# mode (ATM/T1/E1 controller)

To set the DSL controller into ATM mode and create an ATM interface or to set the T1 or E1 controller into T1 or E1 mode and create a logical T1/E1 controller, use the **mode** command in controller configuration mode. To disable the current mode and prepare to change modes, use the **no** form of this command.

**Cisco 1800, Cisco 2800, Cisco 3700, Cisco 3800 Series**

> **mode atm**

> **no mode atm**

**Cisco 1700 Series, Cisco 2600XM Platform,**

> **mode {atm | t1 | e1}**

> **no mode {atm | t1 | e1}**

**Cisco IAD2430**

> **mode {atm [aim** *aim-slot*] **| cas | t1 | e1}**

> **no mode {atm [aim** *aim-slot*] **| cas | t1 | e1}**

| Syntax Description | | |
|---|---|---|
| | **atm** | Sets the controller into ATM mode and creates an ATM interface (ATM 0). When ATM mode is enabled, no channel groups, DS0 groups, PRI groups, or time-division multiplexing (TDM) groups are allowed, because ATM occupies all the DS0s on the T1/E1 trunk. |
| | | When you set the controller to ATM mode, the controller framing is automatically set to extended super frame (ESF) for T1 or cyclic redundancy check type 4 (CRC4) for E1. The line code is automatically set to binary 8-zero substitution (B8ZS) for T1 or high-density bipolar C (HDBC) for E1. When you remove ATM mode by entering the **no mode atm** command, ATM interface 0 is deleted. |
| | | **Note** The **mode atm** command without the **aim** keyword uses software to perform ATM segmentation and reassembly (SAR). This is supported on Cisco 2600 series WIC slots only; it is not supported on network module slots. |
| | **aim** | (Optional) The configuration on this controller uses the Advanced Integration Module (AIM) in the specified slot for ATM SAR. The **aim** keyword does not apply to the Cisco IAD2430 series IAD. |
| | *aim-slot* | (Optional) AIM slot number on the router chassis: <br> • Cisco 2600 series—0. <br> • Cisco 3660—0 or 1. |

| cas | (Cisco 2600 series WIC slots only) Channel-associated signaling (CAS) mode. The T1 or E1 in this WIC slot is mapped to support T1 or E1 voice (that is, it is configured in a DS0 group or a PRI group). |
| | CAS mode is supported on both controller 0 and controller 1. |
| | On the Cisco IAD2430 series IAD, CAS mode is not supported. |
| t1 | Sets the controller into T1 mode and creates a T1 interface. |
| | When you set the controller to T1 mode, the controller framing is automatically set to ESF for T1. The line code is automatically set to B8ZS for T1. |
| e1 | Sets the controller into E1 mode and creates an E1 interface. |
| | When you set the controller to E1 mode, the controller framing is automatically set to CRC4 for E1. The line code is automatically set to HDB3 for E1. |

**Command Default**   The controller mode is disabled.

**Command Modes**   Controller configuration

**Command History**

| Release | Modification |
|---|---|
| 11.3 MA | This command was introduced on the Cisco MC3810. |
| 12.1(5)XM | Support for this command was extended to the merged SGCP/MGCP software. |
| 12.2(2)T | This command was integrated into Cisco IOS Release 12.2(2)T. |
| 12.2(8)T | This command was integrated into Cisco IOS Release 12.2(8)T for the Cisco IAD2420 IADs. |
| 12.2(2)XB | Support was extended to the Cisco 2600 series and Cisco 3660. The keyword **aim** and the argument *aim-slot* were added. The parenthetical modifier for the command was changed from "Voice over ATM" to "T1/E1 controller." |
| 12.2(15)T | This command was implemented on the Cisco 2691 and the Cisco 3700 series. |
| 12.3(4)XD | This command was integrated into Cisco IOS Release 12.3(4)XD on Cisco 2600 series and Cisco 3700 series routers to configure DSL Frame mode and to add T1/E1 Framed support. |
| 12.3(4)XG | This command was integrated into Cisco IOS Release 12.3(4)XG on the Cisco 1700 series routers. |
| 12.3(7)T | This command was integrated into Cisco IOS Release 12.3(7)T on Cisco 2600 series and Cisco 3700 series routers. |
| 12.3(11)T | This command was implemented on Cisco 2800 and Cisco 3800 series routers. |
| 12.3(14)T | This command was implemented on Cisco 1800 series routers. |

**Usage Guidelines**     When a DSL controller is configured in ATM mode, the mode must be configured identically on both the CO and CPE sides. Both sides must be set to ATM mode.

**Note**     If using the **no mode atm** command to leave ATM mode, the router must be rebooted immediately to clear the mode.

When configuring a DSL controller in T1 or E1 mode, the mode must be configured identically on the CPE and CO sides.

**Examples**     **ATM Mode Example**

The following example configures ATM mode on the DSL controller.

```
Router(config)# controller dsl 3/0
Router(config-controller)# mode atm
```

**T1 Mode Example**

The following example configures T1 mode on the DSL controller.

```
Router(config)# controller dsl 3/0
Router(config-controller)# mode t1
```

**Related Commands**

| Command | Description |
| --- | --- |
| channel-group | Configures a list of time slots for voice channels on controller T1 0 or E1 0. |
| tdm-group | Configures a list of time slots for creating clear channel groups (pass-through) for time-division multiplexing (TDM) cross-connect. |

# mode (T1/E1 controller)

To set the T1 or E1 controller into asynchronous transfer mode (ATM) and create an ATM interface, to set the T1 or E1 controller into T1 or E1 mode and create a logical T1 or E1 controller, or to set the T1 or E1 controller into channel-associated signaling (CAS) mode, use the **mode** command in controller configuration mode. To disable the current mode and prepare to change modes, use the **no** form of this command.

**mode** {**atm** [**aim** *aim-slot*] | **cas** | **t1** | **e1**}

**no mode** {**atm** [**aim** *aim-slot*] | **cas** | **t1** | **e1**}

| Syntax Description | | |
|---|---|---|
| **atm** | Sets the controller into ATM mode and creates an ATM interface (ATM 0). When ATM mode is enabled, no channel groups, DS0 groups, PRI groups, or time-division multiplexing (TDM) groups are allowed, because ATM occupies all the DS0s on the T1/E1 trunk. | |
| | When you set the controller to ATM mode, the controller framing is automatically set to extended super frame (ESF) for T1 or cyclic redundancy check type 4 (CRC4) for E1. The line code is automatically set to binary 8-zero substitution (B8ZS) for T1 or high-density bipolar C (HDB3) for E1. When you remove ATM mode by entering the **no mode atm** command, ATM interface 0 is deleted. | |
| | On the Cisco MC3810, ATM mode is supported only on controller 0 (T1 or E1 0). | |
| | **Note** The **mode atm** command without the **aim** keyword uses software to perform ATM segmentation and reassembly (SAR). This is supported on Cisco 2600 series WIC slots only and is not supported on network module slots. | |
| **aim** | (Optional) The configuration on this controller uses the Advanced Integration Module (AIM) in the specified slot for ATM SAR. The **aim** keyword does not apply to the Cisco MC3810 and the Cisco IAD2420 series IAD. | |
| *aim-slot* | (Optional) AIM slot number on the router chassis. For the Cisco 2600 series, the AIM slot number is 0; for the Cisco 3660, the AIM slot number is 0 or 1. | |
| **cas** | (CAS mode on Cisco 2600 series WIC slots only) The T1 or E1 in this WIC slot is mapped to support T1 or E1 voice (it is configured in a DS0 group or a PRI group). | |
| | CAS mode is supported on both controller 0 and controller 1. | |

| | |
|---|---|
| **t1** | (Cisco 2600XM series using the G.SHDSL WIC only) Sets the controller into T1 mode and creates a T1 interface. |
| | When you set the controller to T1 mode, the controller framing is automatically set to ESF for T1. The line code is automatically set to B8ZS for T1. |
| **e1** | (Cisco 2600XM series using the G.SHDSL WIC only) Sets the controller into E1 mode and creates an E1 interface. |
| | When you set the controller to E1 mode, the controller framing is automatically set to CRC4 for E1. The line code is automatically set to HDB3 for E1. |

**Command Default**   No controller mode is configured.

**Command Modes**   Controller configuration

**Command History**

| Release | Modification |
|---|---|
| 11.3 MA | This command was introduced on the Cisco MC3810. |
| 12.1(5)XM | Support for this command was extended to Simple Gateway Control Protocol (SGCP) and Media Gateway Control Protocol (MGCP). |
| 12.2(2)T | This command was integrated into Cisco IOS Release 12.2(2)T and implemented on the Cisco 7200 series. |
| 12.2(2)XB | Support was extended to the Cisco 2600 series and Cisco 3660. The **aim** keyword and the *aim-slot* argument were added. The parenthetical modifier for the command was changed from "Voice over ATM" to "T1/E1 controller." |
| 12.2(8)T | This command was implemented on the Cisco IAD2420 series. |
| 12.2(11)T | This command was implemented on the Cisco AS5300 and Cisco AS5850. |
| 12.2(15)T | This command was implemented on the Cisco 2691 and the Cisco 3700 series. |
| 12.3(4)XD | Support was extended on Cisco 2600 series and Cisco 3700 series routers to configure DSL Frame mode and to add T1/E1 Framed support. |
| 12.3(7)T | The support that was added in Cisco IOS Release 12.3(4)XD was integrated into Cisco IOS Release 12.3(7)T. |

**Usage Guidelines**   This command has the following platform-specific usage guidelines:

- Cisco 2600 series, Cisco 3660 routers, or Cisco 3700 series that use an AIM for ATM processing must use the **mode atm aim** *aim-slot* command.

- Cisco 2600 series routers that use an AIM for DSP processing and specify DS0 groups must use the **mode cas** command if they are using WIC slots for voice. This command does not apply if network modules are being used.

- Cisco 3660 routers or Cisco 3700 series that use an AIM only for DSP resources should not use this command.

- On Cisco 2600 series routers that use WIC slots for voice, the **mode atm** command without the **aim** keyword specifies software ATM segmentation and reassembly. When the **aim** keyword is used with the **mode atm** command, the AIM performs ATM segmentation and reassembly.

- Cisco MC3810 routers cannot use the **aim** keyword.

- Cisco MC3810 routers with digital voice modules (DVMs) use some DS0s exclusively for different signaling modes. The DS0 channels have the following limitations when mixing different applications (such as voice and data) on the same network trunk:

  – On E1 controllers, DS0 16 is used exclusively for either CAS or common channel signaling (CCS), depending on which mode is configured.

  – On T1 controllers, DS0 24 is used exclusively for CCS.

- Cisco MC3810—When no mode is selected, channel groups and clear channels (data mode) can be created using the **channel group** and **tdm-group** commands, respectively.

- Cisco MC3810 is not supported in the AIM-ATM, AIM-VOICE-30, and AIM-ATM-VOICE-30 on the Cisco 2600 Series, Cisco 3660, and Cisco 3700 Series feature.

- On Cisco 2600 series and Cisco 3700 series routers when configuring a DSL controller in ATM mode, the mode must be set to the same mode on both the CO and CPE sides. Both sides must be set to ATM mode.

  – If the **no mode atm** command is used to leave ATM mode, the router must be rebooted immediately to clear the mode.

- On Cisco 2600 series and Cisco 3700 series routers when configuring a DSL controller in T1 or E1 mode, the mode must be configured identically on the CO and CPE sides.

**Examples**

The following example configures ATM mode on controller T1 0. This step is required for Voice over ATM.

```
Router(config)# controller T1 0
Router(config-controller)# mode atm
```

The following example configures ATM mode on controller T1 1/ 0 on a Cisco 2600 series router using an AIM in slot 0 for ATM segmentation and reassembly:

```
Router(config)# controller t1 1/0
Router(config-controller)# mode atm aim 0
```

The following example configures CAS mode on controller T1 1 on a Cisco 2600 series router:

```
Router(config)# controller T1 1
Router(config-controller)# mode cas
```

The following example configures ATM mode on the DSL controller.

```
Router(config)# controller dsl 3/0
Router(config-controller)# mode atm
```

The following example configures T1 mode on the DSL controller.

```
Router(config)# controller dsl 3/0
Router(config-controller)# mode t1
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **channel-group** | Defines the time slots for voice channels on controller T1 0 or E1 0. |
| **tdm-group** | Configures a list of time slots for creating clear channel groups (pass-through) for TDM cross-connect. |

# mode bles

To set Broadband Loop Emulation Services (BLES) mode to independent or slave mode, use the **mode bles** command in dial peer configuration mode. To disable BLES mode, use the **no** form of this command.

**mode bles** [**slave**]

**no mode bles**

**Syntax Description**

| | |
|---|---|
| **slave** | (Optional) Acts in slave mode. |

**Command Default**  The default mode for this command is independent mode. Using the **slave** keyword sets the mode to slave mode.

**Command Modes**  Dial peer configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the Cisco IAD2420 series. |

**Usage Guidelines**  This command activates BLES mode. BLES mode activates the dynamic call admission control (CAC) resource allocation and implicit channel activation and deactivation. Use the **mode bles** command to activate independent mode and the **mode bles slave** command to activate slave mode.

**Examples**  The following example configures BLES mode:

```
voice service voatm
session protocol aal2
mode bles
```

The following example configures slave mode in BLES mode:

```
voice service voatm
session protocol aal2
mode bles slave
```

**Related Commands**

| Command | Description |
|---|---|
| **mode atm** | Places the controller into ATM mode and creates an ATM interface (ATM 0). |
| **mode cas** | Places the controller into CAS mode, which allows you to create channel groups, CAS groups, and clear channels (both data and CAS modes). |

# mode border-element

To enable the set of commands used in border-element configuration on the Cisco 2900 and Cisco 3900 series platforms, use the **mode border-element** command in voice service configuration mode. To disable the set of commands used in border-element configuration, use the **no** form of this command.

> **mode border-element**

> **no mode border-element**

**Syntax Description**    This command has no arguments or keywords.

**Command Default**    The **mode border-element** command is disabled by default, so the commands specific to border-element configuration are unavailable on the Cisco 2900 and Cisco 3900 series platforms.

**Command Modes**    Voice service configuration (conf-voi-serv)

**Command History**

| Release | Modification |
|---------|--------------|
| 15.0(1)M | This command was introduced. |

**Usage Guidelines**    Use this command to enable the commands used in border-element configuration on Cisco 2900 and Cisco 3900 series platforms with a universal feature set. These commands are part of the **media** command. For more information about these commands, see the **media** command in the *Cisco IOS Voice Command Reference.*

If the **mode border-element** command is not entered, border-element-related commands are not available for Cisco Unified Border Element voice connections on the Cisco 2900 and Cisco 3900 series platforms with a universal feature set. The **mode border-element** command is not available on any other platforms.

For the **mode border-element** or the **no mode border-element** command to take effect, you need to save the running-config file and reload the router after you enter the command. The command-line interface (CLI) displays the following reminder after the command is entered:

```
You need to save and reload the router for this configuration change to be effective.
```

If you do not reload the router, the **mode border-element** or **no mode border-element** command does not take effect, and the availability of the commands used in border-element configuration is not affected.

**Note**    The **show running-config** command displays the **mode border-element** or **no mode border-element** command in its output, even if a reload has not been done and either command is not in effect.

**Exampless**    The following example shows how to configure mode border-element and media-monitoring capability for a maximum of 200 Cisco Unified Border Element calls:

```
Router(config)# voice service voip
Router(conf-voi-serv)# mode border-element
Router(conf-voi-serv)# media monitoring 200
```

The following example shows how to configure the **media transcoder** command for high density on all VoIP calls:

```
Router(config)# voice service voip
Router(conf-voi-serv)# mode border-element
Router(conf-voi-serv)# media transcoder high-density
```

The following example shows how to configure the mode border-element and media flow-around for all VoIP calls:

```
Router(config)# voice service voip
Router(conf-voi-serv)# mode border-element
Router(config-voi-serv) media flow-around
```

**Related Commands**

| Command | Description |
|---|---|
| **codec (voice port)** | Specifies voice compression. |
| **codec complexity** | Specifies call density and codec complexity based on the codec used. |
| **media** | Enables media packets to pass directly between the endpoints without the intervention of the IP-to-IP gateway and enables the incoming and outgoing IP-IP call gain/loss feature for audio call scoring on either the incoming dial peer or the outgoing dial peer. |
| **show dial peer voice** | Displays the codec setting for dial peers. |
| **show running-config** | Displays the contents of the currently running configuration file on the router. |

# mode ccs

To configure the T1/E1 controller to support common channel signaling (CCS) cross-connect or CCS frame forwarding, use the **mode ccs** command in global configuration mode. To disable support for CCS cross-connect or CCS frame forwarding on the controller, use the **no** form of this command.

**mode ccs** {**cross-connect** | **frame-forwarding**}

**no mode ccs** {**cross-connect** | **frame-forwarding**}

| Syntax Description | | |
|---|---|
| **cross-connect** | Enables CCS cross-connect on the controller. |
| **frame-forwarding** | Enables CCS frame forwarding on the controller. |

**Command Default**  No CCS mode is configured

**Command Modes**  Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(2)T | This command was introduced on the Cisco MC3810. |
| 12.1(2)XH | This command was implemented on the Cisco 2600 series and Cisco 3600 series. |
| 12.1(3)T | This command was integrated into Cisco IOS Release 12.1(3)T. |

**Usage Guidelines**  On Cisco 2600 Series routers and Cisco 2600XM Series routers with the AIM-ATM, AIM-VOICE-30 or AIM-ATM-VOICE-30 module installed, the channel group configuration must be removed before the **no mode ccs frame-forwarding** command is entered. This restriction does not apply to the Cisco 3600 Series routers or the Cisco 3700 Series routers.

**Examples**  To enable CCS cross-connect on controller T1 1, enter the following commands:

```
controller T1 1
 mode ccs cross-connect
```

To enable CCS frame forwarding on controller T1 1, enter the following commands:

```
controller T1 1
 mode ccs frame-forwarding
```

**Related Commands**

| Command | Description |
|---|---|
| **ccs connect** | Configures a CCS connection on an interface configured to support CCS frame forwarding. |

# modem passthrough (dial peer)

To enable modem pass-through over VoIP for a specific dial peer, use the **modem passthrough** command in dial peer configuration mode. To disable modem pass-through for a specific dial peer, use the **no** form of this command.

> **modem passthrough** {**system** | **nse** [**payload-type** *number*] **codec** {**g711ulaw** | **g711alaw**} [**redundancy**]}

> **no modem passthrough**

**Syntax Description**

| | |
|---|---|
| **system** | Defaults to the global configuration. |
| **nse** | Specifies that named signaling events (NSEs) are used to communicate codec switchover between gateways. |
| **payload-type** *number* | (Optional) NSE payload type. Range varies by platform, but is from 96 to 119 on most platforms. For details, refer to command-line interface (CLI) help. Default is 100. |
| **codec** | Codec selections for upspeeding. |
| **g711ulaw** | Codec G.711 u-law 64000 bits per second for T1. |
| **g711alaw** | Codec G.711 a-law 64000 bits per second for E1. |
| **redundancy** | (Optional) Enables a single repetition of packets (using RFC 2198) to improve reliability by protecting against packet loss. |

**Defaults**

**payload-type** *number*:100

**Command Modes**

Dial peer configuration

**Command History**

| Release | Modification |
|---|---|
| 12.1(3)T | This command was introduced on the Cisco AS5300. |
| 12.2(11)T | This command was implemented on the following platforms: Cisco 2600 series, Cisco 3600 series, Cisco 3700 series, Cisco AS5350, Cisco AS5400, and Cisco AS5850. |

**Usage Guidelines**

Use this command to enable fax pass-through over VoIP individually for a single dial peer. Use the same values for all options on originating and terminating gateways.

Fax pass-through occurs when incoming T.30 fax data is not demodulated or compressed for its transit through the packet network. On detection of a fax tone on an established VoIP call, the gateways switch into fax pass-through mode by suspending the voice codec and configuration and loading the pass-through parameters for the duration of the fax session. The switchover of codec is known as upspeeding, and it changes the bandwidth needed for the call to the equivalent of G.711.

The **system** keyword overrides the configuration for the dial peer and directs that the values from the global configuration are to be used for this dial peer. When the **system** keyword is used, the following parameters are not available: **nse**, **payload-type**, **codec**, and **redundancy**.

The **modem passthrough (voice service)** command can be used to set pass-through options globally on all dial peers at one time. If the **modem passthrough (voice service)** command is used to set pass-through options for all dial peers and the **modem passthrough (dial peer)** command is used on a specific dial peer, the dial peer configuration takes precedence over the global configuration for that dial peer.

**Examples**

The following example configures fax pass-through over VoIP for a specific dial peer:

```
dial-peer voice 25 voip
 modem passthrough nse codec g711ulaw redundancy
```

**Related Commands**

| Command | Description |
|---|---|
| **dial-peer voice** | Enters dial-peer configuration mode. |
| **modem passthrough (voice service)** | Enables fax or modem pass-through over VoIP globally for all dial peers. |

# modem passthrough (voice-service)

To enable fax or modem pass-through over VoIP globally for all dial peers, use the **modem passthrough** command in voice-service configuration mode. To disable fax or modem pass-through, use the **no** form of this command.

**Cisco 2600 Series, Cisco 3600 Series, Cisco 3700 Series, Cisco AS5300**

> **modem passthrough nse** [**payload-type** *number*] **codec** {**g711ulaw** | **g711alaw**} [**redundancy** [**maximum-sessions** *sessions*]]

> **no modem passthrough**

**Cisco AS5350, Cisco AS5400, Cisco AS5850, Cisco AS5350XM, Cisco AS5400XM, Cisco VGD 1T3**

> **modem passthrough** {**nse** | **protocol**} [**payload-type** *number*] **codec** {**g711ulaw** | **g711alaw**} [**redundancy** [**maximum-sessions** *sessions*] [**sample-duration** [**10** | **20**]]]

> **no modem passthrough**

| Syntax Description | | |
|---|---|
| **nse** | Named signaling events (NSEs) are used to communicate codec switchover between gateways. |
| **payload-type** *number* | (Optional) NSE payload type. Range varies, but is from 96 to 119 on most platforms. For details, see the command-line interface (CLI) help. Default is 100. |
| **codec** | Codec selections for upspeed. |
| **g711ulaw** | Codec G.711 mu-law, 64000 bits per second for T1. |
| **g711alaw** | Codec G.711 A-law, 64000 bits per second for E1. |
| **redundancy** | (Optional) A single repetition of packets (using RFC 2198) to improve reliability by protecting against packet loss. |
| **maximum-sessions** *sessions* | (Optional) Maximum number of simultaneous pass-through sessions. Ranges and defaults vary by platform. For details, see the CLI help. |
| **sample-duration** | (Optional) Time, in milliseconds, of the largest Real-time Transport Protocol (RTP) packet when packet redundancy is active. Keywords vary by platform, but are either **10** or **20**. Default is 10. |
| **protocol** | Session Initiation Protocol (SIP)/H.323 protocol is used to signal modem pass-through. |

**Command Default**  The command is disabled, so no fax or modem pass-through occurs.

**Command Modes**  Voice-service configuration (conf-voi-serv)

| Command History | Release | Modification |
| --- | --- | --- |
| | 12.1(3)T | This command was introduced on the Cisco AS5300. |
| | 12.2(11)T | This command was implemented on the following platforms: Cisco 2600 series, Cisco 3600 series, Cisco 3700 series, Cisco AS5350, Cisco AS5400, and Cisco AS5850. The **sample-duration** keyword was added. |
| | 12.4(24)T | This command was implemented on the following platforms: Cisco AS5350XM, Cisco AS5400XM, and Cisco VGD 1T3. The **protocol** keyword was added. |

**Usage Guidelines**   Use this command to enable fax or modem pass-through over VoIP globally for all dial peers. Use the same values for all options on originating and terminating gateways.

In Cisco IOS Release 12.4(24)T, the **modem passthrough protocol** command is supported only on SIP signaling.

> **Note**   The **modem passthrough protocol** and **fax protocol** commands cannot be configured at the same time. If you enter either one of these commands when the other is already configured, the command-line interface returns an error message.
>
> The error message serves as a confirmation notice because the **modem passthrough protocol** command is internally treated the same as the **fax protocol passthrough** command by the Cisco IOS software. For example, no other mode of fax protocol (for example, fax protocol T.38) can operate if the **modem passthrough protocol** command is configured.

> **Note**   Even though the **modem passthrough protocol** and **fax protocol passthrough** commands are treated the same internally, be aware that if you change the configuration from the **modem passthrough protocol** command to the **modem passthrough nse** command, the configured **fax protocol passthrough** command is not automatically reset to the default. If default settings are required for the **fax protocol** command, you have to specifically configure the **fax protocol** command.

Fax pass-through occurs when incoming T.30 fax data is not demodulated or compressed for its transit through the packet network. On detection of a fax tone on an established VoIP call, the gateways switch into fax pass-through mode by suspending the voice codec and configuration and loading the pass-through parameters for the duration of the fax session. The switchover of codec is known as upspeeding, and it changes the bandwidth needed for the call to the equivalent of G.711.

When using the **voice service voip** and **modem passthrough nse** commands on a terminating gateway to globally set up fax or modem pass-through with NSEs, you must also ensure that each incoming call will be associated with a VoIP dial peer to retrieve the global fax or modem configuration. You associate calls with dial peers by using the **incoming called-number** command to specify a sequence of digits that incoming calls can match. You can ensure that all calls will match at least one dial peer by using the following commands:

```
Router(config)# dial-peer voice tag voip
Router(config-dial-peer)# incoming called-number .
```

The **modem passthrough (dial peer)** command can be used to set pass-through options on individual dial peers. If the **modem passthrough (voice-service)** command is used to set pass-through options for all dial peers and the **modem passthrough (dial peer)** command is used on a specific dial peer, the dial-peer configuration takes precedence over the global configuration for that specific dial peer.

**Examples**      The following example configures modem pass-through for NSE payload type 101 using the
G.711 mu-law codec:

```
voice service voip
 modem passthrough nse payload-type 101 codec g711ulaw redundancy maximum-sessions 1
```

**Related Commands**

| Command | Description |
|---|---|
| **fax protocol (voice-service)** | Specifies the global default fax protocol to be used for all VoIP dial peers. |
| **incoming called-number** | Defines an incoming called number to match a specific dial peer. |
| **modem passthrough (dial peer)** | Enables fax or modem pass-through over VoIP for a specific dial peer. |
| **voice service voip** | Enters voice-service configuration mode and specifies the voice encapsulation type. |

# modem relay (dial peer)

To configure modem relay over VoIP for a specific dial peer, use the **modem relay** command in dial peer configuration mode. To disable modem relay over VoIP for a specific dial peer, use the **no** form of this command.

**modem relay** {**nse** [**payload-type** *number*] **codec** {**g711alaw** | **g711ulaw**} [**redundancy**] | **system**} **gw-controlled**

**no modem relay** {**nse** | **system**}

**Syntax Description**

| | |
|---|---|
| **nse** | Named signaling event (NSE). |
| **payload-type** *number* | (Optional) NSE payload type. Range is from 98 to 119. Default is 100. |
| **codec** | Sets the upspeed voice compression selection for speech or audio signals. The upspeed method is used to dynamically change the codec type and speed to meet network conditions. A faster codec speed may be required to support both voice and data calls and a slower speed for only voice traffic. |
| **g711ulaw** | Codec G.711 mu-law 64,000 bits per second (bps) for T1. |
| **g711alaw** | Codec G.711 a-law 64,000 bps for E1. |
| **redundancy** | (Optional) Packet redundancy (RFC 2198) for modem traffic. Sends redundant packets for modem traffic during pass-through. |
| **system** | This default setting uses the global configuration parameters set with the **modem relay** command in voice-service configuration mode for VoIP. |
| **gw-controlled** | Specfies the gateway-configured method for establishing modem relay parameters. |

**Command Default**

Cisco modem relay is disabled.
Payload type: 100

**Command Modes**

Dial peer configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3620, Cisco 3640, Cisco 3660, Cisco 7200 series, and Cisco AS5300. |
| 12.4(4)T | The **gw-controlled** keyword was added. |
| 12.4(6)T | This feature was implemented on the Cisco 1700 series and Cisco 2800 series. |

**Usage Guidelines**    This command applies to VoIP dial peers. Use this command to configure modem relay over VoIP for a specific dial peer.

Use the same codec type for the originating and terminating gateway, as follows:

- T1 requires the G.711 mu-law codec.
- E1 requires the G.711 a-law codec.

The **system** keyword overrides the configuration for the dial peer, and the values from the **modem**-**relay** command in voice-service configuration mode for VoIP are used.

When using the **voice service voip** and **modem relay nse** commands on a terminating gateway to globally set up modem relay with NSEs, you must also ensure that each incoming call will be associated with a VoIP dial peer to retrieve the global fax or modem configuration. You associate calls with dial peers by using the **incoming called-number** command to specify a sequence of digits that incoming calls can match. You can ensure that all calls will match at least one dial peer by using the following commands:

```
Router(config)# dial-peer voice tag voip
Router(config-dial-peer)# incoming called-number .
```

**Examples**    The following example shows Cisco modem relay configured for a specific dial peer using the G.711 mu-law codec and enabling redundancy and gateway-controlled negotiation parameters:

```
Router(config-dial-peer)# modem relay nse codec g711ulaw redundancy gw-controlled
```

**Related Commands**

| Command | Description |
|---|---|
| **incoming called-number** | Defines an incoming called number to match a specific dial peer. |
| **modem passsthrough (voice service)** | Enables fax or modem pass-through over VoIP globally for all dial peers. |
| **modem relay (voice-service)** | Enables fax or modem pass-through over VoIP globally for all dial peers. |
| **voice service voip** | Enters voice-service configuration mode and specifies the voice encapsulation type. |

# modem relay (voice-service)

To configure modem relay over VoIP for all connections, use the **modem relay** command in voice-service configuration mode. To disable modem relay over VoIP for all connections, use the **no** form of this command.

> **modem relay nse** [**payload-type** *number*] **codec** {**g711ulaw** | **g711alaw**}
>     [**redundancy**[**maximum-sessions** *value*]] **gw-controlled**

> **no modem relay nse**

**Syntax Description**

| | |
|---|---|
| **nse** | Named signaling event (NSE). |
| **payload**-**type** *number* | (Optional) NSE payload type. Range is from 98 to 119. Default is 100. |
| **codec** | Sets the upspeed voice compression selection for speech or audio signals. The upspeed method is used to dynamically change the codec type and speed to meet network conditions. A faster codec speed may be required to support both voice and data calls and a slower speed for only voice traffic. |
| **g711ulaw** | Codec G.711m u-law 64,000 bits per second (bps) for T1. |
| **g711alaw** | Codec G.711 a-law 64,000 bps for E1. |
| **redundancy** | (Optional) Packet redundancy (RFC 2198) for modem traffic. Sends redundant packets for modem traffic during pass-through. |
| **maximum**-**sessions** *value* | (Optional) Maximum redundant, simultaneous modem-relay pass-through sessions. Range is from 1 to 10000. Default is 16. Recommended value for the Cisco AS5300 is 26. |
| gw-controlled | Specfies the gateway-configured method for establishing modem relay parameters. |

**Command Default**

Cisco modem relay is disabled.
Payload type: 100.

**Command Modes**

Voice-service configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3620, Cisco 3640, Cisco 3660, Cisco 7200 series, and Cisco AS5300. |
| 12.4(4)T | The **gw**-**controlled** keyword was added. |
| 12.4(6)T | This feature was implemented on the Cisco 1700 series and Cisco 2800 series. |

**Usage Guidelines**    Use this command to configure modem relay over VoIP. The default behavior for this command is **no modem relay**. Configuration of modem relay for VoIP dial peers via the **modem relay** dial peer configuration command overrides this voice-service command for the specific VoIP dial peer on which the dial-peer command is configured.

Use the same payload-type number for both the originating and terminating gateways.

Use the same codec type for the originating and terminating gateway, as follows:

- T1 requires the G.711 mu-law codec.
- E1 requires the G.711 a-law codec.

The **maximum-sessions** keyword is an optional parameter for the **modem relay** command. This parameter determines the maximum number of redundant, simultaneous modem relay sessions. The recommended value for the **maximum-sessions** keyword is 16. The value can be set from 1 to 10000. The **maximum-sessions** keyword applies only if the **redundancy** keyword is used.

When using the **voice service voip** and **modem relay nse** commands on a terminating gateway to globally set up modem relay with NSEs, you must also ensure that each incoming call will be associated with a VoIP dial peer to retrieve the global fax or modem configuration. You associate calls with dial peers by using the **incoming called-number** command to specify a sequence of digits that incoming calls can match. You can ensure that all calls will match at least one dial peer by using the following commands:

```
Router(config)# dial-peer voice tag voip
Router(config-dial-peer)# incoming called-number .
```

**Examples**    The following example shows Cisco modem relay enabled with NSE payload type 101 using the G.711 mu-law codec, enabling redundancy and gateway-controlled negotiation parameters:

```
Router(conf-voi-serv)# modem relay nse payload-type 101 codec g711ulaw redundancy
maximum-sessions 1 gw-controlled
```

**Related Commands**

| Command | Description |
|---|---|
| **incoming called-number** | Defines an incoming called number to match a specific dial peer. |
| **modem relay (dial peer)** | Configures modem relay on a specific VoIP dial peer. |

# modem relay gateway-xid

To enable in-band negotiation of compression parameters between two VoIP gateways, use the **modem relay gateway-xid** command in dial peer or voice-service configuration mode. To disable this function, use the **no** form of this command.

> **modem relay gateway-xid** [**compress** {**backward** | **both** | **forward** | **no**}] [**dictionary** *value*] [string-length *value*]}

> **no modem relay gateway-xid**

| Syntax Description | | |
|---|---|---|
| **compress**[1] | (Optional) Direction in which data flow is compressed. For normal dialup, compression should be enabled on both directions. | |
| | You may want to disable compression in one or more directions. This is normally done during testing and perhaps for gaming applications, but not for normal dialup when compression is enabled in both directions. | |
| | • **backward**—Enables compression only in the backward direction. | |
| | • **both**—Enables compression in both directions. For normal dialup, this is the preferred setting. This is the default. | |
| | • **forward**—Enables compression only in the forward direction. | |
| | • **no**—Disables compression in both directions. | |
| **dictionary** *value* | (Optional) V.42 bis parameter that specifies characteristics of the compression algorithm. Range is from 512 to 2048. Default is 1024. | |
| | **Note** Your modem may support values higher than this range. A value acceptable to both sides is negotiated during modem call setup. | |
| **string-length** *value* | (Optional) V.42 bis parameter that specifies characteristics of the compression algorithm. Range is from 16 to 32. Default is 32. | |
| | **Note** Your modem may support values higher than this range. A value acceptable to both sides is negotiated during modem call setup. | |

1. The **compress**, **dictionary**, and **string-length** arguments can be entered in any order.

**Command Default**
Command: enabled
Compress: both
Dictionary: 1024
String length: 32

**Command Modes**
Dial peer configuration
Voice-service configuration

| Command History | Release | Modification |
|---|---|---|
| | 12.2(11)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3620, Cisco 3640, Cisco 3660, Cisco 7200 series, and Cisco AS5300. |

**Usage Guidelines**  This command enables XID negotiation for modem relay. By default it is enabled.

If this command is enabled on both VoIP gateways of a network, the gateways determine whether they need to engage in in-band negotiation of various compression parameters. The remaining keywords in this command specify the negotiation posture of this gateway in the subsequent in-band negotiation (assuming that in-band negotiation is agreed on by the two gateways).

The remaining parameters specify the negotiation posture of this gateway in the subsequent inband negotiation step (assuming inband negotiation was agreed on by the two gateways).

The **compress**, **dictionary**, and **string-length** keywords are digital-signal-processor (DSP)-specific and related to xid negotiation. If this command is disabled, they are all irrelevant. The application (MGCP or H.323) just passes these configured values to the DSPs, and it is the DSP that requires them.

**Examples**  The following example enables in-band negotiation of compression parameters on the VoIP gateway, with compression in both directions, dictionary size of 1024, and string length of 32 for the compression algorithm:

```
modem relay gateway-xid compress both dictionary 1024 string-length 32
```

| Related Commands | Command | Description |
|---|---|---|
| | **mgcp modem relay voip gateway-xid** | Optimizes the modem relay transport protocol and the estimated one-way delay across the IP network. |
| | **mgcp modem relay voip mode** | Enables modem relay mode support in a gateway for MGCP VoIP calls. |
| | **mgcp modem relay voip sprt retries** | Sets the maximum number of times that the SPRT protocol tries to send a packet before disconnecting. |
| | **mgcp tse payload** | Enables TSEs for communications between gateways, which are required for modem relay over VoIP using MGCP. |

# modem relay latency

To optimize the Modem Relay Transport Protocol and the estimated one-way delay across the IP network, use the **modem relay latency** command in dial peer or voice-service configuration mode. To disable this function, use the **no** form of this command.

**modem relay latency** *value*

**no modem relay latency**

| Syntax Description | *value* | Estimated one-way delay across the IP network, in milliseconds. Range is from 100 to 1000. Default is 200. |
|---|---|---|

**Command Default**  200 ms

**Command Modes**  Dial peer configuration
Voice-service configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3620, Cisco 3640, Cisco 3660, Cisco 7200 series, and Cisco AS5300. |

**Usage Guidelines**  Use this command to adjust the retransmission timer of the Simple Packet Relay Transport (SPRT) protocol, if required, by setting the value to the estimated one-way delay (in milliseconds) across the IP network. Changing this value may affect the throughput or delay characteristics of the modem relay call. The default value of 200 does not need to be changed for most networks.

**Examples**  The following example sets the estimated one-way delay across the IP network to 100 ms.

```
Router(config-dial-peer)# modem relay latency 100
```

**Related Commands**

| Command | Description |
|---|---|
| **mgcp modem relay voip latency** | Optimizes the Modem Relay Transport Protocol and the estimated one-way delay across the IP network using MGCP. |
| **mgcp modem relay voip mode** | Enables modem relay mode support in a gateway for MGCP VoIP calls. |
| **mgcp modem relay voip sprt retries** | Sets the maximum number of times that the SPRT protocol tries to send a packet before disconnecting. |

| Command | Description |
|---------|-------------|
| **mgcp tse payload** | Enables TSEs for communications between gateways, which are required for modem relay over VoIP using MGCP. |
| **modem relay gateway-xid** | Enables in-band negotiation of compression parameters between two VoIP gateways that use MBCP. |

# modem relay sprt retries

To set the maximum number of times that the Simple Packet Relay Transport (SPRT) protocol tries to send a packet before disconnecting, use the **modem relay sprt retries** command in dial peer or voice-service configuration mode. To disable this function, use the **no** form of this command.

**modem relay sprt retries** *value*

**no modem relay sprt retries**

**Syntax Description**

| | |
|---|---|
| *value* | Maximum number of times that the SPRT protocol tries to send a packet before disconnecting. Range is from 6 to 30. The default is 12. |

**Command Default**   12 times

**Command Modes**   Dial peer configuration
Voice-service configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3620, Cisco 3640, Cisco 3660, Cisco 7200 series, and Cisco AS5300. |

**Examples**   The following example sets 15 as the maximum number of times that the SPRT protocol tries to send a packet before disconnecting.

```
modem relay sprt retries 15
```

**Related Commands**

| Command | Description |
|---|---|
| **mgcp modem relay voip mode** | Enables modem relay mode support in a gateway for MGCP VoIP calls. |
| **mgcp tse payload** | Enables TSEs for communications between gateways, which are required for modem relay over VoIP using MGCP. |
| **modem relay gateway-xid** | Enables in-band negotiation of compression parameters between two VoIP gateways that use MBCP. |
| **modem relay latency** | Optimizes the Modem Relay Transport Protocol and the estimated one-way delay across the IP network. |

# modem relay sprt v14

To configure V.14 modem-relay parameters for packets sent by the Simple Packet Relay Transport (SPRT) protocol, use the **modem relay sprt v14** command in voice service configuration mode. To disable this function, use the **no** form of this command.

> **modem relay sprt v14** [**receive playback hold-time** *milliseconds* | **transmit hold-time** *milliseconds* | **transmit maximum hold-count** *characters*]

> **no modem relay sprt v14**

| Syntax Description | | |
|---|---|---|
| | **receive playback hold-time** *milliseconds* | (Optional) Configures the time in milliseconds (ms) to hold incoming data in the V.14 receive queue. Range is 20 to 250 ms. Default is 50 ms. |
| | **transmit hold-time** *milliseconds* | (Optional) Configures the time to wait, in ms, after the first character is ready before sending the SPRT packet. Range is 10 to 30 ms. Default is 20 ms. |
| | **transmit maximum hold-count** *characters* | (Optional) Configures the number of V.14 characters to be received on the ISDN public switched telephone network (PSTN) interface that will trigger sending the SPRT packet. Range is 8 to 128. Default is 16. |

**Command Default**  V.14 modem-relay parameters are enabled by default, using default parameter values.

**Command Modes**  Voice service configuration

| Command History | Release | Modification |
|---|---|---|
| | 12.4(4)T | This command was introduced. |

**Usage Guidelines**  SPRT packets are used to reliably transport modem signals between gateways. Use the **modem relay sprt v14** command under the **voice service voip** command to configure parameters for SPRT packet transport. The maximum size of the receive buffers is set at 500 characters, a nonprovisionable limit. Use the **modem relay sprt v14 receive playback hold-time** command to configure the minimum holding time before characters can be removed from the receive queue. Characters received on the PSTN or ISDN interface may be collected for a configurable collection period before being sent out on SPRT channel 3, potentially resulting in variable size SPRT packets. To configure V.14 transmit parameters for SPRT packets, use the **modem relay sprt v14 transmit hold-time** *milliseconds* and the **modem relay sprt v14 transmit maximum hold-count** *characters* commands.

Parameter changes do not take effect during existing calls; they affect new calls only.

SPRT transport channel 1 is not supported.

Use the **stcapp register capability** *voice-port* **modem-relay** command to specify modem relay as the transport method for a specific device.

**Examples**    The following example shows the receive playback hold time, transmit hold time, and transmit hold count parameters:

```
Router(conf-voi-serv)# modem relay sprt v14 receive playback hold-time 200
Router(conf-voi-serv)# modem relay sprt v14 transmit hold-time 25
Router(conf-voi-serv)# modem relay sprt v14 transmit maximum hold-count 10
```

**Related Commands**

| Command | Description |
|---|---|
| **debug voip ccapi inout** | Traces the execution path through the call control API. |
| **debug vtsp all** | Displays all VTSP debugging except statistics, tone, and event. |
| **stcapp register capability** | Configures the modem transport method for a specified device registered with Cisco CallManager. |
| **voice service voip** | Enters voice service configuration mode for VoIP encapsulation. |

# modem relay sse

To enable V.150.1 modem-relay secure calls and configure state signaling events (SSE) parameters, use the **modem relay sse** command in voice service configuration mode. To disable this function, use the **no** form of this command.

> **modem relay sse** [**redundancy**] [**interval** *milliseconds*] [**packet** *number*] [**retries** *value*] [**t1** *milliseconds*]

> **no modem relay sse**

**Syntax Description**

| | |
|---|---|
| **redundancy** | (Optional) Specifies packet redundancy for modem traffic during modem pass-through. By default redundancy is disabled. |
| **interval** *milliseconds* | (Optional) Specifies the timer in milliseconds (ms) for redundant transmission of SSEs. Range is 5 to 50 ms. Default is 20 ms. |
| **packet** *number* | (Optional) Specifies the SSE packet retransmission count before disconnecting. Range is one to five packets. Default is three packets. |
| **retries** *value* | (Optional) Specifies the number of SSE packet retries, repeated every **t1** interval, before disconnecting. Range is zero to five retries. Default is five retries. |
| **t1** *milliseconds* | (Optional) Specifies the repeat interval, in milliseconds, for initial audio SSEs used for resetting the SSE protocol state machine (clearing the call) following error recovery. Range is 500 to 3000 ms. Default is 1000 ms. |

**Command Default**

Modem relay mode of operation, using the SSE protocol, is enabled by default using default parameter values.

**Command Modes**

Voice service configuration

**Command History**

| Release | Modification |
|---|---|
| 12.4(4)T | This command was introduced. |

**Usage Guidelines**

Use the **modem relay sse** command under the **voice service voip** command to configure SSE parameters used to negotiate the transition from voice mode to V.150.1 modem-relay mode on the digital signal processor (DSP). Secure voice and data calls through the SCCP Telephony Control Application (STCAPP) gateway connect Secure Telephone Equipment (STE) and IP-STE endpoints using the SSE protocol, a subset of the V.150.1 standard for modem relay. SSEs, which are Real-Time Transport Protocol (RTP) encoded event messages that use payload 118, are used to coordinate transitions between secure and non-secure media states.

Use the **stcapp register capability** command to specify modem transport method for secure calls.

Use the **modem relay sprt v14 receive playback hold-time** command to configure V.14 receive parameters for Simple Packet Relay Transport (SPRT) protocol packets in V.150.1 modem relay mode.

Use the **modem relay sprt v14 transmit hold-time** and **modem relay sprt v14 transmit maximum hold-count** commands to configure SPRT transmit parameters in V.150.1 modem relay mode.

Use the **mgcp modem relay voip mode sse** command to enable secure V.150.1 modem relay calls on trunk-side or non-STCAPP-enabled gateways. Use the **mgcp modem relay voip mode nse** command to enable nonsecure modem-relay mode; by default, NSE modem-relay mode is disabled.

**Examples**
The following example shows SSE parameters configured to support secure calls between IP-STE and STE endpoints:

```
Router(config-voi-serv)# modem relay sse redundancy interval 20
Router(config-voi-serv)# modem relay sse redundancy packet 4
Router(config-voi-serv)# modem relay sse retries 5
Router(config-voi-serv)# modem relay sse t1 1000
```

**Related Commands**

| Command | Description |
| --- | --- |
| **mgcp package-capability mdste** | Enables MGCP gateway support for processing events and signals for modem connections over a secure communication path between IP-STE and STE. |
| **modem relay sprt v14 receive playback hold-time** | Configures SPRT parameters |
| **modem relay sprt v14 transmit hold-time** | Configures SPRT transmit parameters. |
| **modem relay sprt v14 transmit maximum hold-count** | Configures SPRT transmit parameters. |
| **modem relay sprt v14 transmit maximum hold-count** | Configures SPRT transmit parameters. |
| **stcapp register capability** | Configures the modem transport method for a specified device registered with Cisco CallManager. |
| **voice service voip** | Enters voice service configuration mode for VoIP encapsulation. |

# monitor call application event-log

To display the event log for an active application instance in real-time, use the **monitor call application event-log** command in privileged EXEC mode.

> **monitor call application event-log** {**app-tag** *application-name* {**last** | **next**} | **session-id** *session-id* [**stop**] | **stop**}

**Syntax Description**

| | |
|---|---|
| **app-tag** *application-name* | Displays event log for the specified application. |
| **last** | Displays event log for the most recent active instance. |
| **next** | Displays event log for the next active instance. |
| **session-id** *session-id* | Displays event log for specific application instance. |
| **stop** | (Optional) Stops the monitoring session. |

**Command Modes**    Privileged EXEC

**Command History**

| Release | Modification |
|---|---|
| 12.3(8)T | This command was introduced. |

**Usage Guidelines**    This command enables dynamic event logging so that you can view events as they happen for active application instances. You can view the most recent active instance or the next new instance of a specified application, or the specified active application instance, or it stops the display. To display event logs with this command, you must enable either the **call application event-log** command or the **call application voice event-log** command.

**Examples**    The following example displays the event log for the next active session of the application named sample_app:

```
Router# monitor call application event-log app-tag generic last

5:1057278146:172:INFO: Prompt playing finished successfully.
5:1057278151:173:INFO: Timed out waiting for user DTMF digits, no user input.
5:1057278151:174:INFO: Script received event = "noinput"
5:1057278151:175:INFO: Playing prompt #1: tftp://172.19.139.145/audio/ch_welcome.au
5:1057278158:177:INFO: Prompt playing finished successfully.
5:1057278163:178:INFO: Timed out waiting for user DTMF digits, no user input.
5:1057278163:179:INFO: Script received event = "noinput"
5:1057278163:180:INFO: Playing prompt #1: tftp://172.19.139.145/audio/ch_welcome.au
5:1057278170:182:INFO: Prompt playing finished successfully.
5:1057278175:183:INFO: Timed out waiting for user DTMF digits, no user input.
5:1057278175:184:INFO: Script received event = "noinput"
5:1057278175:185:INFO: Playing prompt #1: tftp://172.19.139.145/audio/ch_welcome.au
5:1057278181:187:INFO: Prompt playing finished successfully.

5:1057278186:188:INFO: Timed out waiting for user DTMF digits, no user input.
5:1057278186:189:INFO: Script received event = "noinput"
5:1057278186:190:INFO: Playing prompt #1: tftp://172.19.139.145/audio/ch_welcome.au
```

| Related Commands | Command | Description |
|---|---|---|
| | **call application event-log** | Enables event logging for voice application instances. |
| | **call application event-log error-only** | Restricts event logging to error events only for application instances. |
| | **call application voice event-log** | Enables event logging for a specific voice application. |
| | **show call application session-level** | Displays event logs and statistics for voice application instances. |

# monitor call leg event-log

To display the event log for an active call leg in real-time, use the **monitor call leg event-log** command in privileged EXEC mode.

> **monitor call leg event-log** {**leg-id** *leg-id* [**stop**] | **next** | **stop**}

**Syntax Description**

| | |
|---|---|
| **leg-id** *leg-id* | Displays the event log for the identified call leg. |
| **next** | Displays the event log for the next active call leg. |
| **stop** | (Optional) Stops the monitoring session. |

**Command Modes**    Privileged EXEC

**Command History**

| Release | Modification |
|---|---|
| 12.3(8)T | This command was introduced. |

**Usage Guidelines**    This command enables dynamic event logging so that you can view events as they happen for active voice call legs. You can view the event log for the next new call leg, or the specified active call leg, or it stops the display. To display event logs with this command, you must enable the **call leg event-log** command.

**Examples**    The following is sample output from the **monitor call leg event-log next** command showing the event log for the next active call leg after a PSTN incoming call was made to the gateway:

```
Router# monitor call leg event-log next

2B:1058571679:992:INFO: Call setup indication received, called = 4085550198,  calling =
52927, echo canceller = enable, direct inward dialing
2B:1058571679:993:INFO: Dialpeer = 1
2B:1058571679:998:INFO: Digit collection
2B:1058571679:999:INFO: Call connected using codec None
2B:1058571688:1007:INFO: Call disconnected (cause = normal call clearing (16))
2B:1058571688:1008:INFO: Call released
```

**Related Commands**

| Command | Description |
|---|---|
| **call leg event-log** | Enables event logging for voice, fax, and modem call legs. |
| **call leg event-log error-only** | Restricts event logging to error events only for voice call legs. |
| **show call leg** | Displays event logs and statistics for voice call legs. |

# monitor probe icmp-ping

To enable dial-peer status changes based on the results of probes from Internet Control Message Protocol (ICMP) pings, use the **monitor probe icmp-ping** command in dial-peer configuration mode. To disable this capability, use the **no** form of this command.

> **monitor probe** [**icmp-ping** | **rtr**] [*ip-address*]
>
> **no monitor probe** [**icmp-ping** | **rtr**] [*ip-address*]

**Syntax Description**

| | |
|---|---|
| **icmp-ping** | (Optional) Specifies ICMP ping as the method for monitoring the destination target and updating the status of the dial peer. |
| **rtr** | (Optional) Specifies that the Response Time Reporter (RTR) probe is the method for monitoring the destination target and updating the status of the dial peer. |
| *ip-address* | (Optional) The destination IP address of a target interface for the probe signal. |

**Command Default**

If this command is not entered, no ICMP or RTR probes are sent.

**Command Modes**

Dial-peer configuration (config-dial-peer)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced in a release earlier than Cisco IOS Release 12.2(11)T. |

**Usage Guidelines**

The principal use of this command is to specify ICMP ping as the probe method, even though the option for selecting RTR is also available.

In order for the **monitor probe icmp-ping** command to work properly, the **call fallback icmp-ping** command or the **call fallback active** command must be configured. One of these two commands must be in effect before the **monitor probe icmp-ping** command can be used.

If the **call fallback icmp-ping** command is not entered, the **call fallback active** command in global configuration is used for measurements. If the **call fallback icmp-ping** command is entered, these values override the global configuration.

**Examples**

The following example shows how to configure a probe to use ICMP pings to monitor the connection to IP address 10.1.1.1:

```
dial-peer voice tag voip
 call fallback icmp-ping
 monitor probe icmp-ping 10.1.1.1
```

**Cisco IOS Voice Commands: M**

**monitor probe icmp-ping** ■

| Related Commands | Command | Description |
|---|---|---|
| | **call fallback active** | Enables a call request to fall back to alternate dial peers in case of network congestion and specifies the type of probe for pings to IP destinations. |
| | **call fallback icmp-ping** | Specifies ICMP ping as the method for network traffic probe entries to IP destinations and configures parameters for the ping packets. |
| | **show voice busyout** | Displays information about the voice busyout state. |
| | **voice class busyout** | Creates a voice class for local voice busyout functions. |

**Cisco IOS Voice Command Reference** ■

**VR-1301**

# mrcp client rtpsettup enable

To enable the sending of an IP address in the Real Time Streaming Protocol (RTSP) SETUP message, use the **mrcp client rtpsettup enable** command in global configuration mode. To disable sending of the IP address, use the **no** form of this command.

**mrcp client rtpsettup enable**

**no mrcp client rtpsettup enable**

**Syntax Description**  This command has no arguments or keywords.

**Command Default**  This command is enabled by default.

**Command Modes**  Global configuration (config)

**Command History**

| Release | Modification |
|---------|--------------|
| 15.0(1)M | This command was introduced in a release earlier than Cisco IOS Release 15.0(1)M. |

**Examples**  The following example shows how to enable the sending of IP address in the RTSP SETUP message:

```
Router# configure terminal
Router(config)# mrcp client rtpsetup enable
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **show mgcp** | Displays values for MGCP parameters. |

# mrcp client session history duration

To set the maximum number of seconds for which history records for Media Resource Control Protocol (MRCP) sessions are stored on the gateway, use the **mrcp client session history duration** command in global configuration mode. To reset to the default, use the **no** form of this command.

**mrcp client session history duration** *seconds*

**no mrcp client session history duration**

| Syntax Description | *seconds* | Maximum time, in seconds, for which MRCP history records are stored. Range is from 0 to 99999999. The default is 3600 (1 hour). If 0 is configured, no MRCP records are stored on the gateway. |
|---|---|---|

**Command Default**  3600 seconds (1 hour)

**Command Modes**  Global configuration (config)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 3640, Cisco 3660, Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.4(15)T | This command was modified to support MRCP version 2 (MRCP v2). |

**Usage Guidelines**  This command affects the number of records that are displayed when the **show mrcp client session history** command is used.

Active MRCP sessions are not affected by this command.

**Examples**  The following example sets the maximum amount of time for which MRCP history records are stored to 2 hours (7200 seconds):

```
Router(config)# mrcp client session history duration 7200
```

**Related Commands**

| Command | Description |
|---|---|
| **show mrcp client session history** | Displays information about past MRCP client sessions that are stored on the gateway. |

# mrcp client session history records

To set the maximum number of records of Media Resource Control Protocol (MRCP) client history that the gateway can store, use the **mrcp client session history records** command in global configuration mode. To reset to the default, use the **no** form of this command.

**mrcp client session history records** *number*

**no mrcp client session history records**

**Syntax Description**

| | |
|---|---|
| *number* | Maximum number of MRCP history records to save. The maximum value is platform-specific. The default is 50. If 0 is configured, no MRCP records are stored on the gateway. |

**Command Default**

50 records

**Command Modes**

Global configuration (config)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 3640, Cisco 3660, Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.4(15)T | This command was modified to support MRCP version 2 (MRCP v2). |

**Usage Guidelines**

This command affects the number of records that are displayed when the **show mrcp client session history** command is used.

Active MRCP sessions are not affected by this command.

**Examples**

The following example sets the maximum number of MRCP records to 30:

```
Router(config)# mrcp client history records 30
```

**Related Commands**

| Command | Description |
|---|---|
| **show mrcp client session history** | Displays information about past MRCP client sessions that are stored on the gateway. |

# mrcp client session nooffailures

To configure the maximum number of consecutive failures before disconnecting calls, use the **mrcp client session nooffailures** command in global configuration mode. To disable the number of consecutive failures before disconnecting calls, use the **no** form of this command.

**mrcp client session nooffailures** *number*

**no mrcp client session nooffailures**

| Syntax Description | *number* | Maximum number of consecutive failures before disconnecting calls. The range is from 1 to 50. The default is 20. |
|---|---|---|

**Command Default**    The maximum number is set to 20.

**Command Modes**    Global configuration (config)

| Command History | Release | Modification |
|---|---|---|
| | 15.0(1)M | This command was introduced in a release earlier than Cisco IOS Release 15.0(1)M. |

**Examples**    The following example shows how to configure the maximum number of consecutive failures before disconnecting calls:

```
Router# configure terminal
Router(config)# mrcp client session nooffailures 20
```

| Related Commands | Command | Description |
|---|---|---|
| | **show mgcp** | Displays values for MGCP parameters. |

# mrcp client statistics enable

To enable Media Resource Control Protocol (MRCP) client statistics to be displayed, use the **mrcp client statistics enable** command in global configuration mode. To disable display, use the **no** form of this command.

**mrcp client statistics enable**

**no mrcp client statistics enable**

**Syntax Description**    This command has no arguments or keywords.

**Command Default**    MRCP client statistics are disabled.

**Command Modes**    Global configuration (config)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced on the following platforms: Cisco 3640, Cisco 3660, Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.4(15)T | This command was modified to support MRCP version 2 (MRCP v2). |

**Usage Guidelines**    This command enables MRCP client statistics to be displayed when the **show mrcp client statistics hostname** command is used. If this command is not enabled, client statistics cannot be displayed for any host when the **show mrcp client statistics hostname** command is used.

**Examples**    The following example enables MRCP statistics to be displayed:

```
Router(config)# mrcp client statistics enable
```

**Related Commands**

| Command | Description |
|---|---|
| **show mrcp client statistics hostname** | Displays statistics about MRCP sessions for a specific MRCP host. |

# mrcp client timeout connect

To set the number of seconds allowed for the router to establish a TCP connection to a Media Resource Control Protocol (MRCP) server, use the **mrcp client timeout connect** command in global configuration mode. To reset to the default, use the **no** form of this command.

**mrcp client timeout connect** *seconds*

**no mrcp client timeout connect**

**Syntax Description**

| *seconds* | Amount of time, in seconds, the router waits to connect to the server before timing out. Range is 1 to 20. |
|---|---|

**Command Default**    3 seconds

**Command Modes**    Global configuration (global)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced. |
| 12.4(15)T | This command was modified to support MRCP version 2 (MRCP v2). |

**Usage Guidelines**    This command determines when the router abandons its attempt to connect to an MRCP server and declares a timeout error, if a connection cannot be established after the specified number of seconds.

**Examples**    The following example sets the connection timeout to 10 seconds:

```
Router(config)# mrcp client timeout connect 10
```

# mrcp client timeout message

To set the number of seconds that the router waits for a response from a Media Resource Control Protocol (MRCP) server, use the **mrcp client timeout message** command in global configuration mode. To reset to the default, use the **no** form of this command.

**mrcp client timeout message** *seconds*

**no mrcp client timeout message**

**Syntax Description**

| *seconds* | Amount of time, in seconds, the router waits for a response from the server after making a request. Range is 1 to 20. |
|---|---|

**Command Default**   3 seconds

**Command Modes**   Global configuration (config)

**Command History**

| Release | Modification |
|---|---|
| 12.2(11)T | This command was introduced. |
| 12.4(15)T | This command was modified to support MRCP version 2 (MRCP v2). |

**Usage Guidelines**   This command sets the amount of time the router waits for the MRCP server to respond to a request before declaring a timeout error.

**Examples**   The following example sets the request timeout to 10 seconds:

```
Router(config)# mrcp client timeout message 10
```

# mta receive aliases

To specify a hostname accepted as a Simple Mail Transfer Protocol (SMTP) alias for off-ramp faxing, use the **mta receive aliases** command in global configuration mode. To disable the alias, use the **no** form of this command.

**mta receive aliases** *string*

**no mta receive aliases** *string*

**Syntax Description**

| | |
|---|---|
| *string* | Hostname or IP address to be used as an alias for the SMTP server. If you specify an IP address to be used as an alias, you must enclose the IP address in brackets as follows: [xxx.xxx.xxx.xxx]. Default is the domain name of the gateway. |

**Command Default**    Enabled with an empty string

**Command Modes**    Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**    This command creates an accept or reject alias list. The first alias is used by the mailer to identify itself in SMTP banners and when generating its own RFC 822 Received: header.

**Note**    This command does not automatically include reception for a domain IP address; the address must be explicitly added. To explicitly add a domain IP address, use the following format: **mta receive aliases** [*ip-address*]. Use the IP address of the Ethernet or the FastEthernet interface of the off-ramp gateway.

This command applies to on-ramp store-and-forward fax functions.

**Examples**    The following example specifies the host name "seattle-fax-offramp.example.com" as the alias for the SMTP server:

```
mta receive aliases seattle-fax-offramp.example.com
```

The following example specifies IP address 172.16.0.0 as the alias for the SMTP server:

```
mta receive aliases [172.16.0.0]
```

| Related Commands | Command | Description |
|---|---|---|
| | **mta receive generate-mdn** | Specifies that the off-ramp gateway process a response MDN from an SMTP server. |
| | **mta receive maximum-recipients** | Specifies the maximum number of recipients for all SMTP connections. |

# mta receive disable-dsn

To stop the generation and delivery of a Delivery Status Notification (DSN) every time a failure occurs in a T.37 offramp call from a Cisco IOS gateway, use the **mta receive disable-dsn** command in global configuration mode. To restart the generation and delivery of DSNs when failures occur, use the **no** form of this command.

> **mta receive disable-dsn**

> **no mta receive disable-dsn**

**Syntax Description**    This command has no arguments or keywords.

**Command Default**    By default, this command is not enabled, and a DSN message is generated from the gateway each time a T.37 offramp call fails.

**Command Modes**    Global configuration

**Command History**

| Release | Modification |
|---------|--------------|
| 12.4(13) | This command was introduced. |
| 12.4(15)T | This command was integrated into Cisco IOS Release 12.4(15)T. |

**Usage Guidelines**    The T.37 offramp gateway generates DSN messages when calls are successful and when calls fail. The **mta receive disable-dsn** command disables the generation and delivery of DSN messages for successful calls and for failed calls.

A DSN message confirming a successful call is a useful notification tool with no negative impact on processing. However, when a T.37 offramp call is made from a Cisco IOS gateway, and the call fails (ring but no answer), the gateway automatically generates a DSN for each failure. The DSN is based on the Simple Mail Transport Protocol (SMTP) error (which is temporary), so the SMTP client tries to resend the fax every 5 minutes for up to 24 hours. These multiple DSNs eventually overload the sender's inbox.

**Examples**    The following example shows how to disable the generation and sending of DSNs from the offramp gateway:

```
mta receive disable-dsn
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **debug fax mta** | Troubleshoots the fax mail transfer agent. |
| **mta receive generate** | Specifies the type of fax delivery response message that a T.37 fax off-ramp gateway should return. |

# mta receive generate

> **Note** The **mta receive generate** command replaces the **mta receive generate-mdn** command.

To specify the type of fax delivery response message that a T.37 fax off-ramp gateway should return, use the **mta receive generate** command in global configuration mode. To return to the default, use the **no** form of this command.

**mta receive generate** [**mdn** | **permanent-error**]

**no mta receive generate** [**mdn** | **permanent-error**]

**Syntax Description**

| | |
|---|---|
| **mdn** | Optional. Directs the T.37 off-ramp gateway to process response message disposition notifications (MDNs) from an Simple Mail Transfer Protocol (SMTP) server. |
| **permanent-error** | Optional. Directs the T.37 off-ramp fax gateway to classify all fax delivery errors as permanent so that they are forwarded in DSN messages with descriptive error codes to an mail transfer agent (MTA). |

**Command Default**

MDNs are not generated and standard SMTP status messages are returned to the SMTP client with error classifications of permanent or transient.

**Command Modes**

Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced as **mta receive generate-mdn**. |
| 12.0(4)T | The **mta receive generate-mdn** command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.3(7)T | The **mta receive generate-mdn** command was replaced by the **mta receive generate** command, which uses the **mdn** and **permanent-error** keywords. |

**Usage Guidelines**

When the **mdn** keyword is used to enable MDN on a sending device, a flag is inserted in the off-ramp message e-mail header, requesting that the receiving device generate an MDN. The MDN is then returned to the sender when the e-mail message that contains the fax image is opened. Use this command to enable the receiving device—the off-ramp gateway—to process the response MDN.

Depending on the configuration, usage, and features of the mailers used at a site, it might be desirable to enable or disable MDN generation. Specifications for MDN are described in RFC 2298. Delivery status notification (DSN) generation cannot be disabled.

The **permanent-error** keyword directs the T.37 off-ramp fax gateway to classify all fax delivery errors as permanent so that they are forwarded in a DSN with descriptive error codes to the originating MTA. The descriptive error codes allow the MTA to control fax operations directly because the MTA can examine the error codes and make decisions about how to proceed with each fax (whether to retry or cancel, for example).

If this command is not used, the default is to return standard SMTP status messages to SMTP clients using both permanent and transient error classifications.

**Examples**    The following example allows a T.37 off-ramp gateway to process response MDNs:

```
Router(config)# mta receive generate mdn
```

The following example directs a T.37 off-ramp gateway to classify all fax delivery errors as permanent and forward the errors and descriptive text using SMTP DSNs to the MTA:

```
Router(config)# mta receive generate permanent-error
```

**Related Commands**

| Command | Description |
|---|---|
| **mdn** | Requests that a message disposition notification be generated when a fax-mail message is processed (opened). |
| **mta receive aliases** | Specifies a host name that is accepted as an SMTP alias for off-ramp faxing. |
| **mta receive generate-mdn** | Specifies that the off-ramp gateway process a response MDN from an SMTP server. |
| **mta receive maximum-recipients** | Specifies the maximum number of recipients for all SMTP connections. |

# mta receive generate-mdn

> **Note** The **mta receive generate-mdn** command was replaced by the **mta receive generate** command in Cisco IOS Release 12.3(7)T.

To specify that the off-ramp gateway process a response message disposition notification (MDN) from a Simple Mail Transfer Protocol (SMTP) server, use the **mta receive generate**-**mdn** command in global configuration mode. To disable MDN generation, use the **no** form of this command.

**mta receive generate**-**mdn**

**no mta receive generate**-**mdn**

**Syntax Description**    This command has no arguments or keywords.

**Command Default**    Disabled

**Command Modes**    Global configuration

**Command History**

| Release | Modification |
|---------|--------------|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**    When MDN is enabled on a sending device, a flag is inserted in the off-ramp message e-mail header, requesting that the receiving device generate the MDN and return that message to the sender when the e-mail message that contains the fax image is opened. Use this command to enable the receiving device—the off-ramp gateway—to process the response MDN.

Depending on the configuration, usage, and features of the mailers used at a site, it might be desirable to enable or disable MDN generation. Specifications for MDN are described in RFC 2298. Delivery status notification (DSN) generation cannot be disabled.

This command applies to off-ramp store-and-forward fax functions.

**Examples**    The following example enables the receiving device to generate MDNs:

```
mta receive generate-mdn
```

**Related Commands**

| Command | Description |
| --- | --- |
| **mdn** | Requests that a message disposition notification be generated when the fax-mail message is processed (opened). |
| **mta receive aliases** | Specifies a host name accepted as an SMTP alias for off-ramp faxing. |
| **mta receive maximum-recipients** | Specifies the maximum number of recipients for all SMTP connections. |

# mta receive maximum-recipients

To specify the maximum number of simultaneous recipients for all Simple Mail Transfer Protocol (SMTP) connections, use the **mta receive maximum-recipients** command in global configuration mode. To reset to the default, use the **no** form of this command.

**mta receive maximum-recipients** *number*

**no mta receive maximum-recipients**

**Syntax Description**

| | |
|---|---|
| *number* | Maximum number of simultaneously recipients for all SMTP connections. Range is from 0 to 1024. The default is 0. |

**Command Default**     0 recipients

**Command Modes**     Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**     Use this command to configure the maximum number of resources that you want to allocate for fax usage at any one time. You can use this command to limit the resource usage on the gateway. When the value for the *number* argument is set to 0, no new connections can be established. Which is particularly useful when one is preparing to shut down the system.

This command applies to off-ramp store-and-forward fax functions.

The default of 0 recipients means that incoming mail messages are not accepted; therefore, no faxes are sent by the off-ramp gateway.

**Note**     Unless the transmitting mailer supports the X-SESSION SMTP service extension, each incoming SMTP connection is allowed to send to only one recipient and thus consume only one outgoing voice feature card (VFC).

**Examples**

The following example sets the maximum number of simultaneous recipients for all SMTP connections to 10:

```
mta receive maximum-recipients 10
```

**Related Commands**

| Command | Description |
|---|---|
| **mta receive aliases** | Specifies a host name accepted as an SMTP alias for off-ramp faxing. |
| **mta receive generate-mdn** | Specifies that the off-ramp gateway process a response MDN from an SMTP server. |

# mta send filename

To specify a filename for a TIFF file attached to an e-mail, use the **mta send filename** command in global configuration mode. To disable the configuration after the command has been used, use the **no** form of this command.

**mta send filename** [*string*] [**date**]

**no mta send filename**

**Syntax Description**

| | |
|---|---|
| *string* | (Optional) Name of the TIFF file attached to an e-mail. If this text string does not contain an extension for the filename, ".tif" is added to the formatted filename. |
| **date** | (Optional) Adds today's date in the format yyyymmdd to the filename of the TIFF attachment. |

**Command Default**   The formatted filename for TIFF attachments is "Cisco_fax.tif"

**Command Modes**   Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.2(8)T | This command was introduced. |

**Usage Guidelines**   Use this command to specify the filename for a TIFF file attached to an e-mail.

**Examples**   The following example specifies a formatted filename of "abcd.tif" for the TIFF attachment:

```
Router(config)# mta send filename abcd
```

The following example specifies a formatted filename and extension of "abcd.123" for the TIFF attachment:

```
Router(config)# mta send filename abcd.123
```

The following example specifies a formatted filename "abcd_today's date" (so, for July 4, 2002, the filename would be "abcd_20020704.tif") for the TIFF attachment:

```
Router(config)# mta send filename abcd date
```

The following example specifies a formatted filename and extension of "abcd_today's date.123" (so, for July 4, 2002, the filename would be "abcd_20020704.123") for the TIFF attachment:

```
Router(config)# mta send filename abcd.123 date
```

**Related Commands**

| Command | Description |
| --- | --- |
| **mta send origin-prefix** | Adds information to an e-mail prefix header. |
| **mta send postmaster** | To which an e-mail message should be delivered. Specifies the mail server postmaster account to which if it cannot be delivered to the intended destination. |
| **mta send return-receipt-to** | Specifies the address to which MDNs are sent. |
| **mta send server** | Specifies a destination mail server or servers. |
| **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send mail-from

To specify a mail-from address (also called the RFC 821 envelope-from address or the return-path address), use the **mta send mail-from** command in global configuration mode. To remove this return-path information, use the **no** form of this command.

**mta send mail-from** {**hostname** *string* | **username** *string* | **username $s$**}

**no mta send mail-from** {**hostname** *string* | **username** *string* | **username $s$**}

**Syntax Description**

| | |
|---|---|
| **hostname** *string* | Simple Mail Transfer Protocol (SMTP) host name or IP address. If you specify an IP address, you must enclose the IP address in brackets as follows: [xxx.xxx.xxx.xxx]. |
| **username** *string* | Sender username. |
| **username $s$** | Wildcard that specifies that the username is derived from the calling number. |

**Command Default**   No default behavior or values

**Command Modes**   Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**   Use this command to designate the sender of the fax TIFF attachment, which is equivalent to the return path in an e-mail message. If the mail-from address is blank, the postmaster address, configured with the **mta send postmaster** command, is used.

This command applies to on-ramp store-and-forward fax functions.

**Examples**   The following example specifies that the mail-from username information is derived from the calling number of the sender:

```
mta send mail-from username $s$
```

**Related Commands**

| Command | Description |
|---|---|
| **mta send origin-prefix** | Adds information to an e-mail prefix header. |
| **mta send postmaster** | To which an e-mail message should be delivered. Specifies the mail server postmaster account to which if it cannot be delivered to the intended destination. |
| **mta send return-receipt-to** | Specifies the address to which MDNs are sent. |
| **mta send server** | Specifies a destination mail server or servers. |
| **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send origin-prefix

To add information to an e-mail prefix header, use the **mta send origin**-**prefix** command in global configuration mode. To remove the defined string, use the **no** form of this command.

**mta send origin**-**prefix** *string*

**no mta send origin**-**prefix** *string*

**Syntax Description**

| | |
|---|---|
| *string* | Text string to add comments to the e-mail prefix header. If this string contains more than one word, the string value should be enclosed within quotation marks ("abc xyz"). |

**Command Default**  Null string

**Command Modes**  Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**  Store-and-forward fax provides the slot and port number from which an e-mail comes. In the e-mail prefix header information, use this command to define a text string to be added to the front of the e-mail prefix header information. This text string is a prefix string that is added with the modem port and slot number and passed in the originator_comment field of the esmtp_client_engine_open() call. Eventually, this text ends up in the received header field of the fax-mail message; for example:

```
Received (test onramp Santa Cruz slot1 port15) by router-5300.cisco.com for
<test-test@cisco.com> (with Cisco NetWorks); Fri, 25 Dec 1998 001500 -0800
```

Using the command **mta send origin**-**prefix dog** causes the received header to contain the following information:

```
Received (dog, slot 3 modem 8) by as5300-sj.example.com ....
```

This command applies to on-ramp store-and-forward fax functions.

**Examples**     The following example adds information to the e-mail prefix header:

```
mta send origin-prefix "Cisco-Powered Fax System"
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **mta send mail-from** | Specifies the mail-from address (also called the RFC 821 envelope-from address or the Return-Path address). |
| **mta send postmaster** | To which an e-mail message should be delivered. Specifies the mail server postmaster account to which if it cannot be delivered to the intended destination. |
| **mta send return-receipt-to** | Specifies the address to which MDNs are sent. |
| **mta send server** | Specifies a destination mail server or servers. |
| **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send postmaster

To specify the mail server postmaster account to which an e-mail message should be delivered if it cannot be delivered to the intended destination, use the **mta send postmaster** command in global configuration mode. To remove the specification, use the **no** form of this command.

**mta send postmaster** *e-mail-address*

**no mta send postmaster** *e-mail-address*

**Syntax Description**

| | |
|---|---|
| *e-mail-address* | Address of the mail server postmaster account to which an e-mail message should be delivered if it cannot be delivered to its intended destination. |

**Command Default**   No e-mail destination is defined

**Command Modes**   Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**   If you have configured a router to generate delivery status notifications (DSNs) and message disposition notifications (MDNs), but you have not configured the sender information (using the **mta send mail-from** command) or the Simple Mail Transfer Protocol (SMTP) server, DSNs and MDNs are delivered to the e-mail address determined by this command.

It is recommended that an address such as "fax-administrator@example.com" be used to indicate fax responsibility. In this example, fax-administrator is aliased to the responsible person. At some sites, this could be the same person as the e-mail postmaster, but most likely is a different person with a different e-mail address.

This command applies to on-ramp store-and-forward fax functions.

**Examples**   The following example configures the e-mail address "fax-admin@example.com" as the sender for all incoming faxes. Thus, any returned DSNs are delivered to "fax-admin@example.com" if the mail-from field is blank.

```
mta send postmaster fax-admin@example.com
```

| **Related Commands** | **Command** | **Description** |
|---|---|---|
| | **mta send mail-from** | Specifies the mail-from address (also called the RFC 821 envelope-from address or the Return-Path address). |
| | **mta send origin-prefix** | Adds information to an e-mail prefix header. |
| | **mta send return-receipt-to** | Specifies the address to which where MDNs are sent. |
| | **mta send server** | Specifies a destination mail server or servers. |
| | **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send return-receipt-to

To specify the address to which message disposition notifications (MDNs) are sent, use the **mta send return-receipt-to** command in global configuration mode. To remove the address, use the **no** form of this command.

**mta send return-receipt-to** {**hostname** *string* | **username** *string* | **$s$**}

**no mta send return-receipt-to** {**hostname** *string* | **username** *string* | **$s$**}

**Syntax Description**

| | |
|---|---|
| **hostname** *string* | Simple Mail Transfer Protocol (SMTP) host name or IP address where MDNs are sent. If you specify an IP address, you must enclose the IP address in brackets as follows: [xxx.xxx.xxx.xxx]. |
| **username** *string* | Username of the sender to which MDNs are to be sent. |
| **$s$** | Wildcard that specifies that the calling number (ANI) generates the disposition-notification-to e-mail address. |

**Command Default**
No address is defined

**Command Modes**
Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**
Use this command to specify where you want MDNs to be sent after a fax-mail is opened.

**Note** Store-and-forward fax supports the Eudora proprietary format, meaning that the header that store-and-forward fax generates is in compliance with RFC 2298 (MDN).

**Note** Multimedia Mail over IP (MMoIP) dial peers must have MDN enabled in order to generate return receipts in off-ramp fax-mail messages.

This command applies to on-ramp store-and-forward fax functions.

**Examples**     The following example configures "xyz" as the user and "server.com" as the SMTP mail server to which MDNs are sent:

```
mta send return-receipt-to hostname server.com
mta send return-receipt-to username xyz
```

**Related Commands**

| Command | Description |
| --- | --- |
| **mta send mail**-**from** | Specifies the mail-from address (also called the RFC 821 envelope-from address or the Return-Path address). |
| **mta send origin**-**prefix** | Adds information to the e-mail prefix header. |
| **mta send postmaster** | To which an e-mail message should be delivered. Specifies the mail server postmaster account to which if it cannot be delivered to the intended destination. |
| **mta send server** | Specifies a destination mail server or servers. |
| **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send server

To specify a destination mail server or servers, use the **mta send server** command in global configuration mode. To remove the specification, use the **no** form of this command.

> **mta send server** {*hostname* | *ip-address*}

> **no mta send server** {*hostname* | *ip-address*}

**Syntax Description**

| | |
|---|---|
| *hostname* | Hostname of the destination mail server. |
| *ip-address* | IP address of the destination mail server. |

**Command Default**  IP address defined as 0.0.0.0

**Command Modes**  Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**  Use this command to provide a backup destination server in case the first configured mail server is unavailable. This command is not intended to be used for load distribution.

You can configure up to ten different destination mail servers using this command. If you configure more than one destination mail server, the router attempts to contact the first mail server configured. If that mail server is unavailable, it contacts the next configured destination mail server.

DNS mail exchange (MX) records are not used to look up host names provided to this command.

> **Note**  When you use this command, configure the router to perform name lookups using the **ip name-server** command.

This command applies to on-ramp store-and-forward fax functions.

**Examples**       The following example defines the mail servers "xyz.example.com" and "abc.example.com" as the destination mail servers:

```
mta send server xyz.example.com
mta send server abc.example.com
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **ip name-server** | Specifies the address of one or more name servers to use for name and address resolution. |
| **mta send mail-from** | Specifies the mail-from address (also called the RFC 821 envelope-from address or the Return-Path address). |
| **mta send origin-prefix** | Adds information to the e-mail prefix header. |
| **mta send postmaster** | Specifies the mail-server postmaster account to which an e-mail message should be delivered if it cannot be delivered to the intended destination. |
| **mta send return-receipt-to** | Specifies the address to which MDNs are sent. |
| **mta send subject** | Specifies the subject header of an e-mail message. |

# mta send success-fax-only

To configure the router to send only successful fax messages and drop failed fax messages, use the **mta send success-fax-only** command in global configuration mode. To disable this functionality, use the **no** form of this command.

**mta send success-fax-only**

**no mta send success-fax-only**

**Syntax Description**     This command has no arguments or keywords.

**Command Default**     The router is configured to send all fax messages.

**Command Modes**     Global configuration (config)

**Command History**

| Release | Modification |
|---------|--------------|
| 15.0(1)M | This command was introduced in a release earlier than Cisco IOS Release 15.0(1)M. |

**Examples**     The following example shows how to configure the router to send only successful fax messages drop failed fax messages:

```
Router# configure terminal
Router(config)# mta send success-fax-only
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **mta send origin-prefix** | Adds information to an e-mail prefix header. |
| **mta send postmaster** | Specifies the mail server postmaster account to which an e-mail message should be delivered if it cannot be delivered to the intended destination. |

# mta send subject

To specify the subject header of an e-mail message, use the **mta send subject** command in global configuration mode. To remove the string, use the **no** form of this command.

**mta send subject** *string*

**no mta send subject** *string*

| Syntax Description | *string* | Subject header of an e-mail message. |
|---|---|---|

**Command Default**    Null string

**Command Modes**    Global configuration

**Command History**

| Release | Modification |
|---|---|
| 12.0(4)XJ | This command was introduced. |
| 12.0(4)T | This command was integrated into Cisco IOS Release 12.0(4)T. |
| 12.1(1)T | This command was integrated into Cisco IOS Release 12.1(1)T. |
| 12.1(5)T | This command was integrated into Cisco IOS Release 12.1(5)T. |
| 12.2(4)T | This command was implemented on the Cisco 1750. |
| 12.2(8)T | This command was implemented on the following platforms: Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco 3725, and Cisco 3745. |

**Usage Guidelines**    This command applies to on-ramp store-and-forward fax functions.

**Note**    The string does not have to be enclosed in quotation marks.

**Examples**    The following example defines the subject header of an e-mail message as "fax attachment":

```
mta send subject fax attachment
```

**Related Commands**

| Command | Description |
|---|---|
| **mta send mail-from** | Specifies the mail-from address (also called the RFC 821 envelope-from address or the Return-Path address). |
| **mta send origin-prefix** | Adds information to an e-mail prefix header. |

| Command | Description |
|---|---|
| **mta send postmaster** | To which an e-mail message should be delivered. Specifies the mail server postmaster account to which if it cannot be delivered to the intended destination. |
| **mta send return-receipt-to** | Specifies the address to which MDNs are sent. |
| **mta send server** | Specifies a destination mail server or servers. |

# mta send with-subject

To configure the subject attached with called or calling numbers, use the **mta send with-subject** command in global configuration mode. To disable the subject attached with called or calling numbers, use the **no** form of this command.

**mta send with-subject** {**$d$** | **$s$** | **both**}

**no mta send with-subject**

| Syntax Description | $d$ | Configures the subject attached with called number. |
|---|---|---|
| | $s$ | Configures the subject attached with calling number. |
| | **both** | Configures the subject attached with both called and calling numbers. |

**Command Default**     The subject is not attached with the calling or called numbers.

**Command Modes**     Global configuration (config)

| Command History | Release | Modification |
|---|---|---|
| | 15.0(1)M | This command was introduced in a release earlier than Cisco IOS Release 15.0(1)M. |

**Usage Guidelines**     The **mta send with-subject both** command instructs the router to include the calling and called party number in the "Subject:" line of the e-mail. This helps to route the fax e-mail to the appropriate mailbox.

**Examples**     The following example shows how to include the calling and the called party number in the "Subject:" line of the e-mail:

```
Router# configure terminal
Router(config)# mta send with-subject both
```

| Related Commands | Command | Description |
|---|---|---|
| | **mta send origin-prefix** | Adds information to an e-mail prefix header. |
| | **mta send postmaster** | Specifies the mail server postmaster account to which an e-mail message should be delivered if it cannot be delivered to the intended destination. |
| | **mta send server** | Specifies a destination mail server or servers. |

# music-threshold

To specify the threshold for on-hold music for a specified voice port, use the **music-threshold** command in voice-port configuration mode. To disable this feature, use the **no** form of this command.

**music-threshold** *decibels*

**no music-threshold** *decibels*

**Syntax Description**

| | |
|---|---|
| *decibels* | On-hold music threshold, in decibels (dB). Range is from –70 to –10 (integers only). The default is –38 dB. |

**Command Default**    –38 dB

**Command Modes**    Voice-port configuration

**Command History**

| Release | Modification |
|---|---|
| 11.3(1)T | This command was introduced on the Cisco 3600 series. |
| 12.0(4)T | This command was implemented on the Cisco MC3810. |
| 12.3(4)XD | The range of values for the *decibels* argument was increased. |
| 12.3(7)T | This command was integrated into Cisco IOS Release 12.3(7)T. |
| 12.3(14)T | This command was implemented on the Cisco 2800 series and Cisco 3800 series. |
| 12.4(2)T | This command was integrated into Cisco IOS Release 12.4(2)T. |

**Usage Guidelines**    Use this command to specify the decibel level of music played when calls are put on hold. This command tells the firmware to pass steady data above the specified level. It affects the operation of voice activity detection (VAD) only when the voice port is receiving voice.

If the value for this command is set too high, VAD interprets music-on-hold as silence, and the remote end does not hear the music. If the value for this command is set too low, VAD compresses and passes silence when the background is noisy, creating unnecessary voice traffic.

**Examples**    The following example sets the decibel threshold to –35 for the music played when calls are put on hold:

```
voice port 0:D
 music-threshold -35
```

The following example sets the decibel threshold to –35 for the music played when calls are put on hold on a Cisco 3600 series router:

```
voice-port 1/0/0
 music-threshold -35
```

# mwi

To enable message-waiting indication (MWI) for a specified voice port, use the **mwi** command in voice-port configuration mode. To disable MWI for a specified voice port, use the **no** form of this command.

**mwi**

**no mwi**

**Syntax Description**     This command has no arguments or keywords.

**Command Default**     MWI is disabled by default.

**Command Modes**     Voice-port configuration

**Command History**

| Release | Modification |
|---------|--------------|
| 12.3(8)T | This command was introduced. |

**Usage Guidelines**     Use the **mwi** command to enable MWI functionality on the voice port and the **mwi-server** command to configure the voice-mail server to send MWI notifications. If the voice port does not have MWI enabled, the voice gateway returns a 481 Call Leg/Transaction Does Not Exist message to the voice-mail server. If there are multiple dial peers associated with the same FXS voice port, multiple subscriptions are sent to the voice-mail server.

**Examples**     The following example shows MWI set on a voice port.

```
voice-port 2/2
 cptone us
 mwi
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **cptone** | Specifies a regional analog voice-interface-related tone, ring, and cadence setting. |
| **mwi-server** | Specifies voice-mail server settings on a voice gateway or UA. |
| **voice-port** | Enters voice-port configuration mode. |

# mwi (supplementary-service)

To set the type of message waiting indication (MWI) when a voicemail is available, use the **mwi** command in supplementary-service configuration mode. To return to the default setting, use the **no** form of this command.

**mwi** {**audible** | **visible** | **both**}

**no mwi**

| Syntax Description | | |
|---|---|
| **audible** | Audible message waiting indication (AMWI) is enabled. |
| **visible** | Visible message waiting indication (VMWI) is enabled. |
| **both** | Default configuration. Both AMWI and VMWI are enabled. |

**Command Default**   Both AMWI and VMWI are enabled by default.

**Command Modes**   Supplementary-service configuration (config-stcapp-suppl-serv)

| Command History | Release | Modification |
|---|---|---|
| | 15.1(3)T | This command was introduced. |

**Usage Guidelines**   Use the **mwi** command to enable MWI as audible only (AMVI), visible only (VMWI), or both (AMVI/VMWI).

When a voicemail is available, you go offhook to hear a special AMWI tone or you go onhook to see an MWI light (when the phone is equipped with one).

**Examples**   The following example shows how to set the type of MWI on voice ports 2/1, 2/2, and 2/3:

```
Router(config)# stcapp supplementary-services
Router(config-stcapp-suppl-serv)# port 2/1
Router(config-stcapp-suppl-serv-port)# fallback-dn 3001
Router(config-stcapp-suppl-serv)# port 2/2
Router(config-stcapp-suppl-serv-port)# fallback-dn 3102
Router(config-stcapp-suppl-serv-port)# mwi visible
Router(config-stcapp-suppl-serv)# port 2/3
Router(config-stcapp-suppl-serv-port)# fallback-dn 3203
Router(config-stcapp-suppl-serv-port)# mwi audible
```

| Related Commands | Command | Description |
|---|---|---|
| | **stcapp supplementary-services** | Enters supplementary-service configuration mode for configuring STCAPP supplementary-service features on an FXS port. |

# mwi-server

To specify voice-mail server settings on a voice gateway or user agent (UA), use the **mwi-server** command in SIP UA configuration mode. To reset to the default, use the **no** form of this command.

> **mwi-server** {**ipv4:***destination-address* | **dns:***host-name*} [**expires** *seconds*] [**port** *port*]
> [**transport** {**tcp** | **udp**}] [**unsolicited**]

> **no mwi-server**

**Syntax Description**

| | |
|---|---|
| **ipv4:***destination-address* | IP address of the voice-mail server. |
| **dns:***host-name* | Host device housing the domain name server that resolves the name of the voice-mail server. |
| | • *host-name*—String that contains the complete host name to be associated with the target address; for example, **dns:test.cisco.com**. |
| **expires** *seconds* | (Optional) Subscription expiration time, in seconds. The range is 1 to 999999. The default is 3600. |
| **port** *port* | (Optional) Defines the port number on the voice-mail server. The default is 5060. |
| **transport** {**tcp** | **udp**} | (Optional) Defines the transport protocol to the voice-mail server. Choices are **tcp** or **udp**. UDP is the default. |
| **unsolicited** | (Optional) Requires the voice-mail server to send a SIP notification message to the voice gateway or UA if the mailbox status changes. Removes the requirement that the voice gateway subscribe for MWI service. |

**Command Default**   Voice-mail server settings are disabled by default.

**Command Modes**   SIP UA configuration

**Command History**

| Release | Modification |
|---|---|
| 12.3(8)T | This command was introduced. |

**Usage Guidelines**   Using the **mwi-server** command a user can request that the UA subscribe to a voice-mail server requesting notification of mailbox status. When there is a status change, the voice-mail server notifies the UA. The UA then indicates to the user that there is a change in mailbox status with an MWI tone when the user takes the phone off-hook.

Only one voice-mail server can be configured per voice gateway. Use the **mwi-server** command with the **mwi** command to enable MWI functionality on the voice port. If the voice port does not have MWI enabled, the voice gateway returns a 481 Call Leg/Transaction Does Not Exist message to the voice-mail server. MWI status is always reset after a router reload.

**Examples**     The following example specifies voice-mail server settings on a voice gateway. The example includes the **unsolicited** keyword, enabling the voice-mail server to send a SIP notification message to the voice gateway or UA if the mailbox status changes.

```
sip-ua
 mwi-server dns:test.cisco.com expires 60 port 5060 transport udp unsolicited
```

For unsolicited Notify, the Contact header derives the voice-mail server address. If the unsolicited MWI message does not contain a Contact header, configure the voice-mail server on the gateway with the following special syntax to accept MWI Notify messages.

```
sip-ua
 mwi-server ipv4:255.255.255.255 unsolicited
```

**Related Commands**

| Command | Description |
|---------|-------------|
| **mwi** | Enables MWI for a specified voice port. |
| sip-us | Enables SIP UA configuration mode. |
| voice-port | Enters voice-port configuration mode. |