

# 在CUCM上配置自助調配功能 ( 基於URL )

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## 簡介

本文檔介紹如何在Cisco Unified Communications Manager(CUCM) ( 基於URL ) 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？

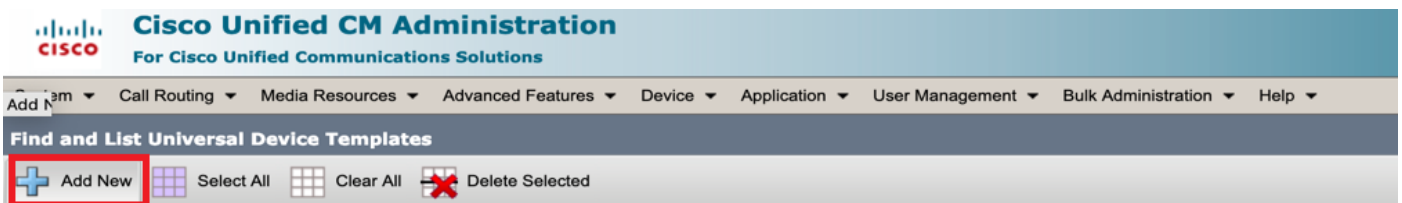
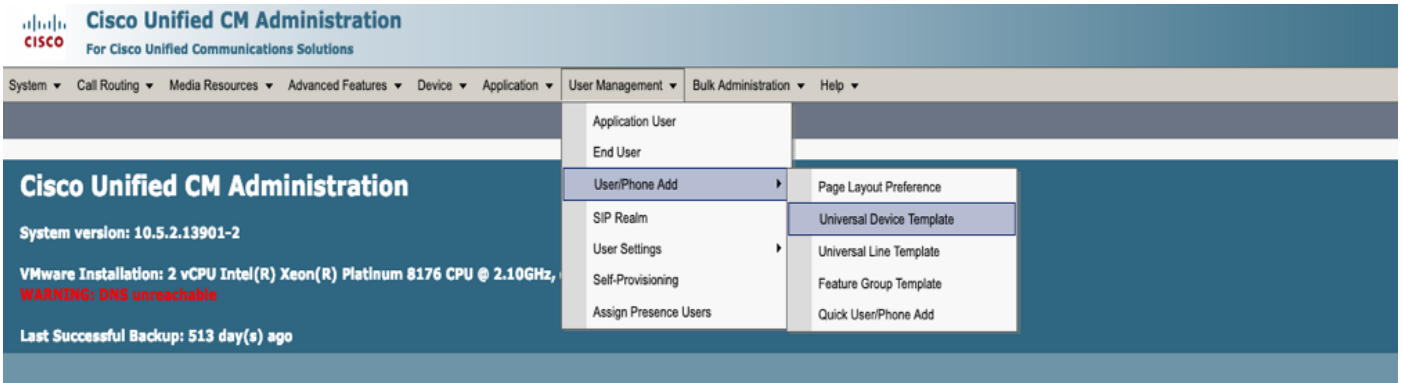
自助調配是10.x版思科統一通訊管理器(CUCM)中引入的一項功能。它提供**即插即用**型功能簡化了電話部署過程。使用**自動註冊**、某些模板和配置檔案配置以及IVR服務，CUCM管理員能夠以最少的前期配置部署電話。

附註：自助調配僅適用於自動註冊電話。

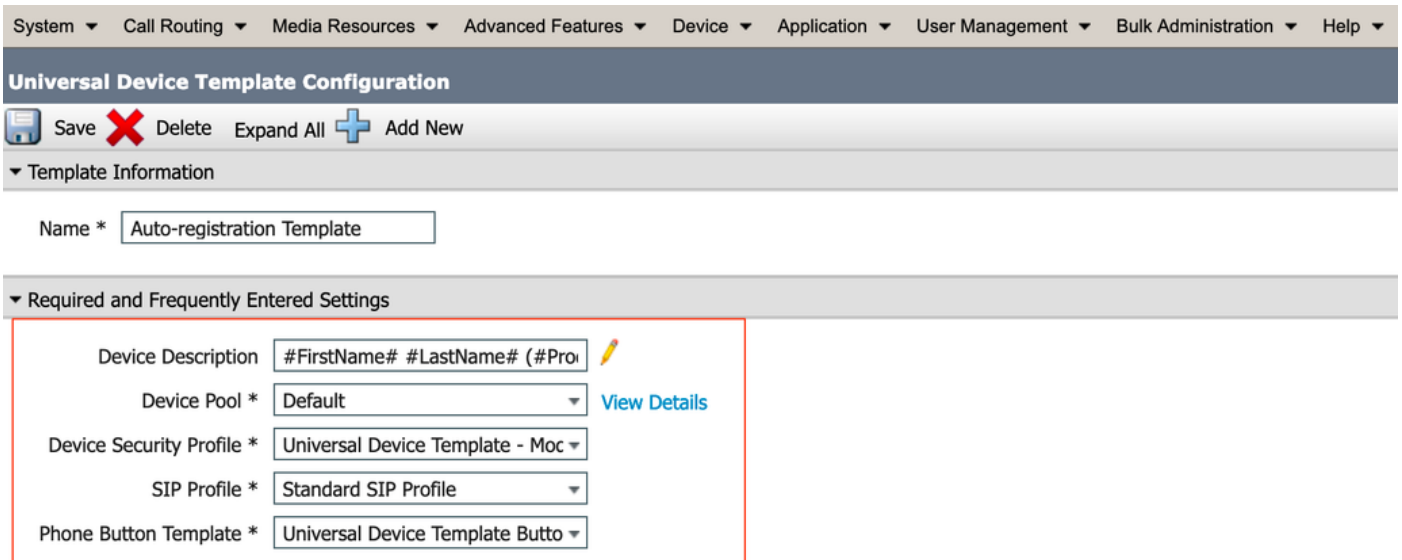
## 設定

### 1. 建立通用裝置模板(UDT)

步驟1. 導航到 User management > User Phone add > Universal Device Template 和 Add New Template。



步驟2. 將您期望電話在自動註冊後採用的配置應用到新的UDT ( 裝置池/Sip配置檔案/裝置安全配置檔案/電話按鍵模板 )



步驟3. 將自助調配URL新增到CUCM，如下圖所示。

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

### Universal Device Template Configuration

Save **X** Delete Expand All **+** Add New

- ▶ Device Settings
- ▶ Device Routing
- ▶ Phone Settings
- ▶ Protocol Settings
- ▶ Phone Buttons Configuration
- ▶ IP Phone Services Subscription
- ▶ Security Settings
- ▼ Service Configuration Settings

Information	Default ▾	
Directory	Default ▾	
Messages	Default ▾	
Services	Default ▾	
Authentication Server	Default ▾	
Proxy Server	Default ▾	
Idle	Override ▾	https://10.106.114.151/cucm-uds/private/self
Idle Timer (seconds)	Override ▾	1
Secure Authentication URL	Default ▾	
Secure Directory URL	Default ▾	
Secure Idle URL	Default ▾	
Secure Information URL	Default ▾	
Secure Messages URL	Default ▾	
Secure Services URL	Default ▾	
Services Provisioning *	Default ▾	

附註：Self Provisioning URL Format為，https://<callManager>/cucm-uds/private/selfProvision

## 2. 建立通用LineTemplate(ULT)

步驟1. 導航到使用者管理>>使用者/電話新增>>使用者線路模板。

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,

- Application User
- End User
- User/Phone Add ▶
  - Page Layout Preference
  - Universal Device Template
  - Universal Line Template
  - Feature Group Template
- SIP Realm
- User Settings ▶
- Self-Provisioning

步驟2. 新增自動註冊後電話上預期的路由分割槽和CSS。

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

### Universal Line Template Configuration

Save Delete Expand All Add New

Template Information

Name \*   Urgent Priority

Required and Frequently Entered Settings

Line Description:

Route Partition:

Voice Mail Profile:

Calling Search Space:

Alerting Name:

External Call Control Profile:

步驟3.此通用裝置模板和通用線路模板應與自動註冊連結，以便電話在自動註冊時可以採用配置。

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。

Cisco Unified CM Administration  
For Cisco Unified Communications Solutions

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

Server

Cisco Unified CM

Cisco Unified CM Group

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\*

Description

Location Bandwidth Manager Group

Auto-registration Information

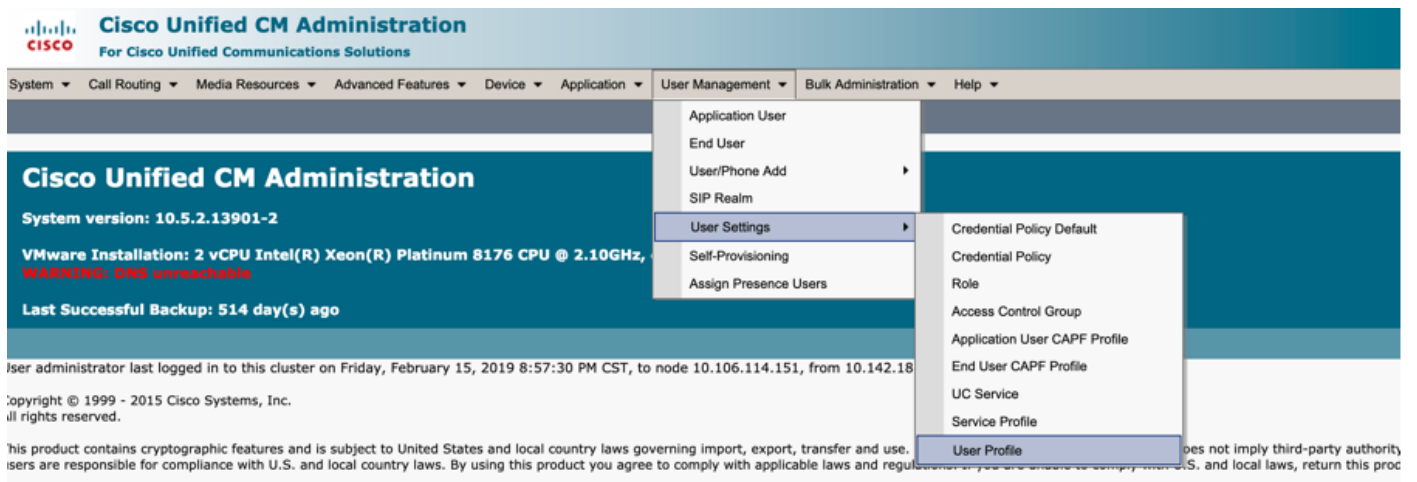
Universal Device Template\*

Universal Line Template\*

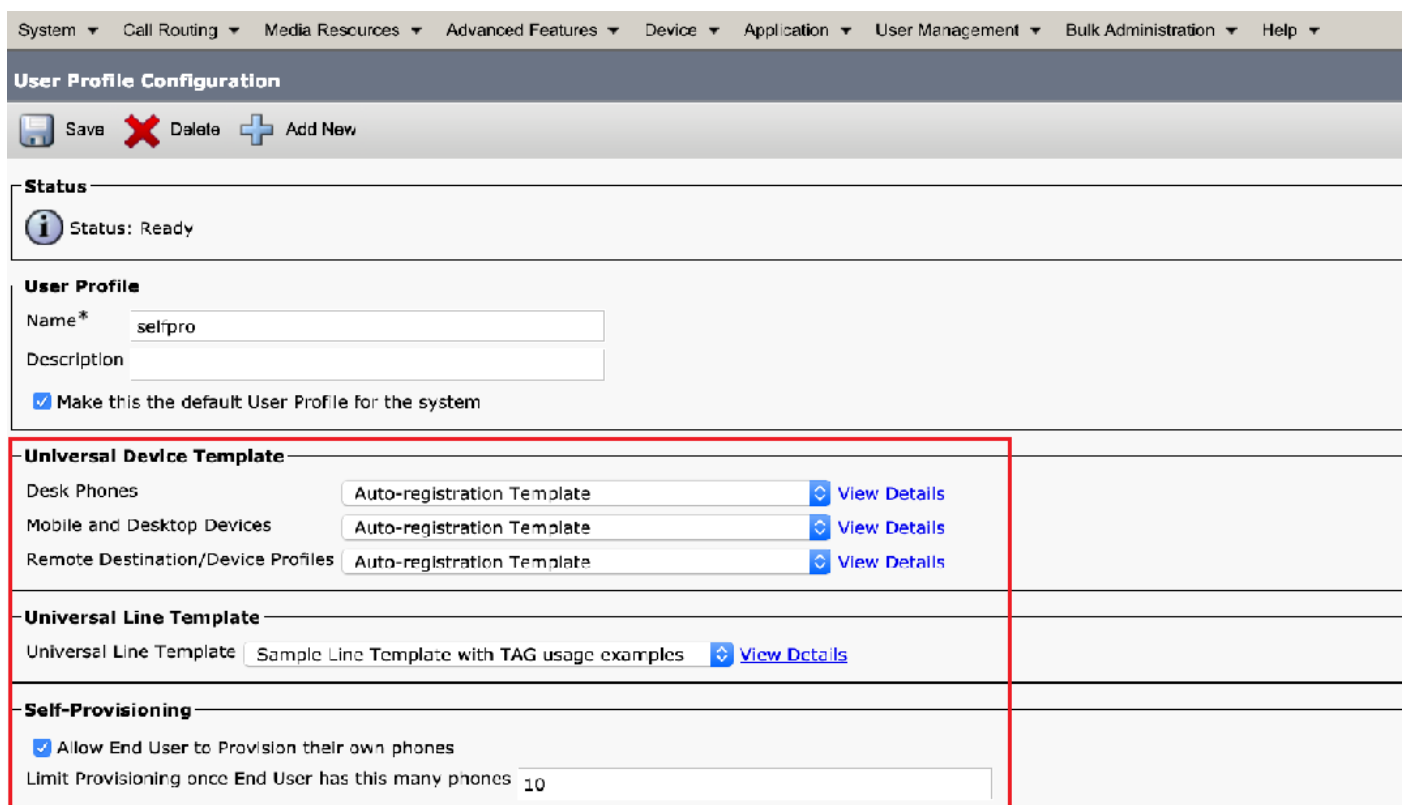
Starting Directory Number\* 1000

4.新增新的使用者配置檔案以進行自我調配。

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



步驟2. 新增User Device Template、User Line Template，然後選中Allow End User to Provision Their Own Phone覈取方塊。

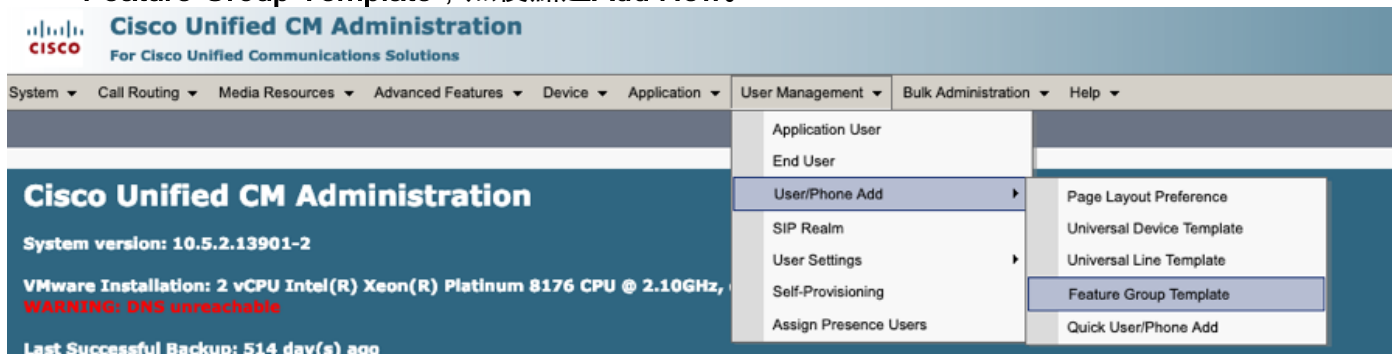


附註：當使用者嘗試使用自己的副檔名自行調配裝置時，應用這些設定。

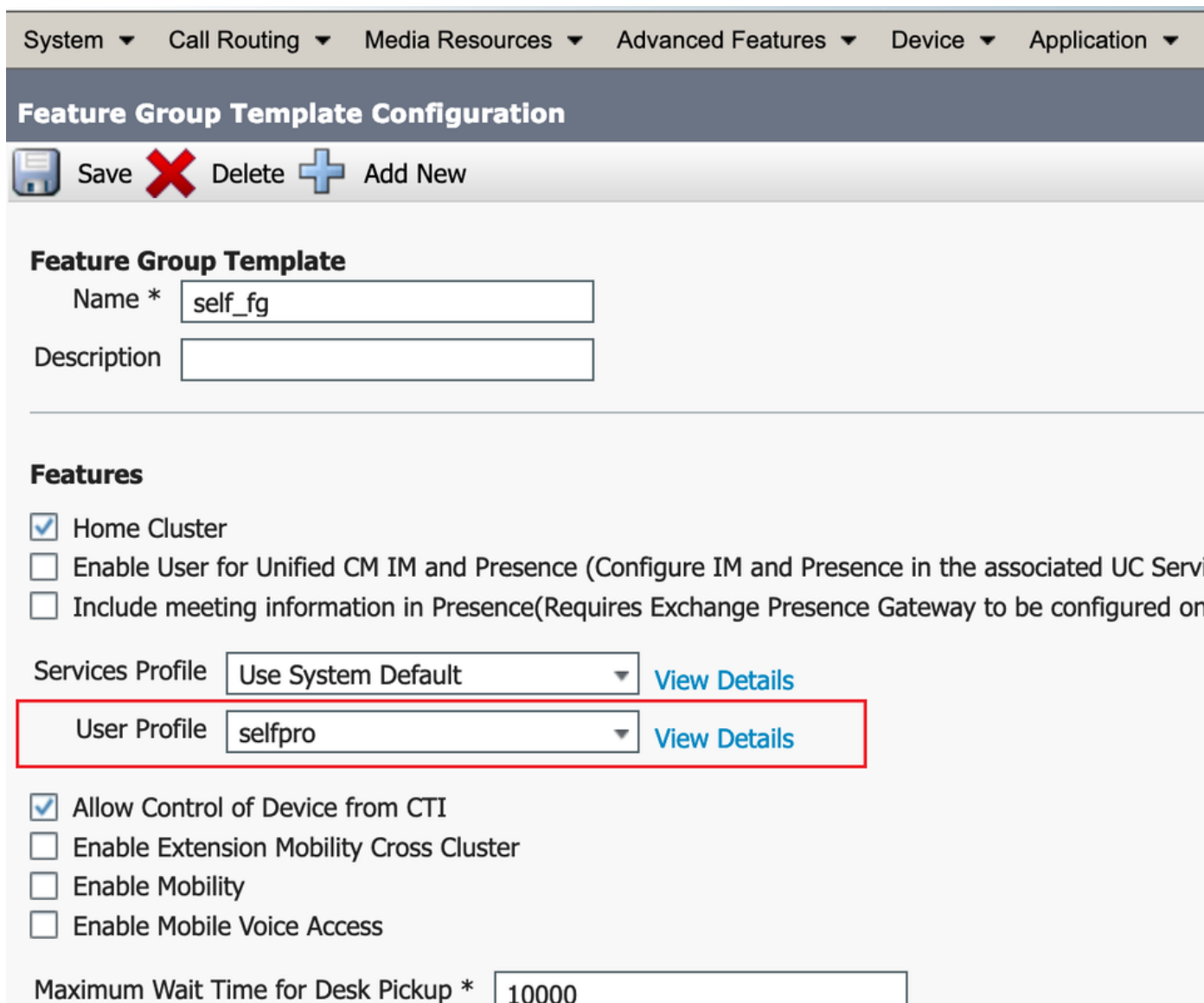
附註：您還可以為使用者設定最大裝置數限制，超過此限制後，自助調配對使用者將不起作用。  
例如：如果使用者已分配9個裝置由於上述螢幕截圖中的最大限制設定為10，使用者只能自行調配一個裝置。

附註：如果Allow End User to Provision Their Own Phone覈取方塊未選中。自助調配不適用於使用者。

5. 建立功能組模板並分配使用者配置檔案。導航到User Management > User/Phone Add > Feature Group Template，然後點選Add New。



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, Bulk Administration, and Help. The User Management dropdown menu is open, showing options like Application User, End User, User/Phone Add, SIP Realm, User Settings, Self-Provisioning, and Assign Presence Users. The User/Phone Add option is selected, and its sub-menu is visible, containing Page Layout Preference, Universal Device Template, Universal Line Template, Feature Group Template, and Quick User/Phone Add. The Feature Group Template option is highlighted.



The screenshot shows the Feature Group Template Configuration page. The page title is "Feature Group Template Configuration". Below the title, there are buttons for Save, Delete, and Add New. The "Name \*" field contains "self\_fg" and the "Description" field is empty. Under the "Features" section, there are several checkboxes: "Home Cluster" (checked), "Enable User for Unified CM IM and Presence (Configure IM and Presence in the associated UC Service)" (unchecked), and "Include meeting information in Presence(Requires Exchange Presence Gateway to be configured on)" (unchecked). There are two dropdown menus: "Services Profile" set to "Use System Default" and "User Profile" set to "selfpro". Both dropdown menus have "View Details" links next to them. Below these, there are more checkboxes: "Allow Control of Device from CTI" (checked), "Enable Extension Mobility Cross Cluster" (unchecked), "Enable Mobility" (unchecked), and "Enable Mobile Voice Access" (unchecked). At the bottom, the "Maximum Wait Time for Desk Pickup \*" field is set to "10000".

6. 從「快速使用者/電話新增」頁建立使用者，然後新增功能組模板。

步驟1. 導覽至User management > User Phone Add > Quick User /Phone Add，如下圖所示。

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

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 1:00:00 AM

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

- 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。

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

### 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:

Standard CCM End Users



## Credentials

Use default credential

Password

Confirm Password

PIN

Confirm PIN

## Extensions

Order Extension

Line Primary URI/Partition

Action

New...

/



步驟3. 如果要建立新擴展，請按一下**New**並新增新DN。（如圖選項1所示）。如果CUCM上已經存在分機且要分配給使用者，請從如下圖選項2所示的下拉選單中選擇該分機。

## Access Control Group Membership

User is a member of:

Standard CCM End Users



## Credentials

Use default credential

Password

Confirm Password

PIN

Confirm PIN

## Extensions

Order Extension

Line Primary URI/Partition

Action

**2**

**1**  
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. 驗證終端使用者已收到**主要分機**、**自助服務使用者ID**、**使用者配置檔案**和**標準CCM終端使用者角色**。 導覽至**User Management > End User**，然後存取新建立的使用者，如下圖所示。





Application User

End User

User/Phone Add

### End User Configuration

Save Delete Add New

#### - User Information

User Status	Enabled Local User	
User ID*	<input type="text" value="aksethi"/>	
Password	<input type="password" value="....."/>	<a href="#">Edit Credential</a>
Confirm Password	<input type="password" value="....."/>	
Self-Service User ID	<input type="text" value="1004"/>	
PIN	<input type="password" value="....."/>	<a href="#">Edit Credential</a>
Confirm PIN	<input type="password" value="....."/>	
Last name*	<input type="text" value="sethi"/>	
Middle name	<input type="text"/>	
First name	<input type="text" value="akash"/>	
Title	<input type="text"/>	


### End User Configuration

Save Delete Add New

User Locale	<input type="text" value="&lt; None &gt;"/>	
Associated PC	<input type="text"/>	
Digest Credentials	<input type="password" value="....."/>	
Confirm Digest Credentials	<input type="password" value="....."/>	
User Profile	<input type="text" value="selfpro"/>	<a href="#">View Details</a>
Name Dialing	<input type="text" value="sethiakash"/>	
Number of Digits needed for the Unique AA Name 2	<input type="text"/>	

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  ▾

**附註：**使用者必須具有主分機和自助服務使用者ID(標準CCM終端使用者角色)才能使用自助調配。

8. 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。


此功能設定為**無身份驗證必需**模式，該模式不要求任何PIN才能使用自設定。導航到**使用者管理>自設定**

### Self-Provisioning

Save

---

#### Status

 Status: Ready

---

#### Authentication Mode

Require Authentication  
 In this mode, users may use their password or PIN to authenticate and provision devices based on the permissions in their User Profile. Additionally, administrators may authenticate on behalf of users.

Allow authentication for users only (via Password/PIN)  
 Allow authentication for users (via Password/PIN) and Administrators (via Authentication Code)  
 Authentication Code:

No Authentication Required  
 In this mode, authentication is disabled during device self-provisioning. The administrator or end user can enter a user ID or self-provisioning ID into an endpoint and the endpoint will associate the user ID with the endpoint.

**附註：**即使未配置步驟8，自置備仍將起作用，因為它在不需要身份驗證的情況下選擇了 Default value。

## 與自助調配關聯的服務

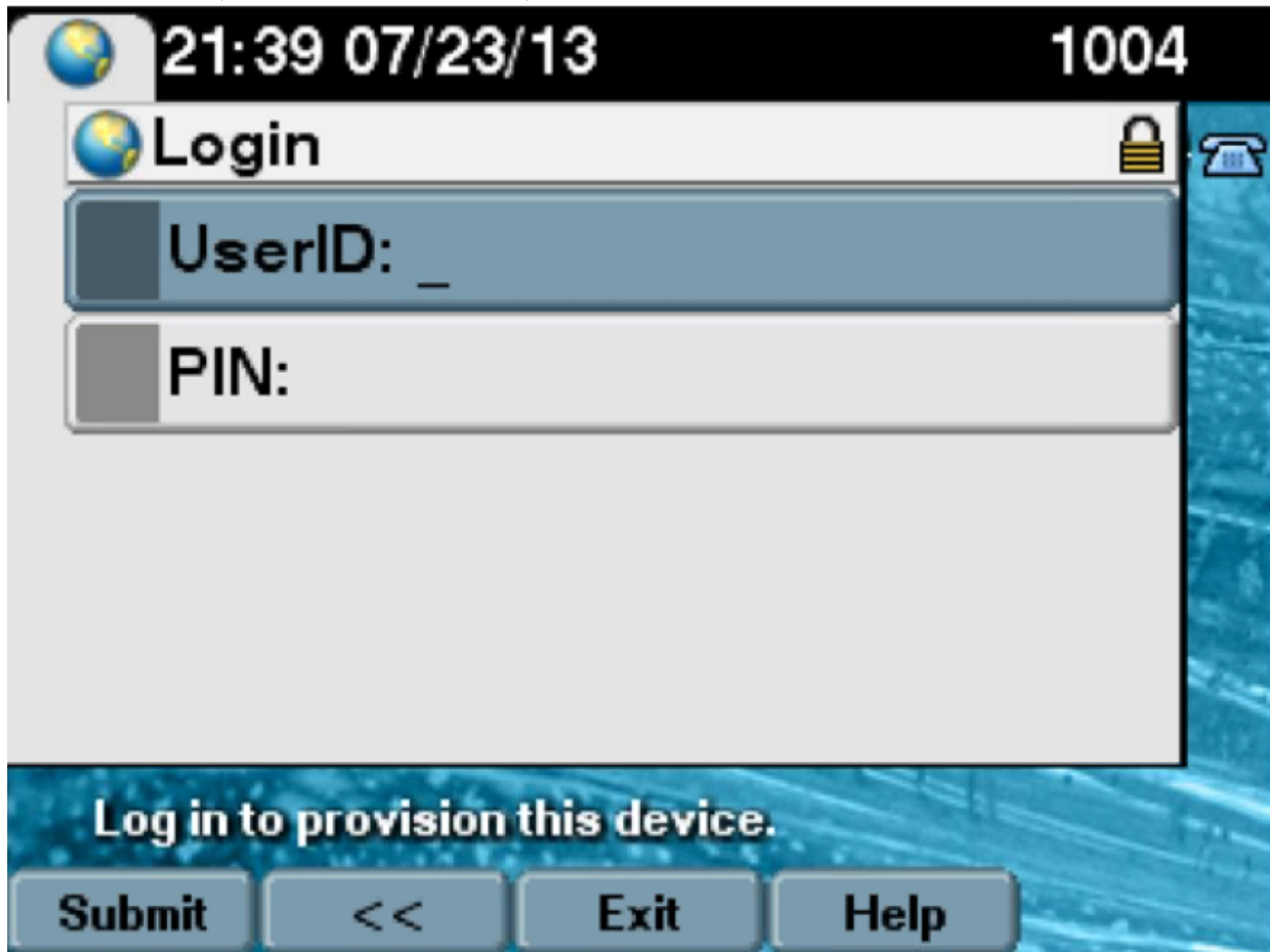
- Cisco Call Manager  
此服務與電話註冊關聯，必須在嘗試註冊的節點上啟用。
- 思科使用者資料服務

此服務預設啟用，不能禁用。

此服務可在Cisco Unified Serviceability中的網路服務頁面上的CM服務下找到。

## 電話上的終端使用者體驗

1. 超時1秒後，電話將訪問IDLE URL，這將提示「登入」視窗。



21:39 07/23/13 1004

Login

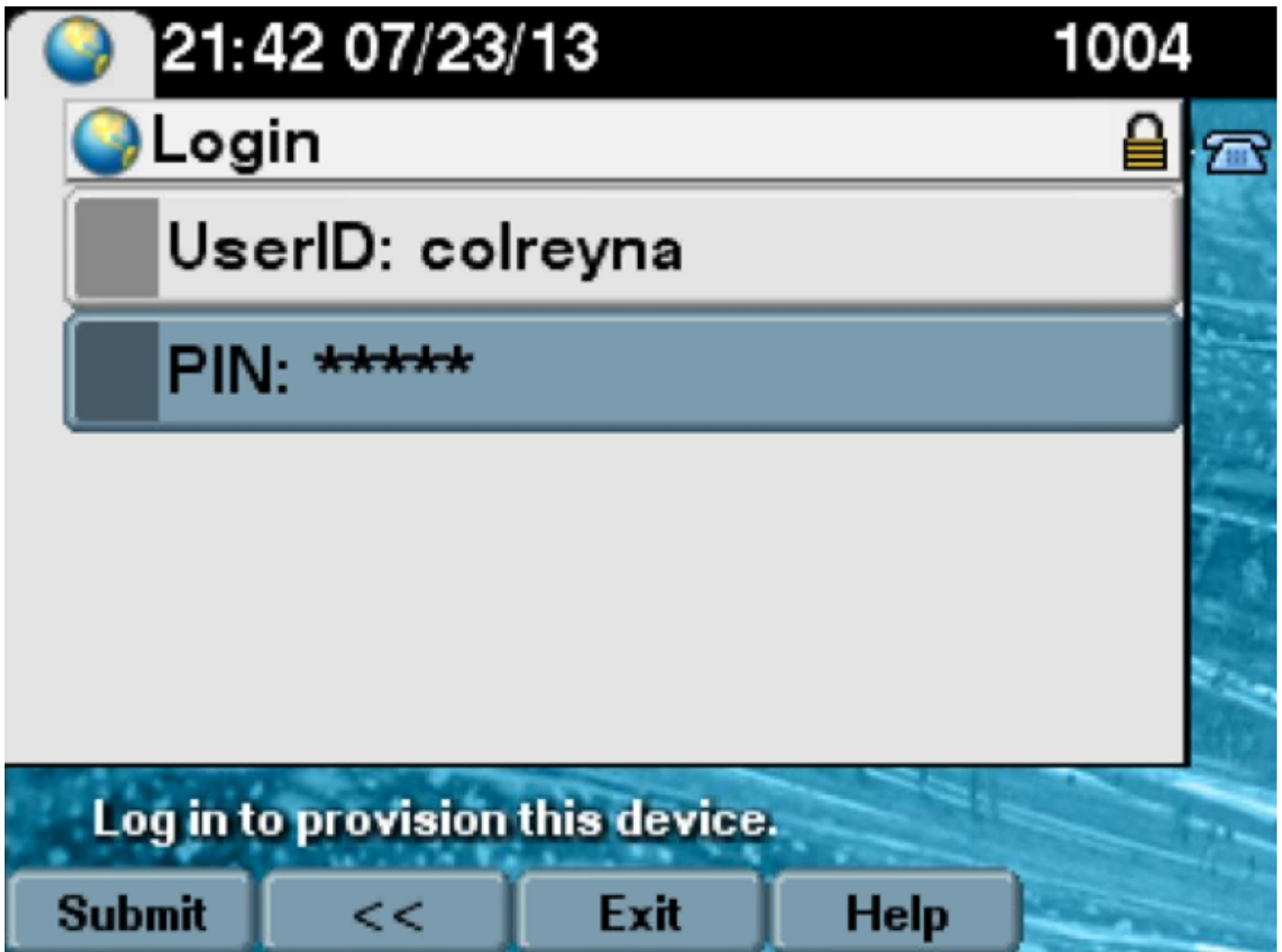
UserID: \_

PIN:

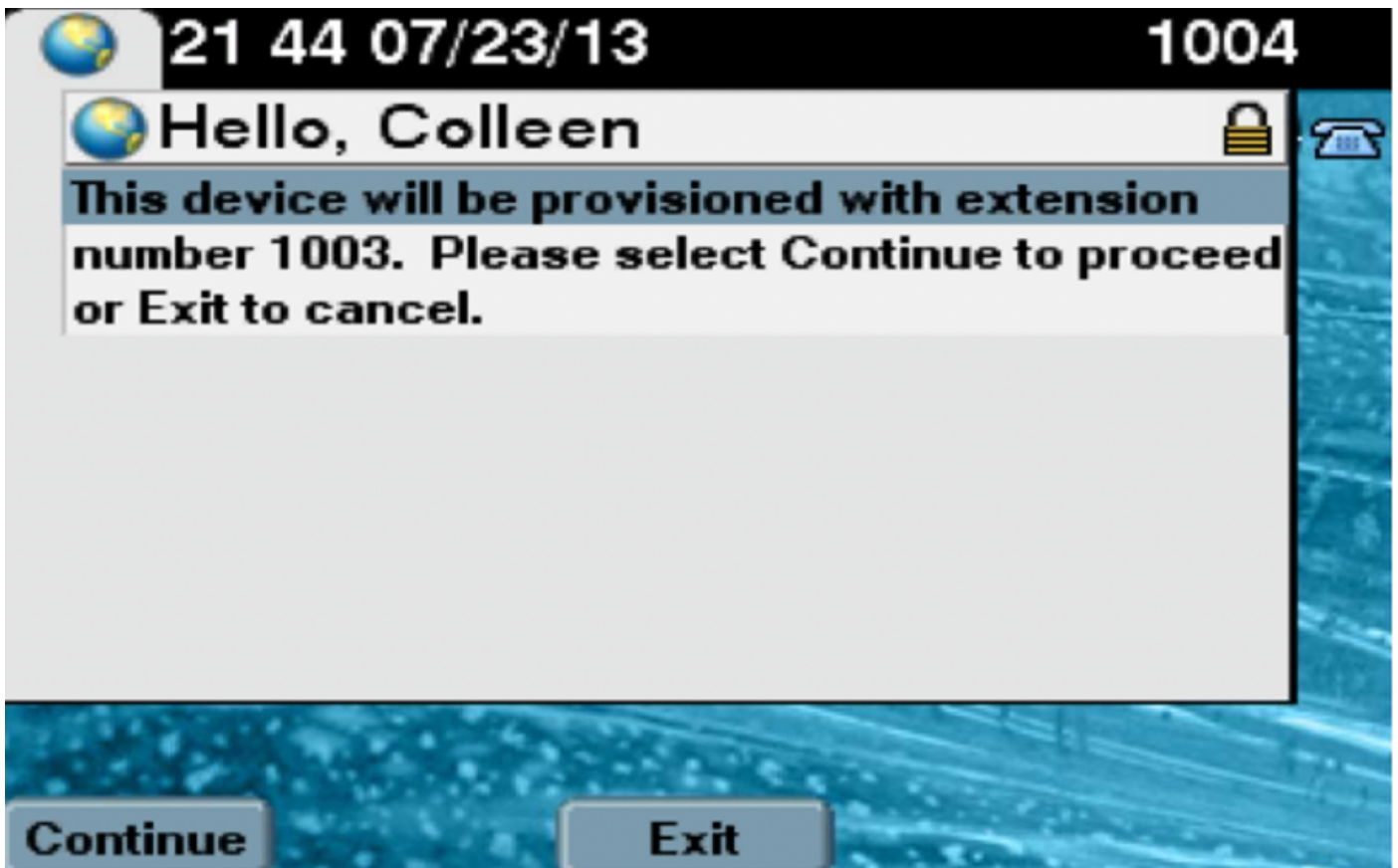
Log in to provision this device.

Submit << Exit Help

2. 使用者輸入使用者ID和PIN(非密碼)。



3.向使用者顯示Login Success螢幕和要設定的號碼，該號碼是新增到使用者的主行。



按一下繼續後，裝置將使用「模板」中指定的設定以及與使用者關聯的主行進行重新啟動和啟動。

## 疑難排解

下面是Phone客戶端返回的一些常見錯誤消息：

錯誤代碼

解決方案/原因

SELFPROV\_NOT\_ALLOWED

檢查使用者的User Profile中是否選中了Self-Provisioning 覈塊。

SELFPROV\_DEVICE\_LIMIT

使用者擁有的裝置已達到限制。

INVALID\_DEVICE\_MODEL

提供的裝置型號無效。

MODEL\_PHONETEMPLATE\_NOT\_FOUND

未配置所需的UDT。

## 要收集的日誌

為了進一步排除UDS ( 使用者資料服務 ) 故障，請從RTMT收集「思科使用者資料服務」日誌。

檔名格式為cucm-uds#####.log。 ( #代表數字。 )

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250。

**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。

## 在UDS日誌及其解決方案中出現的常見錯誤：

**2013-07-23 23:47:43,016 ERROR [http-bio-443-exec-177]**

**handlers.SelfProvisionHandler - Model phone template is not available.**

Solution: Ensure the User Profile has a UDT assigned (the default sample is fine)

**2013-07-23 23:48:25,852 ERROR [http-bio-443-exec-181]**

**handlers.SelfProvisionHandler - Device Self-Provision is not allowed.**

Solution: Ensure the User Profile has "Allow End User to Provision their own phones" checked.

**2013-07-23 23:54:06,039 ERROR [http-bio-443-exec-220]**

**handlers.SelfProvisionHandler - Device Self-Provision has reached its device limit.**

Solution: Ensure the Usure Profile has a non-zero value in "Limit Provisioning once End User has this many phones" field.

## 已知瑕疵

- [CSCuq00358](#)
- [CSCve52657](#)
- [CSCun77515](#)
- [CSCun13382](#)

## 相關資訊

- [技術支援與文件 - Cisco Systems](#)