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IP Direct Calling



The following instructions¹⁾ are to make direct IP-to-IP calls using the Cisco SPA525G or SPA504G phones. For instructions on using our local PBX, see the [instructions are here](#).

General Notes:

- All steps are done as Administrator on the advanced page.
- This setup will configure the last extension and line key for direct IP dial calls and leave extension 1 / line key 1 for PBX calls.
- It may be a good idea to Submit All Changes after each step but it also may be unnecessary.
- Outgoing calls may be placed from the personal directory, speed dial buttons or the dial pad. When using the dial pad, end the IP address with a <#> character. This will send the call out immediately.
- If you like, you can publish your phone's IP number on the mesh status page so others can add your phone directly.
- If you are replacing an existing speed dial button with the new direct dialing Line, make sure to remove the previous info in the Short Name and Extended Functions boxes.

SPA525G

Ext 1 tab

- SIP Settings
 - SIP Port: 5070

Cisco		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
Attendant Console Status User Login basic advanced													
General													
Line Enable:		yes ▾											
Share Line Appearance													
Share Ext:		private ▾		Shared User ID:									
Subscription Expires:		3600		Restrict MWI:		no ▾							
NAT Settings													
NAT Mapping Enable:		no ▾		NAT Keep Alive Enable:		no ▾							
NAT Keep Alive Msg:		\$NOTIFY		NAT Keep Alive Dest:		\$PROXY							
Network Settings													
SIP TOS/DiffServ Value:		0x68		SIP CoS Value:		3 ▾							
RTP TOS/DiffServ Value:		0xb8		RTP CoS Value:		6 ▾							
Network Jitter Level:		high ▾		Jitter Buffer Adjustment:		up and down ▾							
SIP Settings													
SIP Transport:		UDP ▾		SIP Port:		5070							

Ext 5 tab (or any free Ext you want to use)

- General
 - Line Enable: yes
- SIP Settings
 - SIP Port: 5060



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	
Attendant Console Status User Login basic advanced														

General

Line Enable: yes

Share Line Appearance

Share Ext: private Shared User ID:
Subscription Expires: 3600 Restrict MWI: no

NAT Settings

NAT Mapping Enable: no NAT Keep Alive Enable: no
NAT Keep Alive Msg: \$NOTIFY NAT Keep Alive Dest: \$PROXY

Network Settings

SIP TOS/DiffServ Value: 0x68 SIP CoS Value: 3
RTP TOS/DiffServ Value: 0xb8 RTP CoS Value: 6
Network Jitter Level: high Jitter Buffer Adjustment: up and down

SIP Settings

SIP Transport: UDP SIP Port: 5060

- Proxy and Registration
 - Register: no
 - Make Call Without Reg: yes
 - Ans Call Without Reg: yes
- Subscriber Information:
 - Enter your Call and Direct for example

Proxy and Registration			
Proxy:			
Outbound Proxy:			
Alternate Proxy:			
Alternate Outbound Proxy:	0		
Use Outbound Proxy:	no ▾	Use OB Proxy In Dialog:	yes ▾
Register:	no ▾	Make Call Without Reg:	yes ▾
Register Expires:	3600	Ans Call Without Reg:	yes ▾
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 DIRECT	User ID:	
Password:		Use Auth ID:	no ▾
Auth ID:		Reversed Auth Realm:	0
Mini Certificate:			
SRTP Private Key:			
Resident Online Number:		SIP URI:	

- Dial Plan
 - Dial Plan: (x.<*: :>x.<*: :>x.<*: :>x.)
 - Enable IP Dialing: Yes

Dial Plan	
Dial Plan:	(x.<*: :>x.<*: :>x.<*: :>x.)
Caller ID Map:	
Enable IP Dialing:	yes ▾
Emergency Number:	

Phone tab

- Line Key 1
 - Extension: 1
- Line Key 5
 - Extension: 5 or your preference Line Key



Make sure your line keys do not have anything entered for extended Function.

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													
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											
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:		5 ▾				Short Name:		VE7LSE IP DIALING					
Share Call Appearance:		private ▾											
Extended Function:													

Outgoing Direct-IP dialed calls

Personal Directory

This section is done on the phone itself. To add to the directory:

- Press your line key that is setup for direct dialing
- Dial IP of the phone you want to call (using the * key as a .)
For example, to enter 10.10.123.123, key in: 10*10*123*123
- Press **Dial** to make sure it works.
- Press Setup button: 
- Navigate to 2. Call History
- Navigate to 4. Placed Calls
- Navigate to the call you just placed using the IP Address
- Press the **Option** button.
- Navigate to Add to Address Book
- Enter the info you want in there then press **Save**

The reason for this method is that the SPA525G does not recognize an IP addressed entered into the web interface when adding a directory entry. If anyone figures out a work around, please let us know.

How to add direct IP contacts to your speed dial buttons on your phone's spare line keys or Attendant Console keys:

Phone

- Line Key x
 - Extension: Disabled
 - Short Name: Enter a short name
 - Extended Function: Enter something like: vid=5;fnc=sd;ext=10.46.174.182



- vid=5 refers to the line key used for this speed dial button
- Change the IP address and name to the correct one you are trying to add

CISCO		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		
Attendant Console Status User Login basic advanced															
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:				VA7PF DIRECT			
Share Call Appearance:				private											
Extended Function:				vid=5;fnc=sd;ext=10.46.174.182											

ATT Console

- Cut and paste this example into a free "Unit 1 or Unit 2 Key":

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

Unit 1 Key 3:

vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT

SPA504G

Ext 1 tab

- SIP Settings
 - SIP Port: 5070

Small Business
cisco SPA504G Configuration Utility

User Login

Voice Call History Personal Directory Attendant Console Status

Info System SIP Provisioning Regional Phone User Attendant Console

Ext 1 Ext 2 Ext 3 Ext 4

General

Line Enable:

Share Line Appearance

Share Ext: Shared User ID:

Subscription Expires: Restrict MWI:

Monitor User ID: SCA Unseize Delay:

NAT Settings

NAT Mapping Enable: NAT Keep Alive Enable:

NAT Keep Alive Msg: NAT Keep Alive Dest:

Network Settings

SIP TOS/DiffServ Value: SIP CoS Value:

RTP TOS/DiffServ Value: RTP CoS Value:

Network Jitter Level: Jitter Buffer Adjustment:

SIP Settings

SIP Transport: SIP Port:

SIP 100REL Enable: EXT SIP Port:

Ext 4 tab or any free Ext you want to use

- General
 - Line Enable: yes
- SIP Settings
 - SIP Port: 5060

The screenshot shows the Cisco SPA504G Configuration Utility interface. The top navigation bar includes 'Voice', 'Call History', 'Personal Directory', and 'Attendant Console Status'. Below this, a tabbed interface shows 'Ext 1', 'Ext 2', 'Ext 3', and 'Ext 4' (selected). The 'General' section is expanded, showing 'Line Enable' set to 'yes'. The 'Share Line Appearance' section shows 'Share Ext' set to 'private', 'Subscription Expires' set to '3600', and 'Monitor User ID' set to an empty field. The 'NAT Settings' section shows 'NAT Mapping Enable' set to 'no', 'NAT Keep Alive Msg' set to '\$NOTIFY', 'NAT Keep Alive Enable' set to 'no', and 'NAT Keep Alive Dest' set to '\$PROXY'. The 'Network Settings' section shows 'SIP TOS/DiffServ Value' set to '0x68', 'RTP TOS/DiffServ Value' set to '0xb8', 'Network Jitter Level' set to 'high', 'SIP CoS Value' set to '3', 'RTP CoS Value' set to '6', and 'Jitter Buffer Adjustment' set to 'up and down'. The 'SIP Settings' section shows 'SIP Transport' set to 'UDP', 'SIP 100REL Enable' set to 'no', 'SIP Port' set to '5060', and 'EXT SIP Port' set to an empty field.

- Proxy and Registration
 - Register: no
 - Make Call Without Reg: yes
 - Ans Call Without Reg: yes
- Subscriber Information
 - Enter your Call and Direct for example

The screenshot shows the 'Proxy and Registration' and 'Subscriber Information' sections of the configuration utility. The 'Proxy and Registration' section shows 'Proxy' set to an empty field, 'Outbound Proxy' set to an empty field, 'Alternate Proxy' set to an empty field, 'Alternate Outbound Proxy' set to an empty field, 'Use Outbound Proxy' set to 'no', 'Register' set to 'no', 'Register Expires' set to '3600', 'Use DNS SRV' set to 'no', 'Proxy Fallback Intvl' set to '3600', 'Dual Registration' set to 'no', 'Use OB Proxy In Dialog' set to 'yes', 'Make Call Without Reg' set to 'yes', 'Ans Call Without Reg' set to 'yes', 'DNS SRV Auto Prefix' set to 'no', 'Proxy Redundancy Method' set to 'Normal', and 'Auto Register When Failover' set to 'no'. The 'Subscriber Information' section shows 'Display Name' set to 'VE7BEF Direct', 'User ID' set to an empty field, 'Password' set to an empty field, and 'Use Auth ID' set to 'no'.

- Dial Plan

- Dial Plan: (x.<*: :>x.<*: :>x.<*: :>x.)
- Enable IP Dialing: Yes

Dial Plan	
Dial Plan:	(x.<*: :>x.<*: :>x.<*: :>x.)
Caller ID Map:	
Enable IP Dialing:	yes
Emergency Number:	

Phone tab

- Line Key 1
 - Extension: 1
- Line Key 4
 - Extension: 4 or your preference Line Key



Make sure your line keys do not have anything entered for extended Function.

Info	System	SIP	Provisioning	Regional	Phone	User	Attendant Console
Ext 1	Ext 2	Ext 3	Ext 4				
General							
Station Name:		2211		Station Display Name:		VE7BEF	
Voice Mail Number:		#97		Text Logo:			
BMP Picture Download URL:							
Select Logo:		Default		Select Background Picture:		None	
Softkey Labels Font:		Auto		Screen Saver Enable:		no	
Screen Saver Wait:		300		Screen Saver Icon:		Background Picture	
Line Key 1							
Extension:		1		Short Name:		SUSER	
Share Call Appearance:		private					
Extended Function:							
Line Key 2							
Extension:		2		Short Name:		VE7BEF 3311	
Share Call Appearance:		private					
Extended Function:							
Line Key 3							
Extension:		Disabled		Short Name:		VE7LSE Direct	
Share Call Appearance:		private					
Extended Function:		vid=4;fnc=sd;ext=10.46.174.182					
Line Key 4							
Extension:		4		Short Name:		VE7BEF IP Dialing	
Share Call Appearance:		private					
Extended Function:							

Outgoing Direct-IP dialed calls

Personal Directory

In each box, place an entry for each desired phone. Examples:

n=VE7LSE;p=10.1.2.3
n=N2MH;p=10.73.73.66

 Small Business

SPA504G Personal Directory

Admin Login basic | advanced

VoiceCall HistoryPersonal DirectoryAttendant Console Status

Directory

1.	<input type="text" value="n=VE7LSE;p=10.1.2.3"/>	2.	<input type="text"/>
3.	<input type="text" value="n=N2MH;p=10.73.73.66"/>	4.	<input type="text"/>
5.	<input type="text"/>	6.	<input type="text"/>

How to add direct IP contacts to your speed dial buttons on your phone's spare line keys or Attendant Console keys:

Phone

- Line Key x
 - Extension: Disabled
 - Short Name: Enter a short name
 - Extended Function: Enter something like: vid=4;fnc=sd;ext=10.46.174.182



- vid=4 refers to the line key used for this speed dial button
- Change the IP address and name to the correct one you are trying to add

Small Business
cisco SPA504G Configuration Utility

Voice | Call History | Personal Directory | Attendant Console Status

Info | System | SIP | Provisioning | Regional | **Phone** | User | Attendant Console

Ext 1 | Ext 2 | Ext 3 | Ext 4

General

Station Name: 2211 | Station Display Name: VE7BEF
 Voice Mail Number: *97 | Text Logo:
 BMP Picture Download URL:
 Select Logo: Default | Select Background Picture: None
 Softkey Labels Font: Auto | Screen Saver Enable: no
 Screen Saver Wait: 300 | Screen Saver Icon: Background Picture

Line Key 1

Extension: 1 | Short Name: \$USER
 Share Call Appearance: private
 Extended Function:

Line Key 2

Extension: 2 | Short Name: VE7BEF 3311
 Share Call Appearance: private
 Extended Function:

Line Key 3

Extension: Disabled | Short Name: VE7LSE Direct
 Share Call Appearance: private
 Extended Function: vid=4;fnc=sd;ext=10.46.174.182

Line Key 4

Extension: 4 | Short Name: VE7BEF IP Dialing
 Share Call Appearance: private
 Extended Function:

ATT Console

- Cut and paste this example into a free "Unit 1 or Unit 2 Key":

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

Unit 1 Key 3:

vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT

1)

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