

在CUCM上配置自助調配功能 (基於IVR)

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簡介

本文檔介紹如何在CUCM (基於IVR) 上配置自助調配功能。

必要條件

需求

思科建議您瞭解以下主題：

- 思科整合通訊管理員。
- 網際網路通訊協定語音(VoIP)
- 電話註冊流程。

採用元件

本檔案中的資訊是根據思科整合通訊管理員10.5

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除 (預設) 的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

什麼是自我調配？

自助調配是10.x版思科統一通訊管理器(CUCM)中引入的一項功能。它提供**即插即用**型功能簡化了電話部署過程。使用**自動註冊**、某些模板和配置檔案配置以及IVR服務，CUCM管理員能夠以最少的前期配置部署電話。

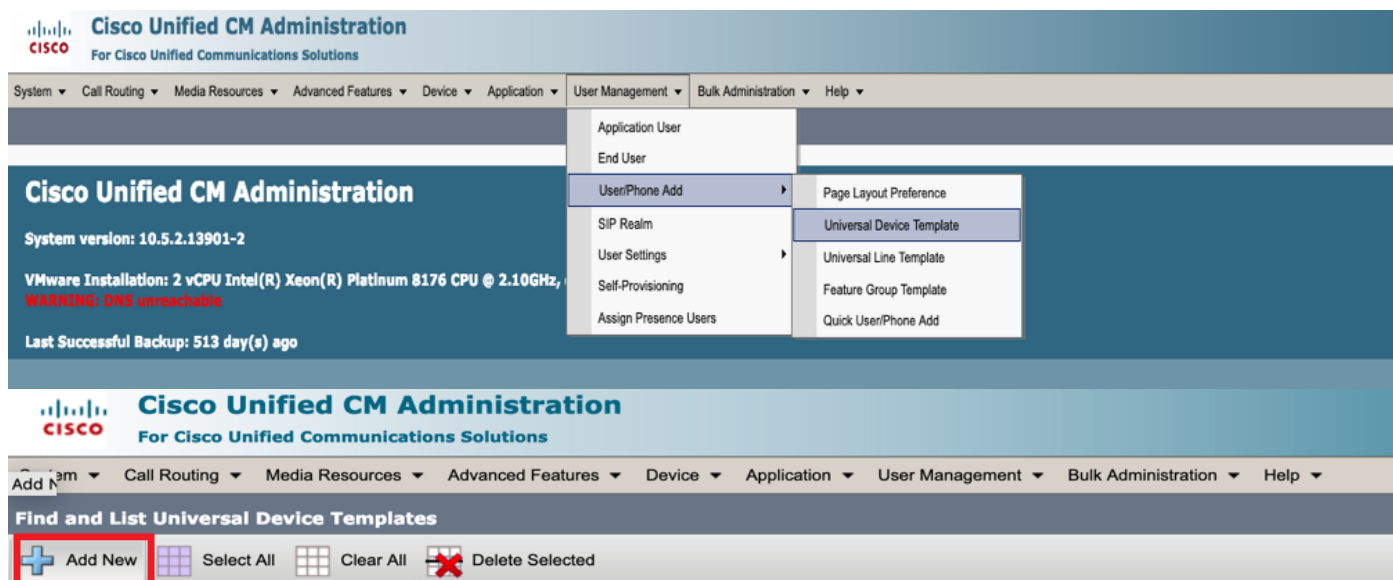
自助調配 (基於IVR) 的功能類似於舊的自動註冊電話工具(TAPS)方法。自助調配的關鍵區別在於

IVR服務在CUCM上運行，因此您不需要UCCX，如同使用TAPS一樣。

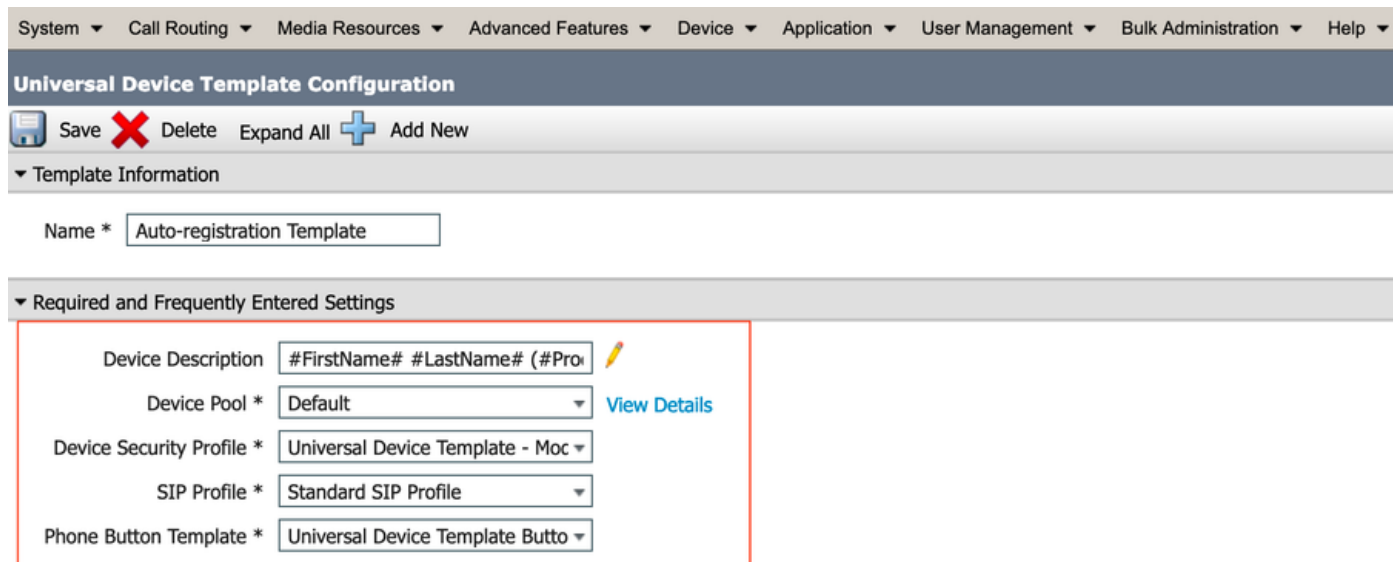
設定

1. 建立通用裝置模板(UDT)。

步驟1. 導航至 使用者管理>使用者電話新增>通用裝置模板 並新增新模板。

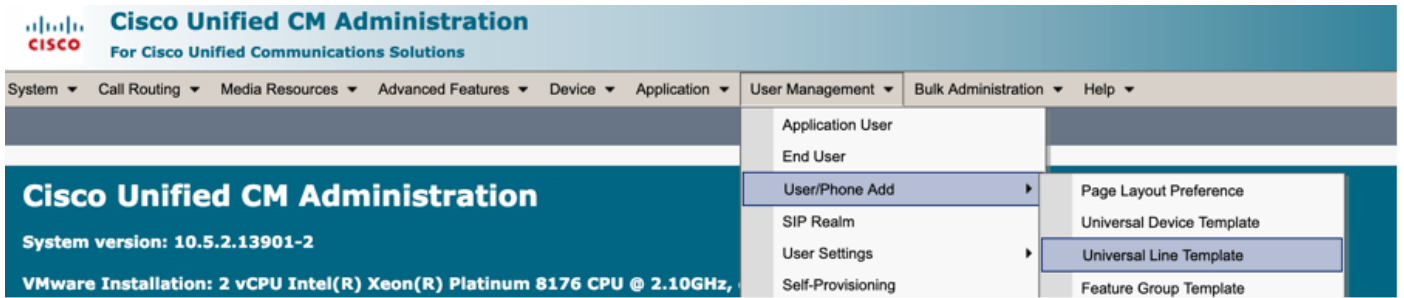


步驟2. 將電話在自動註冊後採用的配置應用到新的UDT。

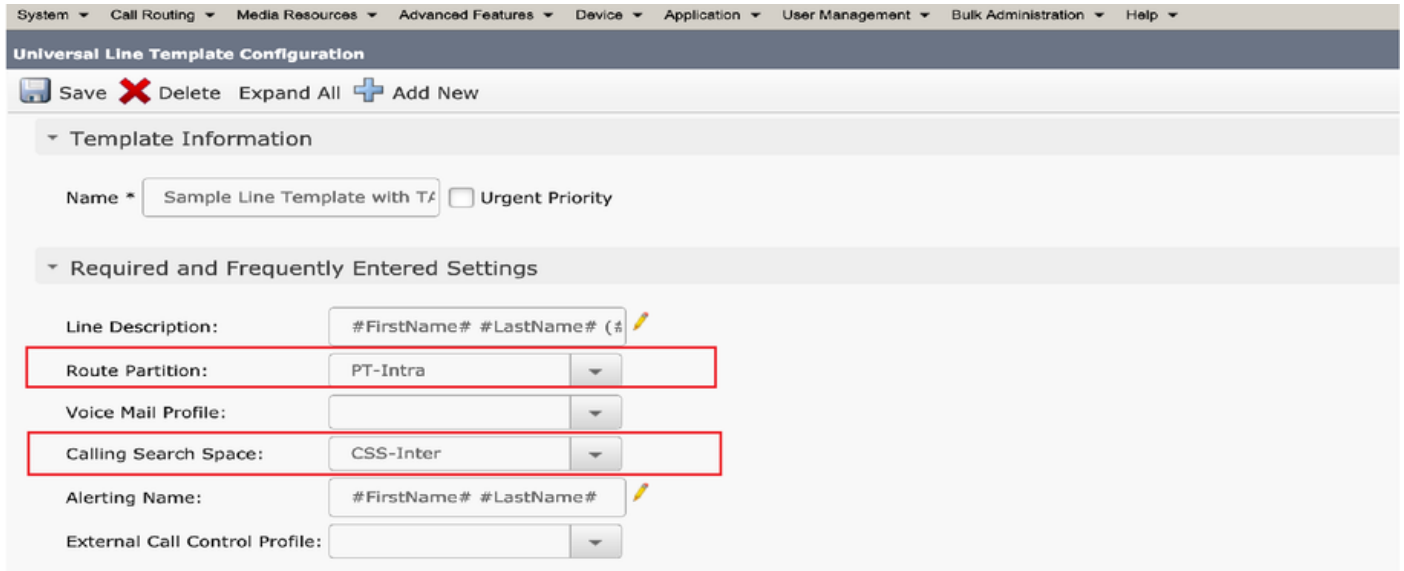


2. 建立通用行模板(ULT)。

步驟1. 導覽至User Management > User/Phone Add > User Line Template，如下圖所示。

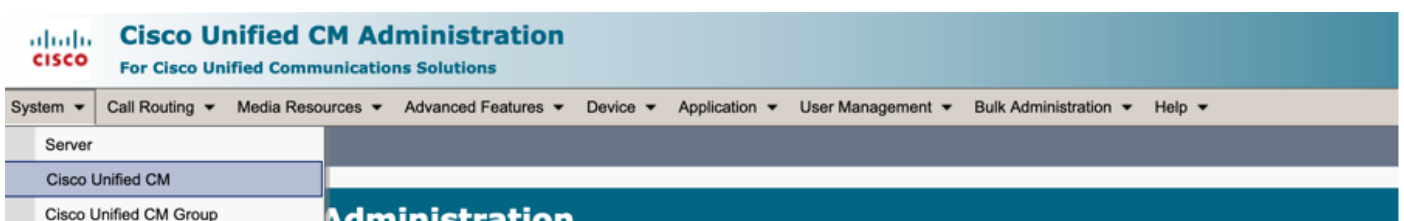


步驟2.新增自動註冊後電話上預期的路由分割槽和CSS。



附註：這些通用裝置模板和通用線路模板應與自動註冊連結，以便電話可以在自動註冊時進行配置。

3.將模板新增到CUCM節點以進行自動註冊配置，然後導航到System > Cisco Unified CM，如下圖所示。



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

Cisco Unified CM Configuration

Save Reset Apply Config

Status

Status: Ready

Cisco Unified Communications Manager Information

Cisco Unified Communications Manager: CM_UCM-PUB10 (used by 74 devices)

Server Information

CTI ID 1

Cisco Unified Communications Manager Server* 10.106.114.151

Cisco Unified Communications Manager Name* CM_UCM-PUB10

Description 10.106.114.151

Location Bandwidth Manager Group < None >

Auto-registration Information

Universal Device Template* Auto-registration Template

Universal Line Template* Sample Line Template with TAG usage examples

Starting Directory Number* 1000

4. 新增用於自置置備的新使用者配置檔案。

步驟1. 導覽至User Management > User Settings > User Profile，如下圖所示。

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

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

Cisco Unified CM Administration

System version: 10.5.2.13901-2

VMware Installation: 2 vCPU Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz, 32GB
WARNING: DNS unreachable

Last Successful Backup: 514 day(s) ago

User administrator last logged in to this cluster on Friday, February 15, 2019 8:57:30 PM CST, to node 10.106.114.151, from 10.142.18.100

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- Application User
- End User
- User/Phone Add
- SIP Realm
- User Settings
- Self-Provisioning
- Assign Presence Users

- Credential Policy Default
- Credential Policy
- Role
- Access Control Group
- Application User CAPF Profile
- End User CAPF Profile
- UC Service
- Service Profile
- User Profile

步驟2. 新增使用者裝置模板、使用者線路模板並選中Allow End User to Provision Their Own Phone復選框。

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

User Profile Configuration

Save **X** Delete **+** Add New

Status
i Status: Ready

User Profile
 Name* selfpro
 Description
 Make this the default User Profile for the system

Universal Device Template
 Desk Phones Auto-registration Template **View Details**
 Mobile and Desktop Devices Auto-registration Template **View Details**
 Remote Destination/Device Profiles Auto-registration Template **View Details**

Universal Line Template
 Universal Line Template Sample Line Template with TAG usage examples **View Details**

Self-Provisioning
 Allow End User to Provision their own phones
 Limit Provisioning once End User has this many phones 10

附註：當使用者嘗試使用自己的副檔名自行調配裝置時，應用這些設定。

附註：您還可以為使用者設定最大裝置數限制，超過此限制後，自助調配對使用者將不起作用。

例如：如果使用者已分配9台裝置，因為上述螢幕截圖中的最大限制設定為10，則使用者只能自行調配一台裝置。

附註：如果「允許終端使用者調配自己的電話」覈取方塊未選中。自助調配不適用於使用者。

5. 建立功能模板組並分配使用者配置檔案。現在，請導航到「使用者管理」>「使用者/電話新增」>「功能組模板」，然後按一下**新建**。

Cisco Unified CM Administration
 For Cisco Unified Communications Solutions

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



Cisco Unified CM Administration
 System version: 10.5.2.13901-2
 VMware Installation: 2 vCPU Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz
 WARNING: DNS unreachable
 Last Successful Backup: 514 day(s) ago

User Management ▾
 Application User
 End User
 User/Phone Add
 SIP Realm
 User Settings
 Self-Provisioning
 Assign Presence Users

Bulk Administration ▾
 Page Layout Preference
 Universal Device Template
 Universal Line Template
 Feature Group Template
 Quick User/Phone Add

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾

Feature Group Template Configuration

Save  Delete  Add New

Feature Group Template

Name *

Description

Features

Home Cluster

Enable User for Unified CM IM and Presence (Configure IM and Presence in the associated UC Service)

Include meeting information in Presence(Requires Exchange Presence Gateway to be configured on the server)

Services Profile [View Details](#)

User Profile [View Details](#)

Allow Control of Device from CTI

Enable Extension Mobility Cross Cluster

Enable Mobility

Enable Mobile Voice Access

Maximum Wait Time for Desk Pickup *

6.從「快速使用者/電話新增」頁建立用戶，並新增功能組模板。

步驟1。導覽至User management > User Phone Add > Quick User/Phone Add。

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

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

Cisco Unified CM Administration
System version: 10.5.2.13901-2
VMware Installation: 2 vCPU Intel(R) Xeon(R) Platinum 8176 CPU @ 2.10GHz,
WARNING: DNS unreachable
Last Successful Backup: 5/14/2016 10:00:00 AM

- Application User
- End User
- User/Phone Add**
 - Page Layout Preference
 - Universal Device Template
 - Universal Line Template
 - Feature Group Template
 - Quick User/Phone Add**
- SIP Realm
- User Settings
 - Self-Provisioning
- Assign Presence Users

步驟2.在訪問控制組成員身份下新增標準CCM終端使用者。


Quick User/Phone Add

 Save



User Information

First Name Middle Name Last Name * User ID * Feature Group Template [View Details](#)

Access Control Group Membership

User is a member of: 

Access Control Group Membership

User is a member of:  

步驟3. 將擴展欄位中的擴展新增到User，按一下Action下的+ Icon以啟用該欄位。

Access Control Group Membership

User is a member of:  

Credentials

 Use default credentialPassword Confirm Password PIN Confirm PIN

Extensions

Order	Extension	Line Primary URI/Partition	Action
	<input type="text"/> <input type="button" value="New..."/>	<input type="text"/> / <input type="text"/>	 

步驟4. 如果要建立新擴展，請按一下**New**和Add a New DN，如影象選項1中所示。如果CUCM上已存在該擴展並將其分配給「使用者」，則從影象選項2中所示的下拉選單中選擇該擴展。

Access Control Group Membership

User is a member of: + -

Credentials

Use default credential

Password

Confirm Password

PIN

Confirm PIN

Extensions

Order	Extension	Line Primary URI/Partition	Action
	<input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="button" value="New..."/>

附註： 使用者建立後，預設情況下將主線路作為自助使用者ID。

7. 驗證終端使用者是否已收到**主要擴展**、**自助使用者ID**、**使用者配置檔案**和**標準CCM終端使用者角色**。現在導航到**使用者管理>終端使用者**，然後訪問新建立的使用者，如下圖所示。

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

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

Application User
End User
UserPhone Add

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

End User Configuration

Save Delete Add New

- User Information

User Status: Enabled Local User

User ID*:

Password:

Confirm Password:

Self-Service User ID:

PIN:

Confirm PIN:

Last name*:

Middle name:

First name:

Title:

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

End User Configuration

Save Delete Add New

User Locale

Associated PC

Digest Credentials

Confirm Digest Credentials

User Profile [View Details](#)

Name Dialing

Number of Digits needed for the Unique AA Name 2

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

End User Configuration

Save Delete Add New

Allow Control of Device from CTI

Enable Extension Mobility Cross Cluster

Directory Number Associations

Primary Extension

IPCC Extension

[View Details](#)

Permissions Information

Groups

[View Details](#)

8. 要建立CTI路由點，請導航到Device > CTI Route Point，然後按一下Add New，如下圖所示。




步驟1. 新增名稱和裝置池專案，然後按一下Save，如下圖所示。

CTI Route Point Configuration

 Save

Status

 Status: Ready

Device Information

Device is trusted

Device Name*

Description

Device Pool* [View Details](#)

Common Device Configuration [View Details](#)

Calling Search Space

Location*

User Locale

Media Resource Group List

Network Hold MOH Audio Source

User Hold MOH Audio Source

Use Trusted Relay Point*

Calling Party Transformation CSS

Geolocation

Use Device Pool Calling Party Transformation CSS

步驟2.將目錄號碼新增到CTI路由點，

Device Information

Registration: Unknown

IPv4 Address: None

Device is trusted

Device Name*

Description

Device Pool* [View Details](#)

Common Device Configuration [View Details](#)

Calling Search Space

Location*

User Locale

Media Resource Group List

Network Hold MOH Audio Source

User Hold MOH Audio Source

Use Trusted Relay Point*

Calling Party Transformation CSS

Geolocation

Use Device Pool Calling Party Transformation CSS

Association

 Line [1] - Add a new DN

CTI Route Point Configuration

Save Delete Copy Reset Apply Config Add New

Status

Status: Ready

Device Information

Registration: Unknown
IPv4 Address: None
 Device is trusted
Device Name* Self_Pro
Description Self_Pro
Device Pool* Default [View Details](#)
Common Device Configuration < None > [View Details](#)
Calling Search Space < None >
Location* Hub_None
User Locale < None >
Media Resource Group List < None >
Network Hold MOH Audio Source < None >
User Hold MOH Audio Source < None >
Use Trusted Relay Point* Default
Calling Party Transformation CSS < None >
Geolocation < None >
 Use Device Pool Calling Party Transformation CSS

Association

7715 Line [1] - 1111111 (no partition)

9. 要新增新應用程式使用者，請導覽至使用者管理>應用程式使用者，然後按一下新增新使用者。

The screenshot shows the Cisco Unified CM Administration interface. The top navigation bar includes: System, Call Routing, Media Resources, Advanced Features, Device, Application, User Management, and Bulk Administration. The 'User Management' dropdown menu is expanded, showing 'Application User' and 'End User' options. The 'Application User' option is highlighted. The page title is 'CTI Route Point Configuration'.

步驟1. 在Controlled Devices下新增建立的CTI路由點

Application User Configuration

Save Delete Copy Add New

Status

Status: Ready

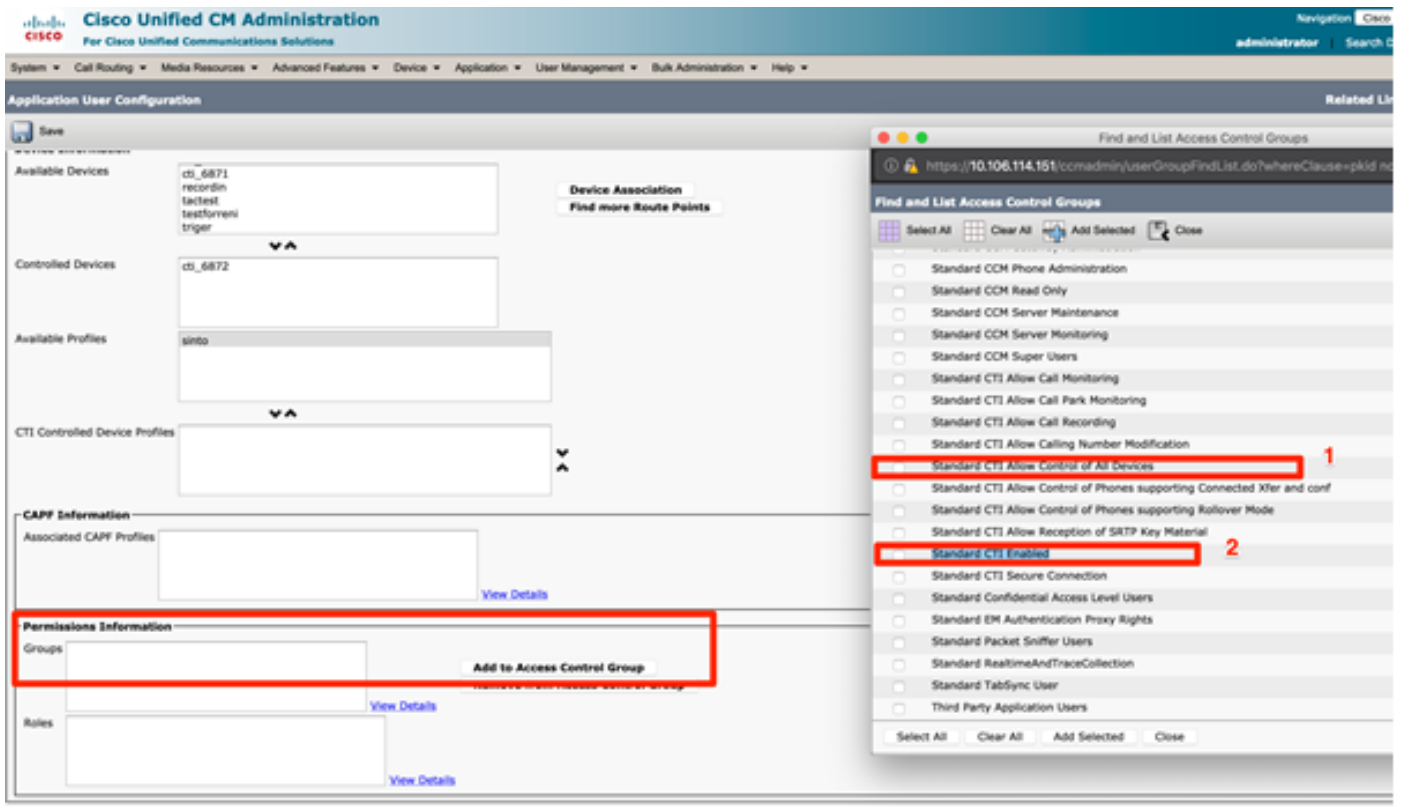
Application User Information

User ID *	selfpro	Edit Credential
Password	
Confirm Password	
Digest Credentials		
Confirm Digest Credentials		
BLF Presence Group *	Standard Presence group	
<input type="checkbox"/>	Accept Presence Subscription	
<input type="checkbox"/>	Accept Out-of dialog REFER	
<input type="checkbox"/>	Accept Unsolicited Notification	
<input type="checkbox"/>	Accept Replaces Header	

Device Information

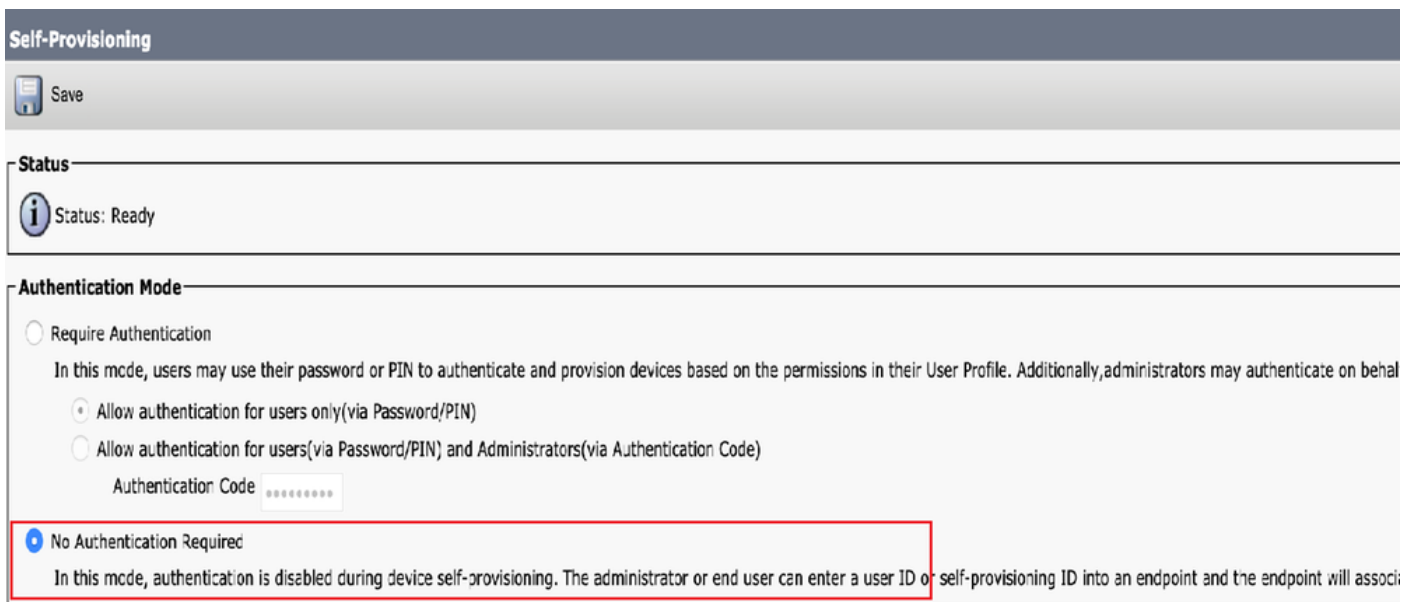
Available Devices	Sample Device Template with TAG usage examples Self:procti TEST UPCNTPC VINMLL	Device Association Find more Route Points
Controlled Devices	Self_Pro	

步驟2.在「Permission Information (許可權資訊)」部分新增Standard CTI Enabled和Standard CTI Allow Control of All Devices。



10. 可以在系統級別將自助調配服務設定為使用安全模式，並且可以設定密碼。預設情況下，此功能設定為**Non-Authentication Required Mode**，Not Required any PIN to Use Self Provisioning。

步驟1. 導覽至User Management > Self-Provisioning。




步驟2. 將CTI路由點和應用程序用戶添加到Self-Provisioning。

Self-Provisioning

 Save

- Status

 Status: Ready

- Authentication Mode

- Require Authentication
In this mode, users may use their password or PIN to authenticate and provision device
- Allow authentication for users only(via Password/PIN)
 - Allow authentication for users(via Password/PIN) and Administrators(via Authentication Code)
- No Authentication Required
In this mode, authentication is disabled during device self-provisioning. The administrat

- IVR Settings

Language Preference


Available Language


简体中文, 普通话, 简体字, 中华人民共和国

Selected La

English, Ur



CTI Route Point  Dial 1111111 from

Application User 

附註：每次對IVR設定進行配置更改時，都需要重新啟動自助調配IVR設定以觸發更改。

與自助調配關聯的服務

Cisco Call Manager

此服務與電話註冊關聯，必須在嘗試註冊的節點上啟用。

自助調配IVR

可以在Cisco Unified Serviceability的功能服務頁面上的CM服務下找到此服務。

附註：即使服務已停用，您也可以配置自助調配，但管理員無法向使用IVR服務的使用者分配IP電話。預設情況下，此服務處於停用狀態。

附註：自助調配IVR服務僅在Publisher上運行。

電話上的終端使用者體驗

- 終端使用者撥打CTI路由點並提示輸入自助服務ID。
- 系統會要求使用者確認自助服務ID並輸入PIN。
- 驗證PIN後，裝置將重新引導以獲取新的副檔名。

疑難排解

錯誤：收到警報「裝置無法調配」。

原因：裝置已設定，無法重新設定。

要收集的日誌

為了進一步排除故障，請從RTMT收集「自助調配IVR服務」日誌。

檔名的格式為PnP#####.log。（#表示數字。）

預設情況下，「跟蹤」(Traces)設定為「資訊級別」(Info Level)。

預設情況下，最大檔案大小為1 MB。儲存檔案的最大數量預設為10。

附註：在「跟蹤配置」視窗中更改「最大檔案數」或「最大檔案大小」設定時，系統會刪除除當前檔案（即如果服務運行）之外的所有服務日誌檔案。如果服務尚未啟用，則在啟用服務後，系統會立即刪除檔案。

已知瑕疵

[CSCun16461](#)

相關資訊

- [技術支援與文件 - Cisco Systems](#)