



Cisco Unified CME Commands: D

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This chapter contains commands to configure and maintain Cisco Unified Communications Manager Express (formally known as Cisco Unified CallManager Express). The commands are presented in alphabetical order. Some commands required for configuring Cisco Unified Communications Manager Express (Cisco Unified CME) may be found in other Cisco IOS references. Use the reference master index or search online to find these commands.

date-format (telephony-service)

To set the date display format on the Cisco IP phones in a Cisco CallManager Express (Cisco CME) system, use the **date-format** command in telephony-service configuration mode. To display the date in the default format, use the **no** form of this command.

```
date-format { dd-mm-yy | mm-dd-yy | yy-dd-mm | yy-mm-dd }
```

```
no date-format
```

Syntax Description

dd-mm-yy	Format in which dates are displayed on the IP phone:
mm-dd-yy	
yy-dd-mm	
yy-mm-dd	
	<ul style="list-style-type: none"> • dd—Two-digit day. • mm—Two-digit month. • yy—Two-digit year.

Command Default

Default is **mm-dd-yy**.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(2)XT	Cisco ITS 2.0	This command was introduced
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.

Examples

The following example sets the date format to day, month, and year, so that December 17, 2004 is represented as 17-12-04.

```
Router(config)# telephony-service
Router(config-telephony)# date-format dd-mm-yy
```

date-format (voice register global)

To set the date display format on SIP phones directly connected in Cisco Unified CME, use the **date-format** command in voice register global configuration mode. To display the date in the default format, use the **no** form of this command.

```
date-format {d/m/y | m/d/y | y-d-m | y/a/m | y/m/d | yy-m-d}
```

```
no date-format
```

Syntax Description

d/m/y	Format in which dates are displayed on the SIP IP phone:
m/d/y	
y-d-m	
y/d/m	
y/m/d	
yy-m-d	

- **d**—Two-digit date of the month
- **m**—Two-digit month
- **y**—Two-digit year
- **yy**—Four-digit year

Command Default

Date is displayed as **m/d/y**.

Command Modes

Voice register global configuration (config-register-global)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Examples

The following example shows how to set the date format so that a date such as December 3, 2007 is represented as 2007-12-03. By using the default configuration, this same date appears as 12/03/07.

```
Router(config)# voice register global
Router(config-register-global)# date-format yy-m-d
```

Related Commands

Command	Description
dst auto-adjust (voice register global)	Enables automatic adjustment of daylight saving time on SIP phones.
time-format (voice register global)	Selects a 12-hour clock or a 24-hour clock for the time display format on SIP IP phones in Cisco Unified CME.

default (voice hunt-group)

To set a command to its defaults values, use the **default** command in voice hunt-group configuration mode.

default *default-value*

Syntax Description	<i>default-value</i>	One of the voice hunt group configuration commands. Valid choices are as follows: <ul style="list-style-type: none"> • hops (Peer or longest-idle voice hunt group only) • preference • timeout
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Command Default There are no default behaviors or values.

Command Modes Voice hunt-group configuration (config-voi-hunt-group)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines Use this command to configure the default value for a voice hunt group command.

The default command instructs the voice hunt group to use the default value of the specified command whenever the hunt group is called. This has the same effect as using the no form of the specified command, but the default command clearly specifies which commands are using their default values.

To use the default values for more than one command, enter each command on a separate line.

Examples The following example shows how to set the default values for two separate voice hunt-group commands:

```
Router(config)# voice hunt-group 4 peer
Router(config-voi-hunt-group)# default hops
Router(config-voi-hunt-group)# default timeout
```

Related Commands	Command	Description
	voice hunt-group	Defines a hunt group for SIP phones in Cisco Unified CME.

description (ephone)

To provide ephone descriptions for network management systems using an eXtensible Markup Language (XML) query, use the **description** command in ephone configuration mode. To remove a description, use the **no** form of this command.

description *string*

no application

Syntax Description

<i>string</i>	Allows for a maximum of 128 characters, including spaces. There are no character restrictions.
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Command Default

No ephone description is configured.

Command Modes

Ephone configuration (config-ephone)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced
12.3(14)T	Cisco CME 3.3	This command was integrated into Cisco IOS Release 12.3(14)T.

Usage Guidelines

The descriptions configured with this command will appear neither on phone displays nor in show command output. Instead, they are sent to network management systems, such as CiscoView. Network management systems obtain **description** command data by sending an XML ISgetDevice request to a Cisco CME system. Cisco CME responds by sending ISDevDesc field data to the network management system, which uses the data to perform such tasks as printing descriptions on screen.

Examples

The following example provides a description for ephone 1:

```
Router(config)# ephone 1
Router(config-ephone) description S/N:SK09456FPH3, Location:SJ21- 2nd Floor E5-9, User:
Smith, John
```

description (ephone-dn and ephone-dn-template)

To display a custom text-string description in the header bar of all supported Cisco Unified IP phones, use the **description** command in ephone-dn or ephone-dn-template configuration mode. To return to the default, use the **no** form of this command.

description *string*

no description

Syntax Description

string Alphanumeric characters to be displayed in the header bar of the phone display. If spaces appear in the string, enclose the string in quotation marks. The maximum string length is 40 characters.

Note Display behavior depends on phone firmware version.

Command Default

The extension number of the first line on the phone appears in the header bar.

Command Modes

Ephone-dn configuration (config-ephone)
Ephone-dn-template configuration (config-ephone-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(11)T	Cisco ITS 2.0.1	This command was introduced.
12.2(11)YT	Cisco ITS 2.1	The number of characters in the string was modified.
12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.
12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
12.4(9)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS 12.4(9)T.

Usage Guidelines

Use this command under the ephone-dn that is associated with the first line button on a Cisco Unified IP phone. This command is typically used to display the entire E.164 telephone number associated with the first line button in the header bar rather than just the extension number, which is the default.

This command is supported by the following IP phones:

- Cisco Unified IP Phone 7940 and 7940G
- Cisco Unified IP Phones 7960 and 7960G
- Cisco Unified IP Phone 7970
- Cisco Unified IP Phone 7971

For Cisco Unified IP Phone 7940s and 7940Gs or Cisco Unified IP Phone 7960s and 7960Gs, the *string* is truncated to 14 characters if the text string is greater than 14 characters.

For Cisco Unified IP Phone 797x, all characters in the *string* appear alternately with time and date, each for 5 seconds.

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.

Examples

The following example shows how to define a header bar display for a phone on which the first line button is the extension number 50155:

```
Router(config)# ephone-dn 4
Router(config-ephone-dn)# number 50155
Router(config-ephone-dn)# description 888-555-0155
```

The following example shows how to use an ephone-dn template to define a header bar display for a phone on which the first line button is the extension number 50155:

```
Router(config)# ephone-dn-template 3
Router(config-ephone-dn-template)# description "888 555-0155"
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 4
Router(config-ephone-dn)# number 50155
Router(config-ephone-dn)# ephone-dn-template 3
```

Related Commands

Command	Description
number	Configures a valid number for a Cisco Unified IP phone.

description (ephone-hunt)

To create a label for an ephone hunt group, use the **description** command in ephone-hunt configuration mode. To return this value to the default, use the **no** form of this command.

description *string*

no description

Syntax Description

<i>string</i>	Character string that identifies a hunt group.
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Command Default

No description exists for the ephone hunt group.

Command Modes

Ephone-hunt configuration (config-ephone-hunt)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS 12.4(9)T.

Usage Guidelines

This command creates a label to identify the ephone-hunt group. This label helps make the configuration more readable.

Examples

The following example shows how to identify a hunt group for technical support agents.

```
ephone-hunt 3 peer
pilot 4200
list 1001, 1002, 1003
description Tech Support Hunt Group
hops 3
timeout 7, 10, 15
max-timeout 25
final 4500
```

description (voice moh-group)

To display a brief description specific to a MOH group, use the **description** command in voice moh-group configuration mode. To remove the description, use the **no** form of this command.

description *string*

no description

Syntax Description

<i>string</i>	An alphanumeric string to add a brief description specific to a MOH group. Maximum length: 80 characters including spaces.
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Command Default

No MOH group description is configured.

Command Modes

Voice moh-group configuration (config-voice-moh-group)

Command History

Cisco IOS Release	Cisco Product	Modification
15.0(1)XA	Cisco Unified CME 8.0 Cisco Unified SRST 8.0	This command was introduced

Usage Guidelines

This command allows you to type a brief text describing a specific voice-moh-group. You can use maximum 80 characters, including spaces to describe a MOH group.

Examples

The following example provides a description for voice-moh-group1:

```
Router(config)#
Router(config-voice-moh-group)#
Router(config-voice-moh-group) description this is a moh group for sales
```

Related Commands

Command	Description
voice-moh-group	Enter voice-moh-group configuration mode.
moh	Enables music on hold from a flash audio feed
multicast moh	Enables multicast of the music-on-hold audio stream.
extension-range	Specifies the extension range for a clients calling a voice-moh-group.

description (voice register pool)

To display a custom description in the header bar of Cisco IP Phone 7940 and 7940G or a Cisco IP Phone 7960 and 7960G, use the **description** command in voice register pool configuration mode. To return to the default, use the **no** form of this command.

description *string*

no description

Syntax Description

<i>string</i>	Alphanumeric characters that appear in the header bar of the phone display. If spaces appear in the string, enclose the string in quotation marks. The maximum string length is 40 characters.
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Command Default

The extension number of the first line on the phone appears in the header bar.

Command Modes

Voice register pool configuration (config-register-pool)

Command History

Cisco IOS Release	Cisco product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines

Use this command to display a customized description in the header bar of a SIP phone instead of the extension number, which is the default. For example, you can display the entire E.164 telephone number associated with the first phone line.

String is truncated to 14 characters in the display of the Cisco IP Phone 7940, Cisco IP Phone 7940G, Cisco IP Phone 7960, and Cisco IP Phone 7960G.

Examples

The following example shows how to define a header bar display for a SIP phone on which the extension number is 50155:

```
Router(config)# voice register pool 4
Router(config-register-pool)# number 1 50155
Router(config-register-pool)# description 888-555-0155
```

Related Commands

Command	Description
number (voice register pool)	Configures a valid number for a SIP phone.

device-id (ephone-type)

To specify the device ID of a phone type, use the **device-id** command in ephone-type configuration mode. To reset to the default value, use the **no** form of this command.

device-id *number*

no device-id

Syntax Description

number Device ID of the phone type. Range: 1 to 2,147,483,647. Default: 0. See [Table 1](#) for a list of supported device IDs.

Command Default

Device ID is 0.

Command Modes

Ephone-type configuration (config-ephone-type)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(15)XZ	Cisco Unified CME 4.3 Cisco Unified SRST 4.3	This command was introduced.
12.4(20)T	Cisco Unified CME 7.0 Cisco Unified SRST 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

This command specifies the device ID of the type of phone being added with the ephone-type template. If this command is set to the default value of 0, the ephone-type is invalid.

Table 2 Supported Values for Ephone-Type Commands

Supported Device	device-id	device-type	num-buttons	max-presentation
Cisco Unified IP Phone 7915 Expansion Module with 12 buttons	227	7915	12	0 (default)
Cisco Unified IP Phone 7915 Expansion Module with 24 buttons	228	7915	24	0
Cisco Unified IP Phone 7916 Expansion Module with 12 buttons	229	7916	12	0
Cisco Unified IP Phone 7916 Expansion Module with 24 buttons	230	7916	24	0
Cisco Unified Wireless IP Phone 7925	484	7925	6	4
Cisco Unified IP Conference Station 7937G	431	7937	1	6
Nokia E61	376	E61	1	1

Examples

The following example shows the device ID is set to 376 for the Nokia E61 when creating the ephone-type template:

```
Router(config)# ephone-type E61
Router(config-ephone-type)# device-id 376
Router(config-ephone-type)# device-name E61 Mobile Phone
```

Related Commands

Command	Description
device-name	Assigns a name to a phone type in an ephone-type template.
load	Associates a type of phone with a phone firmware file.
type	Assigns the phone type to a SCCP phone.

device-name

To assign a name to a phone type in an ephone-type template, use the **device-name** command in ephone-type configuration mode. To remove the name, use the **no** form of this command.

device-name *name*

no device-name

Syntax Description	<i>name</i>	String that identifies this phone type. Value is any alphanumeric string up to 32 characters.
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Command Default No name is assigned to this phone type.

Command Modes Ephone-type configuration (config-ephone-type)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(15)XZ	Cisco Unified CME 4.3 Cisco Unified SRST 4.3	This command was introduced.
	12.4(20)T	Cisco Unified CME 7.0 Cisco Unified SRST 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines This command specifies a device name for the type of phone being added with the ephone-type template.

Examples The following example shows that the name “E61 Mobile Phone” is assigned to a phone type when creating the ephone-type template:

```
Router(config)# ephone-type E61
Router(config-ephone-type)# device-id 376
Router(config-ephone-type)# device-name E61 Mobile Phone
```

Related Commands	Command	Description
	device-id	Specifies the device ID for a phone type in an ephone-type template.

device-type

To specify the phone type, use the **device-type** command in ephone-type configuration mode. To reset to the default value, use the **no** form of this command.

device-type *phone-type*

no device-type

Syntax Description

phone-type Device type of the phone. See [Table 1](#) for a list of supported device types. Default value is the same value entered with the **ephone-type** command.

Command Default

Device type is the same value that is entered with the **ephone-type** command.

Command Modes

Ephone-type configuration (config-ephone-type)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(15)XZ	Cisco Unified CME 4.3 Cisco Unified SRST 4.3	This command was introduced.
12.4(20)T	Cisco Unified CME 7.0 Cisco Unified SRST 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

This command specifies the device type of the phone being added with the ephone-type template. The device type is set to the same value as the **ephone-type** command unless you use this command to change the value.

This command must be set to one of the following supported values.

Table 3 Supported Values for Ephone-Type Commands

Supported Device	device-id	device-type	num-buttons	max-presentation
Cisco Unified IP Phone 7915 Expansion Module with 12 buttons	227	7915	12	0 (default)
Cisco Unified IP Phone 7915 Expansion Module with 24 buttons	228	7915	24	0
Cisco Unified IP Phone 7916 Expansion Module with 12 buttons	229	7916	12	0
Cisco Unified IP Phone 7916 Expansion Module with 24 buttons	230	7916	24	0
Cisco Unified Wireless IP Phone 7925	484	7925	6	4

Table 3 Supported Values for Ephone-Type Commands

Supported Device	device-id	device-type	num-buttons	max-presentation
Cisco Unified IP Conference Station 7937G	431	7937	1	6
Nokia E61	376	E61	1	1

Examples

The following example shows the device type set to 7915 in the ephone-type template for the Cisco Unified IP Phone 7915 Expansion Module with 12 buttons:

```
Router(config)# ephone-type 7915-12 addon
Router(config-ephone-type)# device-id 227
Router(config-ephone-type)# device-name 7915-12
Router(config-ephone-type)# device-type 7915
```

Related Commands

Command	Description
device-name	Assigns a name to a phone type in an ephone-type template.
ephone-type	Adds a Cisco Unified IP phone type by defining an ephone-type template.
load	Associates a type of phone with a phone firmware file.
type	Assigns the phone type to a SCCP phone.

device-security-mode

To set the security mode for SCCP signaling for devices communicating with the Cisco Unified CME router globally or per ephone, use the **device-security-mode** command in telephony-service or ephone configuration mode. To return to the default, use the **no** form of this command.

device-security-mode { **authenticated** | **none** | **encrypted** }

no device-security-mode

Syntax Description

authenticated	SCCP signaling between a device and Cisco Unified CME through the secure TLS connection on TCP port 2443.
none	SCCP signaling is not secure.
encrypted	SCCP signaling between a device and Cisco Unified CME through the secure TLS connection on TCP port 2443, and the media uses Secure Real-Time Transport Protocol (SRTP).

Command Default

Device signaling is not secure.

Command Modes

Telephony-service configuration (config-telephony)
Ephone configuration (config-ephone)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(9)T.
12.4(15)XW	Cisco Unified CME 4.1	The encrypted keyword was added.
12.4(15)XY	Cisco Unified CME 4.2(1)	The encrypted keyword was added.
12.4(15)XZ	Cisco Unified CME 4.3	The encrypted keyword was added.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

Use this command with Cisco Unified CME phone authentication and encryption.

Set the SCCP signaling security mode globally using this command in telephony-service configuration mode or per ephone using this command in ephone configuration mode. If you use both commands, the per-phone setting overrides the global setting.

Examples

The following example selects secure SCCP signaling for all ephones.

```
Router(config)# telephony-service
Router(config-telephony)# device-security-mode authenticated
```

The following example selects secure SCCP signaling for ephone 28:

```
Router(config)# ephone 28
Router(config-ephone)# button 1:14 2:25
Router(config-ephone)# device-security-mode authenticated
```

The following example selects secure SCCP signaling for all ephones and then disables it for ephone 36:

```
Router(config)# telephony-service
Router(config-telephony)# device-security-mode authentication

Router(config)# ephone 36
Router(config-ephone)# button 1:15 2:16
Router(config-ephone)# device-security-mode none
```

The following example selects encrypted secure SCCP signaling and encryption through SRTP for all ephones:

```
Router(config)# telephony-service
Router(config-telephony)# device-security-mode encrypted
```


dialplan

To assign a dial plan to a SIP phone, use the **dialplan** command in voice register pool or voice register template configuration mode. To remove the dial plan from the phone, use the **no** form of this command.

dialplan *dialplan-tag*

no dialplan *dialplan-tag*

Syntax Description

<i>dialplan-tag</i>	Number that identifies the dial plan to use for this SIP phone. This is the <i>dialplan-tag</i> argument that was assigned to the dial plan with the voice register dialplan command. Range: 1 to 24.
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Command Default

No dial plan is assigned to the phone.

Command Modes

Voice register pool configuration (config-register-pool)
Voice register template configuration (config-register-temp)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

You apply a dial plan to a SIP phone with this command after you create the dial plan with the **voice register dialplan** command. When the phone is reset or restarted, the dial plan file specified with this command is loaded to the phone. A phone can use only one dial plan.

A dial plan assigned to a SIP phone has priority over Key Press Markup Language (KPML), which is enabled by default on the phone.

If you use a voice register template to apply a command to a phone and you also use the same command in voice register pool configuration mode for the same phone, the value that you set in voice register pool configuration mode has priority.

After using the **no dialplan** command to remove a dial plan from a phone, use the **restart** command after creating a new configuration profile if the dial plan was defined with the **pattern** command. If the dial plan was defined using a custom XML file with the **filename** command, you must use the **reset** command for the change to take effect.

Examples

The following example shows that dial plan 5 is assigned to the SIP phone identified by pool 1:

```
Router(config)# voice register pool 1
Router(config-register-pool)# dialplan 5
```

The following example shows that dial plan 5 is assigned to voice register template 10:

```
Router(config)# voice register template 10
Router(config-register-temp)# dialplan 5
```

Related Commands

Command	Description
digit collect kpml	Enables KPML digit collection on a SIP phone.
filename	Specifies a custom XML file that contains the dial patterns to use for a SIP dial plan.
pattern	Defines a dial pattern for a SIP dial plan.
show voice register dialplan	Displays all configuration information for a specific SIP dial plan.
show voice register pool	Displays all configuration information associated with a particular voice register pool.
voice register dialplan	Enters voice register dialplan configuration mode to define a dial plan for SIP phones.

dialplan-pattern

To define a pattern that is used to expand extension numbers in Cisco Unified CME into fully qualified E.164 numbers, use the **dialplan-pattern** command in telephony-service configuration mode. To disable the **dialplan-pattern** command settings, use the **no** form of this command.

```
dialplan-pattern tag pattern extension-length extension-length [extension-pattern
extension-pattern | no-reg]
```

```
no dialplan-pattern tag
```

Syntax Description		
	<i>tag</i>	Identifies this dial-plan pattern. The tag is a number from 1 to 5.
	<i>pattern</i>	Dial-plan pattern, such as the area code, the prefix, and the first one or two digits of the extension number, plus wildcard markers or dots (.) for the remainder of the extension number digits.
	extension-length	Sets the number of extension digits that will appear as a caller ID.
	<i>extension-length</i>	The number of extension digits. The extension length must match the length of extensions for IP phones. Range: 1 to 32.
	extension-pattern	(Optional) Sets an extension number's leading digit pattern when it is different from the E.164 telephone number's leading digits as defined in the <i>extension-pattern</i> argument.
	<i>extension-pattern</i>	(Optional) The extension number's leading digit pattern. Consists of one or more digits and wildcard markers or dots (.). For example, 5.. would include extension 500 to 599, and 5... would include 5000 to 5999. The length of the extension pattern must equal the value configured for the <i>extension-length</i> argument.
	no-reg	(Optional) Prevents the E.164 numbers in the dial peer from registering with the gatekeeper.

Command Default No expansion pattern exists.

Command Modes Telephony-service configuration

Command History	Cisco IOS Release	Cisco Product	Modification
	12.1(5)YD	Cisco ITS 1.0	This command was introduced.
	12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
	12.2(11)YT	Cisco ITS 2.1	The extension-pattern keyword was added.
	12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

This command creates a pattern for expanding individual abbreviated extension numbers of calling numbers into fully qualified E.164 numbers.

Use this command when configuring a network with multiple Cisco Unified CMEs to ensure that the appropriate calling number, extension or E.164 number, is provided to the target Cisco Unified CME, and appears on the phone display of the called phone. In networks that have a single Cisco Unified CME, this command is not needed.

If multiple dial-plan patterns are defined, the system matches extension numbers against the patterns in sequential order, starting with the lowest numbered dial-plan pattern tag first. Once a pattern matches an extension number, the pattern is used to generate an expanded number. If additional patterns subsequently match the extension number, they are not used.

The **dialplan-pattern** command builds additional dial peers for the expanded numbers it creates. For example, when the ephone-dn with the number 1001 was defined, the following POTS dial peer was automatically created for it:

```
dial-peer voice 20001 pots
 destination-pattern 1001
 voice-port 50/0/2
```

When you define a dial-plan pattern that 1001 will match, such as 40855510..., a second dial peer is created so that calls to both the 1001 and 4085551001 numbers will be completed. In our example, the additional dial peer that is automatically created looks like the following:

```
dial-peer voice 20002 pots
 destination-pattern 4085551001
 voice-port 50/0/2
```

Both numbers are recognized by Cisco Unified CME as being associated with a SCCP phone.

Both dial peers can be seen with the **show telephony-service dial-peer** command.

In networks with multiple routers, you may need to use the **dialplan-pattern** command to expand extensions to E.164 numbers because local extension numbering schemes can overlap each other. Networks with multiple routers have authorities such as gatekeepers that route calls through the network. These authorities require E.164 numbers so that all numbers in the network will be unique. Use the **dialplan-pattern** command to expand extension numbers into unique E.164 numbers for registering with a gatekeeper.

Ephone-dn numbers for the Cisco IP phones must match the number in the *extension-length* argument; otherwise, the extension number cannot be expanded. For example, the following command maps all 3-digit extension numbers to the telephone number 40855501xx, so that extension 111 is expanded but the 4-digit extension 1011 is not.

```
dialplan-pattern 1 40855501.. extension-length 3
```

Using the **dialplan-pattern** command to expand extension numbers can sometimes result in the improper matching of numbers with dial peers. For example, the expanded E.164 number 2035550134 can match dial-peer destination-pattern 203, not 134, which would be the correct destination pattern for the desired extension. If it is necessary for you to use the **dialplan-pattern** command and you know that the expanded numbers might match destination patterns for other dial peers, you can manually configure the E.164 expanded number for an extension as its secondary number using the **number** command, as shown in the following example.

```
ephone-dn 23
 number 134 secondary 2035550134
```

The pattern created by the **dialplan-pattern** command is also used to enable distinctive ringing for inbound calls. If a calling-party number matches a dial-plan pattern, the call is considered an internal call and has a distinctive ring that identifies the call as internal. Any call with a calling-party number that does not match a dial-plan pattern is considered an external call and has a distinctive ring that is different from the internal ringing.

When the **extension-pattern** keyword and *extension-pattern* argument are used, the leading digits of an extension pattern are stripped and replaced with the corresponding leading digits of the dial plan. For example, the following command maps all 4xx extension numbers to the E.164 number 40855501xx, so that extension 412 corresponds to 4085550112.

```
dialplan-pattern 1 4085550100 extension-length 3 extension-pattern 4..
```

Examples

The following example shows how to create dial-plan pattern 1 for extension numbers 5000 to 5099 with a prefix of 408555. If an inbound calling party number (408555044) matches dial-plan pattern 1, the recipient phone will display an extension (5044) as the caller ID and use an internal ringing tone. If an outbound calling party extension number (5044) matches the same dial-plan pattern 1, the calling-party extension will be converted to an E.164 number (408555044). The E.164 calling-party number will appear as the caller ID.

```
Router(config)# telephony-service
Router(config-telephony)# dialplan-pattern 1 40855550.. extension-length 4
extension-pattern 50..
```

In the following example, the **dialplan-pattern** command creates dial-plan pattern 1 for extensions 800 to 899 with the telephone prefix starting with 4085559. As each number in the extension pattern is declared with the **number** command, two POTS dial peers are created. In the example, they are 801 (an internal office number) and 4085579001 (an external number).

```
Router(config)# telephony-service
Router(config-telephony)# dialplan-pattern 1 40855590.. extension-length 3
extension-pattern 8..
```

The following example shows a configuration for two Cisco CME systems. One system uses 50.. and the other uses 60.. for extension numbers. Each is configured with the same two **dialplan-pattern** commands. Calls from the “50..” system to the “60..” system, and vice versa, are treated as internal calls. Calls that go across a H.323 network and calls that go to a PSTN through an ISDN interface on one of the configured Cisco CME routers are represented as E.164.

```
Router(config)# telephony-service
Router(config-telephony)# dialplan-pattern 1 40855550.. extension-length 4
extension-pattern 50..
Router(config-telephony)# dialplan-pattern 2 51055560.. extension-length 4
extension-pattern 60..
```

Related Commands

Command	Description
show telephony-service dial-peer	Displays dial peer information for extensions in a Cisco CME system.

dialplan-pattern (voice register)

To define a pattern that is used to expand extension numbers in Cisco Unified CME into fully qualified E.164 numbers, use the **dialplan-pattern** command in voice register global configuration mode. To disable the **dialplan-pattern** command settings, use the **no** form of this command.

dialplan-pattern *tag pattern* **extension-length** *extension-length* [**extension-pattern** *extension-pattern* | **no-reg**]

no dialplan-pattern *tag*

Syntax Description		
	<i>tag</i>	Unique number for identifying this dial-plan pattern. Range: 1 to 5.
	<i>pattern</i>	Dial-plan pattern to be matched, such as the area code, the prefix, and the first one or two digits of the extension number, plus wildcard markers or dots (.) for the remainder of the extension number digits.
	extension-length	Number of extension digits that will appear as a caller ID.
	<i>extension-length</i>	Number of digits in an extension.
		This variable must match the length of the directory numbers configured for SIP extensions in Cisco Unified CME. Range: 1 to 32.
	extension-pattern	(Optional) Leading digit pattern to be configured for an extension when it is different from the leading digit pattern of the E.164 telephone number, as defined in the <i>extension-pattern</i> argument.
	<i>extension-pattern</i>	(Optional) Leading digit pattern to be stripped from extension number when expanding an extension to an E.164 telephone number. Consists of one or more digits and wildcard markers or dots (.). For example, 5.. would include extension 500 to 599, and 5... would include 5000 to 5999.
		The length of the extension pattern must equal the value configured for the <i>extension-length</i> argument.
	no-reg	(Optional) Prevents the E.164 numbers in the dial peer from registering with the gatekeeper.

Command Default No expansion pattern exists.

Command Modes Voice register global configuration (config-register-global)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
	12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS 12.4(9)T.

Usage Guidelines This command creates a pattern for expanding individual abbreviated SIP extension numbers of calling numbers into fully qualified E.164 numbers.

Use this command when configuring a network with multiple Cisco Unified CMEs to ensure that the appropriate calling number, extension or E.164 number, is provided to the target Cisco Unified CME, and appears on the phone display of the called phone. In networks that have a single Cisco Unified CME, this command is not needed.

Up to five dial-plan patterns can be configured. If multiple dial-plan patterns are defined, the system matches extension numbers against the patterns in sequential order, starting with the lowest numbered dial-plan pattern tag first.

Dial peers for directory numbers are automatically created when SIP phones register in Cisco Unified CME. The **dialplan-pattern** command builds a second dial peer for the expanded number because an extension number matches the pattern. Both numbers are recognized by Cisco Unified CME as being associated with a SIP phone.

For example, the following POTS dial peer is automatically created for extension number 1001 when the associated SIP phone registers in Cisco Unified CME:

```
dial-peer voice 20001 pots
  destination-pattern 1001
  voice-port 50/0/2
```

If the extension number (1001) also matches a dial-plan pattern that is configured using the **dialplan-pattern** command, such as 40855510.., a second dial peer is dynamically created so that calls to both the 1001 and 4085551001 numbers can be completed. Based on the dial-plan pattern to be matched, the following additional POTS dial peer is created:

```
dial-peer voice 20002 pots
  destination-pattern 4085551001
  voice-port 50/0/2
```

Using the **no** form of this command will remove the dial peer that was created for the expanded number.

All dial peers can be displayed by using the **show dial-peer voice summary** command. All dial peers for numbers associated to SIP phones only can be displayed by using the **show voice register dial-peers** command. Dial peers created by using the **dialplan-expansion** command cannot be seen in the running configuration.

The value of the extension-length argument must be equal to the length of extension number to be matched, otherwise, the extension number cannot be expanded. For example, the following command maps all 3-digit extension numbers to the telephone number 40855501.., so that extension 111 is expanded but 4-digit extension number 1111 is not.

```
dialplan-pattern 1 40855501.. extension-length 3
```

When the **extension-pattern** keyword and *extension-pattern* argument are configured, the leading digits of the extension pattern variable are stripped away and replaced with the corresponding leading digits of the dial-plan pattern to create the expanded number. For example, the following command maps all 3-digit extension numbers with the leading digit of “4” to the telephone number 40855501.., so that extension 434 corresponds to 4085550134.

```
dialplan-pattern 1 40855501.. extension-length 3 extension-pattern 4..
```

To apply dialplan-pattern expansion on a per-system basis to individual SIP *redirecting* numbers in a Cisco Unified CME system, including original called and last reroute numbers, use the **call-forward** command.

Examples

The following example shows how to create a dialplan-pattern for expanding extension numbers 60xxx to E.164 numbers 510555xxx.

```
Router(config)# voice register global
Router(config-register-global)# dialplan-pattern 1 5105550... extension-length 5
```

The following example is output from the **show dial-peer summary** command displaying information for four dial peers, one each for extensions 60001 and 60002 and because the dialplan-expansion command was configured to expand 6.... to 4085555...., one each for 4085550001 and 4085550002. The latter two dial peers will not appear in the running configuration.

```
Router# show dial-peer summary
```

TAG	TYPE	MIN	OPER	PREFIX	DEST-PATTERN	PRE	PASS	OUT	
						FER	THRU	SESS-TARGET	STATT
20010	pots	up	up		60002\$	0			0
20011	pots	up	up		60001\$	0			9
20012	pots	up	up		510555001\$	0			9
20013	pots	up	up		510555002\$	0			0

Related Commands

Command	Description
call-forward (voice register)	Applies dial-plan pattern expansion globally to redirecting number.
show dial-peer summary	Displays all dial peers created in Cisco Unified CME.
show voice register dial-peer	Displays dial-peer information for SIP extensions in Cisco Unified CME.

digit collect kpml

To enable Key Press Markup Language (KPML) digit collection on a SIP phone, use the **digit collect kpml** command in voice register pool or voice register template configuration mode. To disable KPML, use the **no** form of this command.

digit collect kpml

no digit collect kpml

Syntax Description This command has no arguments or keywords.

Command Default KPML digit collection is enabled.

Command Modes Voice register pool configuration (config-register-pool)
Voice register template configuration (config-register-temp)

Command History	Release	Cisco Product	Modification
	12.4(11)XJ	Cisco Unified CME 4.1 Cisco Unified SRST 4.1	This command was introduced.
	12.4(15)T	Cisco Unified CME 4.1 Cisco Unified SRST 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines KPML is enabled by default for all directory numbers on the phone. A dial plan assigned to a phone has priority over KPML. Use the **no digit collect kpml** command to disable KPML on a phone.

If you use a voice register template to apply a command to a phone and you also use the same command in voice register pool configuration mode for the same phone, the value that you set in voice register pool configuration mode has priority.

KPML is not supported on the Cisco Unified IP Phone 7905, 7912, 7940, or 7960.

Examples The following example shows KPML enabled on SIP phone 4:

```
Router(config)# voice register pool 4
Router(config-register-pool)# digit collect kpml
```

Related Commands	Command	Description
	dialplan	Assigns a dial plan to a SIP phone.
	show voice register pool	Displays all configuration information associated with a SIP phone.
	voice register dialplan	Enters voice register dialplan configuration mode to define a dial plan for SIP phones.

directory

To define the order in which the names of Cisco IP phone users are displayed in the local directory, use the **directory** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

```
directory {first-name-first | last-name-first}
```

```
no directory {first-name-first | last-name-first}
```

Syntax Description

first-name-first	First name is entered first in the Cisco IP phone directory name field.
last-name-first	Last name is entered first in the Cisco IP phone directory name field.

Command Default

Default is **first-name-first**.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(2)XT	Cisco ITS 2.0	This command was introduced.
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.

Usage Guidelines

This command defines name order in the local directory. The directory itself is generated from entries made using the **name** command and the **number** command in ephone-dn configuration mode.



Note

The name information must be entered in the correct order in the **name** command.

The location for the file that is accessed when the Directories button is pressed is specified in the **url** (telephony-service) command.

Examples

The following example shows how to configure the local directory with the last name first:

```
Router(config)# telephony-service
Router(config-telephony)# directory last-name-first
```

Related Commands

	Description
name	Specifies a name to be associated with an extension (ephone-dn).

	Description
number	Specifies a telephone number to be associated with an extension (ephone-dn).
url	Provisions URLs for the displays associated with buttons on Cisco IP phones.

directory entry

To add a system-wide phone directory and speed-dial definition, use the **directory entry** command in telephony-service configuration mode. To remove a definition, use the **no** form of this command.

directory entry {*directory-tag* *number* **name** *name* | **clear**}

no directory entry {*directory-tag* | **clear**}

Syntax Description

<i>directory-tag</i>	Digit string that provides a unique identifier for this entry. Range: 1 to 250.
<i>number</i>	String of up to 32 digits that provides the full telephone number for this entry.
name <i>name</i>	String of up to 24 alphanumeric characters, including spaces. Cannot include opening or closing quotation marks (‘, ’, “, or ”).
clear	Removes all directory entries that were made with this command.

Command Default

Entries do not exist.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(15)ZJ	Cisco CME 3.0	This command was introduced.
12.3(4)T	Cisco CME 3.0	This command was integrated into Cisco IOS Release 12.3(4)T.
12.3(11)XL	Cisco CME 3.2.1	This feature was modified to enable systemwide speed-dialing of entries from 34 to 99.
12.3(14)T	Cisco CME 3.3	This command was integrated into Cisco IOS Release 12.3(14)T.
12.4(15)XZ	Cisco Unified CME 4.3	The maximum number of directory entries was increased from 100 to 250.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

Cisco Unified CME automatically creates a local phone directory consisting of the telephone numbers and names that are entered during ephone-dn configuration. Additional directory entries can be made by administrators using the **directory entry** command. Phone number directory listings are displayed in the order in which they are entered.

A single entry can be removed using the **no directory entry** *directory-tag* command.

Directory entries that have directory-tag numbers from 34 to 99 also can be used as system-wide speed-dial numbers. That is, if you have the following definition for the headquarters office, any phone user can speed-dial the number:

```
Router(config)# telephony-service
Router(config-telephony)# directory entry 51 4085550123 name Headquarters
```

Analog phone users press the asterisk (*) key and the speed-dial identifier (tag number) to dial a speed-dial number.

IP phone users follow this procedure to dial a speed-dial number:

1. With the phone on-hook, an IP phone user presses a two-digit speed-dial code (that is, 05 for the entry with tag 5). A new soft key, Abbr, appears in the phone display.
2. The phone user picks up the phone handset and presses the Abbr soft key. The full telephone number associated with the speed-dial tag is dialed.

Examples

The following example adds six telephone listings to the local directory. The last two entries, with the identifiers 50 and 51, can be speed-dialed by anyone on the system because their identifiers (directory-tags) are between 34 and 99.

```
Router(config)# telephony-service
Router(config-telephony)# directory entry 1 4045550110 name Atlanta
Router(config-telephony)# directory entry 2 3125550120 name Chicago
Router(config-telephony)# directory entry 4 2125550140 name New York City
Router(config-telephony)# directory entry 5 2065550150 name Seattle
Router(config-telephony)# directory entry 50 4085550123 name Corp Headquarters
Router(config-telephony)# directory entry 51 4085550145 name Division Headquarters
```

Related Commands

Command	Description
show telephony-service	Displays the configured directory entries.
directory-entry	
url directories	Provisions the directory URL to select an external directory resource and disables the Cisco Unified CME local directory service.

display-logout

To specify a message to display on phones in an ephone hunt group when all phones in the hunt group are logged out, use the **display-logout** command in ephone-hunt configuration mode. To return this value to the default, use the **no** form of this command.

display-logout *string*

no display-logout

Syntax Description

<i>string</i>	Character string to be displayed on hunt group member IP phones when all members are logged out.
---------------	--

Command Default

No logout message exists.

Command Modes

Ephone-hunt configuration (config-ephone-hunt)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS 12.4(9)T.

Usage Guidelines

This command defines a plain-text message that displays on phones with ephone-dns that are members of a hunt group when all the members of the group are logged out. The message can be used to notify agents that no agents are available to take hunt group calls. It can also be used to tell agents about the disposition of any incoming calls to the hunt group when no agents are available to answer calls. For example, you could set the display to read “All Agents Unavailable,” or “Hunt Group Voice Mail” or “Hunt Group Night Service.”

Examples

The following example specifies a message to display when all agents are logged out of hunt group 3.

```
ephone-hunt 3 peer
pilot 4200
list 1001, 1002, 1003
display-logout All Agents Logged Out
hops 3
timeout 7, 10, 15
max-timeout 25
final 4500
```

dnd (voice register pool)

To enable the Do-Not-Disturb (DND) feature, use the **dnd-control** command in voice register pool configuration mode. To disable the DND, use the **no** form of this command.

dnd

no dnd

Syntax Description This command has no arguments or keywords.

Command Default DND is disabled

Command Modes Voice register pool configuration (config-register-pool)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)T	Cisco CME 3.4	This command was introduced.

Examples The following example shows how to enable DND:

```
Router(config)# voice register pool 1
Router(config-register-pool)# dnd
```

Related Commands	Command	Description
	dnd-control (voice register template)	Enables DND soft key in template to be assigned to SIP phones in Cisco Unified CME.

dnd feature-ring

To disable ringing on phone buttons configured for feature ring when the phone is in do-not-disturb (DND) mode, use the **dnd feature-ring** command in ephone configuration mode. To allow lines configured for feature ring to ring when the phone is in DND mode, use the **no** form of this command.

dnd feature-ring

no dnd feature-ring

Syntax Description This command has no arguments or keywords.

Command Default Incoming calls to buttons configured for feature ring do not ring in DND mode.

Command Modes Ephone configuration (config-ephone)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
	12.3(14)T	Cisco CME 3.3	This command was integrated into Cisco IOS Release 12.3(14)T.

Usage Guidelines This command applies only to phone lines that are configured for the feature-ring option with the **button f** command.

Note that the affirmative form of the command is enabled by default and feature-ring lines will not ring when the phone is in DND mode. To enable feature-ring lines to ring when the phone is in DND mode, use the **no dnd feature-ring** command.

Examples For the following example, when DND is active on ephone 1 and ephone 2, button 1 will ring, but button 2 will not.

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 1001
```

```
Router(config)# ephone-dn 2
Router(config-ephone-dn)# number 1002
```

```
Router(config)# ephone-dn 10
Router(config-ephone)# number 1110
Router(config-ephone)# preference 0
Router(config-ephone)# no huntstop
```

```
Router(config)# ephone-dn 11
Router(config-ephone)# number 1111
Router(config-ephone)# preference 1
Router(config-ephone)# no huntstop
```

```
Router(config)# ephone 1
Router(config-ephone)# button 1f1
Router(config-ephone)# button 2o10,11
Router(config-ephone)# no dnd feature-ring

Router(config-ephone-dn)# ephone 2
Router(config-ephone)# button 1f2
Router(config-ephone)# button 2o10,11
Router(config-ephone)# no dnd feature-ring
```

Related Commands

Command	Description
button	Associates ephone-dns with individual buttons on a Cisco IP phone and specifies ring behavior.

dnd-control (voice register template)

To enable the Do-Not-Disturb (DND) soft key on SIP phones, use the **dnd-control** command in voice register template configuration mode. To disable the DND soft key on a SIP phone, use the **no** form of this command.

dnd-control

no dnd-control

Syntax Description This command has no arguments or keywords.

Command Default DND soft key is enabled on SIP phones in Cisco Unified CME.

Command Modes Voice register template configuration (config-register-temp)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines This command enables a soft key for Do-Not-Disturb (DND) in the specified template which can then be applied to SIP phones. The DND soft key is enabled by default. To disable the DND soft key, use the **dnd** command. To apply a template to a SIP phone, use the template command in voice register pool configuration mode.

Examples The following example shows how to disable the DND soft key:

```
Router(config)# voice register template 1
Router(config-register-template)# dnd-control
```

Related Commands	Command	Description
	dnd (voice register pool)	Enables DND feature.

dn-webedit

To enable the adding of extensions (ephone-dns) through the Cisco Unified CME graphical user interface (GUI), use the **dn-webedit** command in telephony-service configuration mode. To disable this feature, use the **no** form of this command.

dn-webedit

no dn-webedit

Syntax Description This command has no arguments or keywords.

Command Default Extensions cannot be added through the Cisco Unified CME GUI.

Command Modes Telephony-service configuration (config-telephony)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.2(2)XT	Cisco ITS 2.0	This command was introduced.
	12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.

Usage Guidelines The **dn-webedit** command enables the adding of extensions through the web-based GUI. If the **dn-webedit** command is enabled, a customer administrator or a system administrator can modify and assign extensions associated with the Cisco Unified CME router. If this ability is disabled, extensions must be added using Cisco IOS commands.

If the set of extension numbers used by the router is part of a larger telephone network, limitations on modification might be needed to ensure network integrity. Disabling the **dn-webedit** command prevents an administrator from allocating phone numbers and prevents assignment of numbers that may already be used elsewhere in the network.

Examples The following example enables editing of directory numbers through the web-based GUI interface:

```
Router(config)# telephony-service
Router(config-telephony)# dn-webedit
```

Related Commands	Command	Description
	time-webedit	Enables time setting through the web interface.

dst (voice register global)

To set the time period for daylight saving time on SIP phones, use the **dst** command in voice register global configuration mode. To disable daylight saving time, use the **no** form of this command.

```
dst {start | stop} month [day day-of-month | week week-number day day-of-week] time
    hour:minutes}
```

```
no dst {start | stop}
```

Syntax Description

start	Sets beginning time for daylight saving time.
stop	Sets ending time for daylight saving time.
<i>month</i>	Abbreviated month. The following abbreviations are valid: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec .
day <i>day-of-month</i>	Date of the month. Range is 1 to 31.
week <i>week-number</i>	Number identifying the week of the month. Range is 1 to 4, or 8, where 8 represents the last week of the month.
day <i>day-of-week</i>	Abbreviated day of the week. The following abbreviations are valid: sun, mon, tue, wed, thu, fri, sat .
time <i>hour:minutes</i>	Beginning and ending time for daylight saving time, in HH:MM format using a 24-hour clock. The stop time must be greater than the start time. The value 24:00 is not valid. If you enter 00:00 for both start time and stop time, daylight saving time is enabled for the entire 24-hour period on the specified date.

Command Default

Default start time is first week of April, Sunday, 2:00 a.m and default stop time is last week of October, Sunday 2:00 a.m.

Command Modes

Voice register global configuration (config-register-global)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines

This command sets the stop and start times for daylight saving time if the **dst auto-adjust** command is configured.

Examples

The following example shows how to set automatic adjustment of daylight saving time:

```
Router(config)# voice register global
Router(config-register-global)# dst start Jan day 1 time 00:00
Router(config-register-global)# dst stop Mar day 31 time 23:99
```

Related Commands	Command	Description
	date-format (voice register global)	Sets the date display format on SIP phones in a Cisco CME system.
	dst auto-adjust (voice register global)	Enables automatic adjustment of daylight saving time on SIP phones.
	time-format (voice register global)	Selects a 12-hour clock or a 24-hour clock for the time display format on Cisco IP phones in a SIP CME system.
	timezone (voice register global)	Sets the time zone used for SIP phones in a Cisco CME system.

dst auto-adjust (voice register global)

To enable automatic adjustment of daylight saving time on SIP phones, use the **dst auto-adjust** command in voice register global configuration mode. To disable daylight saving time auto adjustment, use the **no** form of this command.

dst auto-adjust

no dst auto-adjust

Syntax Description

This command has no arguments or keywords.

Command Default

Automatic adjustment of daylight saving time on SIP phones is enabled.

Command Modes

Voice register global configuration (config-register-global)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines

Automatic adjustment for daylight saving time is enabled by default. To disable auto adjusting for DST, use the **no dst auto-adjust** command. To set the start and stop times for DST, use the **dst** command.

Examples

The following example shows how to disable the automatic adjustment for daylight saving time:

```
Router(config)# voice register global
Router(config-register-global)# no dst auto-adjust
```

Related Commands

Command	Description
date-format (voice register global)	Sets the date display format on SIP phones in a Cisco CME system.
dst (voice register global)	Sets the start and stop time if using daylight saving time on SIP phones.
time-format (voice register global)	Selects a 12-hour clock or a 24-hour clock for the time display format on Cisco IP phones in a SIP CME system.
timezone (voice register global)	Sets the time zone used for SIP phones in a Cisco CME system.

dtmf-relay (voice register pool)

To specify the list of DTMF relay methods that can be used to relay dual-tone multifrequency (DTMF) audio tones between Session Initiation Protocol (SIP) endpoints, use the **dtmf-relay** command in voice register pool configuration mode. To send the DTMF audio tones as part of an audio stream, use the **no** form of this command.

```
dtmf-relay {[cisco-rtp] [rtp-nte] [sip-notify]}
```

```
no dtmf-relay
```

Syntax Description	Command	Description
	cisco-rtp	Forwards DTMF audio tones by using Real-Time Transport Protocol (RTP) with a Cisco proprietary payload type. This keyword is supported only for dial peers that are created by incoming REGISTERS from a SIP gateway. It is not supported for dial peers that are created by a SIP Cisco IP phone.
	rtp-nte	Forwards DTMF audio tones by using Real-Time Transport Protocol (RTP) with a Named Telephone Event (NTE) payload.
	sip-notify	Forwards DTMF audio tones by using SIP-NOTIFY messages. This keyword is supported only for dial peers that are created by incoming REGISTERS from a SIP gateway. It is not supported for dial peers that are created by a SIP Cisco IP phone.

Command Default DTMF tones are disabled and sent in-band. That is, they remain in the audio stream.

Command Modes Voice register pool configuration (config-register-pool)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.3(4)T	Cisco SIP SRST 3.0	This command was introduced.
	12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was added to Cisco Unified CME.

Usage Guidelines During Cisco Unified Session Initiation Protocol (SIP) Survivable Remote Site Telephony (SRST) or Cisco Unified CME registration, a dial peer is created and that dial peer has a default DTMF relay of in-band.

This command allows you to change the default to a desired value. You must use one or more keywords when configuring this command.

DTMF audio tones are generated when you press a button on a Touch-Tone phone. The tones are compressed at one end of the call and when the digits are decompressed at the other end, there is a risk that they can become distorted. DTMF relay reliably transports the DTMF audio tones generated after call establishment out-of-band.

The SIP Notify method sends Notify messages bidirectionally between the originating and terminating gateways for a DTMF event during a call. If multiple DTMF relay mechanisms are enabled on a SIP dial peer and are negotiated successfully, the SIP Notify method takes precedence.

SIP Notify messages are advertised in an Invite message to the remote end only if the **dtmf-relay** command is set.

For SIP calls, the most appropriate methods to transport DTMF tones are RTP-NTE or SIP-NOTIFY.

**Note**

- The **cisco-rtp** keyword is a proprietary Cisco implementation. If the proprietary Cisco implementation is not supported, the DTMF relay feature does not function, and the gateway sends DTMF tones in-band.
- The **sip-notify** keyword is available only if the VoIP dial peer is configured for SIP.

Examples**Cisco Unified CME**

The following example shows how to enable the RTP-NTE and SIP-NOTIFY mechanisms for DTMF relay for SIP phone 4:

```
Router(config)# voice register pool 4
Router(config-register-pool)# dtmf-relay rtp-nte sip-notify
```

Cisco Unified SIP SRST

The following is sample output from the **show running-config** command that shows that voice register pool 1 has been set up to send DTMF tones:

```
voice register pool 1
  application SIP.app
  incoming called-number 308
  voice-class codec 1
  dtmf-relay rtp-nte
```

Related Commands

	Description
dtmf-relay (voice over IP)	Specifies how an H.323 or SIP gateway relays DTMF tones between telephony interfaces and an IP network.

