Creating Templates

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This chapter describes templates support available in Cisco Unified Communications Manager Express (Cisco Unified CME).

Finding Feature Information in This Module

Your Cisco Unified CME version may not support all of the features documented in this module. For a list of the versions in which each feature is supported, see the "Feature Information for Creating Templates" section on page 1535.

Contents

Information About Templates

To enable templates you should understand the following concepts:

Phone Templates

An ephone or voice-register template is a set of features that can be applied to one or more individual phones using a single command.

Ephone templates were introduced in Cisco CME 3.2 to manipulate soft-key display and order on IP phones.

In Cisco Unified CME 4.0, ephone templates were significantly enhanced to include a number of additional phone features. Templates allow you to uniformly and easily implement the features you select for a set of phones. A maximum of 20 ephone templates can be created in a Cisco Unified CME system, although an ephone can have only one template applied to it at a time.

In Cisco Unified CME 4.3 and later versions, an ephone template cannot be applied to a particular phone unless its configuration file includes its Mac address. If you attempt to apply a template to a phone for which the MAC address in not configured, a message appears.

If you use an ephone template to apply a command to a phone and you also use the same command in ephone configuration mode for the same phone, the value set in ephone configuration mode has priority.

Voice-register templates were introduced in Cisco CME 3.4 to enable sets of features to be applied to individual SIP IP phones that are connected directly in Cisco Unified CME. Typically, features to be enabled by using a voice-register template are not configurable in other configuration modes. A maximum 10 voice-register templates can be defined in Cisco Unified CME, although a phone can have only one template applied to it at a time.

Type **?** in ephone-template or voice-register-template configuration mode to display a list of features that can be implemented by using templates.

For configuration information, see the "SCCP: Enabling Ephone Templates" section on page 1526.

Ephone-dn Templates

Ephone-dn templates allow you to apply a standard set of features to ephone-dns. A maximum of 15 ephone-dn templates can be created in a Cisco Unified CME system, although an ephone-dn can have only one template applied to it at a time.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Type **?** in ephone-dn-template configuration mode to display a list of features that can be implemented by using templates.

For configuration information, see the "SCCP: Enabling Ephone-dn Templates" section on page 1528

How to Configure Templates

This section contains the following tasks:

SCCP: Enabling Ephone Templates

To create an ephone template and apply it to a phone, perform the following steps.

Prerequisites

- In Cisco Unified CME 4.3 and later versions, the configuration file for a particular phone must contain its MAC address before an ephone template can be applied to that phone. To explicitly configure a MAC address, use the **mac-address** command in ephone configuration mode. For configuration information, see "Configuring Phones to Make Basic Calls" on page 189.
- It is recommended to configure cnf-file per phone before adding ephone-template under ephone.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone-template** *template-tag*
4. *command*
5. **exit**
6. **ephone** *phone-tag*
7. **ephone-template** *template-tag*
8. **restart**
9. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**ephone-template** *template-tag* **Example:** `Router(config)# ephone-template 15`	Enters ephone-template configuration mode to create an ephone template. • *template-tag*—Unique identifier for the ephone template that is being created. Range is 1 to 20.
Step 4	*command* **Example:** `Router(config-ephone-template)# features blocked Park Trnsfer`	Applies the specified command to the ephone template that is being created. • Type **?** for a list of commands that can be used in this step. • Repeat this step for each command that you want to add to the ephone template.
Step 5	**exit** **Example:** `Router(config-ephone-template)# exit`	Exits ephone-template configuration mode.

	Command or Action	Purpose
Step 6	**ephone** *phone-tag* **Example:** `Router(config)# ephone 36`	Enters ephone configuration mode. • *phone-tag*—Unique sequence number that identifies this ephone during configuration tasks.
Step 7	**ephone-template** *template-tag* **Example:** `Router(config-ephone)# ephone-template 15`	Applies an ephone template to the ephone that is being configured.
Step 8	**restart** **Example:** `Router(config-ephone)# restart`	Performs a fast reboot of this ephone. Does not contact the DHCP or TFTP server for updated information. **Note** Restart all ephones using the **restart all** command in telephony-service configuration mode.
Step 9	**end** **Example:** `Router(config-ephone)# end`	Returns to privileged EXEC mode.

SCCP: Enabling Ephone-dn Templates

To create an ephone-dn template and apply it to an ephone-dn, perform the following steps:

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone-dn-template** *template-tag*
4. *command*
5. **exit**
6. **ephone-dn** *dn-tag*
7. **ephone-dn-template** *template-tag*
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.

	Command or Action	Purpose
Step 3	**ephone-dn-template** *template-tag* **Example:** `Router(config)# ephone-dn-template 3`	Enters ephone-dn-template configuration mode to create an ephone-dn template. • *template-tag*—Unique identifier for the ephone-dn template that is being created. Range is 1 to 20.
Step 4	*command* **Example:** `Router(config-ephone-dn-template)# call-forwarding busy 4000`	Applies the specified command to the ephone-dn template that is being created. • Type **?** for a list of commands that can be used in this step. • Repeat this step to add more commands to the template.
Step 5	**exit** **Example:** `Router(config-ephone-dn-template)# exit`	Exits ephone-dn-template configuration mode.
Step 6	**ephone-dn** *dn-tag* **Example:** `Router(config)# ephone-dn 23`	Enters ephone-dn configuration mode. • *dn-tag*—Unique sequence number that identifies this ephone-dn during configuration tasks.
Step 7	**ephone-dn-template** *template-tag* **Example:** `Router(config-ephone-dn)# ephone-dn-template 3`	Applies an ephone-dn template to the ephone-dn that is being configured.
Step 8	**end** **Example:** `Router(config-ephone-dn)# end`	Returns to privileged EXEC mode.

SCCP: Verifying Templates

To view the configuration of a template, and verify to which phone or directory number a template is applied, perform the following steps.

SUMMARY STEPS

1. **show telephony-service ephone**
2. **show telephony-service ephone-template**
3. **show telephony-service ephone-dn**
4. **show telephony-service ephone-dn-template**

DETAILED STEPS

Step 1 **show telephony-service ephone**

Use is command to display information about SCCP phones in Cisco Unified CME, including which template-tags are enabled in the configuration for a phone.

```
Router# show telephony-service ephone 1
ephone-dn-template  1
 description Call Center Line 1
 call-forward busy 500
 call-forward noan 500 timeout 10
 pickup-group 33!
!
```

Step 2 **show telephony-service ephone-template**

Use is command to display information about an ephone template in Cisco Unified CME, including a list of features enabled in the configuration.

Step 3 **show telephony-service ephone-dn**

Use is command to display information about directory numbers, including which template-tags are enabled in the configuration for a directory number.

```
Router# show telephony-service ephone-dn 4
!
ephone-dn  4  dual-line
 number 136
 description Desk4
 ephone-dn template 1
 ephone-hunt login
```

Step 4 **show telephony-service ephone-dn-template**

Use is command to display information about an ephone-dn template in Cisco Unified CME, including a list of features enabled in the configuration.

SIP: Creating and Applying Templates to SIP Phones

To create templates of common features and softkeys that can be applied to individual Cisco SIP IP phones, follow the steps in this section.

Prerequisites

- Cisco CME 3.4 or a later version.
- The **mode** cme command must be enabled in Cisco Unified CME.

SUMMARY STEPS

1. **enable**
2. **configure termina**l
3. **voice register template** *template-tag*
4. *command*
5. **exit**
6. **voice register pool** *pool-tag*
7. **template** *template-tag*
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Router> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**voice register template** *template-tag* **Example:** `Router(config)# voice register template 1`	Enters voice register template configuration mode to define a template of common parameters for SIP phones in Cisco Unified CME. • Range is 1 to 5.
Step 4	*command* **Example:** `Router(config-register-template)# anonymous block`	Applies the specified command to this template and enables the corresponding feature on any supported SIP phone that uses a template in which this command is configure. • Type **?** to display list of commands that can be used in a voice register template. • Repeat this step for each feature to be added to this voice register template.
Step 5	**exit** **Example:** `Router(config-register-template)# exit`	Exits configuration mode to the next highest mode in the configuration mode hierarchy.
Step 6	**voice register pool** *pool-tag* **Example:** `Router(config)# voice register pool 3`	Enters voice register pool configuration mode to set phone-specific parameters for SIP phones. • *pool-tag*—Unique sequence number of the Cisco SIP phone to be configured. Range is 1 to 100 or the upper limit as defined by **max-pool** command.
Step 7	**template** *template-tag* **Example:** `Router(config-register-pool)# voice register pool 1`	Applies a template created with the **voice register template** command. • *template-tag*—Unique sequence number of the template to be applied to the SIP phone specified by the **voice register pool** command. Range is 1 to 5.
Step 8	**end** **Example:** `Router(config-register-pool)# end`	Returns to privileged EXEC mode.

Examples

The following example shows templates 1 and 2 and how to do the following:

- Apply template 1 to SIP phones 1 to 3
- Apply template 2 to SIP phone 4
- Remove a previously created template 5 from SIP phone 5.

```
Router(config)# voice register template 1
 Router(config-register-temp)# anonymous block
 Router(config-register-temp)# caller-id block
 Router(config-register-temp)# voicemail 5001 timeout 15

Router(config)# voice register template 2
 Router(config-register-temp)# anonymous block
 Router(config-register-temp)# caller-id block
 Router(config-register-temp)# no conference
 Router(config-register-temp)# no transfer-attended
 Router(config-register-temp)# voicemail 5005 timeout 15

Router(config)# voice register pool 1
 Router(config-register-pool)# template 1

Router(config)# voice register pool 2
 Router(config-register-pool)# template 1

Router(config)# voice register pool 3
 Router(config-register-pool)# template 1

Router(config)# voice register pool 4
 Router(config-register-pool)# template 2

Router(config)# voice register pool 5
 Router(config-register-pool)# no template 5
```

Configuration Examples for Creating Templates

This section contains the following examples:

- Using Ephone Template to Block The Use of Park and Transfer Soft Keys, page 1532
- Using Ephone-dn Template to Set Call Forwarding, page 1533

Using Ephone Template to Block The Use of Park and Transfer Soft Keys

The following example creates an ephone template to block the use of Park and Transfer soft keys. It is applied to ephone 36 and extension 2333.

```
ephone-template 15
 features blocked Park Trnsfer

ephone-dn 2
 number 2333

ephone 36
 button 1:2
 ephone-template 15
```

Using Ephone-dn Template to Set Call Forwarding

The following example creates ephone-dn template 3, which sets call forwarding on busy and no answer to forward calls to extension 4000 and sets the pickup group to 4. Ephone-dn template 3 is then applied to ephone-dn 23 and ephone-dn 33, which appear on ephones 13 and 14, respectively.

```
ephone-dn-template 3
 call-forwarding busy 4000
 call-forwarding noan 4000 timeout 30
 pickup group 4

ephone-dn 23
 number 2323
 ephone-dn-template 3

ephone-dn 33
 number 3333
 ephone-dn-template 3

ephone 13
 button 1:23

ephone 14
 button 1:33
```

Where to Go Next

Soft-Key Display

The display of soft keys during different call states is managed using ephone templates. For more information, see "Customizing Soft Keys" on page 1335.

Additional References

The following sections provide references related to Cisco Unified CME features.

Related Documents

Related Topic	Document Title
Cisco Unified CME configuration	• *Cisco Unified CME Command Reference* • Cisco Unified CME Documentation Roadmap
Cisco IOS commands	• *Cisco IOS Voice Command Reference* • Cisco IOS Software Releases 12.4T Command References
Cisco IOS configuration	• *Cisco IOS Voice Configuration Library* • Cisco IOS Software Releases 12.4T Configuration Guides
Phone documentation for Cisco Unified CME	• User Documentation for Cisco Unified IP Phones

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/techsupport

Feature Information for Creating Templates

Table 91 lists the features in this module and enhancements to the features by version.

To determine the correct Cisco IOS release to support a specific Cisco Unified CME version, see the *Cisco Unified CME and Cisco IOS Software Version Compatibility Matrix* at http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/requirements/guide/33matrix.htm.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Note Table 91 lists the Cisco Unified CME version that introduced support for a given feature. Unless noted otherwise, subsequent versions of Cisco Unified CME software also support that feature.

Table 91 Feature Information for Templates

Feature Name	Cisco Unified CME Version	Feature Information
Ephone Templates	4.0	• The number of ephone templates that can be created was increased from 5 to 20. • More commands can be included in ephone templates.
	3.2	Ephone templates were introduced to manage soft keys. The only commands that can be used in ephone templates are the **softkeys** commands.
Ephone-dn Templates	4.0	Ephone-dn templates were introduced.
Phone Templates for SIP Phones	4.1	The maximum number of templates that can be configured was increased from 5 to 10.
	3.4	Voice-register templates were introduced for SIP IP phones directly connected to a Cisco Unified CME router.