

在CUCM (基于IVR) 上配置自调配功能

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[什么是自助调配？](#)

[配置](#)

[与自助调配相关的服务](#)

[最终用户在电话上的体验](#)

[故障排除](#)

[要收集的日志](#)

[已知缺陷](#)

[相关信息](#)

简介

本文档介绍如何在CUCM (基于IVR) 上配置自助调配功能。

先决条件

要求

Cisco 建议您了解以下主题：

- 思科统一通信管理器。
- 互联网语音协议(VoIP)
- 电话注册流程。

使用的组件

本文档中的信息基于Cisco Unified Communications Manager 10.5

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。

什么是自助调配？

自助调配是思科统一通信管理器(CUCM)10.x版中引入的一项功能。它提供一种**即插即用**功能，可简化电话部署过程。CUCM管理员使用**自动注册**、某些模板和配置文件配置以及IVR服务，能够以最少的前期配置部署电话。

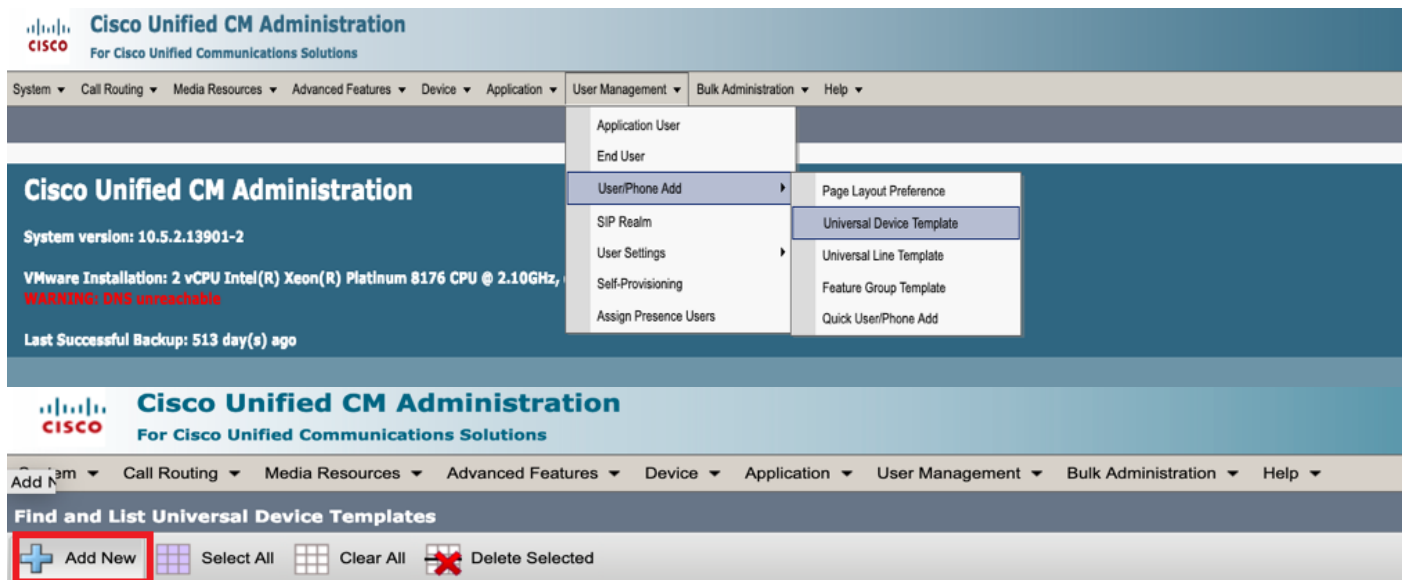
自动调配 (基于IVR) 功能类似于旧的自动注册电话工具(TAPS)方法。自助调配的主要区别是

IVR服务在CUCM上运行，因此您不需要UCCX，就像使用TAPS一样。

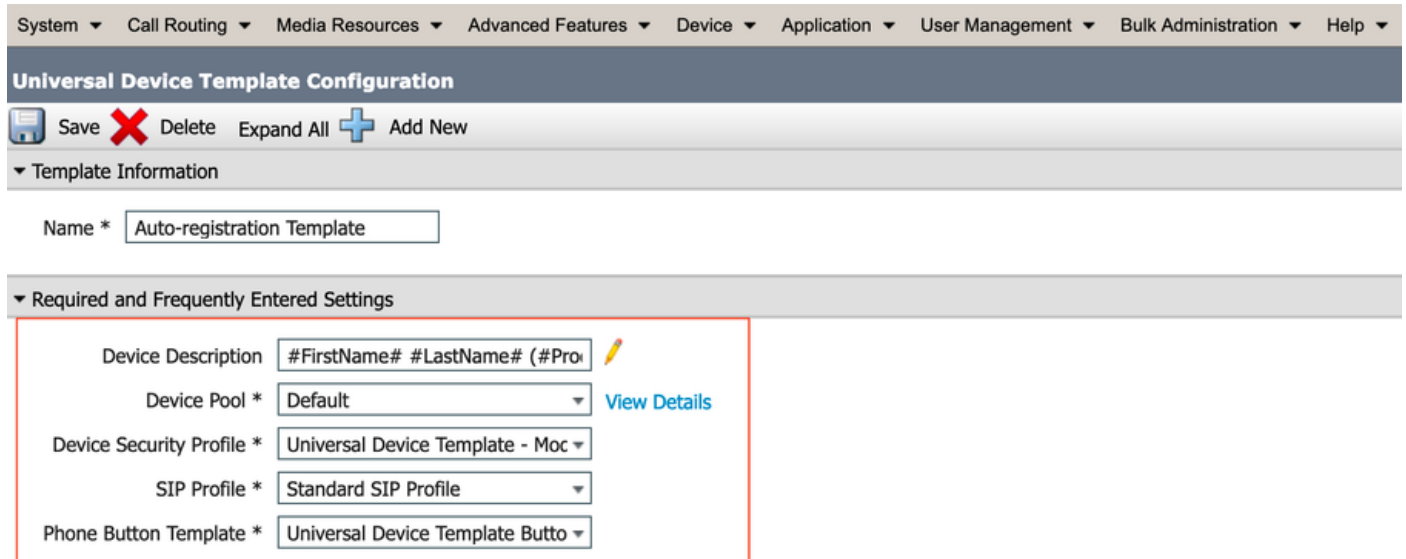
配置

1. 创建通用设备模板(UDT)。

步骤1. 导航至 用户管理>用户电话添加>通用设备模板 和添加新模板。

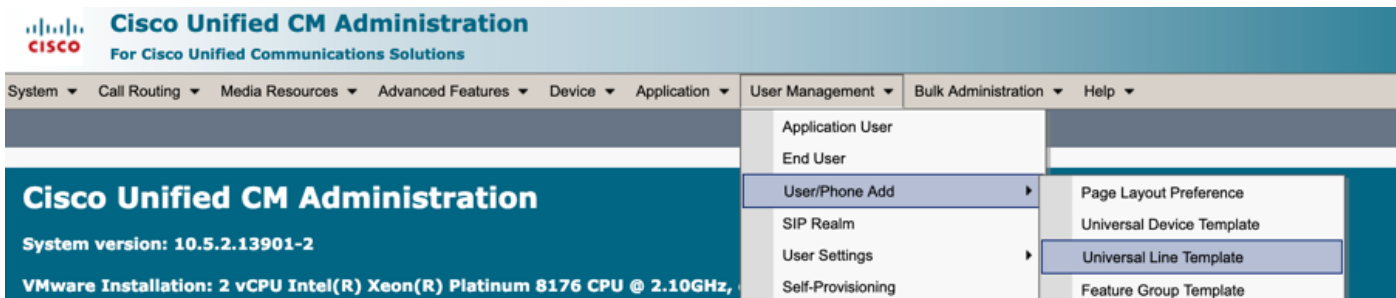


步骤2. 将您希望电话在自动注册后采用的配置应用到新UDT。

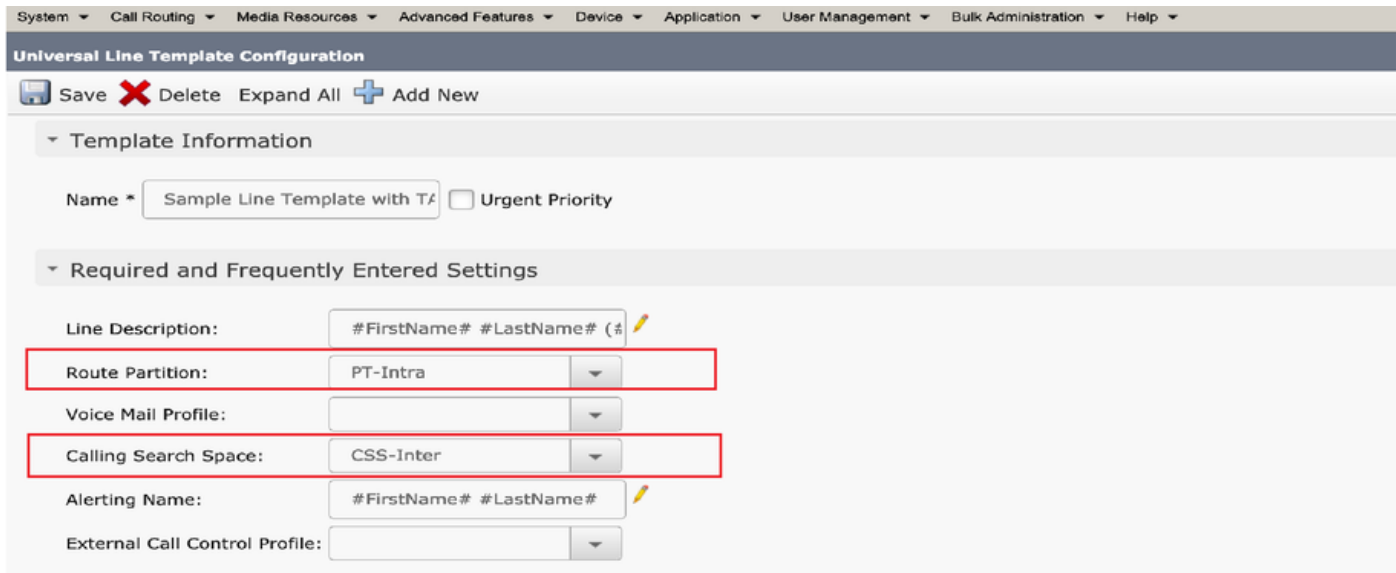


2. 创建通用行模板(ULT)。

步骤1. 导航至 User Management > User/Phone Add > User Line Template，如图所示。

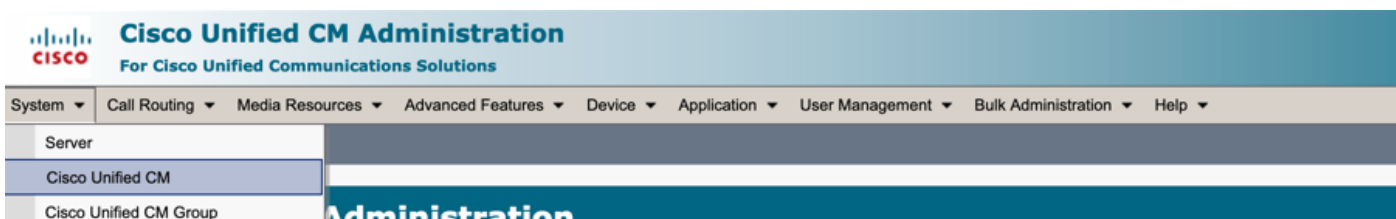


步骤2.在自动注册后，在电话上添加预期的路由分区和CSS。



注意：这些通用设备模板和通用线路模板应与自动注册链接，以便电话在自动注册时可以进行配置。

3.将“模板”添加到CUCM节点以进行自动注册配置，并导航至System > Cisco Unified CM，如图所示。



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.为自助调配添加新用户配置文件。

步骤1.导航至User Management > User Settings > User Profile，如图所示。

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, 16GB
 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

Copyright © 1999 - 2015 Cisco Systems, Inc. All rights reserved.
 This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Cisco does not imply third-party authority, and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product to your distributor.

- Application User
- End User
- User/Phone Add
- SIP Realm
- User Settings**
 - Credential Policy Default
 - Credential Policy
 - Role
 - Access Control Group
 - Application User CAPF Profile
 - End User CAPF Profile
 - UC Service
 - Service Profile
 - User Profile**
- Self-Provisioning
- Assign Presence Users

步骤2.添加User Device Template、User Line Template，并选中Allow End User to Provision the Phone复选框。

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*
 Description
 Make this the default User Profile for the system

Universal Device Template
 Desk Phones [View Details](#)
 Mobile and Desktop Devices [View Details](#)
 Remote Destination/Device Profiles [View Details](#)

Universal Line Template
 Universal Line Template [View Details](#)

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

注意：当用户尝试使用自己的分机自行调配设备时，会应用这些设置。

注意：您还可以为用户设置设备数量的最大限制，在此之后，自助调配将不适用于用户。
 例如：如果自“上面”屏幕截图中的“最大限制”设置为10后，用户已分配9台设备，则用户只能自行调配一台设备。

注意：如果“允许最终用户调配自己的电话”复选框未选中。自助调配对用户不起作用。

5.创建功能模板组并分配用户配置文件。现在导航到用户管理>用户/电话添加>功能组模板，然后单击添加新。

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

- 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

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)

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.从“快速用户/电话添加”页面创建用户并添加功能组模板。

步骤1.导航至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

步骤2.在Access Control Group成员资格下添加Standard CCM End Users。


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:  

步骤3.在分机字段中向用户添加分机，单击“操作”下的+图标以启用该字段。

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	Active
	<input type="text"/> New...	<input type="text"/> / <input type="text"/>	 

步骤4.如果要创建新扩展，请单击**New**和Add a New DN，如图像选项1所示。如果CUCM上已存在该扩展，并且要分配给用户，请从图像选项2中显示的下拉菜单中选择该扩展。

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="text"/>	<input type="text"/>

注意：创建用户后，默认情况下将主行用作自助服务用户ID。

7.验证最终用户是否已收到主分机、自助服务用户ID、用户配置文件和标准CCM最终用户角色。现在导航到**用户管理>最终用户**并访问新创建的用户，如图所示。

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.要创建CTI路由点，请导航至Device > CTI Route Point，然后单击Add New，如图所示。

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

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

CTI Route Point

步骤1.添加Name和Device Pool条目，然后单击Save，如图所示。

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

Save

步骤2.向CTI路由点添加目录号码，

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

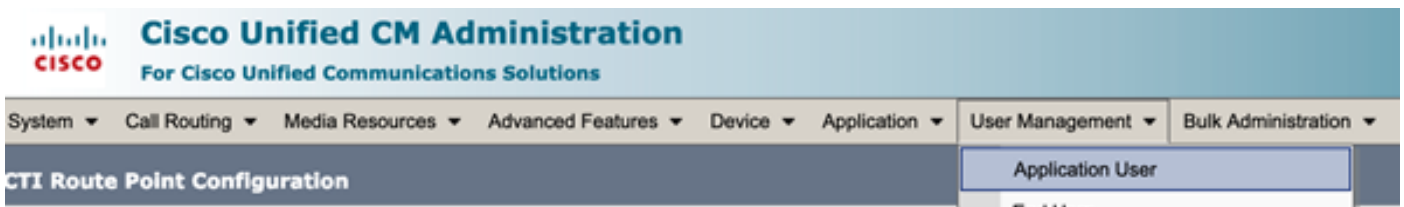
Device Information

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.要添加新应用程序用户，请导航至“用户管理”>“应用程序用户”，然后单击“添加新”。




步骤1.在Controlled Devices下添加Created CTI Route Point(已创建CTI路由点)

Application User Configuration

Save  Delete  Copy  Add New

Status

 Status: Ready

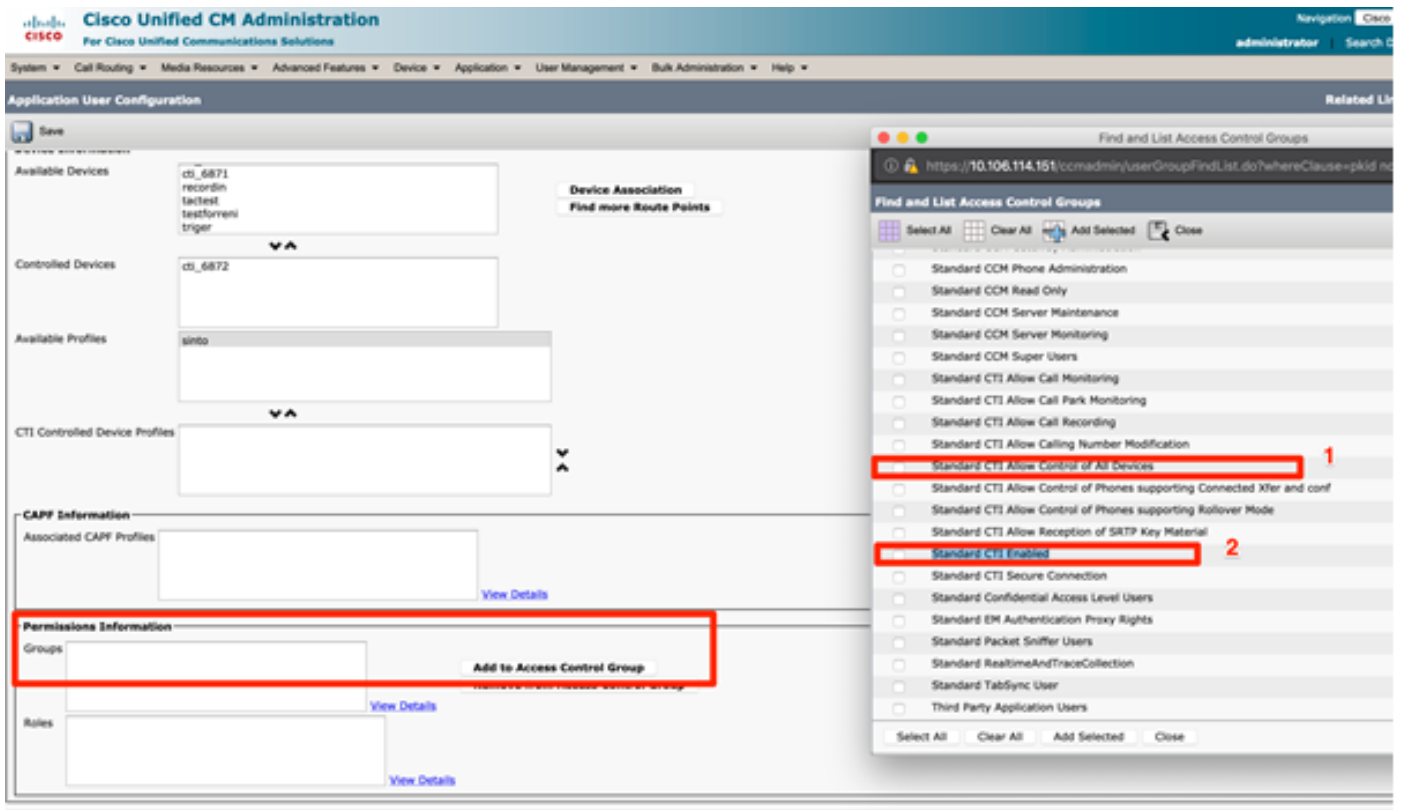
Application User Information

User ID *	<input type="text" value="selfpro"/>	Edit Credential
Password	<input type="password" value="....."/>	
Confirm Password	<input type="password" value="....."/>	
Digest Credentials	<input type="text"/>	
Confirm Digest Credentials	<input type="text"/>	
BLF Presence Group *	<input type="text" value="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

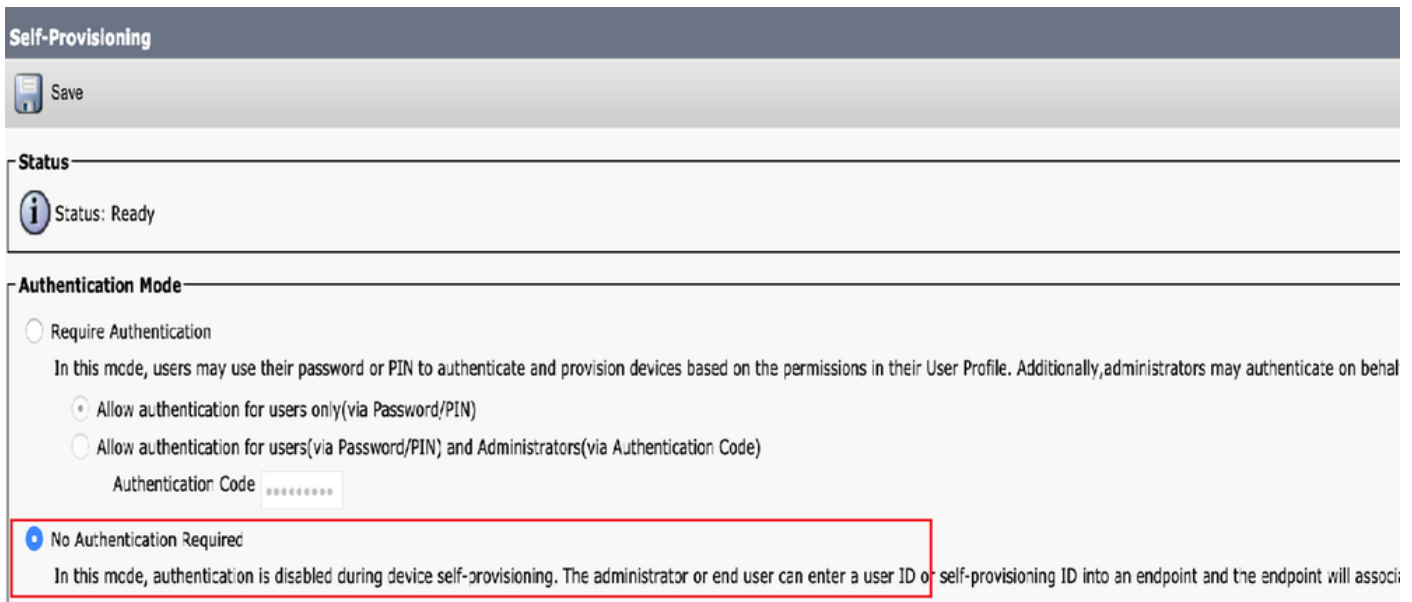
Available Devices	<input type="text" value="SIP1"/> Sample Device Template with TAG usage examples Self:procti TEST UPCNTPC VINMLL	Device Association Find more Route Points
Controlled Devices	<input type="text" value="Self_Pro"/>	

步骤2. 在“权限信息”部分下添加“已启用标准CTI”和“允许控制所有设备的标准CTI”。



10.可在系统级别设置自助调配服务以使用安全模式，并可设置密码。默认情况下，此功能设置为非身份验证所需模式，这不需要任何PIN来使用自助调配。

步骤1.导航至User Management > Self-Provisioning。




步骤2.将CTI路由点和应用用户添加到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 

注意：每次在IVR设置上进行配置更改时，需要重新启动自调配IVR设置以触发更改。

与自助调配相关的服务

思科呼叫管理器

此服务与电话注册关联，必须在尝试注册的节点上启用。

自助调配IVR

此服务可在Cisco Unified Serviceability的**功能服务页**的**CM服务**下找到。

注意：即使服务被停用，您也可以配置自调配，但管理员无法使用IVR服务将IP电话分配给用户。默认情况下，此服务将停用。

注意：自调配IVR服务仅在发布者上运行。

最终用户在电话上的体验

- 最终用户拨打CTI路由点，系统提示输入自助服务ID。
- 系统会要求用户确认自助服务ID并输入PIN。
- 验证PIN后，设备将重新启动以获取新的分机。

故障排除

Error:收到警报“设备无法调配”。

原因：设备已调配，无法重新调配。

要收集的日志

为了进一步排除故障，从RTMT收集“Self-Provisioning IVR service”日志。

文件名的格式为PnP#####.log。（#表示一个数字。）

默认情况下，跟踪设置为信息级别。

默认情况下，最大文件大小为1 MB。存储文件的最大数量默认为10。

注意：在“跟踪配置”窗口中更改“最大文件数”或“最大文件大小”设置时，系统会删除除当前文件（即，如果服务运行）之外的所有服务日志文件。
如果服务尚未激活，系统会在激活服务后立即删除文件。

已知缺陷

[CSCun16461](#)

相关信息

- [技术支持和文档 - Cisco Systems](#)