

配置Cisco Aironet 1142和有CUCM的寄存器7925 wi-fi电话的步骤

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简介

本文描述如何注册Cisco无线电话到Cisco Unified Communications管理器(CUCM)服务器。本文有CUCM、接入点和无线电话详细配置。

先决条件

要求

思科建议您有CUCM和Cisco接入点的知识。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- CUCM版本9.1.2.15126-1。
- Cisco Aironet 1140系列接入点，版本15.3(3)JBB2
- Cisco 7925电话，版本1.4(7)

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

配置

请使用在此部分描述为了注册Cisco无线电话用CUCM服务器的信息。

接入点配置

如何访问接入点(AP)

配置在您的L3交换机的DHCP或保证Aironet连接的交换机访问DHCP服务器。

```
ip dhcp excluded-address 10.106.121.1
ip dhcp excluded-address 10.106.121.1 10.106.121.20
ip dhcp excluded-address 10.106.121.1 10.106.121.30
ip dhcp excluded-address 10.106.122.1 10.106.122.130
!
ip dhcp pool VLAN487
  network 10.106.122.128 255.255.255.192
  default-router 10.106.122.129
  option 150 ip 10.106.122.180
  lease 0 0 5
!
```

在您连接Aironet对Cisco交换机的switchport后，通过使用show cdp neighbors命令在交换机，您能找到Aironet的详细信息。

```
Ramebala_vlan487#sh cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone,
                  D - Remote, C - CVTA, M - Two-port Mac Relay

Device ID         Local Intrfce    Holdtme    Capability  Platform  Port ID
SEPDC7B94F8C4BB  Fas 0/7         140        H P M      IP Phone  Port 1
SEPD0C282D07393  Fas 0/17        131        H P M      IP Phone  Port 1
SEP002497AB40D8  Fas 0/11        147        H P M      IP Phone  Port 1
SEP2893FE1262C4  Fas 0/14        174        H P M      IP Phone  Port 1
SEP503DE57D9995  Fas 0/19        169        H P M      IP Phone  Port 1
SEPB41489A2F295  Fas 0/13        127        H P M      IP Phone  Port 1
BGL14.M.18-LAP1142-1.LAB.com
                  Fas 0/6         157        T B I      AIR-AP114 Gig 0
UC-LAB-CUBE-SWITCH-FD2
                  Fas 0/24        153        R S I      WS-C3750E Gig 2/0/5
```

为了欲知的通过DHCP将采取)的IP地址Aironet (请使用在交换机的show cdp neighbors命令fa0/6详细信息。

```
Ramebala_vlan487#show cdp neighbors fa 0/6 detail
-----
Device ID: BGL14.M.18-LAP1142-1.LAB.com
Entry address(es):
  IP address: 10.106.122.152
  IPv6 address: FE80::CEEF:48FF:FEFA:4426 (link-local)
Platform: cisco AIR-AP1142N-A-K9, Capabilities: Trans-Bridge Source-Route-Bridge IGMP
Interface: FastEthernet0/6, Port ID (outgoing port): GigabitEthernet0
Holdtime : 166 sec

Version :
Cisco IOS Software, C1140 Software (C1140-K9W7-M), Version 15.3(3)JBB2, RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2015 by Cisco Systems, Inc.
Compiled Thu 27-Aug-15 19:02 by prod_rel_team

advertisement version: 2
Duplex: full
Power drawn: 15.400 Watts
Power request id: 44652, Power management id: 2
Power request levels are:15400 14500 0 0 0
Management address(es):
  IP address: 10.106.122.152
```

默认用户名和密码Aironet的将是思科和思科。

您能使用Aironet Aironet或命令行界面(CLI)访问图形用户界面(GUI)访问进行配置更改。在本文中使
用Aironet GUI访问做。



Enable (event)无线接口

如此镜像所显示，导航对网络菜单并且点击每无线接口并且选择Enable单选按钮在设置选项卡下
Enable (event)无线电。启用所有无线电接口。

The screenshot shows the Cisco Meraki configuration interface for a radio interface. The left sidebar contains a 'NETWORK' menu with options like 'NETWORK MAP', 'NETWORK INTERFACE', and 'Radio0-802.11N 2.4GHz'. The main content area is titled 'Radio0-802.11N 2.4GHz STATUS' and 'DETAILED STATUS'. The 'Settings' tab is active, showing the following configuration:

- Hostname: BGL14.M.18-LAP1142-1
- Network Interfaces: Radio0-802.11N 2.4GHz Settings
- Operating Mode: Mixed
- Enable Radio: Enable (with a yellow highlight) Disable
- Current Status (Software/Hardware): Disabled ↓ Down ↓
- Role in Radio Network:
 - Access Point
 - Access Point (Fallback to Radio Shutdown)
 - Access Point (Fallback to Repeater)
 - Repeater
 - Root Bridge

添加新的VLAN

导航对**Security**菜单并且以后选择点击**Define VLANs**的**SSID管理器**，您将获得VLAN，一次执行的选项添加点击**应用按钮**。

The screenshot shows the Cisco Meraki configuration interface for the Security menu. The left sidebar contains a 'Security' menu with options like 'Admin Access', 'Encryption Manager', 'SSID Manager', 'Dot11u Manager', 'Server Manager', 'AP Authentication', 'Intrusion Detection', 'Local RADIUS Server', and 'Advance Security'. The main content area is titled 'Security: Global SSID Manager' and 'SSID Properties'. The 'Current SSID List' is empty. The configuration fields are as follows:

- Hostname: ap
- SSID:
- VLAN: Define VLANs
- Backup 1:
- Backup 2:
- Backup 3:
- Band-Select: Band Select
- Universal Admin Mode: Universal Admin Mode
- Interface: Radio0-802.11N 2.4GHz Radio1-802.11N 5GHz
- Network ID: (0-4096)

如镜像所显示，VLAN 487被添加并且被检查两无线电。

如果此VLAN是本地VLAN，您能检查方框**本地VLAN**。

Services: VLAN

Global VLAN Properties

Current Native VLAN: None

Assigned VLANs

Current VLAN List

< NEW >

Delete

Create VLAN

VLAN ID: 487 (1-4094)

VLAN Name (optional):

Native VLAN

Enable Public Secure Packet Forwarding

Radio0-802.11N^{2.4GHz}

Radio1-802.11N^{5GHz}

Management VLAN (if non-native)

Define SSIDs

Apply

新的SSID的创建和关联VLAN

导航对Security菜单并且选择SSID管理器。

选择<NEW>在当前SSID列表下并且给SSID值。

检查方框两个无线接口。

CISCO

HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES MANAGEMENT SOFTWARE EVENT LOG

Save

Security

Admin Access

Encryption Manager

SSID Manager

Dot11u Manager

Server Manager

AP Authentication

Intrusion Detection

Local RADIUS Server

Advance Security

Hostname BGL14.M.18-LAP1142-1

BGL14.M.18-LAP1142-1

Security: Global SSID Manager

SSID Properties

Current SSID List

< NEW >

Delete

Network ID: (0-4096)

SSID: voicelab

VLAN: < NONE > Define VLANs

Backup 1:

Backup 2:

Backup 3:

Band-Select: Band Select

Universal Admin Mode: Universal Admin Mode

Interface: Radio0-802.11N^{2.4GHz} Radio1-802.11N^{5GHz}

点击应用按钮。

Multiple BSSID Beacon Settings

Multiple BSSID Beacon

Set SSID as Guest Mode

Set DataBeacon Rate (DTIM): **DISABLED** (1-100)

Apply **Cancel**

Guest Mode/Infrastructure SSID Settings

Radio0-802.11N^{2.4GHz}:

Set Beacon Mode: Single BSSID Set Single Guest Mode SSID: **< NONE >** ▼

Multiple BSSID

Set Infrastructure SSID: **< NONE >** ▼ Force Infrastructure Devices to associate only to this SSID

Radio1-802.11N^{5GHz}:

Set Beacon Mode: Single BSSID Set Single Guest Mode SSID: **< NONE >** ▼

Multiple BSSID

Set Infrastructure SSID: **< NONE >** ▼ Force Infrastructure Devices to associate only to this SSID

Apply **Cancel**

Note: 如果无线接口不出现，在从GUI的无线接口启用后，请登陆对CLI并且执行**no shutdown**命令下面无线接口(Dot11Radio)。

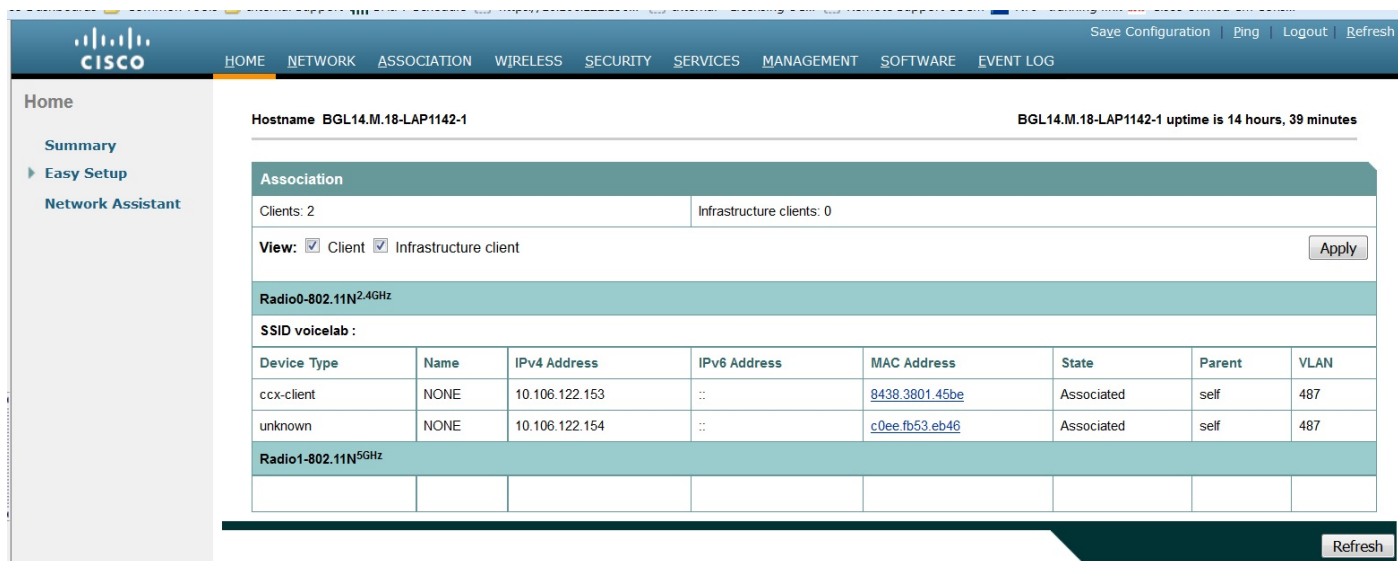
如何使SSID可视对客户端

如此镜像所显示，为了看到在客户端的SSID，您必须选择Ssid在所有无线电的集合单个guest模式SSID下。

The screenshot shows the Cisco configuration interface for the Security section. The left sidebar lists various security features, with 'SSID Manager' highlighted. The main content area shows the 'Guest Mode/Infrastructure SSID Settings' for two radios. For both Radio0 (2.4GHz) and Radio1 (5GHz), the 'Set Beacon Mode' is set to 'Single BSSID'. The 'Set Single Guest Mode SSID' dropdown menu is set to 'voicelab', which is highlighted in yellow. The 'Set Infrastructure SSID' is set to '< NONE >' and the checkbox for 'Force Infrastructure Devices to associate only to this SSID' is unchecked. The 'Set DataBeacon Rate (DTIM)' is set to 'DISABLED'. 'Apply' and 'Cancel' buttons are visible at the bottom of each radio configuration section.

如何验证连接的客户端

在客户端得到连接到接入点后，您将看到在**家庭菜单**的客户端详细信息。



Hostname BGL14.M.18-LAP1142-1 BGL14.M.18-LAP1142-1 uptime is 14 hours, 39 minutes

Association

Clients: 2 Infrastructure clients: 0

View: Client Infrastructure client Apply

Radio0-802.11N^{2.4GHz}

SSID voicelab :

Device Type	Name	IPv4 Address	IPv6 Address	MAC Address	State	Parent	VLAN
ccx-client	NONE	10.106.122.153	::	8438.3801.45be	Associated	self	487
unknown	NONE	10.106.122.154	::	c0ee.fb53.eb46	Associated	self	487

Radio1-802.11N^{5GHz}

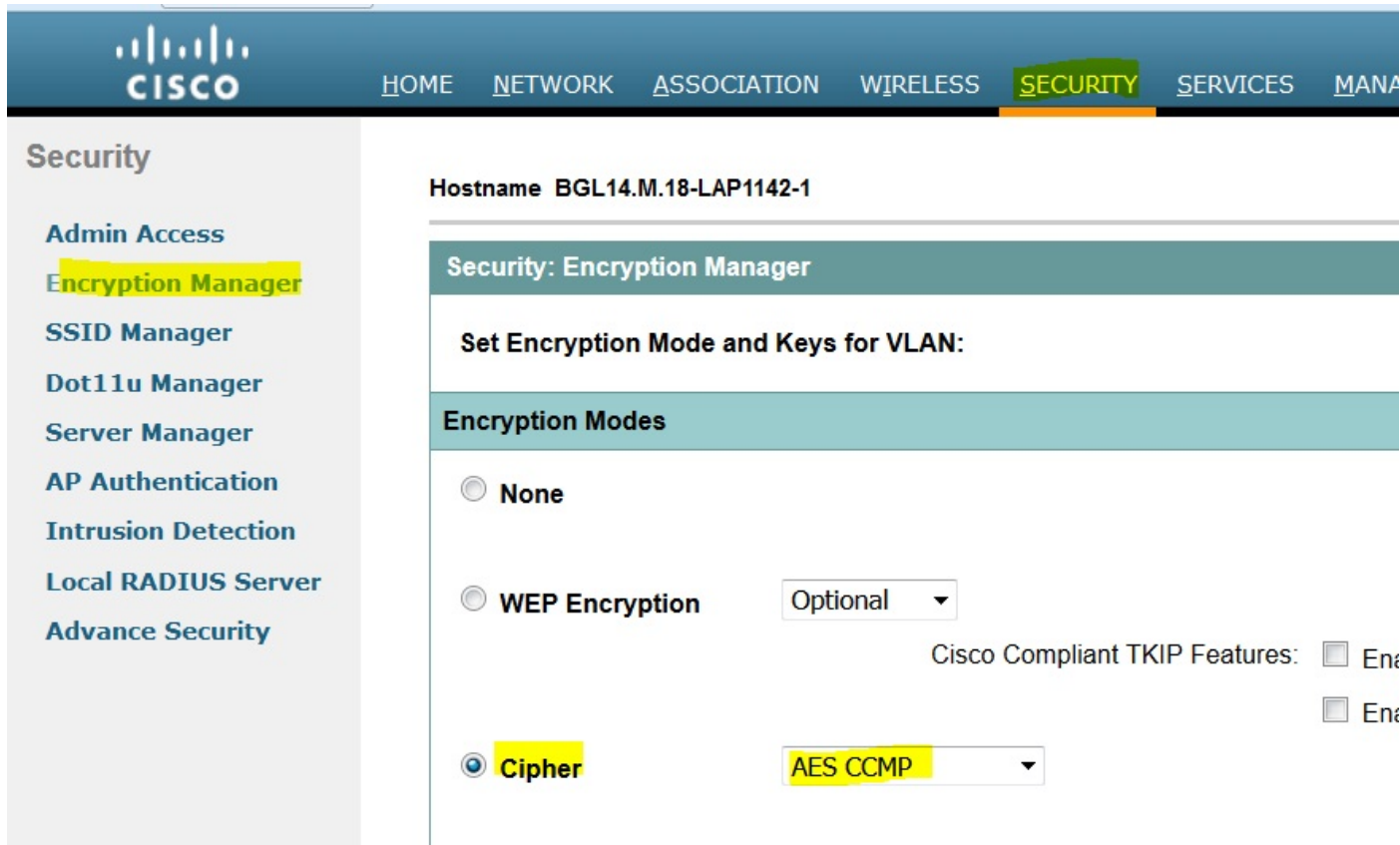
Refresh

可选-如何对对SSID的set password

导航对**安全选项卡**并且选择**加密管理器**。

在加密模式，请选择**密码器**并且选择**AES CCMP**。

在此以后请单击**应用**。



Hostname BGL14.M.18-LAP1142-1

Security: Encryption Manager

Set Encryption Mode and Keys for VLAN:

Encryption Modes

None

WEP Encryption Optional ▼

Cisco Compliant TKIP Features: Enc
 Enc

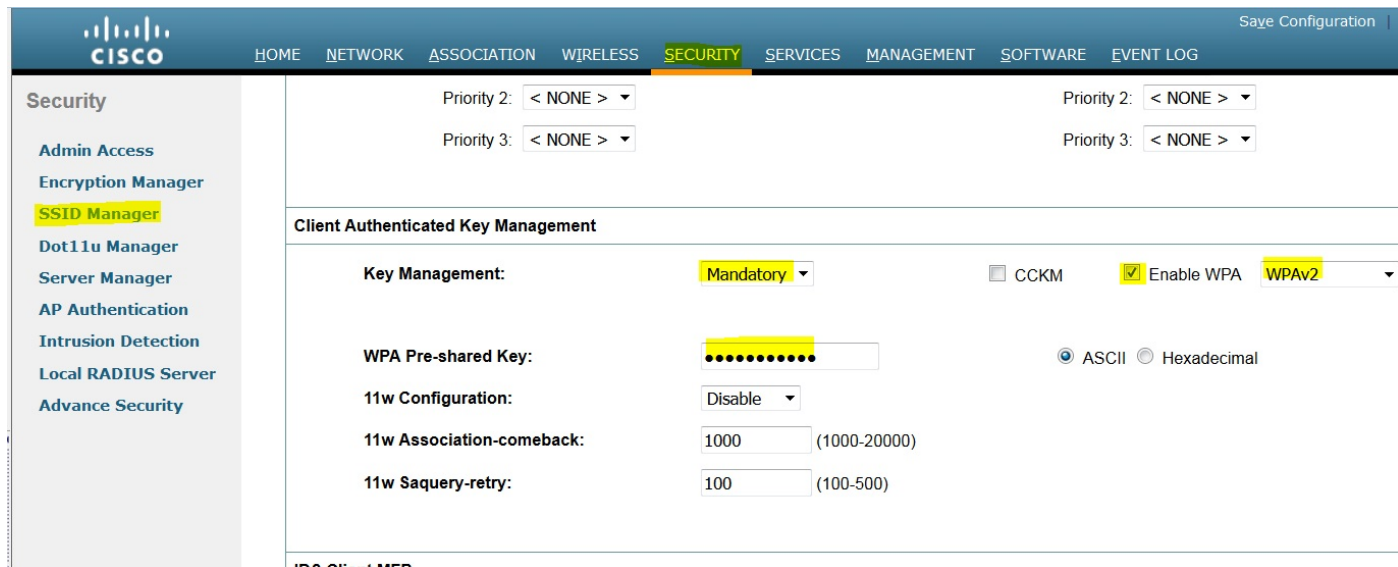
Cipher AES CCMP ▼

然后请选择**SSID管理器**在**Security**菜单下

设置密钥管理作为**必须**并且检查方框**Enable (event) WPA**并且选择**WPAv2**。

给Ssid的密码在**WPA预先共享密钥**下。

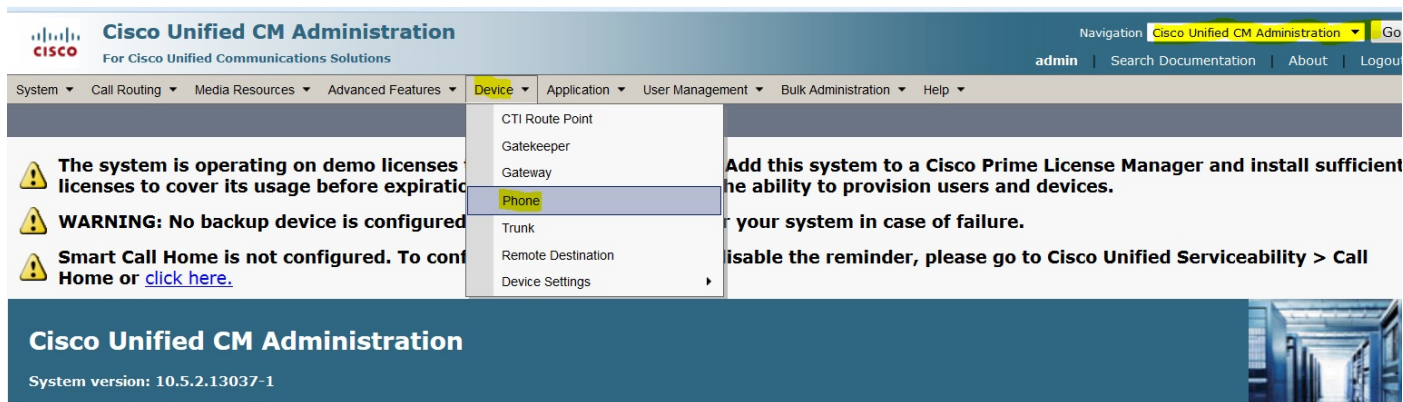
在此以后请点击**应用按钮**。



CUCM配置

如何对CUCM服务器的添加7925电话

登陆对CUCM管理GUI并且导航对**Device > Phone**



点击**添加新按钮**。

The screenshot shows the Cisco Unified CM Administration interface. At the top, there is a navigation menu with items: System, Call Routing, Media Resources, Advanced Features, Device, Application, and User Management. Below the menu is the page title "Find and List Phones". There is a blue plus icon followed by the text "Add New". A section titled "Phone" contains a search form with the label "Find Phone where". The form has two dropdown menus: "Device Name" and "begins with", followed by a text input field and a "Find" button. Below the search form, there is a message: "No active query. Please enter your search criteria." At the bottom left, there is a yellow "Add New" button.

选择Cisco 7925在电话类型下并且点击Next按钮(您能选择电话类型符合您有的)的无线电话。

The screenshot shows the Cisco Unified CM Administration interface for adding a new phone. The navigation menu includes: System, Call Routing, Media Resources, Advanced Features, Device, and Application. The page title is "Add a New Phone". There is a green right-pointing arrow followed by the text "Next". A section titled "Status" contains an information icon and the text "Status: Ready". Below this, a section titled "Select the type of phone you would like to create" contains a dropdown menu labeled "Phone Type*" with "Cisco 7925" selected. At the bottom left, there is a yellow "Next" button.

在Phone Configuration页下，请添加电话的MAC地址并且赋予适当的值到特定部分如镜像所显示并且点击保存按钮。



Phone Configuration

Save

Status

Status: Ready

Phone Type

Product Type: Cisco 7925

Device Protocol: SCCP

Device Information

Device is trusted

MAC Address*

Description

Device Pool* [View Details](#)

Common Device Configuration [View Details](#)

Phone Button Template*

Softkey Template

Common Phone Profile* [View Details](#)

Protocol Specific Information

Packet Capture Mode*

Packet Capture Duration

BLF Presence Group*

Device Security Profile*

SUBSCRIBE Calling Search Space

Unattended Port

点击Add新的一行并且给目录号到此电话。



Cisco Unified CM Administration

For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾

Phone Configuration

Save Delete Copy Reset Apply Config Add New

Status

Status: Ready

Association

[Modify Button Items](#)

- 1 [Line \[1\] - Add a new DN](#)
- 2 [Line \[2\] - Add a new DN](#)
- 3 [Add a new SD](#)
- 4 [Add a new SD](#)
- 5 [Add a new SD](#)
- 6 [Add a new SD](#)

Phone Type

Product Type: Cisco 7925
Device Protocol: SCCP

Real-time Device Status

Registration: Unregistered
IPv4 Address: [10.106.122.155](#)
Active Load ID: None
Download Status: None

Device Information

给任何目录号然后点击**保存按钮**。在那以后，请点击**Apply**设置和复位按钮。



Cisco Unified CM Administration

For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾

Directory Number Configuration

Save

Status

Directory Number Configuration has refreshed due to a directory number change. Please click Save button to save the configuration.

Directory Number Information

Directory Number* Urgent Priority
Route Partition
Description
Alerting Name
ASCII Alerting Name
External Call Control Profile
 Active

Directory Number Settings

物理7925电话配置

配置文件名称

导航对设置>网络配置文件

- 进入所有配置文件
- 类型** #取消锁定电话设置
- 给予所有配置文件名称



网络配置

导航对设置>网络配置文件>网络配置

设置启用DHCP值为YES

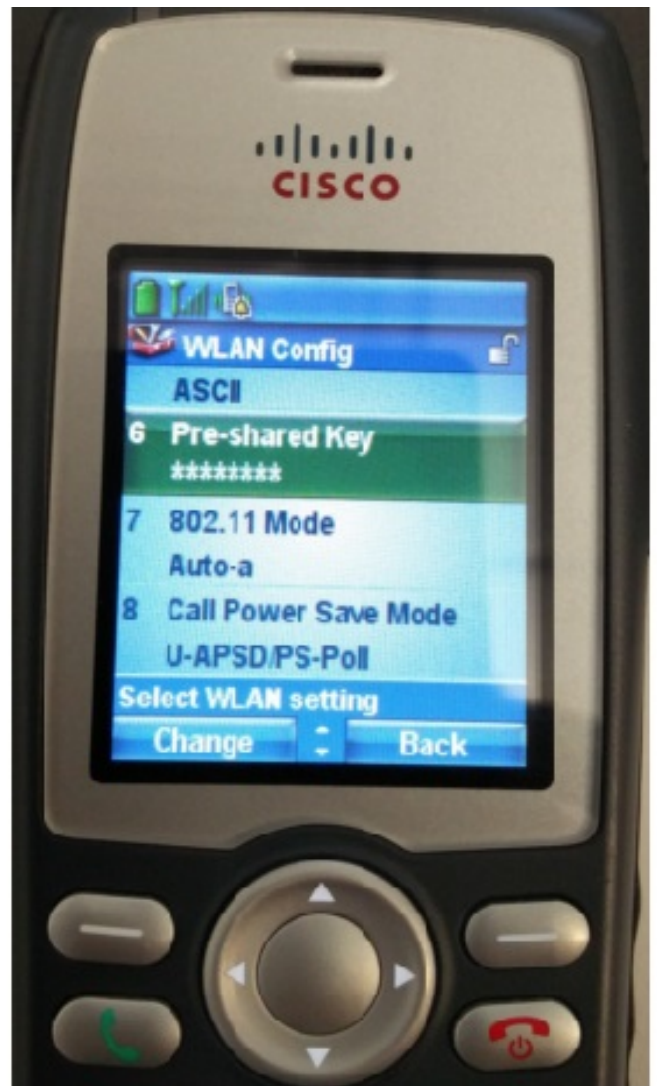
如果TFTP IP没有从DHCP服务器被拉，请手工添加TFTP IP地址此处。



WLAN 配置

导航对设置>网络配置文件> WLAN设置

- 给SSID名称(配置在接入点)然后按选项并且选择SAVE
- 设置安全模式作为自动(AKM)
- 在预先共享密钥部分下，请输入Ssid的密码(在我们的实验室我们设置此作为voicelab123)



验证

一旦电话注册与CUCM，无线电话显示在屏幕的中配置的电话编号。在CUCM管理GUI Phone Configuration页，您看到如镜像所显示，电话在已注册状态。

The screenshot shows the Cisco Unified CM Administration web interface. The main content area displays the configuration for a phone. The 'Association Information' section lists two lines: Line [1] - 4002 (no partition) and Line [2] - 4004 (no partition). The 'Phone Type' section shows 'Product Type: Cisco 7925' and 'Device Protocol: SCCP'. The 'Device Information' section shows 'Registration: Registered with Cisco Unified Communications Manager cucm192' and 'IP Address: 10.106.122.161'. The phone is shown as active.

Line	Description
1	Line [1] - 4002 (no partition)
2	Line [2] - 4004 (no partition)
3	Add a new SD
4	Add a new SD
5	Add a new SD
6	Add a new SD

Field	Value
Product Type	Cisco 7925
Device Protocol	SCCP
Registration	Registered with Cisco Unified Communications Manager cucm192
IP Address	10.106.122.161
Active Load ID	Unknown
Download Status	Unknown
Device is Active	<input checked="" type="checkbox"/>
Device is	<input checked="" type="checkbox"/>

故障排除

目前没有针对此配置的故障排除信息。