ-2219
Unit 1 Key 13:	fnc=sd+cp+blf;sub=2206@$PROXY;nme=VA7MPG-2206
Unit 1 Key 14:	fnc=sd+cp+blf;sub=2211@$PROXY;nme=VE7BEF-2211