

comfort-noise

To generate background noise to fill silent gaps during calls if voice activity detection (VAD) is activated, use the **comfort-noise** command in voice-port configuration mode. To provide silence when the remote party is not speaking and VAD is enabled at the remote end of the connection, use the **no** form of this command.

comfort-noise

no comfort-noise

Syntax Description This command has no arguments or keywords.

Defaults Background noise is generated by default.

Command Modes Voice-port configuration

Command History	Release	Modification
	11.3(1)T	This command was introduced on the Cisco 3600 series.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T and was implemented on the Cisco 2600 series, the Cisco 7200 series, and the Cisco 7500 series using the extended echo canceller.

Usage Guidelines Use the **comfort-noise** command to generate background noise to fill silent gaps during calls if VAD is activated. If the **comfort-noise** command is not enabled, and VAD is enabled at the remote end of the connection, the user hears dead silence when the remote party is not speaking.

The configuration of the **comfort-noise** command affects only the silence generated at the local interface; it does not affect the use of VAD on either end of the connection or the silence generated at the remote end of the connection.



Note On the Cisco MC3810, this command cannot be disabled.

Examples The following example enables background noise on the Cisco 3600 series routers:

```
voice-port 1/0/0
 comfort-noise
```

Related Commands

Command	Description
vad (dial peer configuration)	Enables VAD for the calls using a particular dial peer.
vad (voice-port configuration)	Enables VAD for the calls using a particular voice port on the Cisco MC3810.

compand-type

To specify the companding standard used to convert between analog and digital signals in pulse code modulation (PCM) systems, use the **compand-type** command in voice-port configuration mode. To disable the compand type, use the **no** form of this command.

```
compand-type {u-law | a-law}
```

```
no compand-type {u-law | a-law}
```

Syntax Description

u-law	Specifies the North American U-law ITU-T PCM encoding standard.
a-law	Specifies the European a-law ITU-T PCM encoding standard.

Defaults

u-law (T1 digital)

a-law (E1 digital)

Command Modes

Voice-port configuration

Command History

Release	Modification
11.3(1)MA	This command was introduced on the Cisco MC3810.

Usage Guidelines

If you have a Cisco MC3810 or Cisco 3660 router, the **compand-type a-law** command must be configured on the analog ports only. The Cisco 2660, Cisco 3620, and Cisco 3640 routers do not require configuration of the **compand-type a-law** command, however, if you request a list of commands, the **compand-type a-law** command displays.



Note

On the Cisco 3600 series routers router, the U-law and a-law settings are configured using the **codec dial peer** configuration command.

Examples

The following example configures a-law encoding on voice port 1/1 on the Cisco MC3810 multiservice concentrator:

```
voice-port 1/1
compand-type a-law
```

Related Commands

Command	Description
codec (voice-port configuration)	Configures voice compression on the Cisco MC3810.

condition

To manipulate the signaling format bit-pattern for all voice signaling types, use the **condition** command in voice-port configuration mode. To turn off conditioning on the voice port, use the **no** form of this command.

```
condition { tx-a-bit | tx-b-bit | tx-c-bit | tx-d-bit } { rx-a-bit | rx-b-bit | rx-c-bit | rx-d-bit } { on | off | invert }
```

```
no condition { tx-a-bit | tx-b-bit | tx-c-bit | tx-d-bit } { rx-a-bit | rx-b-bit | rx-c-bit | rx-d-bit } { on | off | invert }
```

Syntax Description

tx-a-bit	Sends A bit.
tx-b-bit	Sends B bit.
tx-c-bit	Sends C bit.
tx-d-bit	Sends D bit.
rx-a-bit	Receives A bit.
rx-b-bit	Receives B bit.
rx-c-bit	Receives C bit.
rx-d-bit	Receives D bit.
on	Forces the bit state to be 1.
off	Forces the bit state to be 0.
invert	Inverts the bit state.

Defaults

The signaling format is not manipulated (for all sent or received A, B, C, and D bits)

Command Modes

Voice-port configuration

Command History

Release	Modification
11.3(1)MA	This command was introduced on the Cisco MC3810.
12.0(7)XK	This command was implemented on the Cisco 2600 series and 3600 series.
12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T.

Usage Guidelines

Use the **condition** command to manipulate the sent or received bit patterns to match expected patterns on a connected device. Be careful not to destroy the information content of the bit pattern. For example, forcing the A-bit on or off prevents Foreign Exchange Office (FXO) interfaces from being able to generate both an on-hook and off-hook state.

The **condition** command is applicable to digital voice ports only.

Examples

The following example manipulates the signaling format bit pattern on digital voice port 0:5 on a Cisco MC3810:

```
voice-port 0:5
 condition tx-a-bit invert
 condition rx-a-bit invert
```

The following example manipulates the signaling format bit pattern on voice port 1/0:0 on a Cisco 2600 or Cisco 3600 router:

```
voice-port 1/0:0
 condition tx-a-bit invert
 condition rx-a-bit invert
```

Related Commands

Command	Description
define	Defines the transmit and receive bits for North American E&M and E&M MELCAS voice signaling.
ignore	Configures the North American E&M or E&M MELCAS voice port to ignore specific receive bits.

connect (atm)

To define connections between T1 or E1 controller ports and the ATM interface, enter the **connect** command in global configuration mode. Use the **no** form of this command to restore the default values.

```
connect id atm slot/port-1 {name of PVC/SVC | vpi/vci} {T1 | E1} slot/port-2 TDM-group-number
```

```
no connect id atm slot/port-1 {name of PVC/SVC | vpi/vci} {T1 | E1} slot/port-2  
TDM-group-number
```

Syntax Description

<i>id</i>	A name for this connection.
atm	Specifies the ATM interface.
<i>slot/port-1</i>	The location of the ATM controller to be connected.
<i>name of PVC/SVC</i>	Specifies the permanent or switched virtual circuit.
<i>vpi/vci</i>	Specifies a virtual path identifier (VPI) and virtual channel identifier (VCI).
T1	Specifies a T1 port.
E1	Specifies an E1 port.
<i>slot/port-2</i>	The location of the T1 or E1 controller to be connected.
<i>TDM-group-number</i>	The number identifier of the time-division multiplexing (TDM) group associated with the T1 or E1 controller port and created by using the tdm-group command. Range is 0 to 23 for T1 and 0 to 30 for E1.

Defaults

No default behavior or values

Command Modes

Global configuration

Command History

Release	Modification
12.1(2)T	This command was introduced for ATM interfaces on the Cisco 2600 series and Cisco 3600 series.

Usage Guidelines

This command is used on Cisco 2600 and Cisco 3600 series routers to provide connections between T1/E1 and ATM interfaces. This command is used after all interfaces are configured.

Once TDM groups are created on two different physical ports, you can use the **connect** command to start the passage of data between the ports. If a crosspoint switch is provided in the advanced integration module (AIM) slot, the connections can extend between ports on different cards. Otherwise, the connection is restricted to ports on the same VWIC card.

The voice/WAN interface card (VWIC) can make a connection only if the number of time slots at the source and destination are the same. For the connection to be error free, the two ports must be driven by the same clock source; otherwise, slips occur.

Examples

The following example shows how the ATM permanent virtual circuit (PVC) and T1 TDM group are set up and then connected:

```
interface atm 1/0
  pvc pvc1 0/100 ces
  exit
controller T1 1/1
  tdm-group 3 timeslots 13-24 type e&m
  exit
connect tdm1 atm 1/0 pvc1 0/100 T1 1/1 3
```

Related Commands

Command	Description
tdm-group	Creates TDM groups that can be connected.

connect (drop-and-insert)

To define connections among T1 or E1 controller ports for drop-and-insert (also called TDM cross-connect), use the **connect** command in global configuration mode. To restore default values, use the **no** form of this command.

```
connect id {t1 | e1} slot/port-1 tdm-group-no-1 {t1 | e1} slot/port-2 tdm-group-no-2
```

```
no connect id {t1 | e1} slot/port-1 tdm-group-no-1 {t1 | e1} slot/port-2 tdm-group-no-2
```

Syntax Description

<i>id</i>	A name for this connection.
t1	Specifies a T1 port.
e1	Specifies an E1 port.
<i>slot/port-1</i>	The location of the first T1 or E1 controller to be connected. Range for <i>slot</i> and <i>port</i> is 0 and 1.
<i>tdm-group-no-1</i>	The number identifier of the time-division multiplexing (TDM) group associated with the first T1 or E1 controller port and created by using the tdm-group command. Range is from 0 to 23 for T1 and from 0 to 30 for E1.
<i>slot/port-2</i>	The location of the second T1 or E1 controller port to be connected. Range for <i>slot</i> is from 0 to 5, depending on the platform. Range for <i>port</i> is from 0 to 3, depending on the platform and the presence of a network module.
<i>tdm-group-no-2</i>	The number identifier of the time-division multiplexing (TDM) group associated with the second T1 or E1 controller and created by using the tdm-group command. Range is from 0 to 23 for T1 and from 0 to 30 for E1.

Defaults

There is no drop-and-insert connection between the ports

Command Modes

Global configuration

Command History

Release	Modification
12.0(5)XK	The command was introduced on the Cisco 2600 series and Cisco 3600 series.
12.0(7)T	This command was integrated into Cisco IOS Release 12.0(7)T.
12.1(1)T	The command was modified to accommodate two channel groups on a port for 1- and 2-port T1/E1 multiflex voice/WAN interface cards (VWICs) on the Cisco 3600 series.

Usage Guidelines

The **connect** command creates a named connect between two TDM groups associated with drop-and-insert ports on T1 or E1 interfaces where you have already defined the groups by using the **tdm-group** command.

Once TDM groups are created on two different physical ports, you can use the **connect** command to start the passage of data between the ports. If a crosspoint switch is provided in the AIM slot, the connections can extend between ports on different cards. Otherwise, the connection is restricted to ports on the same VWIC card.

The VWIC card can make a connection only if the number of time slots at the source and destination are the same. For the connection to be error-free, the two ports must be driven by the same clock source; otherwise, “slips” occur.

Examples

The following example shows a fractional T1 terminated on port 0 using time slots 1 through 8; a fractional T1 is terminated on port 1 using time slots 2 through 12; and time slots 13 through 20 from port 0 are connected to time slots 14 through 21 on port 1 by using the **connect** command:

```
controller t1 0/0
channel-group 1 timeslots 1-8
tdm-group 1 timeslots 13-20
exit
controller t1 0/1
channel-group 1 timeslots 2-12
tdm-group 2 timeslot 14-21
exit
connect exampleconnection t1 0/0 1 t1 0/1 2
```

Related Commands

Command	Description
show connect	Displays configuration information about drop-and-insert connections that have been configured on a router.
tdm-group	Configures a list of time slots for creating clear channel groups (pass-through) for TDM cross-connect.

connect (global)

This command, created for the Cisco MC3810-IGX Interworking feature in Cisco IOS Release 12.0(2)T, is not supported in Cisco IOS Release 12.2.

connect voice

This command, created for the Cisco MC3810-IGX Interworking feature in Cisco IOS Release 12.0(2)T, is not supported in Cisco IOS Release 12.2.

connection

To specify a connection mode for a voice port, use the **connection** command in voice-port configuration mode. To disable the selected connection mode, use the **no** form of this command.

connection { **plar** [**tier**] | **tie-line** | **plar-opx** } *digits* | **trunk** *digits* [**answer-mode**]

no connection { **plar** [**tier**] | **tie-line** | **plar-opx** } *digits* | **trunk** *digits* [**answer-mode**]

Syntax Description	
plar	Specifies a private line automatic ringdown (PLAR) connection. PLAR is an autodialing mechanism that permanently associates a voice interface with a far-end voice interface, allowing call completion to a specific telephone number or PBX without dialing. When the calling telephone goes off-hook, a predefined network dial peer is automatically matched, which sets up a call to the destination telephone or PBX.
tier	(Optional) Specifies the activation of the Private Line Automatic Ringdown for Trading Turrets feature. Using this feature: <ul style="list-style-type: none"> The calling number of an incoming call is matched to the preconfigured number: <ul style="list-style-type: none"> If the numbers match, the call is connected. If the numbers do not match, the call is rejected. The configured voice port can accept an incoming call when the voice port is already off hook.
tie-line	Specifies a connection that emulates a temporary tie-line trunk to a PBX. A tie-line connection is automatically set up for each call and torn down when the call ends.
plar-opx	Specifies a PLAR off-premises extension (OPX) connection. Using this option, the local voice port provides a local response before the remote voice port receives an answer. On Foreign Exchange Office (FXO) interfaces, the voice port does not answer until the remote side has answered.
<i>digits</i>	Specifies the destination telephone number. Valid entries are any series of digits that specify the E.164 telephone number.
trunk	Specifies a connection that emulates a permanent trunk connection to a PBX. A trunk connection remains permanent in the absence of any active calls.
answer-mode	(Optional) Specifies that the router should not attempt to initiate a trunk connection but should wait for an incoming call before establishing the trunk. Used only with the trunk keyword.

Defaults No connection mode is specified

Command Modes Voice-port configuration

Command History

Release	Modification
11.3(1)T	This command was introduced on the Cisco 3600 series.
11.3(1)MA1	This command was implemented on the Cisco MC3810, and the tie-line keyword was implemented on the Cisco MC3810.
11.3(1)MA5	The plar-opx keyword was implemented on the Cisco MC3810 as the plar-opx-ringrelay keyword. The keyword was shortened in a subsequent release.
12.0(2)T	This command was integrated into Cisco IOS Release 12.0(2)T.
12.0(3)XG	The trunk keyword was implemented on the Cisco MC3810. The trunk answer-mode keyword was added.
12.0(4)T	This command was integrated in Cisco IOS Release 12.0(4)T.
12.0(7)XK	This command was implemented on the Cisco 2600, Cisco 3600, and Cisco MC3810 platforms.
12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T.
12.2(15)ZJ	This command was integrated into Cisco IOS Release 12.2(15)ZJ and the typed keyword was added.
12.3(4)T	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use the **connection** command to specify a connection mode for a specific interface. For example, use the **connection plar** command to specify a PLAR interface. The string you configure for this command is used as the called number for all incoming calls over this connection. The destination peer is determined by the called number.

Use the **connection trunk** command to specify a permanent tie-line connection to a PBX. VoIP simulates a trunk connection by creating virtual trunk tie lines between PBXs connected to Cisco devices on each side of a VoIP connection.

In configuring virtual trunk connections in Voice over IP, the following restrictions apply:

- You can use the following voice port combinations:
 - Ear and mouth (E&M) to E&M (same type)
 - Foreign Exchange Station (FXS) to FXO
 - FXS to FXS (with no signaling)
- Do not perform number expansion on the destination pattern telephone numbers configured for trunk connection.
- Configure both end routers for trunk connections.
- The connected Cisco routers must be Cisco 2600 or Cisco 3600 series routers.



Note Because virtual trunk connections do not support number expansion, the destination patterns on each side of the trunk connection must match exactly.

To configure one of the devices in the trunk connection to act as slave and only receive calls, use the **answer-mode** option with the **connection trunk** command when configuring that device.

**Note**

When using the **connection trunk** command, you must enter the **shutdown** command followed by the **no shutdown** command on the voice port.

VoIP establishes the trunk connection immediately after it is configured. Both ports on either end of the connection are dedicated until you disable trunking for that connection. If for some reason the link between the two switching systems goes down, the virtual trunk reestablishes itself after the link comes back up.

Use the **connection tie-line** command when the dial plan requires that digits be added before any digits dialed by the PBX and that the combined set of digits be used to route the call onto the network. The operation is similar to the **connection plar** command operation, but in this case the tie-line port waits to collect digits from the PBX. The tie-line digits are automatically stripped by a terminating port.

If the **connection** command is not configured, the standard session application outputs a dial tone when the interface goes off-hook until enough digits are collected to match a dial peer and complete the call.

Examples

The following example shows PLAR selected as the connection mode on a Cisco 3600 series routers router, with a destination telephone number of 555-0100:

```
voice-port 1/0/0
  connection trunk 5550100
```

The following example shows the tie-line selected as the connection mode on a Cisco MC3810, with a destination telephone number of 555-0100:

```
voice-port 1/1
  connection tie-line 5550100
```

The following example specifies a PLAR off-premises extension connection on a Cisco 3600 series routers router, with a destination telephone number of 555-0100:

```
voice-port 1/0/0
  connection plar-opx 5550100
```

The following example shows configuration of a Cisco 3600 series routers router for a trunk connection and specifies that it establishes the trunk only when it receives an incoming call:

```
voice-port 1/0/0
  connection trunk 5550100 answer-mode
```

The following examples show configuration of the routers on both sides of a VoIP connection to support trunk connections.

Router A

```
voice-port 1/0/0
  connection trunk +15105550100
dial-peer voice 10 pots
  destination-pattern +13085550101
  port 1/0/0
dial-peer voice 100 voip
  session-target ipv4:172.20.10.10
  destination-pattern +15105550100
```

Router B

```
voice-port 1/0/0
  connection trunk +13085550100
```

```

dial-peer voice 20 pots
 destination-pattern +15105550101
 port 1/0/0
dial-peer voice 200 voip
 session-target ipv4:172.19.10.10
 destination-pattern +13085550100

```

Related Commands

Command	Description
destination-pattern	Specifies the prefix or the full E.164 telephone number for a dial peer.
dial peer voice	Enters dial peer configuration mode and specifies the voice encapsulation type.
session-protocol	Establishes a session protocol for calls between the local and remote routers via the packet network.
session-target	Configures a network-specific address for a dial peer.
voice-port	Enters voice-port configuration mode.

connection-timeout

To configure the time in seconds for which a connection is maintained after completion of a communication exchange, use the **connection-timeout** command in settlement configuration mode. To return to the default value, use the **no** form of this command.

connection-timeout *seconds*

no connection-timeout *seconds*

Syntax Description

<i>seconds</i>	Time, in seconds for which a connection is maintained after the communication exchange is completed. Range is from 0 to 86400; 0 means that the connection does not time out. The default is 3600 (1 hour).
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Defaults

3600 seconds (1 hour)

Command Modes

Settlement configuration

Command History

Release	Modification
12.0(4)XH1	This command was introduced on the Cisco 2600 series, Cisco 3600 series and Cisco AS5300.
12.0(7)T	This command was integrated into Cisco IOS Release 12.0(7)T.

Usage Guidelines

The router maintains the connection for the configured period in anticipation of future communication exchanges to the same server.

Examples

The following example shows a connection configured to be maintained for 3600 seconds after completion of a communications exchange:

```
settlement 0
  connection-timeout 3600
```

Related Commands

Command	Description
customer-id	Sets the customer identification.
device-id	Sets the device identification.
encryption	Specifies the encryption method.
max-connection	Sets the maximum simultaneous connections.
response-timeout	Sets the response timeout.
retry-delay	Sets the retry delay.
retry-limit	Sets the connection retry limit.

Command	Description
session-timeout	Sets the session timeout.
settlement	Enters settlement configuration mode.
show settlement	Displays the configuration for all settlement server transactions.
shutdown	Brings up or shuts down the settlement provider.
type	Specifies the provider type.
url	Specifies the Internet service provider address.

copy flash vfc

To copy a new version of VCWare from the Cisco AS5300 universal access server motherboard to voice feature card (VFC) Flash memory, use the **copy flash vfc** command in privileged EXEC mode.

copy flash vfc *slot-number*

Syntax Description	<i>slot-number</i>	Slot on the Cisco AS5300 in which the VFC is installed. Range is from 0 to 2.
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Command Modes	Privileged EXEC
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Command History	Release	Modification
	11.3 NA	This command was introduced on the Cisco AS5300.

Usage Guidelines Use the **copy flash vfc** command to use the standard copy user interface in order to copy a new version of VCWare from the Cisco AS5300 universal access server motherboard to VFC Flash memory. The VFC is a plug-in feature card for the Cisco AS5300 universal access server and has its own Flash memory storage for embedded firmware. For more information about VFCs, refer to *Installing Voice over IP Feature Cards in Cisco AS5300 Universal Gateways*.

Once the VCWare file has been copied, use the **unbundle vfc** command to uncompress and install VCWare.

Examples The following example copies a new version of VCWare from the Cisco AS5300 universal access server motherboard to VFC Flash memory:

```
Router# copy flash vfc 0
```

Related Commands	Command	Description
	copy tftp vfc	Copies a new version of VCWare from a TFTP server to VFC Flash memory.
	unbundle vfc	Unbundles the current running image of VCWare or DSPWare into separate files.

copy tftp vfc

To copy a new version of VCWare from a TFTP server to voice feature card (VFC) Flash memory, use the **copy tftp vfc** command in privileged EXEC mode.

copy tftp vfc *slot-number*

Syntax Description	<i>slot-number</i>	Slot on the Cisco AS5300 in which the VFC is installed. Range is from 0 to 2. There is no default.
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Defaults	No default behavior or values
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Command Modes	Privileged EXEC
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Command History	Release	Modification
	11.3 NA	This command was introduced on the Cisco AS5300.

Usage Guidelines Use the **copy tftp vfc** command to copy a new version of VCWare from a TFTP server to VFC Flash memory. The VFC is a plug-in feature card for the Cisco AS5300 universal access server and has its own Flash storage for embedded firmware. For more information about VFCs, refer to *Installing Voice Over IP Feature Cards in Cisco AS5300 Universal Gateways*.

Once the VCWare file has been copied, use the **unbundle vfc** command to uncompress and install VCWare.

Examples The following example copies a file from the TFTP server to VFC Flash memory:

```
Router# copy tftp vfc 0
```

Related Commands	Command	Description
	copy flash vfc	Copies a new version of VCWare from the Cisco AS5300 motherboard to VFC Flash memory.
	unbundle vfc	Unbundles the current running image of VCWare or DSPWare into separate files.

cor (cm-fallback)

To configure a class of restriction (COR) on the dial peers associated with directory numbers, use the **cor** command in call-manager-fallback configuration mode. To disable COR associated with directory numbers, use the **no** form of this command.

```
cor {incoming | outgoing} cor-list-name cor-list-number starting-number - ending-number
```

```
no cor cor-list-name cor-list-number
```

Syntax Description

incoming	COR list to be used by incoming dial peers.
outgoing	COR list to be used by outgoing dial peers.
<i>cor-list-name</i>	COR list name.
<i>cor-list-number</i>	Maximum number of COR lists that can be created is six: six for incoming and six for outgoing. The first six COR lists are applied to a range of directory numbers. The directory numbers that do not have a COR configuration are assigned to the default COR list, if a default COR list is created.
<i>starting-number-ending-number</i>	Directory number range; for example, 2000 - 2025.

Defaults

No default behavior or values

Command Modes

Call-manager-fallback configuration

Command History

Release	Modification
12.2(2)XT	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725, Cisco 3745, and Cisco MC3810-V3.
12.2(8)T1	This command was implemented on the Cisco 2600-XM and Cisco 2691.
12.2(11)T	This command was implemented on the Cisco 1760.

Usage Guidelines

The **cor** command sets the dial-peer COR parameter for dial peers associated with the directory numbers created during CallManager fallback. A list-based mechanism is provided to assign COR to specific sets of directory numbers during CallManager fallback. The COR functionality provides the ability to deny certain call attempts on the basis of incoming and outgoing class of restrictions provisioned on the dial peers. This functionality provides flexibility in network design, allows users to block calls (for example, calls to 900 numbers), and applies different restrictions to call attempts from different originators.

COR is used to specify which incoming dial peer can use which outgoing dial peer to make a call. Each dial peer can be provisioned with an incoming and an outgoing COR list.

**Note**

You can have up to six COR lists for the Survivable Remote Site Telephony configuration.

A default COR is assigned to the directory numbers that do not match any COR list number or number range. The assigned COR is invoked for the dial peers automatically created for each directory number during CallManager fallback registration.

Examples

The following example shows how to set the dial-peer COR parameter for incoming calls to the IP phone dial peers and directory numbers created during CallManager fallback:

```
Router(config)# call-manager-fallback
Router(config-cm-fallback)# cor incoming LockforPhoneC 1 5002 - 5010
```

The following example shows how to set the dial-peer COR parameter for outgoing calls to the IP phone dial peers and directory numbers created during CallManager fallback:

```
Router(config)# call-manager-fallback
Router(config-cm-fallback)# cor outgoing LockforPhoneC 1 5010 - 5020
```

Related Commands

Command	Description
call-manager-fallback	Enables SRS Telephony feature support and enters call-manager-fallback configuration mode.
corlist incoming	Specifies the COR list to be used when a specified dial peer acts as the incoming dial peer.
corlist outgoing	Specifies the COR list to be used by outgoing dial peers.
dial-peer cor list	Defines a COR list name.

cor (ephone-dn)

To configure a class of restriction (COR) on the dial peers associated with a directory number, use the **cor** command in ephone-dn configuration mode. To disable COR associated with a directory number, use the **no** form of this command.

```
cor {incoming | outgoing} cor-list-name
```

```
no cor cor-list-name
```

Syntax Description

incoming	COR list to be used by incoming dial peers.
outgoing	COR list to be used by outgoing dial peers.
<i>cor-list-name</i>	COR list name.

Defaults

No default behavior or values

Command Modes

Ephone-dn configuration

Command History

Release	Modification
12.2(2)XT	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series and Cisco 3600 series; and Cisco IAD2420 series IADs.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	This command was implemented on the Cisco 2600-XM and Cisco 2691.
12.2(11)T	This command was implemented on the Cisco 1760.

Usage Guidelines

The **cor** command sets the dial-peer class of restriction (COR) parameter for dial peers and the directory numbers created for the Cisco IP phones associated with the Cisco IOS Telephony Service router. The COR functionality provides the ability to deny certain call attempts on the basis of the incoming and outgoing class of restrictions provisioned on the dial peers. This functionality provides flexibility in network design, allows users to block calls (for example, calls to 900 numbers), and applies different restrictions to call attempts from different originators.

COR is used to specify which incoming dial peer can use which outgoing dial peer to make a call. Each dial peer can be provisioned with an incoming and an outgoing COR list.

Examples

The following example shows how to set COR parameter for incoming calls to dial-peer 1:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# cor incoming corlist1
```

Related Commands	Command	Description
	corlist incoming	Specifies the COR list to be used when a specified dial peer acts as the incoming dial peer.
	corlist outgoing	Specifies the COR list to be used by an outgoing dial peer.
	dial-peer cor list	Defines a COR list name.
	ephone-dn	Enters ephone-dn configuration mode.

corlist incoming

See the *Cisco IOS Dial Technologies Command Reference*, Release 12.3 for a description of the [corlist incoming](#) command.

corlist outgoing

See the *Cisco IOS Dial Technologies Command Reference*, Release 12.3 for a description of the [corlist outgoing](#) command.

cptone

To specify a regional analog voice-interface-related tone, ring, and cadence setting, use the **cptone** command in voice-port configuration mode. To disable the selected tone, use the **no** form of this command.

cptone {*locale*}

no cptone {*locale*}

Syntax Description

<i>locale</i>	An analog voice-interface-related default tone, ring, and cadence setting for a specified country (for ISDN PRI and E1 R2 signaling). Range is shown in Table 15 . Keywords for ISDN PRI signaling are shown in Table 16 . The Cisco 2600 and Cisco 3600 series and the Cisco MC3810 comply with the ISO 3166 country name standards, which use a two-letter prefix to represent a country.
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Defaults

The **northamerica** keyword is for the Cisco MC3810 for versions prior to Cisco IOS Release 12.0(4)T and for ISDN PRI.
The **us** keyword is for the Cisco MC3810 for Cisco IOS Release 12.0(4)T and higher and for E1 R2 signaling.

Command Modes

Voice-port configuration

Command History

Release	Modification
11.3(1)T	This command was introduced on the Cisco 3600 series.
11.3(1)MA	The full keyword names for the countries were first supported on the Cisco MC3810.
12.0(4)T	ISO 3166 two-letter country codes were added on the Cisco MC3810.
12.1(5)XM	The following keywords were added: eg, gh, jo, ke, lb, np, ng, pk, pa, sa, and zw .
12.2(2)T	This command was implemented on the Cisco 1750 and integrated into Cisco IOS Release 12.2(2)T.

Usage Guidelines

This command defines the detection of call-progress tones generated at the local interface. It does not affect any information passed to the remote end of a connection, and it does not define the detection of tones generated at the remote end of a connection. Use the **cptone** command to specify a regional analog voice interface-related default tone, ring, and cadence setting for a specified voice port.

This command affects only the tones generated at the local interface. It does not affect any information passed to the remote end of a connection or any tones generated at the remote end of a connection.

If your device is configured to support E1 R2 signaling, the E1 R2 signaling type (whether ITU, ITU variant, or local variant as defined by the **cas-custom** command) must match the appropriate pulse code modulation (PCM) encoding type as defined by the **cptone** command. For countries for which a **cptone** value has not yet been defined, you can try the following:

- If the country uses a-law E1 R2 signaling, use the **gb** value for the **cptone** command.
- If the country uses u-law E1 R2 signaling, use the **us** value for the **cptone** command.

[Table 15](#) lists valid entries for the *locale* argument.

Table 15 Valid Command Entries for locale Argument

Country	cptone locale Command Entry
Argentina	ar
Australia	au
Austria	at
Belgium	be
Brazil	br
Canada	ca
China	cn
Colombia	co
Czech Republic	cz
Denmark	dk
Egypt ¹	eg
Finland	fi
France	fr
Germany	de
Ghana ¹	gh
Great Britain	gb
Greece	gr
Hong Kong	hk
Hungary	hu
Iceland	is
India	in
Indonesia	id
Ireland	ie
Israel	il
Italy	it
Japan	jp
Jordan ¹	jo
Kenya ¹	ke
Korea Republic	kr

Table 15 *Valid Command Entries for locale Argument (continued)*

Country	cptune locale Command Entry
Lebanon ¹	lb
Luxembourg	lu
Malaysia	my
Mexico	mx
Nepal ¹	np
Netherlands	nl
New Zealand	nz
Nigeria ¹	ng
Norway	no
Pakistan ¹	pk
Panama ¹	pa
Peru	pe
Philippines	ph
Poland	pl
Portugal	pt
Russian Federation	ru
Saudi Arabia ¹	sa
Singapore	sg
Slovakia	sk
Slovenia	si
South Africa	za
Spain	es
Sweden	se
Switzerland	ch
Taiwan	tw
Thailand	th
Turkey	tr
United States	us
Venezuela	ve
Zimbabwe ¹	zw

1. Not applicable to Cisco MC3810 multiservice access concentrators with a prior Cisco IOS Release of 12.0(4)T.

Table 16 describes the argument values for ISDN PRI signaling.

Table 16 *cptone locale Argument Values for ISDN PRI Signaling*

Argument Value	Description
australia	Analog voice-interface-related default tone, ring, and cadence setting for Australia.
brazil	Analog voice-interface-related default tone, ring, and cadence setting for Brazil.
china	Analog voice-interface-related default tone, ring, and cadence setting for China.
finland	Analog voice-interface-related default tone, ring, and cadence setting for Finland.
france	Analog voice-interface-related default tone, ring, and cadence setting for France.
germany	Analog voice-interface-related default tone, ring, and cadence setting for Germany.
japan	Analog voice-interface-related default tone, ring, and cadence setting for Japan.
northamerica	Analog voice-interface-related default tone, ring, and cadence setting for North America.
sweden	Analog voice-interface-related default tone, ring, and cadence setting for Sweden.
unitedkingdom	Analog voice-interface-related default tone, ring, and cadence setting for the United Kingdom.

Examples

The following example configures United States as the call-progress tone locale on the Cisco 3600 series router, beginning in global configuration mode:

```
voice-port 1/0/0
cptone us
```

The following example configures Singapore as the call-progress tone locale on the Cisco MC3810, beginning in global configuration mode:

```
voice-port 1/1
cptone sg
```

The following example configures Japan as the call-progress tone locale:

```
voice-port 0:D
cptone japan
```

The following example configures Brazil as the call-progress tone locale on the Cisco AS5300:

```
voice-port 1:0
cptone BR
description Brasil Tone
```

The following example configures United States standard call-progress tones on voice port 1/0/0 on a Cisco 3600 series router, beginning in global configuration mode:

```
voice-port 1/0/0
cptone us
```

The following example configures Singapore standard call-progress tones on a Cisco MC3810, beginning in global configuration mode:

```
voice-port 1/1
  cptone sg
```

Related Commands

Command	Description
voice-port	Enters voice-port configuration mode.

create cnf-files

To build the XML configuration files that are required for Cisco IOS Telephony Service (ITS) V2.1 or a later version, use the **create cnf-files** command in telephony-service configuration mode.

create cnf-files

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Telephony-service configuration

Command History

Release	Modification
12.2(11)YT	This command was introduced.
12.2(15)T	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command to build XML configuration files for Cisco ITS V2.1 or later versions during initial system setup. The XML files created by this command are located in an in-RAM file system at system:/its.

Examples

The following example builds the necessary XML configuration files on the ITS router:

```
Router(config)# telephony-service
Router(config-telephony-service)# create cnf-files
```

Related Commands

Command	Description
telephony-service	Enables Cisco IOS Telephony Service and enters telephony-service configuration mode.

cross-connect

To cross-connect two groups of digital signal level 0s (DS0s) from two controllers on the Cisco MC3810 multiservice concentrator or to cross-connect the Universal I/O (UIO) serial port for pass-through traffic to a trunk controller, use the **cross-connect** command in global configuration mode. To remove the cross-connect function for the given controller, use the **no** form of this command.

Pass-Through Traffic Between Two Controllers

```
cross-connect id controller-1 tdm-group-no-1 controller-2 tdm-group-no-2
```

```
no cross-connect id controller-1 tdm-group-no-1 controller-2 tdm-group-no-2
```

Pass-Through Traffic from a UIO Serial Port to a Trunk Controller

```
cross-connect id interface-serial controller tdm-group-no
```

```
no cross-connect id interface-serial controller tdm-group-no
```



Note

The UIO serial port is either serial port 0 or 1.

Syntax Description

Pass-Through Traffic Between Two Controllers

<i>id</i>	Unique identification (ID) assigned to this cross-connection. Range is from 0 to 31.
<i>controller-1</i>	Type of the first controller (T1 0, T1 1, or E1)
<i>tdm-group-no-1</i>	Time-division multiplexing (TDM) group number assigned to the first controller.
<i>controller-2</i>	Type of the second controller (T1, E1 0, or E1 1).
<i>tdm-group-no-2</i>	TDM group number assigned to the second controller.

Pass-Through Traffic from a UIO Serial Port to a Trunk Controller

<i>id</i>	Unique ID assigned to this cross connection.
<i>interface-serial</i>	Number of the serial port, Range is from 0 to 1.
<i>controller</i>	Type of the controller. Enter one of the following: T1 0, T1 1, E1 0, or E1 1.
<i>tdm-group-no</i>	TDM group number assigned to the controller.

Defaults

No default behavior or values

Command Modes

Global configuration

Command History

Release	Modification
11.3(1)MA	This command was introduced on the Cisco MC3810.

Usage Guidelines

This command applies to Voice over Frame Relay and Voice over ATM on the Cisco MC3810.

Examples

The following example configures a pass-through cross-connect from serial port 0 to controller T1 1 on TDM group 20:

```
cross-connect 10 serial0 T1 1 20
```

Related Commands

Command	Description
supervisory disconnect	Configures a list of time slots for creating clear channel groups (pass-through) for TDM cross-connect.

customer-id

To identify a carrier or Internet service provider (ISP) with a settlement provider, enter the **customer-id** command in settlement configuration mode. To reset the default value of this command, use the **no** form of this command.

customer-id *number*

no customer-id *number*

Syntax Description	<i>number</i>	Customer ID number as provided by the settlement server. Range is from 0 to 2147483647.
---------------------------	---------------	---

Defaults The default customer ID is 0

Command Modes Settlement configuration

Command History	Release	Modification
	12.0(4)XH1	This command was introduced on the Cisco 2600, Cisco 3600 series, and Cisco AS5300.
	12.0(7)T	This command was integrated into Cisco IOS Release 12.0(7)T.

Usage Guidelines It is optional to identify a carrier or ISP with a settlement provider.

Examples The following example identifies a carrier or service provider with the ID number of 1000:

```
settlement 0
  custom id 1000
```

Related Commands	Command	Description
	device-id	Sets the device identification.
	encryption	Specifies the encryption method.
	max-connection	Sets the maximum number of simultaneous connections.
	response-timeout	Sets the response timeout.
	retry-delay	Sets the retry delay.
	retry-limit	Sets the connection retry limit.
	session-timeout	Sets the session timeout.
	settlement	Enters the settlement configuration mode.
	show settlement	Displays the configuration for all settlement server transactions.

Command	Description
shutdown	Shuts down the settlement provider.
type	Specifies the provider type.
url	Specifies the Internet service provider address.

