

# show sessions

To display information about open local-area transport (LAT), Telnet, or rlogin connections, use the **show sessions** command in EXEC mode.

**show sessions**

## Syntax Description

This command has no arguments or keywords.

## Command Modes

EXEC

## Command History

Release	Modification
10.0	This command was introduced.

## Usage Guidelines

This command display the host name, address, number of unread bytes for the user to receive, idle time, and connection name.

## Examples

The following is sample output from the **show sessions** command:

```
Router# show sessions
```

```
Conn Host          Address           Byte    Idle  Conn Name
  1 MATHOM          192.168.7.21     0       0    MATHOM
* 2 CHAFF          172.25.12.19     0       0    CHAFF
```

The asterisk (\*) indicates the current terminal session.

[Table 105](#) describes significant fields shown in the display.

**Table 105** *show sessions Field Descriptions*

Field	Description
Conn	Name or address of the remote host to which the connection is made.
Host	Remote host to which the router is connected through a Telnet session.
Address	IP address of the remote host.
Byte	Number of unread bytes displayed for the user to receive.
Idle	Interval (in minutes) since data was last sent on the line.
Conn Name	Assigned name of the connection.

## Related Commands

Command	Description
<b>protocol (VPDN)</b>	Sets X.3 parameters for PAD connections.
<b>where</b>	Lists open sessions associated with the current terminal line.

# show sgbp

To display the status of the stack group members, use the **show sgbp** command in EXEC mode.

**show sgbp**

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

**Command Modes** EXEC

Command History	Release	Modification
	11.2	This command was introduced.

**Examples** The following is sample output from the **show sgbp** command:

```
Router# show sgbp

Group Name: stack State: 0 Ref: 0xC07B060
  Member Name: systemb State: ACTIVE Id: 1
  Ref: 0xC14256F
  Address: 10.1.1.1 Tcb: 0x60B34538

  Member Name: systemc State: ACTIVE Id: 2
  Ref: 0xA24256D
  Address: 10.1.1.2 Tcb: 0x60B34439

  Member Name: systemd State: IDLE Id: 3
  Ref: 0x0
  Address: 10.1.1.3 Tcb: 0x0
```

[Table 106](#) describes the significant fields shown in the display.

**Table 106** *show sgbp Field Descriptions*

Field	Description
Group Name	Name of the stack group.
State	Status of the group or its member. The values are 0 for the stack group itself, and either ACTIVE or IDLE for each of the members of the group.
Member Name	Name of a specific host defined as a member of this stack group.
Id	Identifier used for each member of the group; typically the final digit of the host's IP address on the network they share.
Address	IP address of the stack group member.

# show sgbp queries

To display the current seed bid value, use the **show sgbp queries** command in EXEC mode.

## show sgbp queries

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

**Command Modes** EXEC

Command History	Release	Modification
	11.2	This command was introduced.

**Examples** The following example shows a bid of 50 from this system. Peers queried the system for the bid, the bid was accepted, and a connection was opened from a peer in the stack group.

```
Router# show sgbp queries

Seed bid: default, 50

Bundle: book State: Query_from_peers OurBid: 50
10.1.1.2      State: Open_from_peer  Bid: 050 Retry: 0
```

[Table 107](#) describes the significant fields shown in the display.

**Table 107** *show sgbp queries Field Descriptions*

Field	Description
Seed bid	The initial bid; in this case, the default 50.
Bundle	Name of the MMP bundle.
State	Activity that occurred. In this case, a peer queried this system for its bid for the specified bundle.
OurBid	What this system bid for the bundle. It bid 50.
10.1.1.2	The peer's IP address.
State Bid Retry	Activity that occurred on the bid. In this case, the stack-group peer 1.1.1.2 accepted this system's bid of 50 for the bundle and opened a connection with this system. Since the peer opened a connection, no retry was needed.

# show snapshot

To display snapshot routing parameters associated with an interface, use the **show snapshot** command in EXEC mode.

```
show snapshot [interface-type interface-number]
```

<b>Syntax Description</b>	<i>interface-type</i> (Optional) Interface type and number. <i>interface-number</i>
---------------------------	--

<b>Command Modes</b>	EXEC
----------------------	------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	10.3	This command was introduced.

**Examples** The following is sample output from the **show snapshot** command:

```
Router# show snapshot serial 1

Serial1 is up, line protocol is up, snapshot up
Options: dialer support
Length of each activation period: 3 minutes
Period between activations:      10 minutes
Retry period on connect failure: 10
For dialer address 240
  Current queue: active, remaining active time: 3 minutes
  Updates received this cycle: ip, ipx, appletalk
For dialer address 1
  Current queue: client quiet, time until next activation: 7 minutes
```

[Table 108](#) describes the significant fields shown in the display.

**Table 108** *show snapshot Field Descriptions*

Field	Description
Serial1 is up, line protocol is up	Indicates whether the interface hardware is currently active (whether carrier detect is present) and whether it has been taken down by an administrator.
snapshot up	Indicates whether the snapshot protocol is enabled on the interface.
Options:	Option configured on the <b>snapshot client</b> or <b>snapshot server</b> interface configuration command. It can be one of the following: <ul style="list-style-type: none"> <li>dialer support—Snapshot routing is configured with the <b>dialer</b> keyword.</li> <li>stay asleep on carrier up—Snapshot routing is configured with the <b>suppress-statechange-updates</b> keyword.</li> </ul>
Length of each activation period	Length of the active period.

**Table 108** *show snapshot Field Descriptions (continued)*

Field	Description
Period between activations	Length of the quiet period.
Retry period on connect failure	Length of the retry period.
For dialer address	Displays information about each dialer rotary group configured with the <b>dialer map</b> command.
Current queue:	Indicates which period snapshot routing is currently in. It can be one of the following: <ul style="list-style-type: none"> <li>• active—Routing updates are being exchanged.</li> <li>• client quiet—The client router is in a quiet period and routing updates are not being exchanged.</li> <li>• server quiet—The server router is in a quiet period, awaiting an update from the client router before awakening, and routing updates are not being exchanged.</li> <li>• post active—Routing updates are not being exchanged. If the server router receives an update from the client router, it processes it but does not begin an active period. This allows time for resynchronization of active periods between the client and server routers.</li> <li>• no queue—This is a temporary holding queue for new snapshot routing interfaces and for interfaces being deleted.</li> </ul>
remaining active time time until next activation	Time remaining in the current period.
Updates received this cycle	Protocols from which routing updates have been received in the current active period. This line is displayed only if the router or access server is in an active period.

# show spe

To display service processing element (SPE) status, use the **show spe** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe [slot | slot/spe | slot/port]
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe [shelf/slot | shelf/slot/spe]
```

Syntax Description	
<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7, and SPE values range from 1 to 17. You must include the slash mark.
<i>slot/port</i>	(Optional) The specified port range on a slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. Port values range from 0 to one less than the number of ports supported by the card. You must include the slash mark.
<i>shelf/slot</i>	(Optional) The specified port range on a shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
<i>shelf/slot/spe</i>	(Optional) All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.1(5)XM2	This command was integrated into Cisco IOS Release 12.1(5)XM2.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350 and Cisco AS5400 platforms.

Usage Guidelines	
	Use the <b>show spe</b> command to display status and history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

**Examples**

The following example displays history statistics for all SPEs after a busyout was executed on SPE 2/0 and a shutdown was executed on SPE 2/1 on the Cisco AS5400:

```
Router# show spe

SPE settings:
=====
Country code configuration: default T1 (u Law)
Polling interval: 12 secs.
History log events: 50(per port)
Port legends:
=====
Port state: (s)shutdown (t)test (r)recovery (d)download
             (b)busiedout (p)busyout pending, (B)bad (a)active call
Call Type: (m)modem (d)digital (__)not in use
```

SPE#	Port #	SPE State	SPE Busyout	SPE Shut	SPE Crash	Port State	Call Type
2/00	0000-0005	ACTIVE	0	0	0	aaaaaa	dddddd
2/01	0006-0011	ACTIVE	0	0	0	aaaaaa	dddddd
2/02	0012-0017	ACTIVE	0	0	0	aaaaaa	dddddd
2/03	0018-0023	ACTIVE	0	0	0	aaaaaa	dddmcm
2/04	0024-0029	ACTIVE	0	0	0	aaaaaa	dmrmmmm
2/05	0030-0035	ACTIVE	0	0	0	aaa_aa	mmm_mm
2/06	0036-0041	ACTIVE	0	0	0	__aaaa	__mrrmm
2/07	0042-0047	ACTIVE	0	0	0	aaa_aa	mmmm_mm
2/08	0048-0053	ACTIVE	0	0	0	_aaa_a	_mmm_m
2/09	0054-0059	ACTIVE	0	0	0	_aa_aa	_mcm_mm
2/10	0060-0065	ACTIVE	0	0	0	_a_a_a	_m_m_m
2/11	0066-0071	ACTIVE	0	0	0	_a_aaa	_d_rmd
2/12	0072-0077	ACTIVE	0	0	0	aaaaaa	mcmrmd
2/13	0078-0083	ACTIVE	0	0	0	_aaaaa	_dmrmd
2/14	0084-0089	ACTIVE	0	0	0	_a_aaa	_m_ddd
2/15	0090-0095	ACTIVE	0	0	0	a_aaaa	m_ddd
2/16	0096-0101	ACTIVE	0	0	0	aaaaaa	dddmd
2/17	0102-0107	ACTIVE	0	0	0	aaaaaa	dddddd

The following example shows output for the **show spe** command on the Cisco AS5800 with the universal port card. This example shows SPE settings for slot 2, SPEs 0 to 53:

```
Router# show spe

SPE settings
=====
Country code configuration default T1 (u Law)
Polling interval 12 secs.
History log events 50(per port)
Port legends
=====
Port state (s)shutdown (t)test (r)recovery (d)download
           (b)busiedout (p)busyout pending, (B)bad (a)active call
Call type (m)modem (d)digital (__)not in use
```

SPE#	Port #	SPE State	SPE Busyout	SPE Shut	SPE Crash	Port State	Call Type
1/02/00	0000-0005	ACTIVE	0	0	0	a_a_a_	m_m_m_
1/02/01	0006-0011	ACTIVE	0	0	0	aaa__	mmmm_
1/02/02	0012-0017	ACTIVE	0	0	0	_a_aa_	_m_mm_
1/02/03	0018-0023	ACTIVE	0	0	0	_aaaaa	_mmmmmm
1/02/04	0024-0029	ACTIVE	0	0	0	a_a_a_	m_m_m_
1/02/05	0030-0035	ACTIVE	0	0	0	__a_	__m_
1/02/06	0036-0041	ACTIVE	0	0	0	_aaa_a	_mmm_m
1/02/07	0042-0047	ACTIVE	0	0	0	a_____	m_____

```

1/02/08 0048-0053 ACTIVE 0 0 0 _aa_aa _mm_mm
1/02/09 0054-0059 ACTIVE 0 0 0 _aa_aa _mm_mm
1/02/10 0060-0065 ACTIVE 0 0 0 _a_a_a _m_m_m
1/02/11 0066-0071 ACTIVE 0 0 0 a_aa_ m_mm_
1/02/12 0072-0077 ACTIVE 0 0 0 aaa_ mmm_
1/02/13 0078-0083 ACTIVE 0 0 0 aaaa_a mmmm_m
1/02/14 0084-0089 ACTIVE 0 0 0 _aaa_ _mmm_
1/02/15 0090-0095 ACTIVE 0 0 0 a_aaa m_mmm
1/02/16 0096-0101 ACTIVE 0 0 0 _aaaa_ _mmmm_
1/02/17 0102-0107 ACTIVE 0 0 0 _aaa_a _mmm_m
1/02/18 0108-0113 ACTIVE 1 0 0 _aaaaa _mmmmm
1/02/19 0114-0119 ACTIVE 1 0 0 aa_aa_ mm_mm_
1/02/20 0120-0125 ACTIVE 1 0 0 aa_aa_ mm_mm_
1/02/21 0126-0131 ACTIVE 1 0 0 aaa_aa mmm_mm
1/02/22 0132-0137 ACTIVE 1 0 0 _a_ _m_
1/02/23 0138-0143 ACTIVE 1 0 0 a_aaa m_mmm
1/02/24 0144-0149 ACTIVE 1 0 0 a_a_aa m_m_mm
1/02/25 0150-0155 ACTIVE 1 0 0 _aaa_ _mmm_
1/02/26 0156-0161 ACTIVE 1 0 0 a_a_a m_m_m
1/02/27 0162-0167 ACTIVE 1 0 0 a_a_aa m_m_mm
1/02/28 0168-0173 ACTIVE 1 0 0 a_aa_ m_mm_
1/02/29 0174-0179 ACTIVE 1 0 0 _a_ _m_
1/02/30 0180-0185 ACTIVE 1 0 0 _aaaaa _mmmmm
1/02/31 0186-0191 ACTIVE 1 0 0 _a_aa_ _m_mm_
1/02/32 0192-0197 ACTIVE 1 0 0 aaa_a_ mmm_m
1/02/33 0198-0203 ACTIVE 1 0 0 a_a_a_ m_m_m
1/02/34 0204-0209 ACTIVE 1 0 0 aaaaaa mmmmmm
1/02/35 0210-0215 ACTIVE 1 0 0 _aa_a_ _mm_m
1/02/36 0216-0221 ACTIVE 0 0 0 a_a_aa m_m_mm
1/02/37 0222-0227 ACTIVE 0 0 0 a_aaaa m_mmmm
1/02/38 0228-0233 ACTIVE 0 0 0 aaaaaa mmmmmm
1/02/39 0234-0239 ACTIVE 0 0 0 aa_aa_ mm_mm_
1/02/40 0240-0245 ACTIVE 0 0 0 aa_aaa mm_mmm
1/02/41 0246-0251 ACTIVE 0 0 0 a_a_ m_m_
1/02/42 0252-0257 ACTIVE 0 0 0 aa_aa_ mm_mm_
1/02/43 0258-0263 ACTIVE 0 0 0 aaa_aa mmm_mm
1/02/44 0264-0269 ACTIVE 0 0 0 aaaa_a mmmm_m
1/02/45 0270-0275 ACTIVE 0 0 0 aaa_a_ mmm_m_
1/02/46 0276-0281 ACTIVE 0 0 0 aaaaa_ mmmmm_
1/02/47 0282-0287 ACTIVE 0 0 0 _aaaa_ _mmmm_
1/02/48 0288-0293 ACTIVE 0 0 0 a_aa_a m_mm_m
1/02/49 0294-0299 ACTIVE 0 0 0 aa_a_a mm_m_m
1/02/50 0300-0305 ACTIVE 0 0 0 aa_aaa mm_mmm
1/02/51 0306-0311 ACTIVE 0 0 0 aaaaa_ mmmmm_
1/02/52 0312-0317 ACTIVE 0 0 0 aaaaaa mmmmmm
1/02/53 0318-0323 ACTIVE 0 0 0 aaaa_a mmmm_m

```

Table 109 describes the significant fields shown in the display.

**Table 109** show spe Field Descriptions

Field	Description
SPE #	Specifies the slot and port number of the SPE.
Port #	Displays the port number.
SPE State	Displays the state of the SPE port.
SPE Busyout	Displays the number of busyout calls.
SPE Shut	Indicates if the port is shut down.
SPE Crash	Specifies if the port has crashed.

**Table 109** *show spe Field Descriptions (continued)*

Field	Description
Port State	Indicates if the port is active or idle.
Call Type	Data, modem, or fax call type.

**Related Commands**

Command	Description
<b>show spe digital active</b>	Displays active digital calls and digital statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe modem active</b>	Displays active modem statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe voice active</b>	Displays active voice statistics of all SPEs, a specified SPE, or the specified SPE range.

# show spe digital

To display history statistics of all service processing elements (SPEs) for digital service, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs, use the **show spe digital** command in EXEC mode.

**show spe digital** [*slot* | *slot/spe*]

## Syntax Description

<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5400, slot values range from 1 to 7 and SPE values range from 1 to 17. You must include the slash mark.

## Command Modes

EXEC

## Command History

Release	Modification
12.1(1)XD	This command was introduced.
12.1(3)T	This command was implemented on the Cisco AS5400.
12.1(5)XM1	This command was implemented on the Cisco AS5350.
12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Usage Guidelines

Use the **show spe digital** command on the Cisco AS5350 and Cisco AS5400 with NextPort port dial feature card (DFC).



### Note

This command is not supported on the Cisco AS5800 with the universal port card (UPC).

## Examples

The following example uses the starting slot/SPE version of the **show spe digital** command. This example shows statistics for slot 5, SPE 4:

```
Router# show spe digital 5/4

#SPE 5/04
Cisco Universal SPE; Fw: 0.06.07.03; Async5/24 - 5/29, TTY672 - 677
Last clearing of statistics counters          : never
  11 incoming completes                    24 incoming failures
   0 outgoing completes                     0 outgoing failures
   0 failed dial attempts                   0 ring no answers
   0 no dial tones                          0 link failures
   0 watchdog timeouts                     0 protocol errors
   0 dial timeouts
```

```

Transmit Speed Counters      :
Speed    Calls Speed    Calls Speed    Calls Speed    Calls
Speed    Calls
 64000      0 28800      0 14400      0 7200      0
1200        0
 56000      0 24000      0 12000      0 4800      1
600         0
 38400      0 19200      10 9600       0 2400      0

Receive Speed Counters      :
Speed    Calls Speed    Calls Speed    Calls Speed    Calls
Speed    Calls
 64000      0 28800      0 14400      0 7200      0
1200        0
 56000      0 24000      0 12000      0 4800      1
600         0
 38400      0 19200      10 9600       0 2400      0

```

Table 110 describes the significant fields shown in the display.

**Table 110** show spe digital Field Descriptions

Field	Description
SPE #	Specifies the slot and port number of the SPE.
Cisco Universal SPE	Firmware version installed on the SPE.
Last clearing of statistics counters	Last time the modem counters were cleared using the <b>clear modem counters</b> command.
Transmit Speed Counters	List of connection speeds that were sent by the SPE.
Receive Speed Counters	List of connection speeds that were received by the SPE.

#### Related Commands

Command	Description
<b>show spe digital active</b>	Displays active digital calls and digital statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital csr</b>	Displays digital CSR statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital disconnect-reason</b>	Displays the local disconnection reasons for all digital calls on the SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital summary</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe digital active

To display active digital calls and digital statistics of all service processing elements (SPEs), a specified SPE, or the specified range of SPEs, use the **show spe digital active** command in EXEC mode.

**show spe digital active** [*slot* | *slot /spe*]

Syntax Description	slot	(Optional) All ports on the specified slot. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5400, slot values range from 1 to 7 and SPE values range from 1 to 17. You must include the slash mark.

**Command Modes** EXEC

Command History	Release	Modification
	12.1(1)XD	This command was introduced.
	12.1(3)T	This command was implemented on the Cisco AS5400.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** Use the **show spe digital active** command on the Cisco AS5350 and Cisco AS5400 with the NextPort dial feature card (DFC).



**Note**

This command is not supported on the Cisco AS5800 with the universal port card (UPC).

**Examples**

The following is sample output from the **show spe digital active** command on the Cisco AS5400 with the NextPort DFC. This example displays active digital statistics for slot 5, SPE 06:

```
Router# show spe digital active 5

SPE 5/06

Port  Prot    Duration  Char          Sync
41    V.110    188       19200/19200  In    0

SPE 5/09

Port  Prot    Duration  Char          Sync
54    V.110    187       19200/19200  In    0
56    V.110    187       19200/19200  In    0
57    V.110    188       19200/19200  In    0
:
```

Table 111 describes the significant fields shown in the display.

**Table 111** *show spe digital active* Field Descriptions

Field	Description
SPE #	Specifies the slot and port number of the SPE.
Port	Port that is active.
Prot	Protocol used for the call in progress.
Duration	Duration of call.
Char Tx/Rx	Characters sent and received.

#### Related Commands

Command	Description
<b>show spe digital</b>	Displays history statistics of all digital SPEs, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs.
<b>show spe digital csr</b>	Displays digital calls CSR statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital disconnect-reason</b>	Displays the local disconnect reasons for all digital calls on the SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital summary</b>	Display history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe digital csr

To display digital call success rate (CSR) statistics of all service processing elements (SPEs), a specified SPE, or the specified range of SPEs, use the **show spe digital csr** command in EXEC mode.

**show spe digital | csr** [**summary** | *slot* | *slot/spe*]

Syntax Description	summary	(Optional) Summary digital CSR statistics.
	<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5400, slot values range from 1 to 7 and SPE values range from 1 to 17. You must include the slash mark.

**Command Modes** EXEC

Command History	Release	Modification
	12.1(1)XD	This command was introduced.
	12.1(3)T	This command was implemented on the Cisco AS5400.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** Use the **show spe digital csr** command on the Cisco AS5350 and Cisco AS5400 with the NextPort dial feature card DFC.



**Note**

This command is not supported on the Cisco AS5800 with the universal port DFC.

**Examples** The following is sample output from the **show spe digital csr** command on the Cisco AS5400 with the NextPort DFC. This example displays the number of call success rate counters for slot 5:

Router# **show spe digital csr 5**

SPE	Avg Hold Time	Inc calls		Out calls		Failed Dial	No Answer	Succ Pct
		Succ	Fail	Succ	Fail			
5/00	00:04:22	6	0	0	0	0	0	100%
5/01	00:04:22	6	0	0	0	0	0	100%
5/02	00:04:22	6	0	0	0	0	0	100%
5/03	00:04:22	6	0	0	0	0	0	100%
5/04	00:04:22	6	0	0	0	0	0	100%
5/05	00:04:22	6	0	0	0	0	0	100%
5/06	00:04:22	4	0	0	0	0	0	100%
5/07	00:04:22	1	0	0	0	0	0	100%
5/08	00:04:21	6	0	0	0	0	0	100%
5/09	00:04:23	5	0	0	0	0	0	100%

5/10	00:00:00	0	0	0	0	0	0	0%
5/11	00:04:21	5	0	0	0	0	0	100%
5/12	00:04:20	2	0	0	0	0	0	100%
5/13	00:00:00	0	0	0	0	0	0	0%
5/14	00:00:00	0	0	0	0	0	0	0%
5/15	00:00:00	0	0	0	0	0	0	0%
5/16	00:00:00	0	0	0	0	0	0	0%
5/17	00:00:00	0	0	0	0	0	0	0%

Table 112 describes the significant fields shown in the display.

**Table 112** *show spe digital csr Field Descriptions*

Field	Description
SPE	The SPE slot and port number.
Avg Hold Time	The average hold time.
Inc calls, Succ/Fail	The cumulative number of incoming calls that have succeeded and failed in the configured time period.
Out calls, Succ/Fail	The cumulative number of outgoing calls that have succeeded and failed in the configured time period.
Failed Dial	The number of calls that failed when dialed.
No Answer	The number of calls that were not answered.
Succ Pct	The CSR of the carrier.

#### Related Commands

Command	Description
<b>show spe digital</b>	Displays history statistics of all digital SPEs, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs.
<b>show spe digital active</b>	Displays active digital calls and digital statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital disconnect-reason</b>	Displays the local disconnect reasons for all digital calls on the SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital summary</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe digital disconnect-reason

To display the local disconnection reasons for all digital calls on the service processing elements (SPEs), a specified SPE, or the specified range of SPEs, use the **show spe digital disconnect-reason** command in EXEC mode.

**show spe digital disconnect-reason** [**summary** | *slot* | *slot/spe*]

## Syntax Description

<b>summary</b>	(Optional) Summary of local disconnection reasons for digital ports.
<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5400, slot values range from 1 to 7 and SPE values range from 1 to 17. You must include the slash mark.

## Command Modes

EXEC

## Command History

Release	Modification
12.1(1)XD	This command was introduced.
12.1(3)T	This command was implemented on the Cisco AS5400.
12.1(5)XM1	This command was implemented on the Cisco AS5350.
12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Usage Guidelines

Use the **show spe digital disconnect-reason** command on the Cisco AS5350 and Cisco AS5400 with the NextPort dial feature card (DFC).



### Note

This command is not supported on the Cisco AS5800 with the universal port card (UPC).

## Examples

The following is sample output from the **show spe digital disconnect-reason** command on the Cisco AS5400 with the NextPort DFC. This example displays reasons for digital call disconnections on slot 5:

```
Router# show spe digital disconnect-reason 5

#SPE 5/00 :
=====CLASS HOST=====          =====CLASS SERVICE=====
NonSpecific          0  ATH                      0
Busy                 0  Aborted                   0
No Answer            0  Connect Timeout          0
DTR                  0  Sync Loss                 0
ATH                  0
NoDialTone           0
No Carrier           0
ACK                  0  TOTAL                     0
```

```
#SPE 5/03 :
=====CLASS HOST=====          =====CLASS SERVICE=====
NonSpecific          0  ATH                      0
Busy                 1  Aborted                    0
No Answer            0  Connect Timeout            0
DTR                  0  Sync Loss                   0
.
.
.
```

Table 113 describes the significant fields shown in the display.

**Table 113** *show spe digital disconnect-reason Field Descriptions*

Field	Description
SPE	The slot and port number of the SPE.
CLASS HOST	Disconnect reasons are as follows: <ul style="list-style-type: none"> <li>• NonSpecific</li> <li>• Busy</li> <li>• No Answer—Number of times the SPE rang but did not answer the incoming call.</li> <li>• DTR</li> <li>• ATH</li> <li>• NoDialTone—Number of times the dial-out attempt failed because the SPE failed to detect a dial tone.</li> <li>• No Carrier</li> <li>• ACK</li> </ul>
CLASS SERVICE	Disconnect reasons are a s follows: <ul style="list-style-type: none"> <li>• ATH</li> <li>• Aborted</li> <li>• Connect Timeout</li> <li>• Sync Loss</li> </ul>

Related Commands	Command	Description
	<b>show spe digital</b>	Displays history statistics of all digital SPEs, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs.
	<b>show spe digital active</b>	Displays active digital calls and digital statistics of all SPEs, a specified SPE, or the specified range of SPEs.
	<b>show spe digital csr</b>	Displays digital call success rate (CSR) statistics of all SPEs, a specified SPE, or the specified range of SPEs.
	<b>show spe digital summary</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe digital summary

To display history statistics of all service processing elements (SPEs), a specified SPE, or the specified range of SPEs, use the **show spe digital summary** command in EXEC mode.

**show spe digital summary** [*slot* | *slot/spe*]

Syntax Description	slot	(Optional) All ports on the specified slot. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5400, slot values range from 1 to 7 and SPE values range from 1 to 17. You must include the slash mark.

**Command Modes** EXEC

Command History	Release	Modification
	12.1(1)XD	This command was introduced.
	12.1(3)T	This command was implemented on the Cisco AS5400.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** Use the **show spe digital summary** command on the Cisco AS5350 and Cisco AS5400 with the NextPort dial feature card (DFC).



**Note**

This command is not supported on the Cisco AS5800 with the universal port card (UPC).

**Examples**

The following is sample output from the **show spe digital summary** command on the Cisco AS5400 with the NextPort DFC. This example displays active digital statistics for slot 5:

```
Router# show spe digital summary 5

Async5/00 - 5/107, TTY648 - 755
    209 incoming completes          397 incoming failures
      0 outgoing completes          0 outgoing failures
      0 failed dial attempts        0 ring no answers
      0 no dial tones               0 link failures
      0 watchdog timeouts           0 protocol errors
      0 dial timeouts

Transmit Speed Counters      :
Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls
64000   0 28800   0 14400   0  7200   0 1200   20
56000   0 24000   0 12000   0  4800   20  600   20
38400   0 19200  149  9600   0  2400   0
```

```

Receive Speed Counters      :
Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls
64000    0    28800    0    14400    0    7200     0    1200     20
56000    0    24000    0    12000    0    4800     20    600     20
38400    0    19200    149   9600     0    2400     0
.
.
.

```

Table 114 describes the significant fields shown in the display.

**Table 114** show spe digital summary Field Descriptions

Field	Description
A summary of SPE events also appears.	
incoming completes and failures	Total number of incoming connection requests that the SPE answered and successfully or unsuccessfully connected with the remote DCE device.
outgoing completes and failures	Total number of outgoing connection requests that the SPE dialed and successfully or unsuccessfully connected with the remote DCE device.
failed dial attempts	Number of times the SPE attempted to dial out but the call failed to leave the modem.
ring no answers	Number of times the SPE rang but did not answer the incoming call.
no dial tones	Number of times the dial-out attempt failed because the SPE failed to detect a dial tone.
link failures	Number of times the SPE detected a link failure.
watchdog timeouts	Number of times the SPE internal watchdog timer expired.
protocol errors	Number of times the SPE protocol failed to make a call connection
dial timeouts	Number of times the SPE timed out while attempting to dial.
Transmit Speed Counters	List of connection speeds that were sent by the SPE.
Receive Speed Counters	List of connection speeds that were received by the SPE.

#### Related Commands.

Command	Description
<b>show spe digital</b>	Displays history statistics of all digital SPEs, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs.
<b>show spe digital active</b>	Displays active digital calls and digital statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital csr</b>	Displays digital call success rate (CSR) statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital disconnect-reason</b>	Displays the local disconnection reasons for all digital calls on the SPEs, a specified SPE, or the specified range of SPEs.

# show spe log

To display the service processing element (SPE) system log, use the **show spe log** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe log [reverse | slot]
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe log [reverse | shelfslot]
```

Syntax Description	reverse	(Optional) Displays the SPE system log with the most recent event first.
	<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	<i>shelfslot</i>	(Optional) All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.

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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

Usage Guidelines	The <b>show spe log</b> command displays the slot history event log.
------------------	--

Examples	The following is sample output from the <b>show spe log</b> command on the Cisco AS5400 with the NextPort DFC:
----------	--

```
Router# show spe log

Slot 3 Events Log
 2d15h   : SPE State Event:
          Address: 0x3000000
          SPE     : 3/00
          Command: SPE_IMMEDIATE_DISABLE Complete
 2d14h   : SPE State Event:
          Address: 0x3000100
          SPE     : 3/06
          Command: SPE_IMMEDIATE_DISABLE Complete
```

```

2d13h   : SPE State Event:
  Address: 0x3000200
  SPE    : 3/12
  Command: SPE_IMMEDIATE_DISABLE Complete
00:00:26: SPE State Event:
  Address: 0x3000001
  SPE    : 3/01
  Command: SPE_IMMEDIATE_DISABLE Complete
Slot 4 Events Log
2d13h   : SPE State Event:
  Address: 0x4000000
  SPE    : 4/00
  Command: SPE_IMMEDIATE_DISABLE Complete
Slot 7 Events Log
2d15h   : Diag Post event:
  Address   : 0x7000204
  SPE      : 7/16
  Result    : SPE_POST_TEST_FAILED
  Test ID   : SPE_POWER_ON_SELF_TEST
  Diag Code : 0xFE01C004
  Data Format: ASCII
  Data Len  : 0

```

Table 115 describes the significant fields shown in the display.

**Table 115** *show spe log Field Descriptions*

Field	Description
Address	Address of the SPE
SPE	The slot and port number of the SPE.

#### Related Commands

Command	Description
<b>clear spe log</b>	Clears all event entries in the slot history event log.
<b>show spe log reverse</b>	Displays the slot history event log, with the most recent event first.

# show spe modem

To display the modem service history statistics for a specified service processing element (SPE), use the **show spe modem** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem {slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem {shelf/slot | shelf/slot/spe}
```

Syntax Description	slot	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	slot/spe	All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	shelf/slot	All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	shelf/slot/spe	All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 1 to 53. You must include the slash mark.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following is sample output from the **show spe modem** command on the Cisco AS5400 with the NextPort DFC:

```
Router# show spe modem 1/2/0
```

```
Asyncl1/2/00 - 1/3/323, TTY972 - 1619
 4819 incoming completes          287 incoming failures
   0 outgoing completes           0 outgoing failures
   0 failed dial attempts          0 ring no answers          0 autotests
   0 no carriers                   11 dial timeouts          0 autotest fails
   0 no dial tones                 0 link failures           0 fail count
   0 watchdog timeouts            2784 protocol errors      0 recovers
Transmit Speed Counters
```

```

Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls
60000    0      48000    431   38400    0      30666    0      12000    143
58000    0      46666    0      38000    4      29333    0      9600     5
56000    15     46000    56     37333    110    28800    700    7200    11
54666    0      45333    299    36000    84     28000    5      4800     2
54000    0      44000    226    34666    0      26400    266    2400     0
53333    122    42666    0      34000    39     24000    46     1200     3
52000    562    42000    68     33600    323    21600    27     300      0
50666    0      41333    38     33333    9      19200    38
50000    59     40000    65     32000    20     16800    12
49333    370    38666    0      31200    653    14400    5

Receive Speed Counters
Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls
38400    0      26400    2280  16800    11     7200     1      300      2
33600    113    24000    266   14400    139    4800     1
31200    215    21600    56    12000    4      2400     3
28800    1665   19200    47     9600     16     1200     0.

```

The following is sample output from the **show spe modem** command on the Cisco AS5800 with the universal port card:

```
Router# show spe modem 1/8/0
```

```

#SPE 1/08/00
Cisco Universal SPE; Fw: 0.00.06.81; Async1/8/00 - 1/8/05, TTY2916 - 2921
Last clearing of statistics counters      : never
   90 incoming completes                  0 incoming failures
   0 outgoing completes                   0 outgoing failures
   0 failed dial attempts                  0 ring no answers          0 autotests
   0 no carriers                           0 dial timeouts           0 autotest fails
   0 no dial tones                          0 link failures           0 fail count
   0 watchdog timeouts                     0 protocol errors

Transmit Speed Counters      :
Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls
60000    0      48000    0      38400    0      30666    0      12000    0
58000    0      46666    0      38000    0      29333    0      9600     0
56000    0      46000    0      37333    0      28800    0      7200     0
54666    0      45333    0      36000    0      28000    0      4800     0
54000    0      44000    0      34666    0      26400    0      2400     0
53333    0      42666    0      34000    0      24000    0      1200     0
52000    0      42000    0      33600    0      21600    0      300      0
50666    0      41333    0      33333    0      19200    0
50000    0      40000    0      32000    0      16800    0
49333    0      38666    0      31200    90     14400    0

Receive Speed Counters      :
Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls  Speed    Calls
38400    0      26400    0      16800    0      7200     0      300      0
33600    11     24000    0      14400    0      4800     0
31200    25     21600    0      12000    0      2400     0
28800    54     19200    0      9600     0      1200     0

```

[Table 116](#) describes the significant fields shown in the display.

**Table 116** show spe modem Command Field Descriptions

Field	Description
SPE	The slot and port number of the SPE.
Cisco Universal SPE	Firmware version installed on the SPE.
Last clearing of “show modem” counters	Last time the modem’s counters were cleared using the <b>clear modem counters</b> command.
Summary of modem and SPE events as follows:	
incoming completes and failures	Total number of incoming connection requests that the SPE answered and successfully or unsuccessfully connected with the remote DCE device.
outgoing completes and failures	Total number of outgoing connection requests that the SPE dialed and successfully or unsuccessfully connected with the remote DCE device.
failed dial attempts	Number of times the SPE attempted to dial out but the call failed to leave the modem.
ring no answers	Number of times the SPE rang but did not answer the call.
autotests	Number of times an autotest was run on the SPE.
no carriers	Number of times the SPE disconnected because no carrier was present.
dial timeouts	Number of times the SPE timed out while attempting to dial.
autotest fails	Number of times the SPE failed an autotest.
no dial tones	Number of times the dial-out attempt failed because the SPE failed to detect a dial tone.
link failures	Number of times the SPE detected a link failure.
fail count	Number of times the SPE failed.
watchdog timeouts	Number of times the SPE internal watchdog timer expired.
protocol errors	Number of times the SPE protocol failed to make a call connection.
Transmit Speed Counters	List of connection speeds that were sent by the SPE.
Receive Speed Counters	List of connection speeds that were received by the SPE.

**Related Commands**

Command	Description
<b>show modem</b>	Displays modem service history statistics for the MICA technologies modem.
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe modem active

To display the modem service statistics of all active calls on specified service processing elements (SPEs), use the **show spe modem active** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem active {slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem active {shelfslot | shelfslot/spe}
```

Syntax Description	slot	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	slot/spe	All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	shelfslot	All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	shelfslot/spe	All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was introduced on the Cisco AS5350.
	12.2(2)XA	This command was supported on the Cisco AS5350.
	12.2(2)XB	This command was integrated into Cisco IOS Release 12.2(2)XB.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following is sample output from the **show spe modem active** command on the Cisco AS5400 with the NextPort DFC. This example displays active modem statistics for slot 5, SPE 6:

```
Router# show spe modem active 5/6
```

```
SPE 5/06
Port Type Prot Comp Duration Tx/Rx Tx/Rx(Lvl) SNR Cfg Retrain
37 V.90 LAP-M V.42bis 95 3890/76 --/-11 38 In 0
```

## show spe modem active

The following is sample output from the **show spe modem active** command on the Cisco AS5800 with universal port card. This example displays active modem statistics for shelf 1, slot 8:

```
Router# show spe modem active 1/8
```

```
SPE 1/08/34
Port  Type      Prot    Comp    Duration  Tx/Rx(bps) Tx/Rx(Lvl) SNR Cfg  Retrain
209   V.34+      LAP-M   V.42bis 23       28800/31200 --/-13    37  In   0

SPE 1/08/35
Port  Type      Prot    Comp    Duration  Tx/Rx(bps) Tx/Rx(Lvl) SNR Cfg  Retrain
215   V.34+      LAP-M   V.42bis 12       28800/31200 --/-13    37  In   0

SPE 1/08/36
Port  Type      Prot    Comp    Duration  Tx/Rx(bps) Tx/Rx(Lvl) SNR Cfg  Retrain
216   V.34+      LAP-M   V.42bis 24       33600/31200 --/-36    38  In   0
217   ##         ##      ##      0        33600/300   --/19     37  In   0
218   ##         ##      ##      0        33600/300   --/19     37  In   0
219   ##         ##      ##      0        33600/300   --/19     35  In   0
```

Table 117 describes the significant fields shown in the display.

**Table 117** show spe modem active Field Descriptions

Field	Description
SPE	The slot and port number of the SPE.
Port	Displays the port number.
Type	Modulation type.
Prot	The connection protocol used for the call.
Comp	The compression protocol used for the call.
Duration	Time duration of the call.
Tx/Rx(bps)	Transmission and receiving speed for the call in bits per second (bps).
Tx/Rx(Lvl)	Transmission and receiving level reduction for the call in decibels per milliwatt (dBm).
SNR	The signal-to-noise ratio for the call in dB.
Cfg	
Retrain	Number of retrain failures. A connection was lost and not reestablished after three attempts.

### Related Commands

Command	Description
<b>show port operational-status</b>	Displays the operational status of a specific port or port range.
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show spe modem csr

To display the call success rate (CSR) for the specified service processing elements (SPEs), use the **show spe modem csr** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem csr {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem csr {summary | shelfslot | shelfslot/spe}
```

Syntax Description	summary	Description
	<i>slot</i>	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	<i>shelfslot</i>	All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	<i>shelfslot/spe</i>	All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash mark.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(2)XA	This command was implemented on the Cisco AS5350.
	12.2(2)X	This command was integrated into Cisco IOS Release 12.2(2)XB.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** The **show spe modem csr** command displays the modem CSR statistics for a specific SPE, range of SPEs, or all the SPEs. The **summary** keyword displays the CSR statistics for all SPEs.

**Examples**

The following are sample outputs from the **show spe modem csr** command on the Cisco AS5400 with the NextPort DFC:

```
Router# show spe modem csr 5/6
```

```

      Avg Hold      Inc calls      Out calls      Failed      No      Succ
SPE      Time      Succ  Fail      Succ  Fail      Dial      Answer      Pct
5/06    00:22:41         2    0         0    0         0         0      100%
```

```
Router# show spe modem csr 5/1 5/6
```

```

      Avg Hold      Inc calls      Out calls      Failed      No      Succ
SPE      Time      Succ  Fail      Succ  Fail      Dial      Answer      Pct
5/01    00:00:00         0    0         0    0         0         0         0%
5/02    00:00:00         0    0         0    0         0         0         0%
5/03    00:00:00         0    0         0    0         0         0         0%
5/04    00:00:00         0    0         0    0         0         0         0%
5/05    00:00:00         0    0         0    0         0         0         0%
5/06    00:22:48         2    0         0    0         0         0      100%
```

The following is sample output from the **show spe modem csr summary** command on the Cisco AS5800 with the universal port card:

```
Router# show spe modem csr summary
```

```

      Avg Hold      Inc calls      Out calls      Failed      No      Succ
Time      Succ  Fail  Avail      Succ  Fail  Avail  Dial  Answer  Pct
002631   4827   285   93         0     0    93     5     0     94%
```

Table 118 describes the significant fields shown in the display.

**Table 118** *show spe modem csr Field Descriptions*

Field	Description
SPE	The slot and port number of the SPE.
Avg Hold Time	The average hold time for the SPE.
Inc/Out calls	Calls dialing into and out of the modem: <ul style="list-style-type: none"> <li>Succ—Total call successfully connected.</li> <li>Fail—Total calls that did not successfully connect.</li> <li>Avail—Total modems available for use in the system.</li> </ul>
Failed Dial	The number of attempts the SPE failed to make a connection.
No Answer	Number of times the SPE rang but did not answer the call.
Succ Pct	The percentage of calls that were successfully connected.

**Related Commands**

Command	Description
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe modem summary</b>	Displays a summary of modem statistics for the specified SPE or range of SPEs.

# show spe modem disconnect-reason

To display all modem disconnection reasons for the specified service processing element (SPE), use the **show spe modem disconnect-reason** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem disconnect-reason {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem disconnect-reason {summary | shelfslot | shelfslot/spe}
```

Syntax Description	summary	Displays the disconnect reasons for all SPEs.
	<i>slot</i>	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	<i>shelfslot</i>	All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	<i>shelfslot/spe</i>	All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 1 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was introduced on the Cisco AS5350.
	12.2(2)XA	This command was implemented on the Cisco AS5350.
	12.2(2)XB	This command was integrated into Cisco IOS Release 12.2(2)XB.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** Disconnection reasons are reasons why active calls are disconnected. The disconnect reasons are displayed with Class boundaries. The **show spe modem disconnect-reason** command is equivalent to the **show modem call stats** MCIA technologies modem command.

## show spe modem disconnect-reason

### Examples

The following is sample output from the **show spe modem disconnect-reason** command on the Cisco AS5400 with the NextPort DFC:

```
Router# show spe modem disconnect-reason 5/6

#SPE 5/06 :
====CLASS OTHER====  =====CLASS DSP=====  ===CLASS EC LCL===  ==CLASS EC FRMR===
Software Rst      0  No Carrier      0  No LR           0  Frmr Bad Cmd    0
EC Termntd       0  No ABT dtctd    0  LR Param1      0  Frmr Data       0
Bad MNP5 Rx      0  Trainup flr    0  LR Incmpt      0  Frmr Length     0
Bad V42B         0  Retrain Lt     0  Retrns Lt     0  Frmr Bad NR     0
Bad COP stat     0  ABT end flr    0  Inactivity     0
ATH              0
Aborted          0  =====CLASS HOST=====  Fallbck Term    0  LD No LR        0
Connect Tout     0  Hst NonSpec    0  No XID         0  LD LR Param1    0
Reset DSP        0  Hst Busy       0  XID Incmpt     0  LD LR Incmpt    0
                  Hst No answr   0  Disc           0  LD Retrns Lt   0
====CLASS EC Cmd===  Hst DTR        1  DM             0  LD Inactivty   0
Bad Cmd          0  Hst ATH        0  Bad NR         0  LD Protocol     0
                  Hst NoDialTn   0  SABME Online   0  LD User         0
=====N O N E=====  Hst No Carr    0  XID Online     0
None             0  Hst Ack        0  LR Online      0  TOTAL           1
```

The following is sample output from the **show spe modem disconnect-reason summary** command on the Cisco AS5800 with the universal port card:

```
Router# show spe modem disconnect-reason summary

====CLASS OTHER====  =====CLASS DSP=====  ===CLASS EC LCL===  ==CLASS EC FRMR===
Software Rst      0  No Carrier     21  No LR          0  Frmr Bad Cmd    0
EC Termntd       0  No ABT dtctd   0  LR Param1     0  Frmr Data       0
Bad MNP5 Rx      0  Trainup flr   26  LR Incmpt     0  Frmr Length     0
Bad V42B         12  Retrain Lt    0  Retrns Lt    37  Frmr Bad NR     0
Bad COP stat     0  ABT end flr   0  Inactivity    0
ATH              0
Aborted          0  =====CLASS HOST=====  Fallbck Term    22  LD No LR        0
Connect Tout    11  Hst NonSpec   799  No XID        5  LD LR Param1    0
Reset DSP        0  Hst Busy      0  XID Incmpt    0  LD LR Incmpt    0
                  Hst No answr   0  Disc          2718  LD Retrns Lt    0
====CLASS EC Cmd===  Hst DTR       870  DM            0  LD Inactivty   0
Bad Cmd          0  Hst ATH       0  Bad NR        0  LD Protocol     0
                  Hst NoDialTn   0  SABME Online   0  LD User         0
=====N O N E=====  Hst No Carr    0  XID Online     0
None             29  Hst Ack       0  LR Online     0  TOTAL           4555
```

### Related Commands

Command	Description
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe modem summary</b>	Displays a summary of modem statistics for the specified SPE or range of SPEs.

# show spe modem high speed

To display the total number of connections within each high-speed modulation or codec for a specific range of service processing elements (SPEs), use the **show spe modem high speed** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem high speed {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem high speed {summary | shelf/slot | shelf/slot/spe}
```

Syntax Description	summary	Displays a brief list of all modulation connections negotiated.
	<i>slot</i>	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	<i>shelf/slot</i>	All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	<i>shelf/slot/spe</i>	All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following is sample output from the **show spe modem high speed** command on the Cisco AS5400 with the NextPort DFC:

```
Router# show spe modem high speed 1/0
```

```
#SPE 1/0      :
Modln        V.FC          V.34          K56Flex       V.90          Modln
Speed  Tx    Rx      Tx    Rx      Tx    Rx      Tx    Rx    Speed
56000 ----- ----- ----- ----- 000000 ----- 000000 ----- 56000
54667 ----- ----- ----- -----          -          -          0          - 54667
```

## show spe modem high speed

```

54000 ----- 0 - - 54000
53333 ----- - - 0 - 53333
52000 ----- 0 - 0 - 52000
50667 ----- - - 0 - 50667
50000 ----- 0 - - - 50000
49333 ----- - - 0 - 49333
48000 ----- 0 - 0 - 48000
46667 ----- - - 0 - 46667
46000 ----- 0 - - - 46000
45333 ----- - - 0 - 45333
44000 ----- 0 - 0 - 44000
42667 ----- - - 0 - 42667
42000 ----- 0 - - - 42000
41333 ----- - - 0 - 41333
40000 ----- 0 - 0 - 40000
38667 ----- - - 0 - 48667
38000 ----- 0 - - - 38000
37333 ----- - - 0 - 37333
36000 ----- 0 - 0 - 36000
34667 ----- - - 0 - 34667
34000 ----- 0 - - - 34000
33600 ----- 0 0 - - 0 33600
33333 ----- - - - - 0 - 33333
32000 ----- - - 0 - 0 - 32000
31200 ----- 0 0 - 0 0 31200
30667 ----- - - - - 0 - 30667
29333 ----- - - - - 0 - 29333
28800 0 0 0 0 - 0 - 0 28800
28000 - - - - - - 0 - 28000
26400 0 0 0 0 - 0 - 0 26400
24000 0 0 0 0 - 0 - 0 24000
21600 0 0 0 0 - 0 - 0 21600
19200 0 0 0 0 - 0 - 0 19200
16800 0 0 0 0 - 0 - 0 16800
14400 0 0 0 0 - 0 - 0 14400
12000 - - 0 0 - 0 - 0 12000
9600 - - 0 0 - 0 - 0 9600
7200 - - 0 0 - 0 - 0 7200
4800 - - 0 0 - 0 - 0 4800
2400 - - 0 0 - - - 2400
TOTAL 0000000 0000000 0000000 0000000 TOTAL
#SPE 1/1 :
Modln V.FC V.34 K56Flex V.90 Modln
Speed Tx Rx Tx Rx Tx Rx Tx Rx Speed
56000 ----- 0000000 ----- 0000000 ----- 56000
54667 ----- - - - - - - 0 - 54667
54000 ----- - - - - - - 0 - 54000
53333 ----- - - - - - - 0 - 53333
52000 ----- 0 - - - - - 0 - 52000
50667 ----- - - - - - - 0 - 50667
50000 ----- 0 - - - - - - 50000
49333 ----- - - - - - - 0 - 49333
48000 ----- 0 - - - - - 0 - 48000
46667 ----- - - - - - - 0 - 46667
46000 ----- 0 - - - - - - 46000
45333 ----- - - - - - - 0 - 45333
44000 ----- 0 - - - - - 0 - 44000
42667 ----- - - - - - - 0 - 42667
42000 ----- 0 - - - - - - 42000
41333 ----- - - - - - - 0 - 41333
40000 ----- 0 - - - - - 0 - 40000
38667 ----- - - - - - - 0 - 48667
38000 ----- 0 - - - - - - 38000
37333 ----- - - - - - - 0 - 37333

```

```

36000 ----- 0 - 0 - 36000
34667 ----- - - 0 - 34667
34000 ----- 0 - - - 34000
33600 ----- 0 0 - - 0 33600
33333 ----- - - - - 0 - 33333
32000 ----- - - 0 - - 32000
31200 ----- 0 0 - 0 - 0 31200
30667 ----- - - - - 0 - 30667
29333 ----- - - - - 0 - 29333
28800 0 0 0 0 - 0 - 0 28800
28000 - - - - - 0 - 28000
26400 0 0 0 0 - 0 - 0 26400
24000 0 0 0 0 - 0 - 0 24000
21600 0 0 0 0 - 0 - 0 21600
19200 0 0 0 0 - 0 - 0 19200
16800 0 0 0 0 - 0 - 0 16800
14400 0 0 0 0 - 0 - 0 14400
12000 - - 0 0 - 0 - 0 12000
9600 - - 0 0 - 0 - 0 9600
7200 - - 0 0 - 0 - 0 7200
4800 - - 0 0 - 0 - 0 4800
2400 - - 0 0 - - - 2400
TOTAL 0000000 0000000 0000000 0000000 TOTAL

```

The following is sample output from the **show spe modem high speed** command on the Cisco AS5800 with universal port card:

Router# **show spe modem high speed 1/8/1**

```

-- Indicates an invalid speed for a standard
#SPE 1/08/01 :
Modln      V.FC      V.34      K56Flex    V.90      Modln
Speed      Tx        Rx        Tx         Rx        Tx         Rx        Tx         Rx        Speed
60000 ----- 000000 000000 000000 000000 000000 000000 60000
58000 ----- 0 ----- 58000
56000 ----- 0 - 0 - 56000
54667 ----- - - 0 - 54667
54000 ----- 0 - - - 54000
53333 ----- - - 0 - 53333
52000 ----- 0 - 0 - 52000
50667 ----- - - 0 - 50667
50000 ----- 0 - - - 50000
49333 ----- - - 0 - 49333
48000 ----- 0 - 0 - 48000
46667 ----- - - 0 - 46667
46000 ----- 0 - - - 46000
45333 ----- - - 0 - 45333
44000 ----- 0 - 0 - 44000
42667 ----- - - 0 - 42667
42000 ----- 0 - - - 42000
41333 ----- - - 0 - 41333
40000 ----- 0 - 0 - 40000
38667 ----- - - 0 - 38667
38400 ----- - - - - 38400
38000 ----- 0 - - - 38000
37333 ----- - - 0 - 37333
36000 ----- 0 - 0 - 36000
34666 ----- - - 0 - 34666
34000 ----- 0 - - - 34000
33600 ----- 0 1 - - 0 33600
33333 ----- - - 0 - 33333
32000 ----- - - 0 - 32000
31200 ----- 6 1 - 0 - 0 31200
30667 ----- - - - - 0 - 30667

```

## show spe modem high speed

```

29333 -----
28800      0      0      0      4      -      0      -      0 28800
28000      -      -      -      -      -      -      0      - 28000
26400      0      0      0      0      -      0      -      0 26400
24000      0      0      0      0      -      0      -      0 24000
21600      0      0      0      0      -      0      -      0 21600
19200      0      0      0      0      -      0      -      0 19200
16800      0      0      0      0      -      0      -      0 16800
14400      0      0      0      0      -      0      -      0 14400
12000      -      -      0      0      -      0      -      0 12000
 9600      -      -      0      0      -      0      -      0  9600
 7200      -      -      0      0      -      0      -      0  7200
 4800      -      -      0      0      -      0      -      0  4800
 2400      -      -      0      0      -      0      -      0  2400
TOTAL      0000000      0000012      0000000      0000000

```

Table 119 describes the significant fields shown in the display.

**Table 119** *show spe modem high speed Field Descriptions*

Field	Description
SPE	The slot and port number of the SPE.
Modln Speed	Modem line speed, in bits per second.
Tx	The number of sent calls that occurred at this speed.
Rx	The number of received calls that occurred at this speed.

### Related Commands

Command	Description
<b>show spe modem low speed</b>	Displays the total number of connections within each low modulation or codec for the specified SPEs.

# show spe modem high standard

To display the total number of connections within each high modulation or codec for a specific range of service processing element (SPE), use the **show spe modem high standard** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem high standard {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem high standard {summary | shelfslot | shelfslot/spe}
```

Syntax Description		
<b>summary</b>		Displays a brief list of all modulation connections negotiated.
<i>slot</i>		All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>		All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
<i>shelfslot</i>		All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
<i>shelfslot/spe</i>		All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following is sample output from the show spe modem high standard command on the Cisco AS5400 with the NextPort DFC. This example displays standard low-speed connections for SPEs in slot 5:

```
Router# show spe modem high standard 5

SPE/Mod->   V.FC   V.34  K56Flex   V.90
5/00         0       1       2         1
5/01         0       0       0         0
5/02         0       0       0         0
5/03         0       0       0         0
```

## show spe modem high standard

```

5/04          0          0          0          0
5/05          0          0          0          0
5/06          0          0          0          2
5/07          0          0          0          0
5/08          0          0          0          0
5/09          0          0          0          0
5/10          0          0          0          0
5/11          0          0          0          0
5/12          0          0          0          0
5/13          0          0          0          0
5/14          0          0          0          0
5/15          0          0          0          0
5/16          0          0          0          0
5/17          0          0          0          0
TOTAL        00000000 00000001 00000002 00000003

```

The following is sample output from the **show spe modem high standard** command on the Cisco AS5800 with the universal port card. This example displays standard low-speed connections for SPEs in slot 8:

```

Router# show spe modem high standard 1/8/1

SPE/Mod->    V.FC      V.34  K56Flex   V.90
1/08/01      0          6          0          0
TOTAL        00000000 00000006 00000000 00000000

```

[Table 120](#) describes the significant fields shown in the display.

**Table 120** *show spe modem high standard Field Descriptions*

Field	Description
SPE	The slot and port number of the SPE.
Mod	The modem type.

### Related Commands

Command	Description
<b>show spe modem low standard</b>	Displays the total number of connections within each low modulation or codec for the SPE.

# show spe modem low speed

To display the total number of connections within each low-speed modulation or codec for the specified service processing elements (SPEs), use the **show spe modem low speed** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem low speed {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem low speed {summary | shelfslot | shelfslot/spe}
```

Syntax Description	summary	Description
	<i>slot</i>	All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	<i>slot/spe</i>	Ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	<i>shelfslot</i>	Ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	<i>shelfslot/spe</i>	Ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following is sample output from the **show spe modem low speed** command on the Cisco AS5400 with the NextPort DFC. This example displays standard low-speed connections:

```
Router# show spe modem low speed 1/0
```

```
#SPE 1/0      :          <--  MODEM  FAX      -->
Speed B103   V.21   B212   V.22   V.22b   V.32   V.32b   V.27t   V.29   V.17
14400 -----
12000 -----
 9600 -----
 7200 -----
```

## show spe modem low speed

```

4800 ----- 0 0 0 0 -----
2400 ----- 0 -----
1200 ----- 0 0 6 -----
600 -----
300 0 0 -----
TOTAL 000000 000000 000000 000000 000006 000000 000030 000000 000000 000000
#SPE 1/1 : <-- MODEM FAX -->
Speed B103 V.21 B212 V.22 V.22b V.32 V.32b V.27t V.29 V.17
14400 ----- 30 ----- 0
12000 ----- 0 ----- 0
9600 ----- 0 0 ----- 0 0
7200 ----- - 0 ----- 0 0
4800 ----- 0 0 ----- 0 0 -----
2400 ----- 0 ----- 0 -----
1200 ----- 0 0 6 -----
600 -----
300 0 0 -----
TOTAL 000000 000000 000000 000000 000006 000000 000030 000000 000000 000000

```

The following is sample output from the **show spe modem low speed** command on the Cisco AS5800 with the universal port card. This example displays standard low-speed connections for SPEs in slot 8:

Router# **show spe modem low speed 1/8/0 1/8/6**

```

-- Indicates an invalid speed for a standard
#SPE 1/08/00 : <-- MODEM FAX -->
Speed B103 V.21 B212 V.22 V.22b V.23 V.32 V.32b V.27t V.29 V.17
14400 ----- 0 ----- 0
12000 ----- 0 ----- 0
9600 ----- 0 0 ----- 0 0
7200 ----- - 0 ----- 0 0
4800 ----- 0 0 ----- 0 0 -----
2400 ----- 0 ----- 0 -----
1200 ----- 0 0 0 0 -----
300 0 0 -----
TOTAL 000000 000000 000000 000000 000000 000000 000000 000000 000000 000000 000000

```

Table 121 describes the significant fields shown in the display.

**Table 121 show spe modem low speed Field Descriptions**

Field	Description
SPE	The slot and port number of the SPE.
Speed	The modem line speed, in bits per second.
MODEM	The modem type.
FAX	The fax type.

### Related Commands

Command	Description
<b>show spe modem high standard</b>	Displays the total number of connections within each high modulation or codec for a specific range of SPEs.

# show spe modem low standard

To display the total number of connections within each low modulation or codec for the specified service processing elements (SPEs), use the **show spe modem low standard** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem low standard {summary | slot | slot/spe}
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem low standard {summary | shelfslot | shelfslot/spe}
```

Syntax Description		
<b>summary</b>		Displays a brief list of all modulation connections negotiated.
<i>slot</i>		All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>		All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
<i>shelfslot</i>		All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
<i>shelfslot/spe</i>		All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

## Examples

The following example displays standard low-speed connections for SPEs in slot 5 on the Cisco AS5400:

```
Router# show spe modem low standard 5
SPE/Mod-->  B103  V.21  B212  V.22  V.22b  <--  MODEM  FAX  -->
              0    0    0    0    0    V.23  V.32  V.32b  V.27t  V.29  V.17
5/00         0    0    0    0    0    0    0    0    0    0    0
5/01         0    0    0    0    0    0    0    0    0    0    0
5/02         0    0    0    0    0    0    0    0    0    0    0
5/03         0    0    0    0    0    0    0    0    0    0    0
5/04         0    0    0    0    0    0    0    0    0    0    0
```

## show spe modem low standard

```

5/05      0  0  0  0  0  0  0  0  0  0  0  0
5/06      0  0  0  0  0  0  0  0  0  0  0  0
5/07      0  0  0  0  0  0  0  0  0  0  0  0
5/08      0  0  0  0  0  0  0  0  0  0  0  0
5/09      0  0  0  0  0  0  0  0  0  0  0  0
5/10      0  0  0  0  0  0  0  0  0  0  0  0
5/11      0  0  0  0  0  0  0  0  0  0  0  0
5/12      0  0  0  0  0  0  0  0  0  0  0  0
5/13      0  0  0  0  0  0  0  0  0  0  0  0
5/14      0  0  0  0  0  0  0  0  0  0  0  0
5/15      0  0  0  0  0  0  0  0  0  0  0  0
5/16      0  0  0  0  0  0  0  0  0  0  0  0
5/17      0  0  0  0  0  0  0  0  0  0  0  0
TOTAL    00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000

```

The following example displays standard low-speed connections for SPEs in slot 8 on the Cisco AS5800:

Router# **show spe modem low standard 1/8**

```

          <--          MODEM          FAX          -->
SPE/Mod-> B103  V.21  B212  V.22  V.22b  V.23  V.32  V.32b  V.27t  V.29  V.17
1/08/00      0   0   0   0   0   0   0   0   0   0   0
1/08/01      0   0   0   0   0   0   0   0   0   0   0
1/08/02      0   0   0   0   0   0   0   0   0   0   0
1/08/03      0   0   0   0   0   0   0   0   0   0   0
1/08/04      0   0   0   0   0   0   0   0   0   0   0
1/08/05      0   0   0   0   0   0   0   0   0   0   0
1/08/06      0   0   0   0   0   0   0   0   0   0   0
1/08/07      0   0   0   0   0   0   0   0   0   0   0
1/08/08      0   0   0   0   0   0   0   0   0   0   0
1/08/09      0   0   0   0   0   0   0   0   0   0   0
1/08/10      0   0   0   0   0   0   0   0   0   0   0
1/08/11      0   0   0   0   0   0   0   0   0   0   0
1/08/12      0   0   0   0   0   0   0   0   0   0   0
1/08/13      0   0   0   0   0   0   0   0   0   0   0
1/08/14      0   0   0   0   0   0   0   0   0   0   0
1/08/15      0   0   0   0   0   0   0   0   0   0   0
1/08/16      0   0   0   0   0   0   0   0   0   0   0
1/08/17      0   0   0   0   0   0   0   0   0   0   0
1/08/18      0   0   0   0   0   0   0   0   0   0   0
1/08/19      0   0   0   0   0   0   0   0   0   0   0
1/08/20      0   0   0   0   0   0   0   0   0   0   0
          <--          MODEM          FAX          -->
SPE/Mod-> B103  V.21  B212  V.22  V.22b  V.23  V.32  V.32b  V.27t  V.29  V.17
1/08/21      0   0   0   0   0   0   0   0   0   0   0
1/08/22      0   0   0   0   0   0   0   0   0   0   0
1/08/23      0   0   0   0   0   0   0   0   0   0   0
1/08/24      0   0   0   0   0   0   0   0   0   0   0
1/08/25      0   0   0   0   0   0   0   0   0   0   0
1/08/26      0   0   0   0   0   0   0   0   0   0   0
1/08/27      0   0   0   0   0   0   0   0   0   0   0
1/08/28      0   0   0   0   0   0   0   0   0   0   0
1/08/29      0   0   0   0   0   0   0   0   0   0   0
1/08/30      0   0   0   0   0   0   0   0   0   0   0
1/08/31      0   0   0   0   0   0   0   0   0   0   0
1/08/32      0   0   0   0   0   0   0   0   0   0   0
1/08/33      0   0   0   0   0   0   0   0   0   0   0
1/08/34      0   0   0   0   0   0   0   0   0   0   0
1/08/35      0   0   0   0   0   0   0   0   0   0   0
1/08/36      0   0   0   0   0   0   0   0   0   0   0
1/08/37      0   0   0   0   0   0   0   0   0   0   0
1/08/38      0   0   0   0   0   0   0   0   0   0   0
1/08/39      0   0   0   0   0   0   0   0   0   0   0
1/08/40      0   0   0   0   0   0   0   0   0   0   0
1/08/41      0   0   0   0   0   0   0   0   0   0   0

```

```

1/08/42      0      0      0      0      0      0      0      0      0      0      0      0
                                     <--      MODEM      FAX      -->
SPE/Mod->  B103  V.21  B212  V.22  V.22b  V.23  V.32  V.32b  V.27t  V.29  V.17
1/08/43      0      0      0      0      0      0      0      0      0      0      0
1/08/44      0      0      0      0      0      0      0      0      0      0      0
1/08/45      0      0      0      0      0      0      0      0      0      0      0
1/08/46      0      0      0      0      0      0      0      0      0      0      0
1/08/47      0      0      0      0      0      0      0      0      0      0      0
1/08/48      0      0      0      0      0      0      0      0      0      0      0
1/08/49      0      0      0      0      0      0      0      0      0      0      0
1/08/50      0      0      0      0      0      0      0      0      0      0      0
1/08/51      0      0      0      0      0      0      0      0      0      0      0
1/08/52      0      0      0      0      0      0      0      0      0      0      0
1/08/53      0      0      0      0      0      0      0      0      0      0      0
TOTAL      00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000

```

Table 122 describes the significant fields shown in the displays.

**Table 122** *show spe modem low standard Field Descriptions*

Field	Description
SPE	The slot and port number of the SPE.
MODEM	The modem type.
FAX	The fax type.

#### Related Commands

Command	Description
<b>show spe modem high standard</b>	Displays the total number of connections within each high modulation or codec for a specific range of SPE.

# show spe modem summary

To display a summary of modem statistics for the specified service processing element (SPE) or range of SPEs, use the **show spe modem summary** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe modem summary [slot | slot/spe]
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe modem summary [shelfslot | shelfslot/spe]
```

Syntax Description	
<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
<i>shelfslot</i>	(Optional) All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
<i>shelfslot/spe</i>	(Optional) All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

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.
	12.1(5)XM1	This command was introduced on the Cisco AS5350.
	12.2(2)XA	Disconnection reasons and states information were added.
	12.2(2)XB	This command was integrated into Cisco IOS Release 12.2(2)XB.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Examples**

The following is sample output from the **show spe modem summary** command on the Cisco AS5400:

```
Router# show spe modem summary

Async1/00 - 5/107, TTY216 - 755
  786 incoming completes          4 incoming failures
    0 outgoing completes          0 outgoing failures
    0 failed dial attempts        0 ring no answers      0 autotests
    0 no carriers                  0 dial timeouts       0 autotest fails
    0 no dial tones                0 link failures       0 fail count
    0 watchdog timeouts           0 protocol errors     0 recovers

Transmit Speed Counters      :
Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls
60000  0  48000  0  38400  0  30666  0  12000  0
58000  0  46666  0  38000  0  29333  0  9600   0
56000  0  46000  0  37333  0  28800  10  7200   0
54666  0  45333  0  36000  0  28000  0  4800   0
54000  0  44000  0  34666  0  26400  0  2400   0
53333  0  42666  0  34000  0  24000  0  1200   0
52000  0  42000  0  33600  631  21600  0  300    0
50666  0  41333  0  33333  0  19200  0
50000  0  40000  0  32000  0  16800  0
49333  0  38666  0  31200  145  14400  0

Receive Speed Counters      :
Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls
38400  0  26400  0  16800  0  7200  0  300    0
33600  786  24000  0  14400  0  4800  0
31200  0  21600  0  12000  0  2400  0
28800  0  19200  0  9600   0  1200  0
```

The following is sample output from the **show spe modem summary** command on the Cisco AS5800:

```
Router# show spe modem summary

Async1/2/00 - 1/3/323, TTY972 - 1619
  4827 incoming completes        284 incoming failures
    0 outgoing completes          0 outgoing failures
    0 failed dial attempts        0 ring no answers      0 autotests
    0 no carriers                  11 dial timeouts      0 autotest fails
    0 no dial tones                0 link failures       0 fail count
    0 watchdog timeouts           2787 protocol errors  0 recovers

Transmit Speed Counters      :
Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls
60000  0  48000  432  38400  0  30666  0  12000  143
58000  0  46666  0  38000  4  29333  0  9600   5
56000  15  46000  56  37333  111  28800  700  7200  11
54666  0  45333  299  36000  84  28000  5  4800   2
54000  0  44000  227  34666  0  26400  267  2400  0
53333  123  42666  0  34000  39  24000  46  1200  3
52000  563  42000  68  33600  323  21600  27  300    0
50666  0  41333  38  33333  9  19200  38
50000  59  40000  65  32000  20  16800  12
49333  371  38666  0  31200  654  14400  5

Receive Speed Counters      :
Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls  Speed  Calls
38400  0  26400  2286  16800  11  7200  1  300    2
33600  113  24000  267  14400  139  4800  1
31200  216  21600  56  12000  4  2400  3
28800  1665  19200  47  9600   16  1200  0
```

Table 123 describes the significant fields shown in the display.

**Table 123** *show spe modem summary Field Descriptions*

Field	Description
Summary of modem and SPE events follows:	
incoming completes and failures	Total number of incoming connection requests that the SPE answered and successfully or unsuccessfully connected with the remote DCE device.
outgoing completes and failures	Total number of outgoing connection requests that the SPE dialed and successfully or unsuccessfully connected with the remote DCE device.
failed dial attempts	Number of times the SPE attempted to dial out but the call failed to leave the modem.
ring no answers	Number of times the SPE rang but did not answer the call.
autotests	Number of times an autotest was run on the SPE.
no carriers	Number of times the SPE disconnected because no carrier was present.
dial timeouts	Number of times the SPE timed out while attempting to dial.
autotest fails	Number of times the SPE failed an autotest.
no dial tones	Number of times the dial-out attempt failed because the SPE failed to detect a dial tone.
link failures	Number of times the SPE detected a link failure.
fail count	Number of times the SPE failed.
watchdog timeouts	Number of times the SPE internal watchdog timer expired.
protocol errors	Number of times the SPE protocol failed to make a call connection.
recovers	Number of times the SPE recovered.
Transmit Speed Counters	List of connection speeds that were sent by the SPE.
Receive Speed Counters	List of connection speeds that were received by the SPE.
Transmit Speed Counters	List of connection speeds that were sent by the SPE.
Receive Speed Counters	List of connection speeds that were received by the SPE.

#### Related Commands

Command	Description
<b>show port operational-status</b>	Displays the operational status of a specific port or range of ports.
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.
<b>show spe digital</b>	Displays history statistics of all digital SPEs, in summary form or for SPEs starting with a specified slot or a specified shelf/slot/range of SPEs.
<b>show spe modem disconnect-reason</b>	Displays all modem disconnection reasons for the specified SPE or range of SPEs.

# show spe recovery

To display service processing element (SPE) recovery statistics, use the **show spe recovery** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe recovery [slot | slot/spe]
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe recovery [shelfslot | shelfslot/spe]
```

Syntax Description	slot	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
	slot/spe	(Optional) All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
	shelfslot	(Optional) All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
	shelfslot/spe	(Optional) All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

**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.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines** Use this command to display a list of recovered SPEs.

**Examples** The following is sample output from the **show spe recovery** command on the Cisco AS5400:

```
Router# show spe recovery

SPE#      Session Abort  Session NAK  Call Failure
1/00      0              0            0
1/01      0              0            0
1/02      0              0            0
1/03      0              0            0
```

**show spe recovery**

```

1/04          0          0          0
1/05          0          0          0
1/06          0          0          0
1/07          0          0          0
1/08          0          0          0
1/09          0          0          0
1/10          0          0          0
1/11          0          0          0
1/12          0          0          0
1/13          0          0          0
1/14          0          0          0
1/15          0          0          0
1/16          0          0          0
1/17          0          0          0

```

The following is sample output from the **show spe recovery** command on the Cisco AS5800:

```
Router# show spe recovery 1/8
```

```

SPE#          Session Abort    Session NAK    Call Failure
1/08/00        0          0          0
1/08/01        0          0          0
1/08/02        0          0          0
1/08/03        0          0          0
1/08/04        0          0          0
1/08/05        0          0          0
1/08/06        0          0          0
1/08/07        0          0          0
1/08/08        0          0          0
1/08/09        0          0          0
1/08/10        0          0          0
1/08/11        0          0          0
1/08/12        0          0          0
1/08/13        0          0          0
1/08/14        0          0          0
1/08/15        0          0          0
1/08/16        0          0          0
1/08/17        0          0          0
1/08/18        0          0          0
1/08/19        0          0          0
1/08/20        0          0          0
1/08/21        0          0          0
1/08/22        0          0          0
1/08/23        0          0          0
1/08/24        0          0          0
1/08/25        0          0          0
1/08/26        0          0          0
1/08/27        0          0          0
1/08/28        0          0          0
1/08/29        0          0          0
1/08/30        0          0          0
1/08/31        0          0          0
1/08/32        0          0          0
1/08/33        0          0          0
1/08/34        0          0          0
1/08/35        0          0          0
1/08/36        0          0          0
1/08/37        0          0          0
1/08/38        0          0          0
1/08/39        0          0          0
1/08/40        0          0          0
1/08/41        0          0          0
1/08/42        0          0          0
1/08/43        0          0          0

```

1/08/44	0	0	0
1/08/45	0	0	0
1/08/46	0	0	0
1/08/47	0	0	0
1/08/48	0	0	0
1/08/49	0	0	0
1/08/50	0	0	0
1/08/51	0	0	0
1/08/52	0	0	0
1/08/53	0	0	0

**Related Commands**

<b>Command</b>	<b>Description</b>
<code>show spe</code>	Displays SPE status.

# show spe version

To display the firmware version on a service processing element (SPE), use the **show spe version** command in EXEC mode.

## Cisco AS5350 and Cisco AS5400 with the NextPort Dial Feature Card (DFC)

```
show spe version [slot | slot/spe]
```

## Cisco AS5800 with the Universal Port Card (UPC)

```
show spe version [shelfslot | shelfslot/spe]
```

Syntax Description	
<i>slot</i>	(Optional) All ports on the specified slot. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7.
<i>slot/spe</i>	(Optional) All ports on the specified slot and SPE. For the Cisco AS5350 slot values range from 1 to 3. For the Cisco AS5400, slot values range from 1 to 7. SPE values range from 1 to 17. You must include the slash mark.
<i>shelfslot</i>	(Optional) All ports on the specified shelf and slot. For the Cisco AS5800, shelf values range from 0 to 1 and UPC slot values range from 2 to 11. You must include the slash mark.
<i>shelfslot/spe</i>	(Optional) All ports on the specified SPE. For the Cisco AS5800, shelf values range from 0 to 1, slot values range from 2 to 11, and SPE values range from 0 to 53. You must include the slash marks.

Command Modes	
	EXEC

Command History	Release	Modification
	12.0(7)T	This command was introduced.
	12.1(1)XD	This command was implemented on the Cisco AS5400.
	12.1(3)T	This command was implemented on the Cisco AS5800.
	12.1(5)XM1	This command was implemented on the Cisco AS5350.
	12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and support was added for the Cisco AS5350.

**Usage Guidelines**

Use the **show spe version** command to display the firmware version running on a specific SPE. If the *shelfslot/spe* argument is specified, the firmware version for the identified SPE or range of SPEs is displayed. If the *slot* argument is specified, the firmware version for the identified SPEs in this slot or range of slots is displayed. If no argument is specified, all SPE versions are displayed.

The **show spe version** command also displays the version to firmware file mappings.

The **show spe version** command is similar to the **show modem mapping MICA technologies modem** command.

**Examples**

The following is sample output from the **show spe version** command on a Cisco AS5400:

```
Router# show spe version

IOS-Bundled Default Firmware-Filename
=====
system:/ucode/np_spe_firmware1
                                0.6.5.5  SPE firmware
                                0.0.0.0  Portware

On-Flash Firmware-Filename
=====
flash:np.spe
                                0.6.4.5  SPE firmware

SPE-#  SPE-Type  SPE-Port-Range  Version  UPG Firmware-Filename
4/00   CSMV6        0000-0005      0.6.5.5  N/A np.spe
4/01   CSMV6        0006-0011      0.6.5.5  N/A ios-bundled default
4/02   CSMV6        0012-0017      0.6.5.5  N/A ios-bundled default
4/03   CSMV6        0018-0023      0.6.5.5  N/A ios-bundled default
4/04   CSMV6        0024-0029      0.6.5.5  N/A ios-bundled default
4/05   CSMV6        0030-0035      0.6.5.5  N/A ios-bundled default
4/06   CSMV6        0036-0041      0.6.5.5  N/A ios-bundled default
4/07   CSMV6        0042-0047      0.6.5.5  N/A ios-bundled default
4/08   CSMV6        0048-0053      0.6.5.5  N/A ios-bundled default
4/09   CSMV6        0054-0059      0.6.5.5  N/A ios-bundled default
4/10   CSMV6        0060-0065      0.6.5.5  N/A ios-bundled default
4/11   CSMV6        0066-0071      0.6.5.5  N/A ios-bundled default
4/12   CSMV6        0072-0077      0.6.5.5  N/A ios-bundled default
4/13   CSMV6        0078-0083      0.6.5.5  N/A ios-bundled default
4/14   CSMV6        0084-0089      0.6.5.5  N/A ios-bundled default
4/15   CSMV6        0090-0095      0.6.5.5  N/A ios-bundled default
4/16   CSMV6        0096-0101      0.6.5.5  N/A ios-bundled default
4/17   CSMV6        0102-0107      0.6.5.5  N/A ios-bundled default
```

The following is sample output from the **show spe version** command on a Cisco AS5800:

```
Router# show spe version 1/8

IOS-Bundled Default Firmware-Filename
=====
system:/ucode/np_spe_firmware1
                                0.0.6.81  SPE firmware
system:/ucode/mica_board_firmware
                                2.7.2.0  Mica Portware

On-Flash Firmware-Filename
=====
slot0:np_6_81.spe
                                0.0.6.81  SPE firmware
slot0:np_6_80.spe
                                0.0.6.80  SPE firmware
slot0:mica-modem-pw.2.7.1.1.bin
                                2.7.1.0  Mica Portware
slot0:mica-modem-pw.2.7.2.0.bin
                                2.7.2.0  Mica Portware

SPE-#  SPE-Type  SPE-Port-Range  Version  UPG Firmware-Filename
1/08/00  CSMV6        0000-0005      0.0.6.81  N/A ios-bundled default
1/08/01  CSMV6        0006-0011      0.0.6.81  N/A ios-bundled default
1/08/02  CSMV6        0012-0017      0.0.6.81  N/A ios-bundled default
1/08/03  CSMV6        0018-0023      0.0.6.81  N/A ios-bundled default
1/08/04  CSMV6        0024-0029      0.0.6.81  N/A ios-bundled default
1/08/05  CSMV6        0030-0035      0.0.6.81  N/A ios-bundled default
1/08/06  CSMV6        0036-0041      0.0.6.81  N/A ios-bundled default
1/08/07  CSMV6        0042-0047      0.0.6.81  N/A ios-bundled default
1/08/08  CSMV6        0048-0053      0.0.6.81  N/A ios-bundled default
1/08/09  CSMV6        0054-0059      0.0.6.81  N/A ios-bundled default
1/08/10  CSMV6        0060-0065      0.0.6.81  N/A ios-bundled default
1/08/11  CSMV6        0066-0071      0.0.6.81  N/A ios-bundled default
1/08/12  CSMV6        0072-0077      0.0.6.81  N/A ios-bundled default
1/08/13  CSMV6        0078-0083      0.0.6.81  N/A ios-bundled default
```

## show spe version

```

1/08/14   CSMV6      0084-0089   0.0.6.81   N/A ios-bundled default
1/08/15   CSMV6      0090-0095   0.0.6.81   N/A ios-bundled default
1/08/16   CSMV6      0096-0101   0.0.6.81   N/A ios-bundled default
1/08/17   CSMV6      0102-0107   0.0.6.81   N/A ios-bundled default
1/08/18   CSMV6      0108-0113   0.0.6.81   N/A ios-bundled default
1/08/19   CSMV6      0114-0119   0.0.6.81   N/A ios-bundled default
1/08/20   CSMV6      0120-0125   0.0.6.81   N/A ios-bundled default
1/08/21   CSMV6      0126-0131   0.0.6.81   N/A ios-bundled default
1/08/22   CSMV6      0132-0137   0.0.6.81   N/A ios-bundled default
1/08/23   CSMV6      0138-0143   0.0.6.81   N/A ios-bundled default
1/08/24   CSMV6      0144-0149   0.0.6.81   N/A ios-bundled default
1/08/25   CSMV6      0150-0155   0.0.6.81   N/A ios-bundled default
1/08/26   CSMV6      0156-0161   0.0.6.81   N/A ios-bundled default
1/08/27   CSMV6      0162-0167   0.0.6.81   N/A ios-bundled default
1/08/28   CSMV6      0168-0173   0.0.6.81   N/A ios-bundled default
1/08/29   CSMV6      0174-0179   0.0.6.81   N/A ios-bundled default
1/08/30   CSMV6      0180-0185   0.0.6.81   N/A ios-bundled default
1/08/31   CSMV6      0186-0191   0.0.6.81   N/A ios-bundled default
1/08/32   CSMV6      0192-0197   0.0.6.81   N/A ios-bundled default
1/08/33   CSMV6      0198-0203   0.0.6.81   N/A ios-bundled default
1/08/34   CSMV6      0204-0209   0.0.6.81   N/A ios-bundled default
1/08/35   CSMV6      0210-0215   0.0.6.81   N/A ios-bundled default
1/08/36   CSMV6      0216-0221   0.0.6.81   N/A ios-bundled default
1/08/37   CSMV6      0222-0227   0.0.6.81   N/A ios-bundled default
1/08/38   CSMV6      0228-0233   0.0.6.81   N/A ios-bundled default
1/08/39   CSMV6      0234-0239   0.0.6.81   N/A ios-bundled default
1/08/40   CSMV6      0240-0245   0.0.6.81   N/A ios-bundled default
1/08/41   CSMV6      0246-0251   0.0.6.81   N/A ios-bundled default
1/08/42   CSMV6      0252-0257   0.0.6.81   N/A ios-bundled default
1/08/43   CSMV6      0258-0263   0.0.6.81   N/A ios-bundled default
1/08/44   CSMV6      0264-0269   0.0.6.81   N/A ios-bundled default
1/08/45   CSMV6      0270-0275   0.0.6.81   N/A ios-bundled default
1/08/46   CSMV6      0276-0281   0.0.6.81   N/A ios-bundled default
1/08/47   CSMV6      0282-0287   0.0.6.81   N/A ios-bundled default
1/08/48   CSMV6      0288-0293   0.0.6.81   N/A ios-bundled default
1/08/49   CSMV6      0294-0299   0.0.6.81   N/A ios-bundled default
1/08/50   CSMV6      0300-0305   0.0.6.81   N/A ios-bundled default
1/08/51   CSMV6      0306-0311   0.0.6.81   N/A ios-bundled default
1/08/52   CSMV6      0312-0317   0.0.6.81   N/A ios-bundled default
1/08/53   CSMV6      0318-0323   0.0.6.81   N/A ios-bundled default

```

The following examples show various implementations of the **show spe version** command to display information about the available SPE sources and modem resources:

```
Router# show spe version
```

```

IOS-Bundled Default Firmware-Filename      Version  Firmware-Type
=====
system:/ucode/mica_board_firmware          2.0.2.0  Mica Boardware
system:/ucode/mica_port_firmware           2.6.2.0  Mica Portware
system:/ucode/microcom_firmware            5.1.20   Microcom F/W and DSP

On-Flash Firmware-Filename                 Version  Firmware-Type
=====
flash:portware.2620.ios                    2.6.2.0  Mica Portware
flash:mcom-modem-firmware.3.1.30.bin       3.1.30   Microcom Firmware
flash:mcom-fw-dsp.5.1.9_47.22.bin          5.1.9    Microcom F/W and DSP
flash:R0620.ios                            0.6.2.0  Mica Portware
flash:pw2710.ios                           2.7.1.0  Mica Portware
flash:mica-modem-pw_2_7_1_0.bin            2.7.1.0  Mica Portware

SPE-#  SPE-Type  SPE-Range  Version  Upgrade  Firmware-Filename
1/0    MICA-HMM   1/0 - 1/5   2.7.1.0  N/A      flash:mica-modem-pw_2_7_1_0.bin
1/1    MICA-HMM   1/6 - 1/11 2.7.1.0  N/A      flash:mica-modem-pw_2_7_1_0.bin

```

```

1/2 MICA-HMM 1/12 - 1/17 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/3 MICA-HMM 1/18 - 1/23 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/5 MICA-HMM 1/30 - 1/35 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/6 MICA-HMM 1/36 - 1/41 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/7 MICA-HMM 1/42 - 1/47 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/9 MICA-HMM 1/54 - 1/59 2.7.1.0 N/A flash:/pw2710.ios

2/0 MCOM-V90 2/0 5.1(20) N/A system:/ucode/microcom_firmware
2/1 MCOM-V90 2/1 5.1(20) N/A system:/ucode/microcom_firmware
2/2 MCOM-V90 2/2 5.1(20) N/A system:/ucode/microcom_firmware
2/3 MCOM-V90 2/3 5.1(20) N/A system:/ucode/microcom_firmware
2/4 MCOM-V90 2/4 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/5 MCOM-V90 2/5 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/6 MCOM-V90 2/6 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/7 MCOM-V90 2/7 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/8 MCOM-V90 2/8 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/9 MCOM-V90 2/9 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/10 MCOM-V90 2/10 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/11 MCOM-V90 2/11 5.1(9) N/A flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/12 MCOM-V34 2/12 2.3(6) N/A feature_card_flash
2/13 MCOM-V34 2/13 2.3(6) N/A feature_card_flash
2/14 MCOM-V34 2/14 2.3(6) N/A feature_card_flash
2/15 MCOM-V34 2/15 2.3(6) N/A feature_card_flash
2/16 MCOM-V34 2/16 2.3(6) N/A feature_card_flash
2/17 MCOM-V34 2/17 2.3(6) N/A feature_card_flash
2/18 MCOM-V34 2/18 2.3(6) N/A feature_card_flash
2/19 MCOM-V34 2/19 2.3(6) N/A feature_card_flash
2/20 MCOM-V34 2/20 2.3(6) N/A feature_card_flash
2/21 MCOM-V34 2/21 2.3(6) N/A feature_card_flash
2/22 MCOM-V34 2/22 2.3(6) N/A feature_card_flash
2/23 MCOM-V34 2/23 2.3(6) N/A feature_card_flash

```

Router# **show spe version 1**

```

SPE-# SPE-Type SPE-Range Version Upgrade Firmware-Filename
1/0 MICA-HMM 1/0 - 1/5 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/1 MICA-HMM 1/6 - 1/11 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/2 MICA-HMM 1/12 - 1/17 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/3 MICA-HMM 1/18 - 1/23 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/5 MICA-HMM 1/30 - 1/35 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/6 MICA-HMM 1/36 - 1/41 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/7 MICA-HMM 1/42 - 1/47 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/9 MICA-HMM 1/54 - 1/59 2.7.1.0 N/A flash:/pw2710.ios

```

Router# **show spe version 1/2**

```

SPE-# SPE-Type SPE-Range Version Upgrade Firmware-Filename
1/2 MICA-HMM 1/12 - 1/17 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin

```

The following two examples show implementation of the **show spe version** command to display information about a range of SPEs:

Router# **show spe version 1/2 2**

```

SPE-# SPE-Type SPE-Range Version Upgrade Firmware-Filename
1/2 MICA-HMM 1/12 - 1/17 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/3 MICA-HMM 1/18 - 1/23 2.7.1.0 N/A flash:mica-modem-pw_2_7_1_0.bin
1/5 MICA-HMM 1/30 - 1/35 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/6 MICA-HMM 1/36 - 1/41 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/7 MICA-HMM 1/42 - 1/47 2.7.1.0 N/A system:/ucode/mica_port_firmware
1/9 MICA-HMM 1/54 - 1/59 2.7.1.0 N/A flash:/pw2710.ios
2/0 MCOM-V90 2/0 5.1(20) N/A system:/ucode/microcom_firmware
2/1 MCOM-V90 2/1 5.1(20) N/A system:/ucode/microcom_firmware

```

## show spe version

2/2	MCOM-V90	2/2	5.1(20)	N/A	system:/ucode/microcom_firmware
2/3	MCOM-V90	2/3	5.1(20)	N/A	system:/ucode/microcom_firmware
2/4	MCOM-V90	2/4	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/5	MCOM-V90	2/5	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/6	MCOM-V90	2/6	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/7	MCOM-V90	2/7	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/8	MCOM-V90	2/8	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/9	MCOM-V90	2/9	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/10	MCOM-V90	2/10	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/11	MCOM-V90	2/11	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/12	MCOM-V34	2/12	2.3(6)	N/A	feature_card_flash
2/13	MCOM-V34	2/13	2.3(6)	N/A	feature_card_flash
2/14	MCOM-V34	2/14	2.3(6)	N/A	feature_card_flash
2/15	MCOM-V34	2/15	2.3(6)	N/A	feature_card_flash
2/16	MCOM-V34	2/16	2.3(6)	N/A	feature_card_flash
2/17	MCOM-V34	2/17	2.3(6)	N/A	feature_card_flash
2/18	MCOM-V34	2/18	2.3(6)	N/A	feature_card_flash
2/19	MCOM-V34	2/19	2.3(6)	N/A	feature_card_flash
2/20	MCOM-V34	2/20	2.3(6)	N/A	feature_card_flash
2/21	MCOM-V34	2/21	2.3(6)	N/A	feature_card_flash
2/22	MCOM-V34	2/22	2.3(6)	N/A	feature_card_flash
2/23	MCOM-V34	2/23	2.3(6)	N/A	feature_card_flash

Router# show spe version 1/2 2/6

SPE-#	SPE-Type	SPE-Range	Version	Upgrade	Firmware-Filename
1/2	MICA-HMM	1/12 - 1/17	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin
1/3	MICA-HMM	1/18 - 1/23	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin
1/5	MICA-HMM	1/30 - 1/35	2.7.1.0	N/A	system:/ucode/mica_port_firmware
1/6	MICA-HMM	1/36 - 1/41	2.7.1.0	N/A	system:/ucode/mica_port_firmware
1/7	MICA-HMM	1/42 - 1/47	2.7.1.0	N/A	system:/ucode/mica_port_firmware
1/9	MICA-HMM	1/54 - 1/59	2.7.1.0	N/A	flash:/pw2710.ios
2/0	MCOM-V90	2/0	5.1(20)	N/A	system:/ucode/microcom_firmware
2/1	MCOM-V90	2/1	5.1(20)	N/A	system:/ucode/microcom_firmware
2/2	MCOM-V90	2/2	5.1(20)	N/A	system:/ucode/microcom_firmware
2/3	MCOM-V90	2/3	5.1(20)	N/A	system:/ucode/microcom_firmware
2/4	MCOM-V90	2/4	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/5	MCOM-V90	2/5	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin
2/6	MCOM-V90	2/6	5.1(9)	N/A	flash:/mcom-fw-dsp.5.1.9_47.22.bin

Router# show spe version

IOS-Bundled	Default	Firmware-Filename	Version	Firmware-Type
system:/ucode/mica_board_firmware			2.0.2.0	Mica Boardware
system:/ucode/mica_port_firmware			2.6.2.0	Mica Portware
system:/ucode/microcom_firmware			5.1.20	Microcom F/W and DSP

On-Flash	Firmware-Filename	Version	Firmware-Type
flash:portware.2620.ios		2.6.2.0	Mica Portware
flash:mcom-modem-firmware.3.1.30.bin		3.1.30	Microcom Firmware
flash:mcom-fw-dsp.5.1.9_47.22.bin		5.1.9	Microcom F/W and DSP
flash:R0620.ios		0.6.2.0	Mica Portware
flash:pw2710.ios		2.7.1.0	Mica Portware
flash:mica-modem-pw_2_7_1_0.bin		2.7.1.0	Mica Portware

SPE-#	SPE-Type	SPE-Range	Version	Upgrade	Firmware-Filename
1/0	MICA-HMM	1/0 - 1/5	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin
1/1	MICA-HMM	1/6 - 1/11	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin
1/2	MICA-HMM	1/12 - 1/17	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin
1/3	MICA-HMM	1/18 - 1/23	2.7.1.0	N/A	flash:mica-modem-pw_2_7_1_0.bin

For the Cisco AS5800, the **show spe version** command display will be different. Note that the SPE-Port-Range field indicates the shelf/slot/port of the SPE.

Router# **show spe version**

```

Firmware-Filename                               Version  Firmware-Type
=====
IOS-Bundled Default                             2.6.2.0  Mica Portware
slot0:/pw2710.ios                               2.7.1.0  Mica Portware
slot0:/pw3102.ios                               3.1.0.2  Mica Portware
slot0:/pw3101.ios                               3.1.0.1  Mica Portware

SPE-#  SPE-Type  SPE-Port-Range  Version  Upgrade  Firmware-Filename
3/0    MICA-DMM  1/3/00 - 1/3/11  2.7.1.0  N/A      slot0:/pw2710.ios
3/1    MICA-DMM  1/3/12 - 1/3/23  2.7.1.0  N/A      slot0:/pw2710.ios
3/2    MICA-DMM  1/3/24 - 1/3/35  2.7.1.0  N/A      slot0:/pw2710.ios
3/3    MICA-DMM  1/3/36 - 1/3/47  2.7.1.0  N/A      slot0:/pw2710.ios
3/4    MICA-DMM  1/3/48 - 1/3/59  2.7.1.0  N/A      slot0:/pw2710.ios
3/5    MICA-DMM  1/3/60 - 1/3/71  2.7.1.0  N/A      slot0:/pw2710.ios
3/6    MICA-DMM  1/3/72 - 1/3/83  2.7.1.0  N/A      slot0:/pw2710.ios
3/7    MICA-DMM  1/3/84 - 1/3/95  2.7.1.0  N/A      slot0:/pw2710.ios
3/8    MICA-DMM  1/3/96 - 1/3/107 2.7.1.0  N/A      slot0:/pw2710.ios

```

[Table 124](#) describes the significant fields for the **show spe version** command on the Cisco AS5800 access server.

**Table 124** *show spe version* Field Descriptions

Field	Description
SPE-#	The slot and port number of the SPE.
SPE-Type	The type of the SPE.
SPE-Port-Range	The range of ports within the specific SPE.
Version	The version of firmware loaded on the SPE.
Upgrade	The method used to reboot the SPE—choices are: busyout (default), N/A, reboot, or recover.
Firmware-Filename	Name of the firmware. You can use the <b>dir</b> command at the prompt to display available firmware filenames.
IOS-Bundled Default Firmware-Filename	The firmware filenames bundled with the Cisco IOS software (system:/ucode).
Firmware-Type	The type of modem associated with the firmware version.
On-Flash Firmware-Filename	The firmware filenames on the Flash (flash:).

#### Related Commands

Command	Description
<b>firmware location</b>	Upgrades SPE firmware after the new SPE firmware image is retrieved from Cisco.com or elsewhere.
<b>show modem mapping</b>	Displays a snapshot of all the firmware versions running on all the modems in the access server.
<b>show spe</b>	Displays history statistics of all SPEs, a specified SPE, or the specified range of SPEs.

# show sss session

To display Subscriber Service Switch session status, use the **show sss session** command in privileged EXEC mode.

**show sss session [all]**

<b>Syntax Description</b>	<b>all</b>	(Optional) Provides an extensive report about the Subscriber Service Switch sessions.
---------------------------	------------	---

<b>Command Modes</b>	Privileged EXEC
----------------------	-----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(13)T	This command was introduced.

<b>Usage Guidelines</b>	Use this command to verify correct operation of PPP connections in the Subscriber Service Switch environment.
-------------------------	---

<b>Examples</b>	The following sample output from the <b>show sss session</b> command provides a basic report of Subscriber Service Switch session activity:
-----------------	---

```
Router# show sss session

Current SSS Information: Total sessions 9

Uniq ID Type      State      Service      Identifier      Last Chg
 9      PPPoE/PPP  connected  VPDN          nobody3@xyz.com 00:02:36
10      PPPoE/PPP  connected  VPDN          nobody3@xyz.com 00:01:52
11      PPPoE/PPP  connected  VPDN          nobody3@xyz.com 00:01:52
 3      PPPoE/PPP  connected  VPDN          user3@xyz.com    2d21h
 6      PPPoE/PPP  connected  Local Term   user1            00:03:35
 7      PPPoE/PPP  connected  Local Term   user2            00:03:35
 8      PPPoE/PPP  connected  VPDN          nobody3@xyz.com 00:02:36
 2      PPP        connected  Local Term   johndoe          00:05:06
 4      PPP        connected  VPDN          nobody2@xyz.com  00:06:52
```

	The following sample output from the <b>show sss session all</b> command provides a more extensive report of Subscriber Service Switch session activity:
--	--

```
Router# show sss session all

Current SSS Information: Total sessions 9

SSS session handle is 40000013, state is connected, service is VPDN
Unique ID is 9
SIP subscriber access type(s) are PPPoE/PPP
Identifier is nobody3@xyz.com
Last Changed 00:02:49
Root SIP Handle is DF000010, PID is 49
AAA unique ID is 10
```

```
Current SIP options are Req Fwding/Req Fwded

SSS session handle is B0000017, state is connected, service is VPDN
Unique ID is 10
SIP subscriber access type(s) are PPPoE/PPP
Identifier is nobody3@xyz.com
Last Changed 00:02:05
Root SIP Handle is B9000015, PID is 49
AAA unique ID is 11
Current SIP options are Req Fwding/Req Fwded

SSS session handle is D6000019, state is connected, service is VPDN
Unique ID is 11
SIP subscriber access type(s) are PPPoE/PPP
Identifier is nobody3@xyz.com
Last Changed 00:02:13
Root SIP Handle is D0000016, PID is 49
AAA unique ID is 12
Current SIP options are Req Fwding/Req Fwded

SSS session handle is 8C000003, state is connected, service is VPDN
Unique ID is 3
SIP subscriber access type(s) are PPPoE/PPP
Identifier is user3@xyz.com
Last Changed 2d21h
Root SIP Handle is D3000002, PID is 49
AAA unique ID is 3
Current SIP options are Req Fwding/Req Fwded

SSS session handle is BE00000B, state is connected, service is Local Term
Unique ID is 6
SIP subscriber access type(s) are PPPoE/PPP
Identifier is user1
Last Changed 00:03:56
Root SIP Handle is A9000009, PID is 49
AAA unique ID is 7
Current SIP options are Req Fwding/Req Fwded

SSS session handle is DC00000D, state is connected, service is Local Term
Unique ID is 7
SIP subscriber access type(s) are PPPoE/PPP
Identifier is user2
Last Changed 00:03:57
Root SIP Handle is 2C00000A, PID is 49
AAA unique ID is 8
Current SIP options are Req Fwding/Req Fwded

SSS session handle is DB000011, state is connected, service is VPDN
Unique ID is 8
SIP subscriber access type(s) are PPPoE/PPP
Identifier is nobody3@xyz.com
Last Changed 00:02:58
Root SIP Handle is 1000000F, PID is 49
AAA unique ID is 9
Current SIP options are Req Fwding/Req Fwded

SSS session handle is 3F000007, state is connected, service is Local Term
Unique ID is 2
SIP subscriber access type(s) are PPP
Identifier is johndoe
Last Changed 00:05:30
Root SIP Handle is 8A000009, PID is 92
AAA unique ID is 1
Current SIP options are Req Fwding/Req Fwded
```

```

SSS session handle is 97000005, state is connected, service is VPDN
Unique ID is 4
SIP subscriber access type(s) are PPP
Identifier is nobody2@xyz.com
Last Changed 00:07:16
Root SIP Handle is 32000000, PID is 92
AAA unique ID is 5
Current SIP options are Req Fwding/Req Fwded

```

Most of the messages displayed by the **show sss session** and **show sss session all** commands are self-explanatory. [Table 125](#) describes the significant fields shown in the displays. Any data not described in [Table 125](#) is used for internal debugging purposes.

**Table 125** *show sss session Field Descriptions*

Field	Description
Unique ID (Uniq ID)	The unique identifier used to correlate this particular session with the sessions retrieved from other <b>show</b> commands or <b>debug</b> command traces.
Type	Access protocols relevant to this session.
State	Status of the connection, which can be one of the following states: <ul style="list-style-type: none"> <li>connected—The session has been established.</li> <li>wait-for-req—Waiting for request.</li> <li>wait-for-auth—Waiting for authorization.</li> <li>wait-for-fwd—Waiting to be forwarded; for example, waiting for virtual private dialup network (VPDN) service.</li> </ul>
Service	Type of service given to the user.
Identifier	A string identifying the user. This identifier may either be the username, or the name used to authorize the session.
Last Chg (Last Changed)	Time interval in in hh:mm:ss since the service for this session was last changed.

#### Related Commands

Command	Description
<b>show vpdn session</b>	Displays session information about the L2TP and L2F protocols, and PPPoE tunnels in a VPDN.

# show tech-support modem

To create a modem ISDN channel aggregation (MICA) modem functionality report on a Cisco AS5300 or AS5800 access server, use the **show tech-support modem** command in privileged EXEC mode.

**show tech-support modem [detail]**

<b>Syntax Description</b>	<b>detail</b> (Optional) Produces an extensive modem functionality report.
---------------------------	--

<b>Command Modes</b>	Privileged EXEC
----------------------	-----------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(11)T	This command was introduced for MICA technologies modems on the Cisco AS5300 and AS5800.

**Usage Guidelines**

This command is useful when information is required to troubleshoot a problem with MICA modems in the field. Customers are typically asked to send the output for a number of Cisco IOS EXEC commands. The **show tech-support modem** command provides extensive output of many EXEC commands through entry of a single command.

The report displayed by the **show tech-support modem** command is the successive output of many commands. The report takes some time to run and, when captured in a buffer, can be over 100 pages in length. The following commands are run by the **show tech-support modem** command. The commands are shown in the order run:

- **show version**
- **show running-config**
- **show modem version**
- **show modem**
- **show modem summary**
- **show spe version**
- **show controllers t1 call-counters**
- **show controllers e1 call-counters**
- **show modem connect-speeds**
- **show modem mapping**
- **show line**
- **show caller**
- **show users all**

The following additional commands are run by the **show tech-support modem detail** command. The commands are shown in the order run:

- **show modem configuration**
- **show modem operational-status**
- **show modem mica all**
- **show modem csm**
- **show modem log**

To interpret the modem reports, refer to the descriptions for each command in the appropriate command reference manual.

---

### Examples

The following example shows how to display a basic list of modem reports:

```
Router# show tech-support modem
```

The following example shows how to display an extensive list of modem reports:

```
Router# show tech-support modem detail
```

---

### Related Commands

Command	Description
<b>execute-on</b>	Executes a command on a line card to monitor and maintain information on the card (for example, a line card on a dial shelf).

# show tech-support spe

To create a NextPort service processing element (SPE) modem functionality report on a Cisco AS5350, AS5400, AS5800, or AS5850 access server, use the **show tech-support spe** command in privileged EXEC mode.

**show tech-support spe [detail]**

<b>Syntax Description</b>	<b>detail</b> (Optional) Produces an extensive modem functionality report.				
<b>Command Modes</b>	Privileged EXEC				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>12.2(11)T</td> <td>This command was introduced for SPE modems on the Cisco AS5350, AS5400, AS5800, and AS5850.</td> </tr> </tbody> </table>	Release	Modification	12.2(11)T	This command was introduced for SPE modems on the Cisco AS5350, AS5400, AS5800, and AS5850.
Release	Modification				
12.2(11)T	This command was introduced for SPE modems on the Cisco AS5350, AS5400, AS5800, and AS5850.				

**Usage Guidelines** This command is useful when information is required to troubleshoot a problem with SPE modems in the field. Customers are typically asked to send the output for a number of Cisco IOS EXEC commands. The **show tech-support spe** command provides extensive output of many EXEC commands by entering a single command.

The report displayed by the **show tech-support spe** command is the successive output of many commands. The report takes some time to run and, when captured in a buffer, can be over 100 pages in length. The following commands are run by the **show tech-support spe** command. The commands are shown in the order run:

- **show version**
- **show running-config**
- **show spe version**
- **show spe**
- **show spe modem summary**
- **show spe modem csr summary**
- **show spe modem disconnect-reason summary**
- **show spe recovery**
- **show csm call-rate**
- **show nextport mm**
- **show controllers e1 call-counters**
- **show controllers t1 call-counters**
- **show line**
- **show caller**
- **show users all**

The following additional commands are run by the **show tech-support spe detail** command. The commands are shown in the order run:

- **show csm modem**
- **show spe log**
- **show port modem log**

To interpret the modem reports, refer to the descriptions for each command listed in the appropriate command reference manual.

---

### Examples

The following example shows how to display a basic list of modem reports:

```
Router# show tech-support spe
```

The following example shows how to display an extensive list of modem reports:

```
Router# show tech-support spe detail
```

---

### Related Commands

Command	Description
<b>execute-on</b>	Executes a command on a line card to monitor and maintain information on the card (for example, a line card on a dial shelf).

# show tgrm

To display information for debugging purposes about defined trunk groups and interfaces that have been assigned to the trunk groups, use the **show tgrm** command in EXEC mode.

## show tgrm

### Syntax Description

This command has no arguments or keywords.

### Command Modes

EXEC

### Command History

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

### Examples

The following is sample output from the **show tgrm** command:

```
Router# show tgrm

      Trunk   Any in  Vce in   Data in
      Group # Any out Vce out   Data out

      2       65535  65535   65535
              65535  65535   65535
              0 Retries
              Interface Se1/0/1:15   Data = 0, Voice = 0, Free = 30
              Interface Se1/0/8:15   Data = 2, Voice = 0, Free = 28

              Total calls for trunk group:Data = 2, Voice = 0, Free = 58
              Selected Voice Interface :Se1/0/1:15
              Selected Data Interface  :Se1/0/1:15
```

[Table 126](#) describes the significant fields shown in the display.

**Table 126** *show tgrm* Field Descriptions

Field	Description
Trunk Group #	Number of a defined trunk group.
Any in, Vce In, Data In, Any out, Vce out, Data out	Trunk group settings that specify whether incoming and outgoing voice and data traffic is allowed.  The nonconfigured number 65535 indicates that <b>max-calls</b> values have not been configured in the global <b>trunk group</b> command.
Retries	Defined maximum number of retries.
Interface	Specified interface, number of channels currently used for voice and data, and number of free channels.

**Table 126** *show tgrm Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Total calls for trunk group	Number of calls to and from the trunk group, number of channels used for voice and data, and number of free channels.
Selected Voice Interface	Interface or trunk to be used next for a voice call.
Selected Data Interface	Interface or trunk to be used next for a data call.

# show vpdn

To display basic information about all active virtual private dialup network (VPDN) tunnels, use the **show vpdn** command in user EXEC mode.

**show vpdn**

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

**Command Modes** User EXEC

Command History	Release	Modification
	11.2	This command was introduced.
	12.1(1)T	This command was enhanced to display Point-to-Point Protocol over Ethernet (PPPoE) information.
	12.1(2)T	This command was enhanced to display PPPoE session information on actual Ethernet interfaces.

**Usage Guidelines** Use the **show vpdn** command to display information about all active tunnels using Layer 2 Tunnel Protocol (L2TP), Layer 2 Forwarding (L2F), and Point-to-Point Tunnel Protocol (PPTP). The output of the **show vpdn session** command also displays PPPoE session information. PPPoE is supported on ATM permanent virtual connections (PVCs) compliant with RFC 1483 only. PPPoE is not supported on Frame Relay and any other LAN interfaces such as FDDI and Token Ring.

**Examples** The following is sample output from the **show vpdn** command on a device with active L2F and L2TP tunnels:

```
Router> show vpdn

Active L2F tunnels
NAS Name   Gateway Name   NAS CLID   Gateway CLID   State
nas        gateway        4          2              open

L2F MIDs
Name       NAS Name       Interface   MID            State
router1@cisco.com  nas           As7        1              open
router2@cisco.com  nas           As8        2              open

%No active PPTP tunnels
```

The following is sample output from the **show vpdn** command on a device with an active PPPoE tunnels:

```
Router> show vpdn

%No active L2TP tunnels
%No active L2F tunnels
```

```

PPPoE Tunnel and Session Information Total tunnels 1 sessions 1
PPPoE Tunnel Information
Session count:1
PPPoE Session Information
SID          RemMAC          LocMAC          Intf          VASt          OIntf          VC
1            0010.7b01.2cd9  0090.ab13.bca8  Vi4          UP           AT6/0         0/104

```

The following is sample output from the **show vpdn** command on a device with an active PPPoE session on an actual Ethernet interface:

```
Router> show vpdn
```

```
%No active L2TP tunnels
%No active L2F tunnels
```

```

PPPoE Tunnel and Session Information Total tunnels 1 sessions 1
PPPoE Tunnel Information
Session count:1
PPPoE Session Information
SID          RemMAC          LocMAC          Intf          VASt          OIntf
1            0090.bf06.c870 00e0.1459.2521  Vi1          UP           Eth1

```

[Table 127](#) describes the significant fields shown in the displays.

**Table 127 show vpdn Field Descriptions**

Field	Description
Active L2F tunnels	
NAS Name	Hostname of the network access server (NAS), which is the remote termination point of the tunnel.
Gateway Name	Hostname of the home gateway, which is the local termination point of the tunnel.
NAS CLID	A number uniquely identifying the VPDN tunnel on the NAS.
Gateway CLID	A number uniquely identifying the VPDN tunnel on the gateway.
State	Indicates whether the tunnel is open, opening, closing, or closed.
L2F MIDs	
Name	Username of the person from whom a protocol message was forwarded over the tunnel.
NAS Name	Hostname of the NAS.
Interface	Interface from which the protocol message was sent.
MID	A number uniquely identifying this user in this tunnel.
State	Indicates status for the individual user in the tunnel. The states are: opening, open, closed, closing, and waiting_for_tunnel.  The waiting_for_tunnel state means that the user connection is waiting until the main tunnel can be brought up before it moves to the opening state.
PPPoE Tunnel Information	
SID	Session ID for the PPPoE session.
RemMAC	Remote MAC address of the host.
LocMAC	Local MAC address of the router. It is the default MAC address of the router.
Intf	Virtual access interface associated with the PPP session.

**Table 127** *show vpdn Field Descriptions (continued)*

Field	Description
VASt	Line protocol state of the virtual access interface.
OIntf	Outgoing interface.
VC	VC on which the PPPoE session is established.

**Related Commands\**

Command	Description
<b>show vpdn domain</b>	Shows all VPDN domains and DNIS groups configured on the NAS.
<b>show vpdn group</b>	Shows a summary of the relationships among VPDN groups and customer/VPDN profiles, or summarizes the configuration of a VPDN group including DNIS/domain, load sharing information and current session information.
<b>show vpdn history failure</b>	Shows the content of the failure history table.
<b>show vpdn multilink</b>	Shows the multilink sessions authorized for all VPDN groups.
<b>show vpdn redirect</b>	Displays statistics for L2TP redirects and forwards.
<b>show vpdn session</b>	Displays session information about active Layer 2 sessions for a VPDN.
<b>show vpdn tunnel</b>	Displays information about active Layer 2 tunnels for a VPDN.

# show vpdn domain

To view all virtual private dialup network (VPDN) domains and DNIS groups configured on the network access server, use the **show vpdn domain** command in privileged EXEC mode.

## show vpdn domain

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

**Command Modes** Privileged EXEC

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

**Examples** The following is sample output from the **show vpdn domain** command:

```
Router# show vpdn domain

Tunnel          VPDN Group
-----          -
dnis:cg2        vgdnis (L2F)
domain:twu-ultra test (L2F)
```

[Table 128](#) shows the significant fields shown in the display.

**Table 128 show vpdn domain Field Descriptions**

Field	Description
Tunnel	The assigned name of the tunnel endpoint.
VPDN Group	The assigned name of the VPDN group using the tunnel.

# show vpdn group

To see a summary of the relationships among virtual private dialup network (VPDN) groups and customer/VPDN profiles, or to summarize the configuration of a VPDN group including domain/DNIS, load sharing information and current session information, use the **show vpdn group** command in EXEC mode.

**show vpdn group** [*name*] [**domain** | **endpoint**]

Syntax Description	
<b>name</b>	(Optional) VPDN group name summarizes the configuration of the specified group.
<b>domain</b>	(Optional) DNIS/domain information.
<b>endpoint</b>	(Optional) Endpoint session information.

**Command Modes** EXEC

Command History	Release	Modification
	12.0(4)XI	This command was introduced.
	12.2(8)T	The “resource-pool disabled” message was added to the command output.

**Usage Guidelines** Use the **show vpdn group** command in EXEC mode to see a summary of the relationships among VPDN groups and customer/VPDN profiles, or to summarize the configuration of a VPDN group including domain/DNIS, load sharing information, and current session information. To summarize relationships among VPDN groups and customer/VPDN profiles, use the syntax **show vpdn group name**.

The following usage guidelines apply only to the Cisco AS5300, AS5400, and AS5800 access servers. If the resource manager has been disabled by the **resource-pool disable** global configuration command, the **show vpdn group** command only displays a message stating that the resource-pool is disabled. If you enter the **show vpdn group name** command when the **resource-pool disable** command is enabled, the router will display the message stating that the resource-pool is disabled followed by a summary of active VPDN sessions.

**Examples** The following is sample output from the **show vpdn group** command summarizing all VPDN group and profile relationships:

```
Router# show vpdn group

VPDN Group  Customer Profile  VPDN Profile
-----
1           -                -
2           -                -
3           -                -
lisun      cp1              -
outgoing-2 -                -
test       -                -
*vg1       cpdnis          -
*vg2       cpdnis          -
vgdnis     +cp1            vp1
```

## show vpdn group

```

vnumber      -          -
vp1          -          -

* VPDN group not configured
+ VPDN profile under Customer profile

```



### Note

VPDN group is marked with “\*” if it does not exist, but is used under customer/VPDN profile.



### Note

Customer profiles are marked with “+” if the corresponding VPDN group is not directly configured under a customer profile. Instead, the corresponding VPDN profile is configured under the customer profile.

The following is sample output from the **show vpdn group** command for a VPDN group named vgdnis:

```
Router # show vpdn group vgdnis
```

```

Tunnel (L2TP)
-----
dnis:cg1
dnis:cg2
dnis:jan
cisco.com

Endpoint          Session Limit Priority Active Sessions Status Reserved Sessions
-----
172.21.9.67      *              1           0              OK           -
-----
Total            *              0           0              0

```



### Note

Tunnel section lists all domain/DNIS (“dnis” appears before DNIS).

The session limit endpoint is the sum of the session limits of all endpoints and is marked with “\*” if there is no limit (indicated by “\*”) for any endpoint.

If the endpoint has no session limit, reserved sessions are marked with “-”.

The following is sample output from the **show vpdn group** command:

```

Router# show vpdn group

VPDN Group      Customer Profile VPDN Profile
-----
customer1-vpdng customer1      customer1-profile
customer2-vpdng customer2      -

Router# show vpdn group customer1-vpdng

Tunnel (L2TP)
-----
cisco.com
cisco1.com
dnis:customer1-calledg

```

```

Endpoint          Session Limit Priority Active Sessions Status Reserved Sessions
-----
172.21.9.67      *           1       0           OK
172.21.9.68      100         1       0           OK
172.21.9.69      *           5       0           OK
-----
Total            *           0       0           0

```

The following is sample output from the **show vpdn group** command on a Cisco AS5300 access server when the **resource-pool disable** command is configured:

```

Router # show vpdn group
% Resource-pool disabled

```

The following is sample output from the **show vpdn group vpdnis** command on a Cisco AS5300 access server when the **resource-pool disable** command is configured. The summary of tunnel information is only displayed if there is an active VPDN session.

```

Router # show vpdn group vpdnis
% Resource-pool disabled

```

```

Tunnel (L2TP)
-----

```

```

dnis:cgl
cisco.com

```

```

Endpoint          Session Limit Priority Active Sessions Status Reserved Sessions
-----
172.21.9.67      *           1       1           OK      -
-----

```

[Table 129](#) describes the significant fields shown in the displays.

**Table 129** *show vpdn group Field Descriptions*

Field	Description
VPDN Group	The assigned name of the VPDN group using the tunnel.
Customer Profile	The name of the assigned customer profile.
VPDN Profile	The name of the assigned VPDN profile.
Tunnel	The assigned name of the tunnel endpoint.
Endpoint	IP address of HGW/LNS router.
Session Limit	Number of sessions permitted for the designated endpoint.
Priority	Loadsharing HGW/LNSs are always marked with a priority of 1.
Active Sessions	Number of active sessions on the network access server. These are sessions successfully established with endpoints (not reserved sessions).
Status	Only two status types are possible: OK and busy.
Reserved Sessions	Authorized sessions that are waiting to see if they can successfully connect to endpoints. Essentially, these sessions are queued calls. In most cases, reserved sessions become active sessions.

# show vpdn history failure

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

```
show vpdn history failure [user-name]
```

<b>Syntax Description</b>	<i>user-name</i>	(Optional) Username, which displays only the entries mapped to that particular user.
---------------------------	------------------	--

<b>Command Modes</b>	EXEC
----------------------	------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	11.3 T	This command was introduced.

<b>Usage Guidelines</b>	If a username is specified, only the entries mapped to that username are displayed; when the username is not specified, the whole table is displayed.
-------------------------	---

<b>Examples</b>	The following is sample output from the <b>show vpdn history failure</b> command, which displays the failure history table for a specific user:
-----------------	---

```
Router# show vpdn history failure

Table size: 20
Number of entries in table: 1

User: jcchan@cisco.com, MID = 1
NAS: isp, IP address = 172.21.9.25, CLID = 1
Gateway: hp-gw, IP address = 172.21.9.15, CLID = 1
Log time: 13:08:02, Error repeat count: 1
Failure type: The remote server closed this session
Failure reason: Administrative intervention
```

[Table 130](#) describes the significant fields shown in the display.

**Table 130** show vpdn history failure Field Descriptions

Field	Description
Table size	Configurable VPDN history table size.
Number of entries in table	Number of entries currently in the history table.
User	Username for the entry displayed.
MID	VPDN user session ID that correlates to the logged event. The MID is a unique ID per user session.
NAS	Network access server identity.
IP address	IP address of the network access server or home gateway (HGW).

**Table 130** *show vpdn history failure Field Descriptions (continued)*

Field	Description
CLID	Tunnel endpoint for the network access server and HGW.
Gateway	HGW end of the VPDN tunnel.
Log time	The event logged time.
Error repeat count	Number of times a failure entry has been logged under a specific user. Only one log entry is allowed per user and is unique to its MID, with the older one being overwritten.
Failure type	Description of failure.
Failure reason	Reason for failure.

**Related Commands**

Command	Description
<b>clear vpdn counters</b>	Clears the content of the VPDN failure history table.
<b>vpdn history failure</b>	Enables logging of VPDN failures to the history failure table or to sets the failure history table size.

# show vpdn multilink

To see the multilink sessions authorized for all virtual private dialup network (VPDN) groups, use the **show vpdn multilink** command in EXEC mode.

```
show vpdn multilink
```

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

**Command Modes** EXEC

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

**Examples** Following is sample output comparing the **show vpdn tunnel** command with the **show vpdn multilink** command:

```
Router# show vpdn tunnel
```

```
L2F Tunnel and Session Information (Total tunnels=1 sessions=1)
```

```
NAS CLID  HGW CLID  NAS Name          HGW Name          State
24         10         centi3_nas        twu253_hg         open
                172.21.9.46      172.21.9.67
```

```
CLID  MID  Username                               Intf  State
10    1    twu@twu-ultra.cisco.com                Se0:22 open
```

```
Router# show vpdn multilink
```

```
Multilink Bundle Name  VPDN Group  Active links  Reserved links  Bundle/Link Limit
-----
twu@twu-ultra.cisco.com  vgdnis      1             0                */*
```

[Table 131](#) describes the significant fields shown in the display.

**Table 131 show vpdn multilink Field Descriptions**

Field	Description
NAS CLID	Network access server Caller Line Identification number (CLID).
HGW CLID	Home gateway (HGW) Caller Line Identification number (CLID).
NAS Name	Name assigned to the NAS.
HGW Name	Name assigned to the HGW.
State	Operational state of the designated piece of equipment.
CLID	Calling Line Identification number.
MID	Modem Identification.

**Table 131** *show vpdn multilink Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Username	Assigned user name.
Intf	Type of interface.
State	Operational state of the designated piece of equipment.
Multilink Bundle Name	Name of the multilink bundle.
VPDN Group	Name of the VPDN group.
Active Links	Number of active links.
Reserved Links	Number of reserved links.
Bundle/Link limit	Limit of bundles or links available.

# show vpdn redirect

To display statistics for Layer 2 Tunneling Protocol (L2TP) redirects and forwards, use the **show vpdn redirect** command in privileged EXEC mode.

**show vpdn redirect**

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

**Command Modes** Privileged EXEC

Command History	Release	Modification
	12.2(8)B	This command was introduced.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.

**Usage Guidelines** Statistics about the number of L2TP forwards and redirects that were done by the router as an L2TP access concentrator (LAC) or L2TP network server (LNS) are displayed when you enter the **show vpdn redirect** command. To clear the redirect counters, use the **clear vpdn redirect** command.

**Examples** The following example displays statistics for redirects and forwards for a router configured as a LAC:

```
Router# show vpdn redirect

vpdn redirection enabled
sessions redirected as access concentrator: 2
sessions redirected as network server: 0
sessions forwarded: 2
```

[Table 132](#) describes the significant fields shown in the display.

**Table 132** *show vpdn redirect Field Descriptions*

Field	Description
vpdn redirection enabled	Verifies that L2TP redirect is enabled.
sessions redirected as access concentrator	Displays the number of sessions that the router has redirected when configured as a LAC.
sessions redirected as network server	Displays the number of sessions that the router has redirected when configured as an LNS.
sessions forwarded	Displays the total number of sessions that have been forwarded.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear vpdn redirect</b>	Clears the L2TP redirect counters shown in the output from the <b>show vpdn redirect</b> command.
<b>vpdn redirect</b>	Enables L2TP redirect functionality.
<b>vpdn redirect attempts</b>	Restricts the number of redirect attempts possible for an L2TP call on the LAC.
<b>vpdn redirect identifier</b>	Indicates the name of the VPDN redirect identifier to use for L2TP call redirection.
<b>vpdn redirect source</b>	Configures the public redirect IP address of an LNS.

# show vpdn session

To display session information about active Layer 2 sessions for a virtual private dialup network (VPDN), use the **show vpdn session** command in privileged EXEC mode.

```
show vpdn session [all [filter] | packets [filter] | sequence [filter] | state [filter]]
```

## Syntax Description

<b>all</b>	(Optional) Displays extensive reports about active sessions.
<i>filter</i>	(Optional) One of the filter parameters defined in <a href="#">Table 132</a> .
<b>packets</b>	(Optional) Displays information about packet and byte counts for sessions.
<b>sequence</b>	(Optional) Displays sequence information for sessions.
<b>state</b>	(Optional) Displays state information for sessions.

## Command Modes

Privileged EXEC

## Command History

Release	Modification
11.2	This command was introduced.
12.1(1)T	This command was enhanced to display Point-to-Point Protocol over Ethernet (PPPoE) session information. Support was added for the <b>packets</b> and <b>all</b> keywords.
12.1(2)T	This command was enhanced to display PPPoE session information on actual Ethernet interfaces.
12.2(13)T	Reports from this command were enhanced with a unique identifier that can be used to correlate a particular session with the session information retrieved from other <b>show</b> commands or <b>debug</b> command traces.

## Usage Guidelines

Use the **show vpdn session** command to display information about all active sessions using L2TP, L2F, and PPTP.

The output of the **show vpdn session** command displays PPPoE session information as well. PPPoE is supported on ATM permanent virtual connections (PVCs) compliant with RFC 1483 only. PPPoE is not supported on Frame Relay and any other LAN interfaces such as FDDI and Token Ring.

Reports and options for this command depend upon the configuration in which it is used. Use the command-line question mark (?) help function to display options available with the **show vpdn session** command.

[Table 132](#) defines the filter parameters available to refine the output of the **show vpdn session** command. You may use any one of the filter parameters in place of the *filter* argument.

**Table 133 Filter Parameters for the show vpdn session Command**

Syntax	Description
<b>interface serial</b> <i>number</i>	Filters the output to display only information for sessions associated with the specified serial interface. <ul style="list-style-type: none"> <li><i>number</i>—The serial interface number.</li> </ul>
<b>interface virtual-template</b> <i>number</i>	Filters the output to display only information for sessions associated with the specified virtual template. <ul style="list-style-type: none"> <li><i>number</i>—The virtual template number.</li> </ul>
<b>tunnel id</b> <i>tunnel-id session-id</i>	Filters the output to display only information for sessions associated with the specified tunnel ID and session ID. <ul style="list-style-type: none"> <li><i>tunnel-id</i>—The local tunnel ID. Valid values range from 1 to 65535.</li> <li><i>session-id</i>—The local session ID. Valid values range from 1 to 65535.</li> </ul>
<b>tunnel remote-name</b> <i>remote-name local-name</i>	Filters the output to display only information for sessions associated with the tunnel with the specified names. <ul style="list-style-type: none"> <li><i>remote-name</i>—The remote tunnel name.</li> <li><i>local-name</i>—The local tunnel name.</li> </ul>
<b>username</b> <i>username</i>	Filters the output to display only information for sessions associated with the specified username. <ul style="list-style-type: none"> <li><i>username</i>—The username.</li> </ul>

**Examples**

The **show vpdn session** command provides reports on call activity for all active sessions. The following output is from a device carrying active L2TP, L2F, and PPPoE sessions:

```
Router# show vpdn session

L2TP Session Information Total tunnels 1 sessions 4

LocID RemID TunID Intf      Username                State  Last Chg Uniq ID
4      691   13695 Se0/0    nobody2@cisco.com      est    00:06:00 4
5      692   13695 SSS Circuit nobody1@cisco.com      est    00:01:43 8
6      693   13695 SSS Circuit nobody1@cisco.com      est    00:01:43 9
3      690   13695 SSS Circuit nobody3@cisco.com      est    2d21h   3

L2F Session Information Total tunnels 1 sessions 2

  CLID  MID  Username                Intf      State  Uniq ID
  1     2   nobody@cisco.com        SSS Circuit open    10
  1     3   nobody@cisco.com        SSS Circuit open    11

%No active PPTP tunnels

PPPoE Session Information Total tunnels 1 sessions 7

PPPoE Session Information
UID  SID  RemMAC      OIntf      Intf      Session
LocMAC  VAST      state
3    1    0030.949b.b4a0 Fa2/0      N/A      CNCT_FWDED
      0010.7b90.0840
```

## show vpdn session

```

6      2      0030.949b.b4a0 Fa2/0      Vi1.1      CNCT_PTA
        0010.7b90.0840      UP
7      3      0030.949b.b4a0 Fa2/0      Vi1.2      CNCT_PTA
        0010.7b90.0840      UP
8      4      0030.949b.b4a0 Fa2/0      N/A        CNCT_FWDED
        0010.7b90.0840
9      5      0030.949b.b4a0 Fa2/0      N/A        CNCT_FWDED
        0010.7b90.0840
10     6      0030.949b.b4a0 Fa2/0      N/A        CNCT_FWDED
        0010.7b90.0840
11     7      0030.949b.b4a0 Fa2/0      N/A        CNCT_FWDED
        0010.7b90.0840

```

Table 134 describes the significant fields in the **show vpdn session** display.

**Table 134** show vpdn session Field Descriptions

Field	Description
LocID	Local identifier.
RemID	Remote identifier.
TunID	Tunnel identifier.
Intf	Interface associated with the session.
Username	User domain name.
State	Status for the individual user in the tunnel; can be one of the following states: <ul style="list-style-type: none"> <li>• est</li> <li>• opening</li> <li>• open</li> <li>• closing</li> <li>• closed</li> <li>• waiting_for_tunnel</li> </ul> <p>The waiting_for_tunnel state means that the user connection is waiting until the main tunnel can be brought up before it moves to the opening state.</p>
Last Chg	Time interval (in hh:mm:ss) since last change occurred.
Uniq ID (Unique ID:)	The unique identifier used to correlate this particular session with the sessions retrieved from other <b>show</b> commands or <b>debug</b> command traces.
CLID	A number uniquely identifying the session.
MID	A number uniquely identifying this user in this tunnel.
UID	PPPoE user ID.
SID	PPPoE session ID.
RemMAC	Remote Media Access Control (MAC) address of the host.
LocMAC	Local MAC address of the router. It is the default MAC address of the router.
OIntf	Outgoing interface.

**Table 134** show vpdn session Field Descriptions (continued)

Field	Description
Intf VASt	Virtual access interface number and state.
Session state	PPPoE session state.

The **show vpdn session packets** command provides reports on call activity for all the currently active sessions. The following output is from a device carrying an active PPPoE session:

```
Router# show vpdn session packets

%No active L2TP tunnels
%No active L2F tunnels

PPPoE Session Information Total tunnels 1 sessions 1
PPPoE Session Information
SID      Pkts-In      Pkts-Out      Bytes-In      Bytes-Out
1        202333       202337        2832652       2832716
```

[Table 135](#) describes the significant fields shown in the **show vpdn session packets** command display.

**Table 135** show vpdn session packets Field Descriptions

Field	Description
SID	Session ID for the PPPoE session.
Pkts-In	Number of packets coming into this session.
Pkts-Out	Number of packets going out of this session.
Bytes-In	Number of bytes coming into this session.
Bytes-Out	Number of bytes going out of this session.

The **show vpdn session all** command provides extensive reports on call activity for all the currently active sessions. The following output is from a device carrying active L2TP, L2F, and PPPoE sessions:

```
Router# show vpdn session all

L2TP Session Information Total tunnels 1 sessions 4

Session id 5 is up, tunnel id 13695
Call serial number is 3355500002
Remote tunnel name is User03
  Internet address is 10.0.0.63
  Session state is established, time since change 00:03:53
    52 Packets sent, 52 received
    2080 Bytes sent, 1316 received
  Last clearing of "show vpdn" counters never
  Session MTU is 1464 bytes
  Session username is nobody@cisco.com
  Interface
    Remote session id is 692, remote tunnel id 58582
  UDP checksums are disabled
  SSS switching enabled
  No FS cached header information available
  Sequencing is off
  Unique ID is 8

Session id 6 is up, tunnel id 13695
```

## show vpdn session

```

Call serial number is 3355500003
Remote tunnel name is User03
  Internet address is 10.0.0.63
  Session state is established, time since change 00:04:22
    52 Packets sent, 52 received
    2080 Bytes sent, 1316 received
  Last clearing of "show vpdn" counters never
  Session MTU is 1464 bytes
  Session username is nobody@cisco.com
  Interface
    Remote session id is 693, remote tunnel id 58582
  UDP checksums are disabled
  SSS switching enabled
  No FS cached header information available
  Sequencing is off
  Unique ID is 9

```

```

Session id 3 is up, tunnel id 13695
Call serial number is 3355500000
Remote tunnel name is User03
  Internet address is 10.0.0.63
  Session state is established, time since change 2d21h
    48693 Packets sent, 48692 received
    1947720 Bytes sent, 1314568 received
  Last clearing of "show vpdn" counters never
  Session MTU is 1464 bytes
  Session username is nobody2@cisco.com
  Interface
    Remote session id is 690, remote tunnel id 58582
  UDP checksums are disabled
  SSS switching enabled
  No FS cached header information available
  Sequencing is off
  Unique ID is 3

```

```

Session id 4 is up, tunnel id 13695
Call serial number is 3355500001
Remote tunnel name is User03
  Internet address is 10.0.0.63
  Session state is established, time since change 00:08:40
    109 Packets sent, 3 received
    1756 Bytes sent, 54 received
  Last clearing of "show vpdn" counters never
  Session MTU is 1464 bytes
  Session username is nobody@cisco.com
  Interface Se0/0
    Remote session id is 691, remote tunnel id 58582
  UDP checksums are disabled
  IDB switching enabled
  FS cached header information:
    encap size = 36 bytes
    4500001C BDDC0000 FF11E977 0A00003E
    0A00003F 06A506A5 00080000 0202E4D6
    02B30000
  Sequencing is off
  Unique ID is 4

```

```

L2F Session Information Total tunnels 1 sessions 2
MID: 2
User: nobody@cisco.com
Interface:
State: open
Packets out: 53
Bytes out: 2264

```

```
Packets in: 51
Bytes in: 1274
Unique ID: 10
```

```
Last clearing of "show vpdn" counters never
MID: 3
User: nobody@cisco.com
Interface:
State: open
Packets out: 53
Bytes out: 2264
Packets in: 51
Bytes in: 1274
Unique ID: 11
```

```
Last clearing of "show vpdn" counters never
```

```
%No active PPTP tunnels
```

```
PPPoE Session Information Total tunnels 1 sessions 7
```

```
PPPoE Session Information
SID      Pkts-In      Pkts-Out      Bytes-In      Bytes-Out
1        48696        48696         681765       1314657
2         71           73            1019         1043
3         71           73            1019         1043
4         61           62            879          1567
5         61           62            879          1567
6         55           55            791          1363
7         55           55            795          1363
```

The significant fields shown in the **show vpdn session all** command display are similar to those defined in [Table 134](#) and [Table 135](#).

## Related Commands

Command	Description
<b>show sss session</b>	Displays Subscriber Service Switch session status.
<b>show vpdn</b>	Displays basic information about all active VPDN tunnels.
<b>show vpdn domain</b>	Shows all VPDN domains and DNIS groups configured on the NAS.
<b>show vpdn group</b>	Shows a summary of the relationships among VPDN groups and customer/VPDN profiles, or summarizes the configuration of a VPDN group including DNIS/domain, load sharing information and current session information.
<b>show vpdn history failure</b>	Shows the content of the failure history table.
<b>show vpdn multilink</b>	Shows the multilink sessions authorized for all VPDN groups.
<b>show vpdn redirect</b>	Displays statistics for L2TP redirects and forwards.
<b>show vpdn tunnel</b>	Displays information about active Layer 2 tunnels for a VPDN.

# show vpdn tunnel

To display information about active Layer 2 tunnels for a virtual private dialup network (VPDN), use the **show vpdn** command in privileged EXEC mode.

```
show vpdn tunnel [all filter] | packets filter | state filter | summary filter | transport filter]
```

## Syntax Description

<b>all</b>	(Optional) Displays summary information about all active tunnels.
<i>filter</i>	(Optional) One of the filter parameters defined in <a href="#">Table 132</a> .
<b>packets</b>	(Optional) Displays packet numbers and packet byte information.
<b>state</b>	(Optional) Displays state information for a tunnel.
<b>summary</b>	(Optional) Displays a summary of tunnel information.
<b>transport</b>	(Optional) Displays tunnel transport information.

## Command Modes

Privileged EXEC

## Command History

Release	Modification
11.2	This command was introduced.
12.1(1)T	Support was added for the <b>packet</b> and <b>all</b> keywords.

## Usage Guidelines

Use the **show vpdn tunnel** command to display detailed information about L2TP, L2F, and PPTP VPDN tunnels.

[Table 132](#) defines the filter parameters available to refine the output of the **show vpdn tunnel** command. You may use any one of the filter parameters in place of the *filter* argument.

**Table 136 Filter Parameters for the show vpdn tunnel Command**

Syntax	Description
<b>id</b> <i>local-id</i>	Filters the output to display only information for the tunnel with the specified local ID. <ul style="list-style-type: none"> <li><i>local-id</i>—The local tunnel ID number. Valid values range from 1 to 65535.</li> </ul>
<b>local-name</b> <i>local-name</i> <i>remote-name</i>	Filters the output to display only information for the tunnel associated with the specified names. <ul style="list-style-type: none"> <li><i>local-name</i>—The local tunnel name.</li> <li><i>remote-name</i>—The remote tunnel name.</li> </ul>
<b>remote-name</b> <i>remote-name</i> <i>local-name</i>	Filters the output to display only information for the tunnel associated with the specified names. <ul style="list-style-type: none"> <li><i>remote-name</i>—The remote tunnel name.</li> <li><i>local-name</i>—The local tunnel name.</li> </ul>

**Examples**

The following is sample output from the **show vpdn tunnel** command for L2F and L2TP sessions:

```
Router# show vpdn tunnel

L2TP Tunnel Information (Total tunnels=1 sessions=1)
LocID RemID Remote Name   State Remote Address  Port  Sessions
2      10    router1           est   172.21.9.13     1701  1

L2F Tunnel
NAS CLID HGW CLID NAS Name      HGW Name      State
9         1         nas1          HGW1          open
          172.21.9.4   172.21.9.232

%No active PPTP tunnels
```

[Table 137](#) describes the significant fields shown in the **show vpdn tunnel** command display.

**Table 137 show vpdn tunnel Field Descriptions**

Field	Description
LocID	Local tunnel identifier.
RemID	Remote tunnel identifier.
Remote Name	Hostname of the remote peer.
State	Status for the individual user in the tunnel; can be one of the following states: <ul style="list-style-type: none"> <li>est</li> <li>opening</li> <li>open</li> <li>closing</li> <li>closed</li> <li>waiting_for_tunnel</li> </ul> <p>The <code>waiting_for_tunnel</code> state means that the user connection is waiting until the main tunnel can be brought up before it moves to the opening state.</p>
Remote address	IP address of the remote peer.
Port	Port ID.
Sessions	Number of sessions using the tunnel.
NAS CLID	A number uniquely identifying the VPDN tunnel on the network access server (NAS).
HGW CLID	A number uniquely identifying the VPDN tunnel on the gateway.
NAS Name	Hostname and IP address of the NAS.
HGW Name	Hostname and IP address of the home gateway.

**Related Commands**

Command	Description
<b>show vpdn</b>	Displays basic information about all active VPDN tunnels.
<b>show vpdn domain</b>	Shows all VPDN domains and DNIS groups configured on the NAS.

<b>Command</b>	<b>Description</b>
<b>show vpdn group</b>	Shows a summary of the relationships among VPDN groups and customer/VPDN profiles, or summarizes the configuration of a VPDN group including DNIS/domain, load sharing information and current session information.
<b>show vpdn history failure</b>	Shows the content of the failure history table.
<b>show vpdn multilink</b>	Shows the multilink sessions authorized for all VPDN groups.
<b>show vpdn redirect</b>	Displays statistics for L2TP redirects and forwards.
<b>show vpdn session</b>	Displays session information about active Layer 2 sessions for a VPDN.

# show vtemplate

To display information about all configured virtual templates, use the **show vtemplate** command in privileged EXEC mode.

## show vtemplate

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

**Command Modes** Privileged EXEC

Command History	Release	Modification
	12.0(7)DC	This command was introduced on the Cisco 6400 NRP.
	12.2(13)T	This command was integrated into Cisco IOS Release 12.2(13)T.

**Examples** The following is sample output from the **show vtemplate** command:

```
Router# show vtemplate
```

```
Virtual access subinterface creation is globally enabled
```

	Active Interface	Active Subinterface	Subint Capable	Pre-clone Available	Pre-clone Limit	Interface Type
Vt1	0	0	Yes	--	--	Serial
Vt2	0	0	Yes	--	--	Serial
Vt4	0	0	Yes	--	--	Serial
Vt21	0	0	No	--	--	Tunnel
Vt22	0	0	Yes	--	--	Ether
Vt23	0	0	Yes	--	--	Serial
Vt24	0	0	Yes	--	--	Serial

```
Usage Summary
```

	Interface	Subinterface
Current Serial in use	1	0
Current Serial free	0	3
Current Ether in use	0	0
Current Ether free	0	0
Current Tunnel in use	0	0
Current Tunnel free	0	0
Total	1	3
Cumulative created	8	4
Cumulative freed	0	4

```
Base virtual access interfaces: 1
Total create or clone requests: 0
Current request queue size: 0
Current free pending: 0
```

```
Maximum request duration: 0 msec
```

```

Average request duration: 0 msec
Last request duration: 0 msec

Maximum processing duration: 0 msec
Average processing duration: 0 msec
Last processing duration: 0 msec
Last processing duration:0 msec

```

Table 138 describes the significant fields shown in the example.

**Table 138** *show vtemplate Field Descriptions*

Field	Description
Virtual access subinterface creation is globally...	The configured setting of the <b>virtual-template</b> command. Virtual access subinterface creation may be enabled or disabled.
Active Interface	The number of virtual access interfaces that are cloned from the specified virtual template.
Active Subinterface	The number of virtual access subinterfaces that are cloned from the specified virtual template.
Subint Capable	Specifies if the configuration of the virtual template is supported on the virtual access subinterface.
Pre-clone Available	The number of precloned virtual access interfaces currently available for use for the particular virtual template.
Pre-clone Limit	The number of precloned virtual access interfaces available for that particular virtual template.
Current in use	The number of virtual access interfaces and subinterfaces that are currently in use.
Current free	The number of virtual access interfaces and subinterfaces that are no longer in use.
Total	The total number of virtual access interfaces and subinterfaces that exist.
Cumulative created	The number of requests for a virtual access interface or subinterface that have been satisfied.
Cumulative freed	The number of times that the application using the virtual access interface or subinterface has been freed.
Base virtual-access interfaces	This field specifies the number of base virtual access interfaces. The base virtual access interface is used to create virtual access subinterfaces. There is one base virtual access interface per application that supports subinterfaces. A base virtual access interface can be identified from the output of the <b>show interfaces virtual-access</b> command.
Total create or clone requests	The number of requests that have been made through the asynchronous request API of the virtual template manager.
Current request queue size	The number of items in the virtual template manager work queue.
Current free pending	The number of virtual access interfaces whose final freeing is pending. These virtual access interfaces cannot currently be freed because they are still in use.

**Table 138** *show vtemplate Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Maximum request duration	The maximum time that it took from the time that the asynchronous request was made until the application was notified that the request was done.
Average request duration	The average time that it took from the time that the asynchronous request was made until the application was notified that the request was done.
Last request duration	The time that it took from the time that the asynchronous request was made until the application was notified that the request was done for the most recent request.
Maximum processing duration	The maximum time that the virtual template manager spent satisfying the request.
Average processing duration	The average time that the virtual template manager spent satisfying the request.
Last processing duration	The time that the virtual template manager spent satisfying the request for the most recent request.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>clear counters</b>	Clears interface counters.
<b>show interfaces virtual-access</b>	Displays status, traffic data, and configuration information about a specified virtual access interface.
<b>virtual-template</b>	Specifies which virtual template will be used to clone virtual access interfaces.