channel-group

To define the time slots that belong to each T1 or E1 circuit, use the **channel-group** command in controller configuration mode. To clear the time slots for the T1 or E1 circuit, use the **no** form of this command.

channel-group *channel-number* **timeslots** *range* [**speed** {**48** | **56** | **64**}]

no channel-group [*channel-number* **timeslots** *range*]

Syntax Description

channel-number	Channel-group number. When configuring a T1 data line, channel-group numbers can be values from 0 to 23. When configuring an E1 data line, channel-group numbers can be values from 0 to 30.
timeslots *range*	One or more time slots or ranges of time slots belonging to the channel group. The first time slot is numbered 1. For a T1 controller, the time slot range is from 1 to 24. For an E1 controller, the time slot range is from 1 to 31.
speed {**48** | **56** | **64**}	(Optional) Speed of the underlying DS0s. See the Usage Guidelines section for additional information.

Defaults

The default line speed when configuring a T1 controller is 56 kbps.

The default line speed when configuring an E1 controller is 64 kbps.

Command Modes

Controller configuration

Command History

Release	Modification
11.3 MA	This command was introduced.

Usage Guidelines

Use this command in configurations where the router or access server must communicate with a T1 or E1 fractional data line. The channel-group number may be arbitrarily assigned and must be unique for the controller. The time slot range must match the time slots assigned to the channel group. The service provider defines the time slots that comprise a channel group.

Note Channel groups, CAS voice groups, and TDM groups all use group numbers. All group numbers configured for channel groups, CAS voice groups and TDM groups must be unique on the local Cisco MC3810 concentrator. For example, you cannot use the same group number for a channel group and for a TDM group. Furthermore, on the Cisco MC3810 concentrator, only one channel group can be configured on a controller.

If you specify 56 kbps, the channel group is limited to 14 channels on the Cisco MC3810 MultiFlex Trunk (MFT). Because the **56** keyword is the default, specify the **64** keyword when you need more than 14 channels.

The **channel-group** command also applies to Voice over Frame Relay, Voice over ATM, and Voice over HDLC on the Cisco MC3810.

Examples

The following example defines three channel groups. Channel-group 0 consists of a single time slot, channel-group 8 consists of 7 time slots and runs at a speed of 64 kbps per time slot, and channel-group 12 consists of a single time slot.

```
channel-group 0 timeslots 1
channel-group 8 timeslots 5,7,12-15,20 speed 64
channel-group 12 timeslots 2
```

The following example configures a channel group on controller T1 0 on a Cisco MC3810:

```
controller T1 0
 channel-group 10 timeslots10 64
```

Related Commands

Command	Description
framing	Selects the frame type for the T1 or E1 data line.
linecode	Selects the linecode type for T1 or E1 line.

chat-script

To create a script that will place a call over a modem, use the **chat-script** command in global configuration mode. To disable the specified chat script, use the **no** form of this command.

chat-script *script-name expect-send*

no chat-script *script-name expect-send*

Syntax Description

script-name	Name of the chat script.
expect-send	Pairs of information elements: an item to expect and an item to send in response.

Defaults

No chat scripts are defined.

Command Modes

Global configuration

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

Chat scripts are used in dial-on-demand routing (DDR) to give commands to dial a modem and commands to log on to remote systems. The defined script will be used to place a call over a modem.

Some characteristics of chat scripts are as follows:

- Chat scripts are case sensitive.
- You can have any number of ABORT sequences active at once.
- When a chat script starts, the default timeout is 5 seconds. Changes to the timeout persist until the next time you change them in the script.
- A string within quotation marks is treated as a single entity.

We recommend that one chat script (a "modem" chat script) be written for placing a call and another chat script (a "system" or "login" chat script) be written to log on to remote systems, where required.

Suggested Chat Script Naming Conventions

A suggested chat script naming convention is *vendor-type-modulation.* If you follow this convention, the syntax of the **chat-script** command becomes **chat-script** *vendor-type-modulation expect-send.*

For example, if you have a Telebit T3000 modem that uses V.32*bis* modulation, you would name your chat script `telebit-t3000-v32bis`.

The **chat-script** command could be written as follows:

```
chat-script telebit-t3000-v32bis ABORT ERROR ABORT BUSY ABORT "NO ANSWER" "" "AT H" OK "AT
DT \T" DIALING \c TIMEOUT 30 CONNECT \c
```

Adhering to this naming convention allows you to use partial chat script names with regular expressions to specify a range of chat scripts that can be used. This capability is particularly useful for dialer rotary groups and is explained further in the next section.

Chat scripts are in the form *expect-send*, where the send string following the hyphen (-) is executed if the preceding expect string fails. Each send string is followed by a return unless it ends with the escape sequence *c*. The sequence ^*x* is translated into the appropriate control character, and the sequence *x* is translated into *x* if *x* is not one of the special sequences listed in Table 5.

See the book titled *Managing uucp and Usenet* by Tim O'Reilly and Grace Todino for more information about chat scripts.

Escape Sequences

The escape sequences used in chat scripts are listed in Table 5.

Table 5 Chat Script Send String Escape Sequences

Escape Sequence	Description
\	Sends the ASCII character with its octal value.
\\	Sends a backslash (\) character.
\"	Sends a double-quote (") character (does not work *within* double quotes).
\c	Suppresses a new line at the end of the send string.
\d	Delays for 2 seconds.
\K	Inserts a BREAK.
\n	Sends a newline or linefeed character.
\N	Sends a null character.
\p	Pauses for 0.25 second.
\q	Reserved, not yet used.
\r	Sends a return.
\s	Sends a space character.
\t	Sends a tab character.
\T	Replaced by phone number.
" "	Expects a null string.
BREAK	Causes a BREAK. This sequence is sometimes simulated with line speed changes and null characters. May not work on all systems.
EOT	Sends an end-of-transmission character.

Expect-Send Pairs

Sample supported *expect-send* pairs are described in Table 6.

Table 6 Sample Supported Expect-Send Pairs

Expect and Send Pair	Function
ABORT *string*	Designates a string whose presence in the input indicates that the chat script has failed.
TIMEOUT *time*	Sets the time to wait for input, in seconds. The default is 5 seconds and a timeout of 60 seconds is recommended for V.90 modems.

For example, if a modem reports BUSY when the number dialed is busy, you can indicate that you want the attempt stopped at this point by including ABORT BUSY in your chat script.

Alternate Handlers

If you use the *expect-send* pair ABORT SINK instead of ABORT ERROR, the system terminates abnormally when it encounters SINK instead of ERROR.

Missed Characters

After the connection is established and you press the Return key, you must often press Return a second time before the prompt appears.

For example, you might include the following as part of your chat script:

```
ssword:-/r-ssword
```

This part of the script specifies that, after the connection is established, you want **ssword** to be displayed. If it is not displayed, you must press Return again after the timeout passes.

Examples

The following example shows the **chat-script** command being used to create a chat script named t3000:

```
chat-script t3000 ABORT ERROR ABORT BUSY ABORT "NO ANSWER" "" "AT H" OK "AT DT \T" DIALING
\c TIMEOUT 60 CONNECT \c
```

Related Commands

Command	Description
dialer map	Configures a serial interface or ISDN interface to call one or multiple sites or to receive calls from multiple sites.
script dialer	Specifies a default modem chat script.

class

To create a signaling class structure that can be referred to by its name, use the **class** command in controller configuration mode. To remove the structure, use the **no** form of this command.

class *name*

no class *name*

Syntax Description

name	The signalling class name which specifies the template that processes the ANI/DNIS delimiter.

Defaults

No default behavior or values.

Controller configuration

Command History

Release	Modification
12.1(1)T	The command was introduced.

Usage Guidelines

A signalling class allows the Cisco AS5300 and Cisco AS5800 universal access servers to provide the ANI/DNIS delimiter on incoming T1/CAS trunk lines. The digit collection logic in the call switching module (CSM) for incoming T1 CAS calls in dual tone multifrequency (DTMF) is modified to process the delimiters, the ANI digits, and the DNIS digits.

For this feature to work, a CAS signalling class with the template to process ANI/DNIS delimiters has to be defined. This creates a signalling class structure which can be referred to by its name. The *name* argument must match the name configured in the **signaling-class cas** command.

Examples

The following example defines a CAS signalling class with the template to process ANI/DNIS delimiters on channel 1:

```
Router(config)# signaling-class cas test
Router(config-sig-class)# profile incoming S<*a<*d<*n

Router(config)# controller T1 1/0/1
Router(config-controller)# cas-custom 1
Router(config-ctrl-cas)# class test
```

Related Commands

Commands	Descriptions
profile incoming	Defines a template formed by directives guiding the CSM to process the digit sequence for a signalling class.
signaling-class cas	Defines a signalling class which specifies the template that processes the ANI/DNIS delimiter.

clear cot summary

To reset the counters, use the **clear cot summary** command in privileged EXEC mode.

clear cot summary

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
11.3(7)	This command was introduced.

Examples

There is no display generated, but the counters in the **show cot summary** command would be all zeros.

Related Commands

Command	Description
show cot dsp	Displays information about the COT DSP configuration or current status.
show cot request	Displays COT request information.
show cot summary	Displays information about the COT activity.

clear counters (async)

To clear the counters of a specified asynchronous interface or specified asynchronous interface group, as displayed by the **show interface async** command, use the **clear counters** command in EXEC mode.

clear counters {**async** *async-interface-number* | **group-async** *group-async-interface-number*}

Syntax Description

async	Counters in a specified asynchronous interface.
async-interface-number	Required async interface number of the asynchronous interface that has been previously created with this number specification. The range is from 1 through 49.
group-async	Counters in a specified asynchronous interface group.
group-async-interface-number	Required group-async interface number that has been previously created with this number specification. The range is from 0 through 49.

Command Modes

EXEC

Command History

Release	Modification
12.0	This command was introduced.

Usage Guidelines

Before using this command, use the **show interface async** command to display the asynchronous related counters on the specified asynchronous interface.

Examples

The following example uses the **show interface async** command to display the asynchronous related counters on the asynchronous interface named 1. The example then uses the **clear counters group-async** command to clear the counters. After the counters are cleared, the configuration file for the interface is displayed.

```
Router# show interface async 1

Async1 is down, line protocol is down
  modem(slot/port)=1/0, state=IDLE
  dsx1(slot/unit/channel)=NONE, status=VDEV_STATUS_UNLOCKED
  Hardware is Async Serial
  Interface is unnumbered.  Using address of Ethernet0 (1.18.31.9)
  MTU 1500 bytes, BW 115 Kbit, DLY 100000 usec, rely 255/255, load 1/255
  Encapsulation PPP, loopback not set, keepalive not set
  DTR is pulsed for 5 seconds on reset
  LCP Closed
  Closed: IPCP, CDPCP
  Last input never, output never, output hang never
  Last clearing of "show interface" counters 00:03:46
  Input queue: 0/10/0 (size/max/drops); Total output drops: 0/////
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
     Conversations  0/0/256 (active/max active/max total)
```

```
     Reserved Conversations 0/0 (allocated/max allocated)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
     0 packets output, 0 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 output buffer failures, 0 output buffers swapped out
     0 carrier transitions

Router#
Router# clear counters group-async 1

Clear "show interface" counters on this interface [confirm]
Router#

*Oct 17 00:42:27.083: %CLEAR-5-COUNTERS: Clear counter on interface Group-Asynce
```

Related Commands

Command	Description
clear modem counters	Clears the statistical counters on one or more manageable modems on access servers or routers.
show interface async	Displays the asynchronous related counters on the specified asynchronous interface.

clear counters line

To clear line counters, use the **clear counters line** command in EXEC mode.

clear counters line {*type* | *number*}

Syntax Description

type	Line type: **aux**, **console**, **tty**, or **vty**.
number	First line number to clear, which can be between 0 and 54.

Command Modes

EXEC

Command History

Release	Modification
11.2 P	This command was introduced.

Usage Guidelines

This command clears the line counters shown by the **show line** command.

Examples

The following example shows the available options under the **clear counters line** command. When you issue this command, the counters (for example, Uses and Noise) displayed by the **show line** command are cleared.

```
Router# clear counters line ?

   <0-54>   First Line number
   aux      Auxiliary line
   console  Primary terminal line
   tty      Terminal controller
   vty      Virtual terminal

Router# exit

Router> show line

 Tty Typ     Tx/Rx     A Modem  Roty AccO AccI  Uses    Noise   Overruns
*  0 CTY               -    -      -    -    -     0        4        0/0
A  1 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A  2 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A  3 TTY 115200/115200 - inout     -    -    -     1        0        0/0
*  4 TTY 115200/115200 - inout     -    -    -     0        0        0/0
*  5 TTY 115200/115200 - inout     -    -    -     0        0        0/0
*  6 TTY 115200/115200 - inout     -    -    -     0        0        0/0
*  7 TTY 115200/115200 - inout     -    -    -     0        0        0/0
*  8 TTY 115200/115200 - inout     -    -    -     0        0        0/0
*  9 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 10 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 11 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 12 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 13 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 14 TTY 115200/115200 - inout     -    -    -     0        0        0/0
* 15 TTY 115200/115200 - inout     -    -    -     0        0        0/0
A 16 TTY 115200/115200 - inout     -    -    -     1        0        0/0
```

```
A 17 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A 18 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A 19 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A 20 TTY 115200/115200 - inout     -    -    -     1        0        0/0
A 21 TTY 115200/115200 - inout     -    -    -     1        0        0/0
```

Related Commands

Command	Description
show line	Displays the parameters of a terminal line.

clear dialer

To clear the values of dialer statistics for one or more serial interfaces or BRIs configured for dial-on-demand routing (DDR), use the **clear dialer** privileged EXEC mode command

clear dialer [**interface** *interface-type interface-number*]

Cisco 7500 Series Routers Only

clear dialer [**interface serial** *slot*/*port*]

Syntax Description

interface	(Optional) Indicates that one interface will be specified.
interface-type	(Optional) Interface type: **async**, **serial**, or **bri**.
interface-number	(Optional) Interface number.
slot/*port*	(Optional) Backplane slot number and port number on the interface. See your hardware installation manual for the specific slot and port numbers.

Command Modes

Privileged EXEC

Command History

Release	Modification
11.0	This command was introduced.

Usage Guidelines

If the **interface** keyword and the arguments are not used, dialer statistics are cleared on all interfaces.

Examples

The following example clears the dialer statistics on serial interface 1:

```
Router# clear dialer interface serial 1
```

clear dialer dnis

To reset the counter statistics associated with a specific dialed number identification service (DNIS) group or number, use the **clear dialer dnis** command in privileged EXEC mode.

clear dialer dnis {**group** *name* | **number** *number*}

Syntax Description

group *name*	Dialer DNIS group statistics.
number *number*	Dialer DNIS number statistics.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(4)XI	This command was introduced.

Usage Guidelines

Use the **clear dialer dnis** EXEC command to reset the counter statistics associated with a specific DNIS group or number. This command clears the counters for a DNIS group to reset the counter statistics associated with a specific DNIS group or number. If an ISP is charging a customer for the number of calls to a DNIS, it can clear the number after a week or month by using this command.

Examples

The following example shows the result of using the **clear dialer dnis** command for the DNIS group named dg1. Note that the counters have been cleared after the **clear dialer dnis** command has been entered.

```
Router# show dialer dnis group dg1

DNIS Number:71028
  4 total connections
  3 peak connections
  1 calltype mismatches
DNIS Number:4156266541
  8 total connections
  5 peak connections
  0 calltype mismatches
DNIS Number:4085541628
  3 total connections
  2 peak connections
  0 calltype mismatches
DNIS Number:71017
  2 total connections
  1 peak connections
  0 calltype mismatches

Router# clear dialer dnis group dg1

Router# show dialer dnis group dg1

DNIS Number:71028
  0 total connections
```

```
  0 peak connections
  0 calltype mismatches
DNIS Number:4156266541
  0 total connections
  0 peak connections
  0 calltype mismatches
DNIS Number:4085541628
  0 total connections
  0 peak connections
  0 calltype mismatches
DNIS Number:71017
  0 total connections
  0 peak connections
  0 calltype mismatches
```

Related Commands

Command	Description
show dialer dnis	Displays the number of calls DNIS groups have had.

clear dialer sessions

To remove all dialer sessions and disconnect links when connected, use the **clear dialer sessions** command in EXEC mode.

clear dialer sessions

Syntax Description

This command has no arguments or keywords.

Command Modes

EXEC

Command History

Release	Modification
12.0(3)T	This command was introduced.

Examples

The following example shows how to use the **clear dialer sessions** command:

```
Router# clear dialer sessions
```

Related Commands

Command	Description
show dialer sessions	Displays all dialer sessions.

clear dsip tracing

To clear Distributed System Interconnect Protocol (DSIP) tracing statistics (trace logging), use the **clear dsip tracing** command in privileged EXEC mode.

clear dsip tracing {**counters** | **tracing**} [**control** | **data** | **ipc**]

Syntax Description

counters	DSIP counters.
tracing	DSIP tracing buffers.
control	(Optional) Control counters or tracing buffers.
data	(Optional) Data counters or tracing buffers.
ipc	(Optional) Inter-process communication counters or tracing buffers.

Defaults

If no option is specified, all control, data, and inter-process communication counters or tracing buffers are cleared.

Command Modes

privileged EXEC

Command History

Release	Modification
11.3(2)AA	This command was introduced.

Usage Guidelines

Use this command to clear the counters displayed with the **show dsip tracing** EXEC command.

Examples

In the following example, the DSIP counters are cleared (including data, control, and ipc counters):

```
Router# clear dsip tracing
```

Related Commands

Command	Description
show dsip tracing	Displays DSIP tracing buffer information.
show dsip version	Displays DSIP version information.

clear interface virtual-access

To tear down the virtual access interface and free the memory for other dial-in uses, use the **clear interface virtual-access** command in EXEC mode.

clear interface virtual-access *number*

Syntax Description

number	Virtual access interface number.

Command Modes

EXEC

Command History

Release	Modification
11.2 F	This command was introduced.

Usage Guidelines

This command does not free the memory for uses unrelated to dial-in access.

Examples

The following example clears a specified virtual access interface. You can use the **show interfaces virtual-access** command to display the interface numbers before you clear any specific one.

```
Router# clear interface virtual access 1
```

Related Commands

Command	Description
interface virtual-template	Creates a virtual template interface that can be configured and applied dynamically in creating virtual access interfaces.
show interfaces	Displays statistics for the interfaces configured on a router or access server.

clear ip route download

To clear static routes downloaded from an authentication, authorization, and accounting (AAA) server, use the **clear ip route download** command in EXEC mode.

clear ip route download {* | *network-number network-mask* | **reload**}

Syntax Description

*	All routes.
network-number network-mask	Destination network route and mask in standard IP address notation. For example, 10.1.1.1 255.255.255.255.
reload	Delete all routes, then reload static routes from the AAA server and reset the timer configured by the **aaa route download** command.

Command Modes

EXEC

Command History

Release	Modification
12.0(3)T	This command was introduced.

Usage Guidelines

This command forces the router to reload static routes from the AAA server before the update timer expires.

Examples

The following example shows how to clear all routes:

```
Router# clear ip route download *
```

Related Commands

Command	Description
aaa authorization configuration default	Downloads static route configuration information from the AAA server using TACACS+ or RADIUS.
aaa route download	Enables the download static route feature and sets the amount of time between downloads.
show ip route	Displays all static IP routes, or those installed using the AAA route download function.

clear line

To return a terminal line to idle state, use the **clear line** command in EXEC mode.

clear line *line-number*

Syntax Description

line-number	Absolute line number.

Command Modes

EXEC

Command History

Release	Modification
10.0	This command was introduced.

Usage Guidelines

Use this command to log out of a specific session running on another line. If the line uses a modem, the modem will be disconnected.

Examples

The following example resets line 3 to idle state:

```
Router# clear line 3
```

clear line async-queue

To reset the connections currently waiting to use a rotary line in the queue, use the **clear line async-queue** command in EXEC mode.

clear line async-queue [*rotary-group*]

Syntax Description

rotary-group	(Optional) Rotary group.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)T	This command was introduced.

Usage Guidelines

Use this command without any argument to remove all rotary line queues and terminate the asynchronous queue manager. Use the **clear line async-queue** command with the *rotary-group* argument to reset only the specified rotary group.

Examples

The following example clears all the rotary queues and shows the resulting output:

```
Router# clear line async-queue

Clearing queued connections for ALL rotary groups ! [confirm]
Clearing rotary group 1
  Clearing line 69
  Clearing line 70
Clearing rotary group 2
  Clearing line 66
  Clearing line 67
  Clearing line 68
```

clear modem

To reset the hardware for one or more manageable modems on an access server or router, use the **clear modem** command in EXEC mode.

clear modem {*slot*/*port* | **all** | **group** *group-number* | **at-mode** *slot*/*port* | **test**}

Syntax Description

slot/*port*	Slot and modem port number. (Include the forward slash (/) when entering this variable. For example: **1/1**.)
all	All modems. This command disconnects any active calls.
group *group-number*	Group of modems. The modem group number is the number of the group you have previously created.
at-mode *slot*/*port*	AT directly connected session. The variable, *slot*/*port*, is required. This EXEC command clears an attention (AT) directly connected session to a manageable Microcom modem from a second Telnet session.
test	Log or test report that is displayed by the **show modem test** command. If you do not clear the test regularly, eventually the oldest test report will replace the current test report.

Command Modes

EXEC

Command History

Release	Modification
11.2	This command was introduced.

Usage Guidelines

The modem hardware is reset for modems that are idle or busied out for long periods of time.

An AT directly connected session is usually initiated and closed from the same Telnet session when you enter the **modem at-mode** command and press **Ctrl-C**. However, you can clear an AT directly connected session that was mistakenly left open by enabling the **clear modem at-mode** command from a second Telnet session in to the access server.

Examples

The following example of the **clear modem** *slot*/*port* command resets the hardware for manageable modem 1/1:

```
Router# clear modem 1/1
```

The following is an example of using the **clear modem all** command:

```
Router# clear modem all

This command will disconnect any active calls.
Clear (reset) all modems? [confirm]
Clearing modems.............................................
Done
Router#
```

The following examples of the **clear modem group** command clear the manageable modems in group 1:

```
Router# clear modem group 1
Router# clear modem group1
```

The following example executes the **clear modem at-mode** command from a Telnet session:

```
modem at-mode 1/1
```

The following example executes the **clear modem at-mode** command from a second Telnet session while the first Telnet session is connected to the modem:

```
Router# clear modem at-mode 1/1

clear "modem at-mode" for modem 1/1 [confirm]
Router#
```

The following output is displayed in the first Telnet session after the modem is cleared by the second Telnet session:

```
Direct connect session cleared by vty0 (172.19.1.164)
```

Related Commands

Command	Description
clear modem counters	Clears the statistical counters on one or more manageable modems on access servers or routers.
interface group-async	Creates a group interface that will serve as master, to which asynchronous interfaces can be associated as members.
show modem at-mode	Opens a directly connected session and enters AT command mode, which is used for sending AT commands to Microcom manageable modems.
show modem test	Displays the modem test log.

clear modem counters

To clear the statistical counters on one or more manageable modems installed in an access server, use the **clear modem counters** command in EXEC mode.

clear modem counters [*slot/port-number* | **group** [*group-number*]]

Syntax Description

slot/port-number	(Optional) Slot and modem port number. (Include the forward slash (**/**) when entering this variable. For example: **1/1**.)
group [*group-number*]	(Optional) One or all groups of modems. The optional modem group number is the number of a group-async interface. The group number range is 1 through 1002.

Defaults

Disabled

Command Modes

EXEC

Command History

Release	Modification
11.2	This command was introduced.

Usage Guidelines

Entering the **clear modem counters** command without specifying an optional keyword or argument resets the modem statistics on each modem and the summary statistics displayed in the **show modem summary** command.

The subcommand **clear modem counters group** without the group number clears counters in all modem groups. The optional modem group number is the number of a group you have previously created.

Examples

The following example of the **clear modem counters** *slot/port* command clears the statistical counters on manageable modem 1/1:

```
Router# clear modem counters 1/1
```

The following example of the **clear modem counters group** command clears the statistical counters on all manageable modem groups:

```
Router# clear modem counters group

Clear "show modem" counters for all modem groups [confirm]
Router#
*Oct 17 20:20:24.974: %CLEAR-5-COUNTERS: Clear counter on modems in all groups e
Router#
```

Related Commands

Command	Description
clear cot summary	Clears the counters of a specified asynchronous interface or specified asynchronous interface group.
show modem summary	Displays a high-level report for all manageable modems dialing into and out of the network.

clear modem log

To reset the log for one or more manageable modems installed in a Cisco AS5800 series access server, use the **clear modem log** command in EXEC mode.

clear modem log [*shelf/slot/port shelf/slot/port ...* | **group** [*group-number*]]

Syntax Description

shelf/slot/port	(Optional) One or several modem shelves listed in the order shelf, slot, and port. (Include the forward slash (/) when entering the values.) The shelf value is the shelf ID of the dial shelf. The slot values range from 2 to 11 and the port values range from 0 to 323 on the UP324 modem card, and from 0 to 143 on the Double Density Modem Module (DMM) card.
group [*group-number*]	(Optional) One or all groups of modems. The optional modem group number is the number of a group-async interface. The group number range is 1 to 1002.

Defaults

Reset logs for all modems.

Command Modes

EXEC

Command History

Release	Modification
12.1 T	This command was introduced.

Usage Guidelines

Entering the **clear modem log** command without specifying an optional keyword or argument resets the log for all modems. Entering the **clear modem log** command and the **grou**p keyword without an argument clears the log for all modem groups. Use the optional *shelf/slot/port* or *group-number* argument to clear the log of a specific modem or modem group.

The *group-number* argument is the number of a group you have previously created using the **interface group-async** global configuration and **group range** interface configuration commands. These commands create a group of asynchronous interfaces that are associated with a group asynchronous interface on the same device.

Examples

The following example clears the modem log for shelf 1, slot 4, port 0:

```
Router# clear modem log 1/4/0

Clear Modem log for modem 1/4/00 [confirm]y
```

Use the **show modem log** command to verify that the modem log for shelf 1, slot 4, port 0 is cleared:

```
Router# show modem log 1/4/0

Modem 1/4/00 Events Log:
```

The following example clears the modem logs for shelf 1, slot 4, port 0 and shelf 1, slot 4, port 2:

```
Router# clear modem log 1/4/1 1/4/2

Clear modem log for modems 1/4/01 to 1/4/02 [confirm]y
```

Use the **show modem log** command to verify the modem logs for shelf 1, slot 4, port 0 and shelf 1, slot 4, port 2 are cleared:

```
Router# show modem log 1/4/1 1/4/2

Modem 1/4/01 Events Log:
Modem 1/4/02 Events Log:
```

The following example clears the log for all modems:

```
Router# clear modem log

Clear modem log for all modems [confirm]y
```

The following example clears the log for all modem groups:

```
Router# clear modem log group

Clear modem log for modems in all groups [confirm]y
```

The following example clears the log for modem group 0:

```
Router# clear modem log group 0

Clear modem log for modems in group 0 [confirm]y
```

Related Commands

Command	Description
group range	Creates a list of member asynchronous interfaces (associated with a group interface).
interface group-async	Creates a group interface that will serve as master, to which asynchronous interfaces can be associated as members.
show modem log	Displays the modem history event status performed on a manageable modem or group of modems.

clear modempool-counters

To clear the active or running counters associated with one or more modem pools, use the **clear modempool-counters** command in EXEC mode.

clear modempool-counters [*name*]

Syntax Description

name	(Optional) Modem pool name. If you do not include this option, all counters for all modem pools will be cleared.

Command Modes

EXEC

Command History

Release	Modification
11.2 P	This command was introduced.

Usage Guidelines

The **clear modempool-counters** command clears the counters that are displayed in the **show modem-pool** command. This command is used only with MICA technologies digital modems.

Examples

The following examples show three modem pools set up on the access server: System-def-Mpool, v90service, and v34service.

```
Router# show modem-pool

modem-pool: System-def-Mpool
modems in pool: 20   active conn: 15
0 no free modems in pool

modem-pool: v90service
modems in pool: 50  active conn: 43
  3 no free modems in pool
 called_party_number: 4441000
   max conn allowed: 50, active conn: 43
   3 max-conn exceeded, 3 no free modems in pool

modem-pool: v34service
modems in pool: 50  active conn: 30
 1 no free modems in pool
 called_party_number: 4443000
   max conn allowed: 50, active conn: 30
   0 max-conn exceeded, 0 no free modems in pool
```

In the following example, the **clear modempool-counters v90service** command clears the running counters for the v90services modem pool.

```
Router# clear modempool-counters v90service
Router# show modem-pool

modem-pool: System-def-Mpool
modems in pool: 20   active conn: 15
0 no free modems in pool
```

```
modem-pool: v90service
modems in pool: 50  active conn: 0
 0 no free modems in pool
 called_party_number: 4441000
   max conn allowed: 50, active conn: 0
   0 max-conn exceeded, 0 no free modems in pool

modem-pool: v34service
modems in pool: 50  active conn: 30
 1 no free modems in pool
 called_party_number: 4443000
   max conn allowed: 50, active conn: 30
   0 max-conn exceeded, 0 no free modems in pool
```

Related Commands

Command	Description
called-number (modem pool)	Assigns a called party number to a pool of modems.
modem-pool	Creates a new modem pool or specifies an existing modem pool, which allows you to physically or virtually partition your access server for dial-in and dial-out access.
pool-member	Assigns a range of modems to a modem pool.
show modem-pool	Displays the configuration and connection status for one or more modem pools.

clear port

To reset the NextPort port and clear any active call to the port, use the **clear port** command in EXEC mode.

Cisco AS5400 with NextPort DFC

clear port [*slot* | *slot*/*port*]

Cisco AS5800 with Universal Port Card

clear port [*shelf*/*slot* | *shelf*/*slot*/*port*]

Syntax Description

slot	(Optional) All ports on the specified slot. For the AS5400, slot values range from 0 to 7.
slot/*port*	(Optional) All ports on the specified slot and SPE. For the AS5400, slot values range from 0 to 7 and port values range from 0 to 107.
shelf/*slot*	(Optional) All ports on the specified shelf and slot. For the AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11.
shelf/*slot*/*port*	(Optional) All ports on the specified SPE. For the AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and port values range from 0 to 323.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)XD	This command was introduced on the Cisco AS5400.
12.1(3)T	This command was implemented on the Cisco AS5800.

Usage Guidelines

If you specify the shelf, slot, and port, you clear that port on that Service Processing Element (SPE). If you only specify the shelf and slot, you clear all active ports on that particular shelf and slot. If you do not specify a shelf, slot, or port, you clear all the ports on the access server.

Examples

The following example shows output from the **clear port** command on the Cisco AS5400 with NextPort DFC. This example clears slot 1, port 1:

```
Router# clear port 1/1
This will clear port 1/01[confirm]y
```

The following example shows output from the **clear port** command on the Cisco AS5800 with universal port card. This example clears shelf 1, slot 3, port 0:

```
Router# clear port 01/03/00
This will clear port 1/03/00[confirm]y
```

Related Commands

Command	Description
busyout	Informs the central-office switch that a channel is out of service.
clear line	Returns a terminal line to idle state.
clear spe	Reboots all specified SPEs.
show port digital log	Displays the data event log for digital modems.
show port modem log	Displays the events generated by the modem sessions
show spe	Displays SPE status.
shutdown (port)	Disables a port.

clear port log

To clear all event entries in the port level history event log, use the **clear port log** command in EXEC mode.

Cisco AS5400 with NextPort DFC

clear port log [*slot* | *slot*/*port*]

Cisco AS5800 with Universal Port Card

clear port log [*shelf*/*slot* | *shelf*/*slot*/*port*]

Syntax Description

slot	(Optional) All ports on the specified slot. For the AS5400, slot values range from 0 to 7.
slot/*port*	(Optional) All ports on the specified slot and SPE. For the AS5400, slot values range from 0 to 7 and port values range from 0 to 107.
shelf/*slot*	(Optional) All ports on the specified shelf and slot. For the AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11.
shelf/*slot*/*port*	(Optional) All ports on the specified SPE. For the AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and port values range from 0 to 323.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)XD	This command was introduced on the Cisco AS5400.
12.1(3)T	This command was implemented on the Cisco AS5800.

Usage Guidelines

The **clear port log** command clears the entire port log. You cannot remove individual service events from the port log. On the Cisco AS5400 only, you can use **show port modem log** and/or the **show port digital log** to display specific service events, but you must use **clear port log** to clear the entire port event log.

Examples

The following example shows output from the **clear port log** command on the Cisco AS5400 with NextPort DFC. This example clears slot 1, port 1:

```
Router# clear port log 1/1
This will clear log event history for port(s)1/01 - 1/01[confirm]y
```

The following example shows output from the **clear port log** command on the Cisco AS5800 with universal port card. This example clears shelf 1, slot 3, port 0:

```
Router# clear port log 01/03/00
This will clear port 1/03/00[confirm]y
```

Related Commands

Command	Description
show port digital log	Displays the data event log for digital modems.
show port modem log	Displays the events generated by the modem sessions.

clear resource-pool

To reset the counter statistics associated with a specific customer profile, call discriminator, or physical resource, use the **clear resource-pool** command in privileged EXEC mode.

clear resource-pool {**customer** | **discriminator** | **resource**} {*name* | **all**}

Syntax Description

customer	Customer profile.
discriminator	Call discriminator.
resource	Physical resource. Checks the counters maintained for resource groups.
name	Specific customer profile, discriminator, or physical resource in the access server.
all	All customer profiles, discriminators, or physical resources in the access server.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.0(4)XI	This command was introduced.

Usage Guidelines

Use the **clear resource-pool** privileged EXEC command to reset the counter statistics associated with a specific customer profile, call discriminator, or physical resource.

Examples

The following example shows the use of the **clear resource-pool** command for the specific customer named customer-isp:

```
Router# clear resource-pool customer ?

  WORD  Customer profile name
  all   Clear all customer profiles

Router# clear resource-pool customer customer_isp
Router#
```

Related Commands

Command	Description
show resource-pool call	Displays all active call information for all customer profiles and resource groups.
show resource-pool customer	Displays the contents of one or more customer profiles.
show resource-pool resource	Displays the resource groups configured in the NAS.

clear snapshot quiet-time

To end the quiet period on a client router within 2 minutes, use the **clear snapshot quiet-time** command in EXEC mode.

clear snapshot quiet-time *interface-type interface-number*

Syntax Description

interface-type interface-number	Interface type and number.

Command Modes

EXEC

Command History

Release	Modification
10.3	This command was introduced.

Usage Guidelines

The **clear snapshot quiet-time** command places the client router in a state to reenter the active period within 2 minutes. The 2-minute hold period ensures a quiet period of at least 2 minutes between active periods.

Examples

The following example ends the quiet period on dialer interface 1:

```
Router# clear snapshot quiet-time dialer 1
```

Related Commands

Command	Description
show snapshot	Displays snapshot routing parameters associated with an interface.
snapshot client	Configures a client router for snapshot routing.

clear spe

To reboot all specified Service Processing Elements (SPEs), use the **clear spe** command in EXEC mode.

Cisco AS5400 with NextPort DFC

clear spe [*slot* | *slot*/*spe*]

Cisco AS5800 with Universal Port Card

clear spe [*shelf*/*slot* | *shelf*/*slot*/*spe*]

Syntax Description

slot	(Optional) All ports on the specified slot. For the AS5400, slot values range from 0 to 7.
slot/*spe*	(Optional) All ports on the specified slot and SPE. For the AS5400, slot values range from 0 to 7 and SPE values range from 0 to 17.
shelf/*slot*	(Optional) All ports on the specified shelf and slot. For the AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11.
shelf/*slot*/*spe*	(Optional) All ports on the specified SPE. For the AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)XD	This command was introduced on the Cisco AS5400.
12.1(3)T	This command was implemented on the Cisco AS5800.

Usage Guidelines

Execution of the **clear spe** command causes the configured firmware to be downloaded to the specified SPE or the range of SPEs and causes power-on self-test (POST) to be executed. This command can be executed regardless of the state of the SPEs.

Caution All active ports running on the SPE are prematurely terminated and messages are logged into the appropriate log.

This command downloads configured SPEs with firmware as configured. Unconfigured SPEs download with the default firmware, which is the bundled version. To configure and mange the downloading of firmware without abruptly terminating SPEs, use the firmware location or firmware upgrade commands as appropriate.

Examples

The following example clears SPEs when the **clear spe** command is entered on the Cisco AS5400 with NextPort DFC. This example performs a coldstart on slot 1, SPE 1.

```
Router# clear spe 1/1
Router# This will tear all active calls on the SPE(s), if any.[confirm]y
```

The following example clears SPEs when the **clear spe** command is entered on the Cisco AS5800 with universal port card. This example performs a coldstart on shelf 1, slot 8, SPE 0.

```
Router# clear spe 1/8/0
Router# This will tear all active calls on the SPE(s), if any.[confirm]y
```

Related Commands

Command	Description
busyout	Disables a port by waiting for the active services on the specified port to terminate.
clear line	Returns a line to its idle state.
clear port	Resets the NextPort port and clears any active call.
show spe	Displays SPE status.
shutdown (port)	Disables a port.

clear spe counters

To clear all statistics, use the **clear spe counters** command in EXEC mode.

Cisco AS5400 with NextPort DFC

clear spe counters [*slot* | *slot/spe*]

Cisco AS5800 with universal port card

clear spe counters [*shelf/slot* | *shelf/slot/spe*]

Syntax Description

slot	(Optional) All ports on the specified slot. For the AS5400, slot values range from 0 to 7.
slot/spe	(Optional) All ports on the specified slot and SPE. For the AS5400, slot values range from 0 to 7 and SPE values range from 0 to 17.
shelf/slot	(Optional) All ports on the specified shelf and slot. For the AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11.
shelf/slot/spe	(Optional) All ports on the specified SPE. For the AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)XD	This command was introduced on the Cisco AS5400.
12.1(3)T	This command was implemented on the Cisco AS5800.

Usage Guidelines

The **clear spe counters** command clears statistical counters of all service types for the specified SPE, range of SPEs, or all the SPEs. If you do not set a parameter, you clear all SPE statistical counters.

Examples

The following example clears all statistics when the **clear spe counters** command is entered on the Cisco AS5400 with NextPort DFC.

```
Router# clear spe counters 01/3 01/7
This will clear statistic counters for SPEs 1/03 - 1/07 [confirm]y
```

The following example clears all statistics when the **clear spe counters** command is entered on the Cisco AS5800 with universal port card. This example clears shelf 1, slot 3, ports 0 to 11.

```
Router# clear spe counters 01/03/00 01/03/11
This will clear statistic counters for SPEs 1/03/00 - 1/03/11[confirm]y
```

clear spe log

To clear event entries in the slot history event log, use the **clear spe log** command in EXEC mode.

Cisco AS5400 with NextPort DFC

clear spe log [*slot*]

Cisco AS5800 with Universal Port Card

clear spe log [*shelf/slot*]

Syntax Description

slot	(Optional) All ports on the specified slot. For the AS5400, slot values range from 0 to 7.
shelf/slot	(Optional) All ports on the specified shelf and slot. For the AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11.

Command Modes

EXEC

Command History

Release	Modification
12.1(1)XD	This command was introduced on the Cisco AS5400.
12.1(3)T	This command was implemented on the Cisco AS5800.

Usage Guidelines

The **clear spe log** command clears event entries in the slot history event log. If you do not specify the shelf/slot range, all Service Processing Element (SPE) event entries clear.

If you specify the shelf/slot, only the event entries for that slot clear.

Examples

The following example shows output from the **clear spe log** command on the Cisco AS5400 with NextPort DFC. This example clears the SPE log from shelf 1, slot 3.

```
Router# clear spe log 1/03
This will clear slot event history for slot(s) 3 - 3[confirm]y
```

The following example shows output from the **clear spe log** command on the Cisco AS5800 with universal port card. This example clears shelf 1, slot 8, SPE 0.

```
Router# clear spe log 1/8/0
This will clear slot event history for slot(s) 8 - 8[confirm]y
```

Related Commands

Command	Description
show spe log	Displays the SPE system log.

clear vpdn history failure

To clear the content of the failure history table, use the **clear vpdn history failure** command in EXEC mode.

clear vpdn history failure

Syntax Description

This command has no arguments or keywords.

Command Modes

EXEC

Command History

Release	Modification
11.3 T	This command was introduced.

Examples

The following example clears the content of the failure history table:

```
Router# clear vpdn history failure
```

clear vpdn tunnel

To shut down a specified tunnel and all sessions within the tunnel, use the **clear vpdn tunnel** command in EXEC mode.

clear vpdn tunnel [**pptp** | **l2f** | **l2tp**] *network-access-server gateway-name*

Syntax Description

pptp	(Optional) Clears the specified Point-to-Point Tunneling Protocol (PPTP) tunnel.
l2f	(Optional) Clears the specified Layer 2 Forwarding (L2F) tunnel.
l2tp	(Optional) Clears the specified Layer 2 Tunneling Protocol (L2TP) tunnel.
network-access-server	Name of the network access server at the far end of the tunnel, probably the point of presence of the public data network or the ISP.
gateway-name	Host name of home gateway at the local end of the tunnel.

Command Modes

EXEC

Command History

Release	Modification
11.2	This command was introduced.
11.3(5)AA	The **l2tp** keyword was added.
12.0(1)T	The **l2f** keyword was added.
12.0(5)XE5	The **pptp** keyword was added.
12.1(5)T	The **pptp** keyword was updated for additional Cisco access servers or routers.

Usage Guidelines

Use this command to clear a specific tunnel and all sessions within the tunnel. You can also use this command to isolate problems by forcing a tunnel to come down without deconfiguring the tunnel (the tunnel can be restarted immediately by a user logging in).

You can also use this command to isolate problems by forcing a tunnel to come down without deconfiguring the tunnel (the tunnel can be restarted immediately by having the user log in).

If you are using the **l2tp** keyword, you can clear the tunnel by matching either the remote name or remote name and local name.

Examples

The following example clears a tunnel to a remote peer named sophia:

```
Router# clear vpdn tunnel l2tp mugsy sophia
```

The following example clears a tunnel between a network access server called orion and a home gateway called sampson:

```
Router# clear vpdn tunnel orion sampson
```

clid group

To add a calling line identifier (CLID) group to a discriminator, use the **clid group** command in CLID configuration mode. To remove a CLID group from a discriminator, use the **no** form of this command.

clid group {*clid-group-name* | **default**}

no clid group {*clid-group-name* | **default**}

Syntax Description

clid-group-name	Name of the CLID group added to the discriminator. You can add an existing CLID group or one that is to be defined. Discrimination does not happen until the CLID group is defined.
default	Default discrimination profile. Any CLID number coming in on a call is in its respective default group unless it is specifically assigned a CLID group name.

Defaults

CLID screening is not used.

Command Modes

CLID configuration

Command History

Release	Modification
12.1(5)T	This command was introduced.

Usage Guidelines

Use the **clid group** command to add a CLID group (which specifies the calls to reject) to the discriminator. If you use the default option, CLID call screening is not used.

Examples

The following example shows a call discriminator named **clidKiller** created and configured to block digital calls from the CLID group named **zot**.

```
resource-pool profile discriminator clidKiller
 call-type digital
 clid group zot
```

Related Commands

Command	Description
call-type	Specifies the type of calls you want to block.
resource-pool profile discriminator	Creates a call discrimination profile and assigns it a name.

clock source line

To set the E1 line clock source for the Cisco AS5200 access server, use the **clock source line** command in controller configuration mode. To change or remove the clocking source, use the **no** form of this command.

clock source line {**primary** | **secondary**}

no clock source line {**primary** | **secondary**}

Syntax Description

primary	Primary TDM clock source.
secondary	Secondary TDM clock source.

Defaults

Primary TDM clock source is taken from the E1 controller 0 on the Cisco AS5200.

Secondary TDM clock source is taken from the E1 controller 1 on the Cisco AS5200.

Command Modes

Controller configuration

Command History

Release	Modification
11.1	This command was introduced.

Usage Guidelines

Configure the **clock source line primary** command on the controller that takes the most reliable clocking from an E1 line. Configure the **clock source line secondary** command on the controller that has the next best known clocking. With this configuration, the primary line clocking is backed up to the secondary line if the primary clocking shuts down.

Examples

The following example configures the Cisco AS5200 to use E1 controller 0 as the primary clocking source and the E1 controller 1 as the secondary clocking source:

```
controller e1 0
 framing esf
 linecode hdb3
 pri-group timeslots 1-23
 clock source line primary
!
controller e1 1
 framing esf
 linecode hdb3
 pri-group timeslots 1-23
 clock source line secondary
```

Related Commands

Command	Description
clear controller	Resets the T1 or E1 controller.
controller	Configures a T1 or E1 controller and enters controller configuration mode.
linecode	Selects the linecode type for T1 or E1 line.
show controllers e1	Displays information about the E1 links supported by the NPM (Cisco 4000) or MIP (Cisco 7500 series).

copy modem

To copy modem firmware to integrated modems in an access server, use the **copy modem** command in EXEC mode.

copy {**flash** | **tftp** | **rcp**} **modem**

Syntax Description

flash	Flash memory.
tftp	Local TFTP server.
rcp	Local rcp server.

Command Modes

EXEC

Command History

Release	Modification
11.2	This command was introduced.

Usage Guidelines

Note The **copy modem** command is no longer available for MICA portware and 56K Microcom modems on Cisco AS5200 and AS5300 access servers. Use the **spe** command instead.

The Microcom V.34 modems and Cisco AS5200 V.110 terminal adapter will continue to use the **copy modem** command. On bootup, because these modems do not require download, the command displays the location of the firmware as "feature_card_flash."

After you enable this command, you are asked to provide the download destination (a *slot/port* or **all**), the remote host name, and the path leading to the source modem firmware.

If a modem that you want to upgrade is busy with a call when the **copy modem** command is enabled, the upgrade for that modem yields until the active call is dropped. All other idle modems in the upgrade range proceed with the downloading operation.

Examples

The following example copies the modem firmware file called modem_upgrade from the TFTP server called Modem_Server to modem 2/0, which is installed in a Cisco AS5200 access server:

```
Router# copy tftp modem
Modem Numbers (<slot>/<port>[-<slot>/<port>] | group <number> | all)? 2/0
Address or name of remote host [UNKNOWN]? Modem_Server
Source file name? dirt/elem/modem_upgrade
Accessing file 'dirt/elem/modem_upgrade on Modem_Server...
Loading dirt/elem/modem_upgrade .from 192.168.254.254 (via Ethernet0): ! [OK]

Loading dirt/elem/modem_upgrade from 192.168.254.254 (via Ethernet0):
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
[OK - 237503/278528 bytes]
```

```
Router#
%MODEM-5-DL_START: Modem (2/0) started firmware download
%MODEM-5-DL_GOOD: Modem (2/0) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
```

As shown in this example, you might want to upgrade and test one modem's firmware before upgrading the firmware of all the modems on the access server, as shown in the next example.

The following example downloads the same modem firmware file from the TFTP server to all the modems in the Cisco AS5200 access server:

```
Router# copy tftp modem

Modem Numbers (<slot>/<port>[-<slot>/<port>] | group <number> | all)? all
Address or name of remote host [UNKNOWN]? Modem_Server
Source file name? dirt/elem/modem_upgrade
Accessing file 'dirt/elem/modem_upgrade on Modem_Server...
Loading dirt/elem/modem_upgrade .from 192.168.254.254 (via Ethernet0): ! [OK]

Loading dirt/elem/modem_upgrade from 192.168.254.254 (via Ethernet0):
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
[OK - 237503/278528 bytes]

Router#
%MODEM-5-DL_START: Modem (2/0) started firmware download
%MODEM-5-DL_START: Modem (2/1) started firmware download
%MODEM-5-DL_START: Modem (2/2) started firmware download
%MODEM-5-DL_START: Modem (2/3) started firmware download
%MODEM-5-DL_START: Modem (2/4) started firmware download
%MODEM-5-DL_START: Modem (2/5) started firmware download
%MODEM-5-DL_START: Modem (2/6) started firmware download
%MODEM-5-DL_START: Modem (2/7) started firmware download
%MODEM-5-DL_START: Modem (2/8) started firmware download
%MODEM-5-DL_START: Modem (2/9) started firmware download
%MODEM-5-DL_START: Modem (2/10) started firmware download
%MODEM-5-DL_START: Modem (2/11) started firmware download
%MODEM-5-DL_START: Modem (2/12) started firmware download
%MODEM-5-DL_START: Modem (2/13) started firmware download
%MODEM-5-DL_START: Modem (2/14) started firmware download
%MODEM-5-DL_START: Modem (2/15) started firmware download
%MODEM-5-DL_START: Modem (2/16) started firmware download
%MODEM-5-DL_START: Modem (2/17) started firmware download
%MODEM-5-DL_START: Modem (2/18) started firmware download
%MODEM-5-DL_START: Modem (2/19) started firmware download
%MODEM-5-DL_START: Modem (2/20) started firmware download
%MODEM-5-DL_START: Modem (2/21) started firmware download
%MODEM-5-DL_START: Modem (2/22) started firmware download
%MODEM-5-DL_START: Modem (2/23) started firmware download
%MODEM-5-DL_GOOD: Modem (2/2) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/10) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/4) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/6) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/7) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/12) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/11) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
```

```
%MODEM-5-DL_GOOD: Modem (2/13) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/1) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/14) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/19) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/22) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/5) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/8) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/9) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/17) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/0) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/3) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/21) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/16) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/15) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/18) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/20) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
%MODEM-5-DL_GOOD: Modem (2/23) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
```

The following example copies the modem firmware file called STAR.M from Flash memory to the integrated modem 1/2:

```
Router# copy flash modem

Modem Numbers (<slot>/<port> | group <number> | all)? 1/2

System flash directory:
File  Length   Name/status
  1   3539820  as5200-i-m.allcookies
  2   239203   STAR.M
  3   23072    BOOT.105 [3802288 bytes used, 4586320 available, 8388608 total]
Source file name? STAR.M
Router#
%MODEM-5-DL_START: Modem (1/2) started firmware download
%MODEM-5-DL_GOOD: Modem (1/2) completed firmware download:
MNPClass10V.34/V.FCModemRev1.0.23/85.23/85
Router
```

Related Commands

Command	Description
copy	Copies any file from a source to a destination.
spe	Enters SPE configuration mode and sets the range of SPEs.

corlist incoming

To specify the class of restrictions (COR) list to be used when a specified dial peer acts as the incoming dial peer, use the **corlist incoming** command in dial-peer configuration mode. To clear the previously defined incoming COR list in preparation for redefining the incoming COR list, use the **no** form of this command.

corlist incoming *cor-list-name*

no corlist incoming *cor-list-name*

Syntax Description

cor-list-name	Name of the dial peer COR list that defines the capabilities that the specified dial peer has when it is used as an incoming dial peer.

Defaults

No default behavior or values.

Command Modes

Dial-peer configuration

Command History

Release	Modification
12.1(3)T	This command was introduced.

Usage Guidelines

The **dial-peer cor list** and **member** commands define a set of capabilities (a COR list). These lists are used in dial peers to indicate the capability set that a dial peer has when it is used as an incoming dial peer (the **corlist incoming** command) or to indicate the capability set that is required for an incoming dial peer to make an outgoing call through the dial peer (the **corlist outgoing** command). For example, if dial peer 100 is the incoming dial peer and its incoming COR list name is list_100, dial peer 200 has list_200 as the outgoing COR list name. If list_100 does not include all the members of list_200 (that is, if list_100 is not a superset of list_200), it is not possible to have a call from dial peer 100 that uses dial peer 200 as the outgoing dial peer.

Examples

In the following example, incoming calls from 526.... are blocked from being switched to outgoing calls to 1900.... because the COR list for the incoming dial peer (list2) is not a superset of the COR list for the outgoing dial peer (list1):

```
dial-peer list list1
 member 900_call

dial-peer list list2
 member 800_call
 member other_call

dial-peer voice 526 pots
 answer-address 408526....
 corlist incoming list2
 direct-inward-dial
```

```
dial-peer voice 900 pots
 destination pattern 1900.......
 direct-inward-dial
 trunkgroup 101
 prefix 333
 corlist outgoing list1
```

Related Commands

Command	Description
corlist outgoing	Specifies the COR list to be used by outgoing dial peers.
dial-peer cor list	Defines a COR list name.
member	Adds a member to a dial peer COR list.

corlist outgoing

To specify the class of restrictions (COR) list to be used by outgoing dial peers, use the **corlist outgoing** command in dial-peer configuration mode. To clear the previously defined outgoing COR list in preparation for redefining the outgoing COR list, use the **no** form of this command.

corlist outgoing *cor-list-name*

no corlist outgoing *cor-list-name*

Syntax Description

cor-list-name	Required name of the dial peer COR list for outgoing calls to the configured number using this dial peer.

Defaults

No default behavior or values.

Command Modes

Dial-peer configuration

Command History

Release	Modification
12.1(3)T	This command was introduced.

Usage Guidelines

If the COR list for the incoming dial peer is not a superset of the COR list for the outgoing dial peer, calls from the incoming dial peer cannot use that outgoing dial peer.

Examples

In the following example, incoming calls from 526.... are blocked from being switched to outgoing calls to 1900.... because the COR list for the incoming dial peer (list2) is not a superset of the COR list for the outgoing dial peer (list1):

```
dial-peer list list1
member 900_call

dial-peer list list2
 member 800_call
 member other_call

dial-peer voice 526 pots
 answer-address 408526....
 corlist incoming list2
 direct-inward-dial

dial-peer voice 900 pots
 destination pattern 1900.......
 direct-inward-dial
 trunk group 101
 prefix 333
 corlist outgoing list1
```

Related Commands

Command	Description
corlist incoming	Specifies the COR list to be used when a specified dial peer acts as the incoming dial peer.
dial-peer cor list	Defines a COR list name.
member	Adds a member to a dial peer COR list.

cpp authentication

To enable negotiation of authentication with a router or bridge that supports the Combinet Proprietary Protocol (CPP) and that is calling in to this router, use the **cpp authentication** command in interface configuration mode. To disable negotiation of CPP authentication, use the **no** form of this command.

cpp authentication

no cpp authentication

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
11.2	This command was introduced.

Usage Guidelines

Use this command for authenticating the device that is calling in to this router.

Use this command to communicate over an ISDN interface with Cisco 700 and 800 series (formerly Combinet) routers that do not support PPP but do support the CPP.

Currently, most Cisco routers *do* support PPP. Cisco routers can communicate over ISDN with these devices by using PPP encapsulation, which supports both routing and fast switching.

This command is supported on ISDN and dialer interfaces.

This command uses names and passwords from the **username password** command. It does not support TACACS.

Examples

The following example configures a PRI to communicate with a bridge that does not support PPP:

```
controller t1 1/1
 framing esf
 linecode b8zs
 pri-group timeslots 1-23
 isdn switchtype primary-4ess

interface Serial1/1:23
 encapsulation cpp
 cpp callback accept
 cpp authentication
```

The following example configures a BRI to communicate with a bridge that does not support PPP:

```
interface bri 0
 encapsulation cpp
 cpp callback accept
 cpp authentication
```

Related Commands

Command	Description
cpp callback accept	Enables the router to accept callback from a router or bridge that supports the CPP.
encapsulation cpp	Enables encapsulation for communication with routers or bridges using the CPP.
virtual-profile aaa	Enables virtual profiles by AAA configuration.

cpp callback accept

To enable the router to accept callback from a router or bridge that supports the Combinet Proprietary Protocol (CPP), use the **cpp callback accept** command in interface configuration mode. To disable callback acceptance, use the **no** form of this command.

cpp callback accept

no cpp callback accept

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Interface configuration

Command History

Release	Modification
11.2	This command was introduced.

Usage Guidelines

Use this command to communicate over an ISDN interface with Cisco 700 and 800 series (formerly Combinet) routers that do not support PPP but do support CPP.

Currently, most Cisco routers *do* support PPP. Cisco routers can communicate over ISDN with these devices by using PPP encapsulation, which supports both routing and fast switching.

This command is supported on ISDN and dialer interfaces.

Examples

The following example configures the PRI serial interface 1/1:23 to communicate with a router or bridge that does not support PPP:

```
controller t1 1/1
 framing esf
 linecode b8zs
 pri-group timeslots 1-23
 isdn switchtype primary-4ess
!
interface Serial1/1:23
 encapsulation cpp
 cpp callback accept
 cpp authentication
```

The following example configures BRI 0 to communicate with a router or bridge that does not support PPP:

```
interface bri 0
 encapsulation cpp
 cpp callback accept
 cpp authentication
```

Related Commands

Command	Description
cpp authentication	Enables negotiation of authentication with a router or bridge that supports the CPP and that is calling in to this router.
encapsulation cpp	Enables encapsulation for communication with routers or bridges using the CPP.