

# Vega FXS Gateway & CUCM 7906 SIP-Phone Emulation Configuration

1. Ensure a minimum firmware level of R087S011 is running on the Vega
2. Factory reset to erase any previous configuration
3. Login and use *Quick Config* to assist you with the set-up
4. Click on the **Basic Config** tab and make changes as required



## Vega 50 Europa Configuration

Status  
Quick Config  
Expert Config

Warnings(4)  
Log off  
Reboot System

FXS    FXO    **Basic Config**    VoIP         New Install?   

### General

Country	UK	Timezone Offset (HHMM)	0000	Emergency Numbers	999,112,911,000
---------	----	------------------------	------	-------------------	-----------------

### LAN

Interface	Physical
<input checked="" type="checkbox"/> Obtain IP Settings automatically Using DHCP	Speed: 100BASE-TX
IP Address: 172.19.1.87	Duplex: Full
Subnet Mask: 255.255.255.0	
Gateway: 172.19.1.10	
Preferred DNS Server: 0.0.0.0	
Alternate DNS Server: 0.0.0.0	
NTP Time Server: uk.pool.ntp.org	


### QoS

TOS/Diffserv	0
802.1pQ	<input type="checkbox"/>
VLAN ID	0
Priority	0


### Codecs

Priority	1	2	3	4
Voice	g729	g711Ulaw64k	g711Alaw64k	g7231

- Click on the **VoIP** tab and insert the IP address of CUCM where directed
- Ensure that Registration Mode is enabled for each FXS port



## Vega 50 Europa Configuration

 Unapplied Configuration Changes

Status  
Quick Config  
Expert Config

Warnings(6)  
Log off  
Reboot System

FXS FXO Basic Config **VoIP** Submit  New Install? Exit


### VoIP Routing Mode

Send calls via a VoIP Service Provider/Proxy  
 Send calls to specified VoIP devices


### VoIP Device Configuration

Proxy domain name	CCUM_ip_address
Proxy address	CCUM_ip_address
Registrar address	CCUM_ip_address
Outbound proxy address	0.0.0.0
Registration Mode	FXS Port ▾
Registration and Authentication ID	Reg and Auth ID
Authentication Password	****

- Click on the **FXS** tab
- In the **Numeric Caller ID** column enter the desired extension numbers which will be set up in CUCM also
- Click the **copy to number list** button
- In the **Authentication Password** column enter the password for each extension which will be used in CUCM also



## Vega 50 Europa Configuration

 Unapplied Configuration Changes

Status  
Quick Config  
Expert Config

Warnings(6)  
Log off  
Reboot System

**FXS** FXO Basic Config VoIP Submit  New Install? Exit

### Telephone Connections

Interface	Enabled?	Numeric Caller ID	Textual Caller ID	Telephone number(s) to route to the FXS interface	Registration and Authentication ID	Authentication Password
		copy to number list			Numeric_ID ▾	
0101	<input checked="" type="checkbox"/>	201	FXS1	201	201	201
0102	<input checked="" type="checkbox"/>	202	FXS2	202	202	202
0103	<input checked="" type="checkbox"/>	203	FXS3	203	203	203
0104	<input checked="" type="checkbox"/>	204	FXS4	204	204	204
0105	<input checked="" type="checkbox"/>	205	FXS5	205	205	205
0106	<input checked="" type="checkbox"/>	206	FXS6	206	206	206
0107	<input checked="" type="checkbox"/>	207	FXS7	207	207	207
0108	<input checked="" type="checkbox"/>	208	FXS8	208	208	208

11. Once completed click the **Submit** button
12. Open a Telnet session
13. Copy/paste the supplied Cisco specific code from Notepad into the Vega CLI (it is advisable to perform this in the three individual sections as presented)
14. Enter "save"
15. Enter "apply"
16. Enter "reboot system"

The image shows two windows side-by-side. On the left is a terminal window titled 'show banner' with the following content:

```

-----
Version: 13.02.00.7  UEGAEURO Runtime System
Serial #: 005058040e50
(c) 1998-2009 VegaStream Limited. All rights reserved.
-----

Host name: this_hostname      LAM 1 IP: 172.19.1.87(D)
System licensed for 8 UoIP channels

admin >

```

On the right is a Notepad window titled 'CCUM\_VegaFXS\_interop\_config - Notepad' containing the following configuration code:

```

*****CISCO INTEROP*****

set . _advanced.sip.cisco_cm_compatibility="1"
set . sip.hold.mode="silence"
set . _advanced.sip.user_agent_header="2"
set . _advanced.sip.user_agent_header_ext="cisco-CP7906G/8.3.0"
set . _advanced.sip.register.contact_suffix="+u.sip!model.ccm.cisco.com=\"369\"""
cp
set . sip.local_rx_port="5060"
set . sip.tls.local_rx_port="7000"
set . sipproxy.rx_port="6000"

*****GENERAL PLAN MODIFICATION FOR CALLS FROM FXS TO CCUM*****

set . planner.profile.20.name="to_SIP"
purge . planner.profile.20.plan
cp . planner.profile.20.plan.1
set . planner.profile.20.plan.1.name="to_SIP"
set . planner.profile.20.plan.1.src="IF:01.,TEL:<.*>"
set . planner.profile.20.plan.1.dest="IF:9901,TEL:<1>"
cp . planner.profile.20.plan.2
set . planner.profile.20.plan.2.name="pickup"
set . planner.profile.20.plan.2.src="IF:01.,TEL:\*45"
set . planner.profile.20.plan.2.dest="IF:9901,TEL:X-cisco-serviceuri-pickup"
cp . planner.profile.20.plan.3
set . planner.profile.20.plan.3.name="gpickup"
set . planner.profile.20.plan.3.src="IF:01.,TEL:\*46<.*>"
set . planner.profile.20.plan.3.dest="IF:9901,TEL:X-cisco-serviceuri-gpickup-<1>"
cp . planner.profile.20.plan.4
set . planner.profile.20.plan.4.name="meetme"
set . planner.profile.20.plan.4.src="IF:01.,TEL:\*47<.*>"
set . planner.profile.20.plan.4.dest="IF:9901,TEL:X-cisco-serviceuri-meetme-<1>"
cp
;

```

A red arrow points from the Notepad window to the CLI terminal, with the text "Copy/paste into CLI" written in red.

17. Browse to the CUCM GUI
18. In the User Management tab select **End User**

The image shows the Cisco Unified CM Administration GUI. The top navigation bar includes: System, Call Routing, Media Resources, Voice Mail, Device, Application, User Management, Bulk Administration, and Help. The 'User Management' menu is expanded, showing the following options:

- Credential Policy Default
- Credential Policy
- Application User
- End User**
- Role
- User Group
- User/Phone Add
- Application User CAPF Profile
- End User CAPF Profile
- SIP Realm


The main content area displays "Cisco Unified CM Administration" and "System version: 6.0.1.2000-4".

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A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wvl/export/crypto/tool/stqrg.h>  
If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

19. Click the **Add** button to add a new user
20. Enter the extension details where indicated
21. Click **Save** when completed

 **Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions


System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

### End User Configuration

 Save

---

**Status**

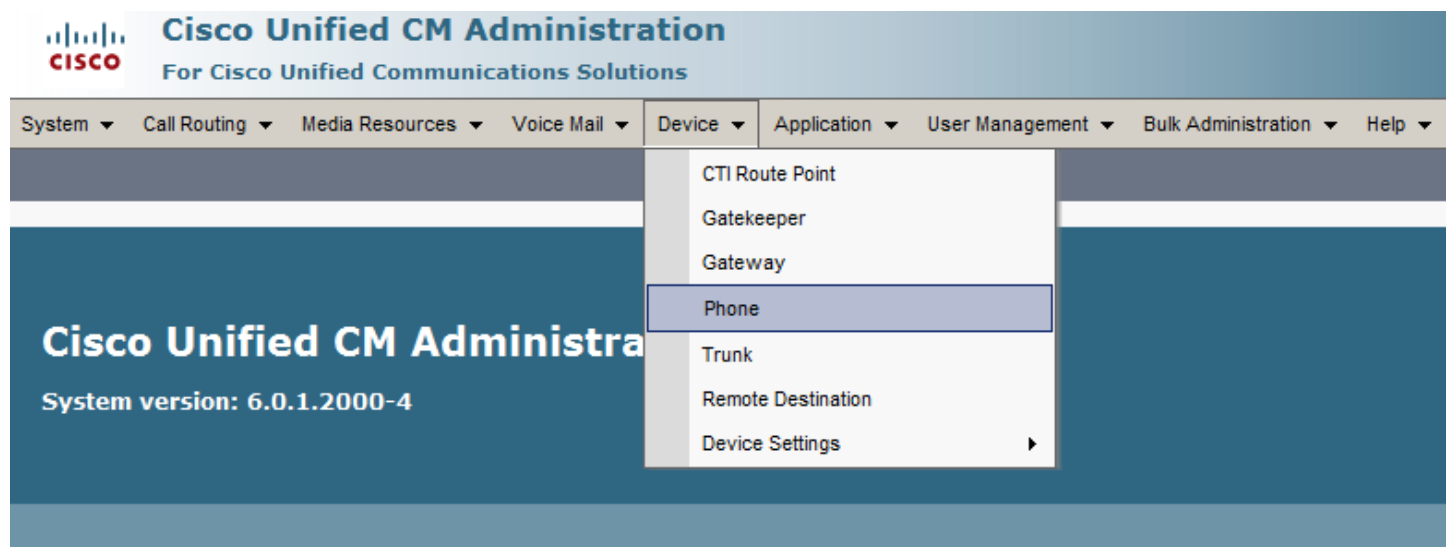
 Status: Ready

---

**User Information**

User ID*	<input type="text" value="201"/>
Password	<input type="text" value="201"/>
Confirm Password	<input type="text" value="201"/>
PIN	<input type="text" value="201"/>
Confirm PIN	<input type="text" value="201"/>
Last name*	<input type="text" value="FXS_201"/>
Middle name	<input type="text"/>
First name	<input type="text"/>
Telephone Number	<input type="text"/>
Mail ID	<input type="text"/>
Manager User ID	<input type="text"/>
Department	<input type="text"/>
User Locale	< None > ▾
Associated PC	<input type="text"/>
Digest Credentials	<input type="text"/>

22. In the Device tab select **Phone**



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A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wwl/export/crypto/tool/starg.h>  
If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

23. Click the **Add** button to add a new phone

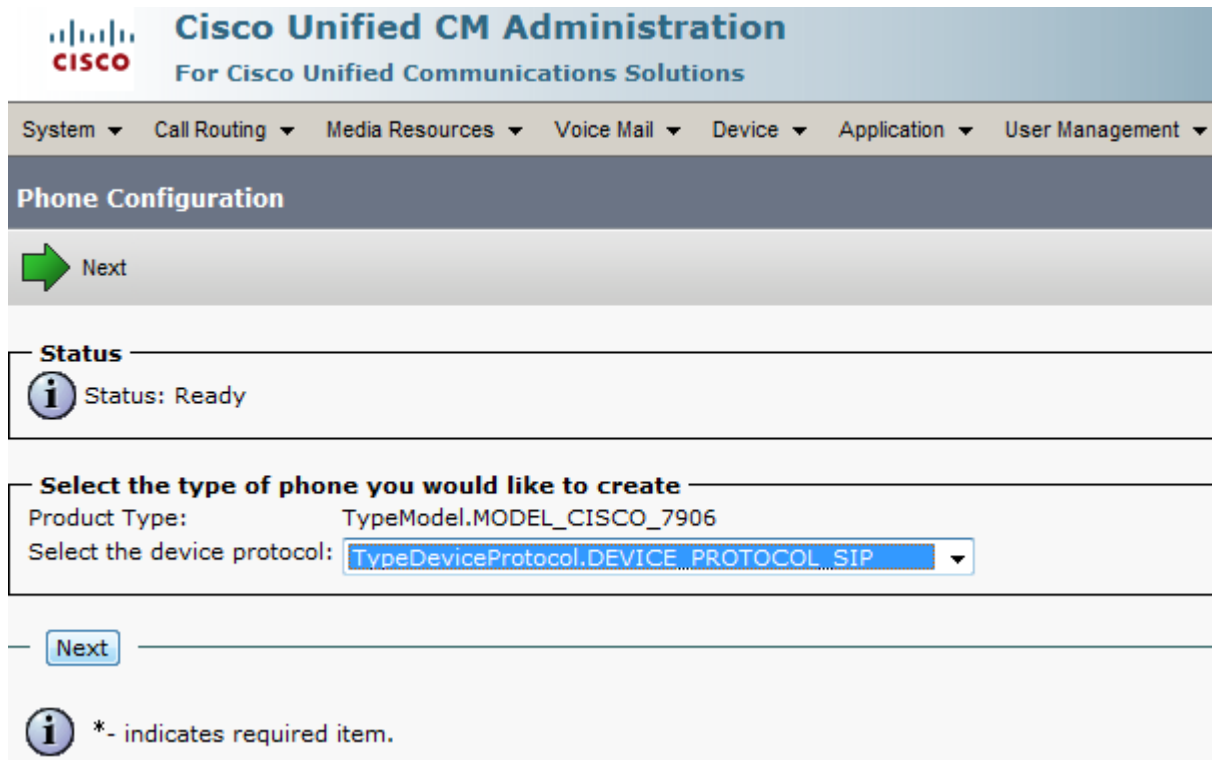
24. Select the phone type **Cisco 7906**

25. Click **Next**

The screenshot shows the "Add a New Phone" configuration page in the Cisco Unified CM Administration interface. The navigation bar at the top is the same as in the previous screenshot, with the "Device" tab selected. The main heading is "Add a New Phone". Below the heading is a green arrow button labeled "Next". Underneath, there is a "Status" section with an information icon and the text "Status: Ready". The next section is titled "Select the type of phone you would like to create" and contains a "Phone Type\*" dropdown menu with "Cisco 7906" selected. At the bottom of this section is a "Next" button. A legend at the very bottom shows an information icon followed by the text "\*- indicates required item."

26. Ensure the protocol is set to **SIP**

27. Click **Next**



The screenshot displays the Cisco Unified CM Administration web interface. At the top, the Cisco logo and the title "Cisco Unified CM Administration" are visible, along with the subtitle "For Cisco Unified Communications Solutions". A navigation menu includes "System", "Call Routing", "Media Resources", "Voice Mail", "Device", "Application", and "User Management". The main heading is "Phone Configuration". A green arrow icon with the text "Next" is prominently displayed. Below this, a "Status" section shows an information icon and the text "Status: Ready". The next section, "Select the type of phone you would like to create", shows "Product Type: TypeModel.MODEL\_CISCO\_7906" and "Select the device protocol:" with a dropdown menu set to "TypeDeviceProtocol.DEVICE\_PROTOCOL\_SIP". A "Next" button is located below the dropdown. At the bottom, an information icon is followed by the text "\*- indicates required item."

28. Enter the MAC of the Vega then substitute the last characters of the MAC for the extension number, whilst ensuring that the string remains twelve characters in length

29. Complete the remainder of the form as shown

30. When completed click **Save**

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾

### Phone Configuration

Save

---

**Status**  
 Status: Ready

---

**Phone Type**  
**Product Type:** TypeModel.MODEL\_CISCO\_7906  
**Device Protocol:** TypeDeviceProtocol.DEVICE\_PROTOCOL\_SIP

---

**Device Information**

MAC Address*	005058040201	<a href="#">View Details</a>
Description	Extension_201	
Device Pool*	Default	<a href="#">View Details</a>
Common Device Configuration	< None >	<a href="#">View Details</a>
Phone Button Template*	Standard 7906 SIP	
Softkey Template	< None >	
Common Phone Profile*	Standard Common Phone Profile	
Calling Search Space	< None >	
AAR Calling Search Space	< None >	
Media Resource Group List	< None >	
User Hold MOH Audio Source	< None >	
Network Hold MOH Audio Source	< None >	
Location*	Hub_None	
AAR Group	< None >	
User Locale	< None >	
Network Locale	< None >	
Built In Bridge*	TypeStatus.STATUS_DEFAULT	
Privacy*	TypeStatus.STATUS_DEFAULT	
Device Mobility Mode*	TypeStatus.STATUS_DEFAULT	<a href="#">View Current</a>
Owner User ID	201	
Phone Personalization*	TypePhonePersonalization.PHONEPERSONALIZATIC	
Phone Load Name		

Ignore Presentation Indicators (internal calls only)  
 Allow Control of Device from CTI  
 Logged Into Hunt Group  
 Remote Device

---

**Protocol Specific Information**

Packet Capture Mode*	TypePacketCaptureMode.PACKET_CAPTURE_MODE	
Packet Capture Duration	0	
Presence Group*	Standard Presence group	
SIP Dial Rules	< None >	
MTP Preferred Originating Codec*	TypeSIPCodec.C_711_ULAW	
Device Security Profile*	Cisco 7906 - Standard SIP Non-Secure Profile	
Rerouting Calling Search Space	< None >	
SUBSCRIBE Calling Search Space	< None >	
SIP Profile*	Standard SIP Profile	
Digest User	201	

Media Termination Point Required  
 Unattended Port  
 Require DTMF Reception

31. Click on [Line 1 - Add A New DN](#)

The screenshot shows the Cisco Unified CM Administration interface. At the top, there is a navigation bar with the Cisco logo and the text "Cisco Unified CM Administration For Cisco Unified Communications Solutions". Below this is a menu bar with options: System, Call Routing, Media Resources, Voice Mail, Device, Application, User Management, Bulk Administration, and Help. The main heading is "Phone Configuration". Below the heading are icons for Save, Delete, Copy, Reset, and Add New. A status bar shows "Add successful". The main content area is divided into two sections: "Association Information" and "Phone Type".

**Association Information**

Modify Button Items

- Line [1] - Add a new DN
- TypeFeature.FEATURE\_NONE
- Add a new SD
- Add a new SD
- Add a new SD
- Add a new SD
- Unassigned Associated Items
- Add a new SD
- TypeFeature.FEATURE\_PRIVACY
- TypeFeature.FEATURE\_NONE

**Phone Type**

Product Type: TypeModel.MODEL\_CISCO\_7906  
Device Protocol: TypeDeviceProtocol.DEVICE\_PROTOCOL\_SIP

**Device Information**

Registration	TypeRisStatus.STATUS_RIS_UNKNOWN
IP Address	Unknown
MAC Address*	005058040201
Description	Extension_201
Device Pool*	Default
Common Device Configuration	< None >
Phone Button Template*	Standard 7906 SIP
Softkey Template	< None >
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	< None >

32. Enter the extension number.

33. Click in the Description field – this will auto update with the user name

The screenshot shows the Cisco Unified CM Administration interface. At the top, there is a navigation bar with the Cisco logo and the text "Cisco Unified CM Administration For Cisco Unified Communications Solutions". Below this is a menu bar with options: System, Call Routing, Media Resources, Voice Mail, Device, and Application. The main heading is "Directory Number Configuration". Below the heading are icons for Save, Delete, Reset, and Add New. A status bar shows "Status: Ready". The main content area is "Directory Number Information".

**Directory Number Information**

Directory Number*	201
Route Partition	< None >
Description	FXS_201
Alerting Name	
ASCII Alerting Name	

Active



34. Click **Save**
35. Repeat from Step 18 until you have completed the configuration for all extensions
36. In the Vega CLI enter "sip reg all" to force all registrations simultaneously
37. In the CUCM GUI click on Device & select **Phone**.
38. Click the **Find** button to display all
39. Ensure that each FXS is displayed as Registered

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

Navigation | Cisco Un

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾










**Find and List Phones** Related Links: [Actively Log](#)

**Status**  
45 records found

**Phone (1 - 45 of 45)**

Find Phone where Device Name ▾ begins with ▾

Select item or enter search text ▾

<input type="checkbox"/>		Device Name(Line) ^	Description	Device Pool	Device Protocol	Status	IP Address
<input type="checkbox"/>		<a href="#">SEP005058040201</a>	Extension_201	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040202</a>	Extension_202	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040203</a>	Extension_203	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040204</a>	Extension_204	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040205</a>	Extension_205	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040206</a>	Extension_206	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040207</a>	Extension_207	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>
<input type="checkbox"/>		<a href="#">SEP005058040208</a>	Extension_208	<a href="#">Default</a>	SIP	Registered with 172.19.1.77	<a href="#">172.19.1.87</a>