

# show nbf cache

To display NetBIOS name cache contents, use the **show nbf cache** command in EXEC mode.

**show nbf cache**

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

**Command Modes** EXEC

**Command History**

Release	Modification
11.1	This command was introduced.

**Examples** The following is an example of output from the **show nbf cache** command:

```
router> show nbf cache

HW Addr          Name          How    Idle  NetBIOS Packet Savings
1000.5a89.449a   IKBA          E0     6     0
0000.0000.0000   NANOO        async1 21    0
```

Table 95 describes significant fields shown in the display.

**Table 95** show nbf cache Field Descriptions

Field	Description
HW Addr	MAC address mapped to the NetBIOS name in this entry.
Name	NetBIOS name mapped to the MAC address in this entry.
How	Interface through which this information was learned.
Idle	Period of time (in seconds) since this entry was last accessed. A hyphen in this column indicates a static entry in the NetBIOS name cache.
NetBIOS Packet Savings	Number of packets to which local replies were made (thus preventing transmission of these packets over the network).

Related Commands	Command	Description
	<b>netbios access-list</b>	Defines an IPX NetBIOS FindName access list filter.
	<b>netbios input-access-filter host</b>	Defines a station access list filter on incoming messages. The access lists of station names are defined in netbios access-list host commands.
	<b>netbios name-cache</b>	Defines a static NetBIOS name cache entry, tying the server with the name netbios-name to the mac-address, and specifying that the server is accessible either locally through the interface-name specified, or remotely through the ring-group group-number specified.

<b>Command</b>	<b>Description</b>
<b>multilink-group</b>	Enables the NBF on an interface.
<b>netbios output-access-filter host</b>	Defines a station access list filter on outgoing messages.
<b>show nbf sessions</b>	Displays NetBEUI connection information.

# show nbf sessions

To view NetBEUI connection information, use the **show nbf sessions** command in EXEC mode.

**show nbf sessions**

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

**Command Modes** EXEC

Command History	Release	Modification
	11.1	This command was introduced.

**Examples** The following is an example of output from the **show nbf sessions** command:

```
router> show nbf sessions

Async6 NetBIOS Session Table:
Srcnum  Destnum  Dest-Interface  DestMAC
8        6         Ethernet0 00aa.005b.c17b

NetBIOS Global Session Table:
Srcnum  Destnum  Dest-Interface  DestMAC  Src-Interface  SrcMac(I)

6        8         Async7 0000.0000.0000  Ethernet0 00aa.005b.c17b(95)
ADD_[GROUP]NAME_QUERY queue size=0
STATUS_QUERY queue size=0
STATUS_RESPONSE queue size=0
NAME_QUERY queue size=0
NAME_RECOGNIZED queue size=0
SESSION_INITIALIZE queue size=0
SESSION_INITIALIZE (pending) queue size=0
```

Table 96 describes significant fields shown in the display.

**Table 96** *show nbf sessions* Field Descriptions

Field	Description
<b>Interface NetBIOS Session Table:</b>	Summarizes Async/ISDN interface NetBIOS connection information.
Srcnum, Destnum	Source and destination connection numbers.
Dest-Interface, DestMAC	Destination interface and MAC address.
<b>Global NetBIOS Session Table:</b>	Summarizes LAN NetBIOS connection information.
Dest-Interface DestMAC	Destination interface (Async7 in this case) and MAC address (0000.0000.0000 in this case).

**Table 96** show nbf sessions Field Descriptions (continued)

Field	Description
Src-Interface SrcMac	Source interface (Ethernet0 in this case) and MAC address (00aa.005b.c17b(95) in this case).
<b>NetBIOS Datagram Queue Summary:</b>	Summarizes NetBIOS pending datagram queues.
ADD_[GROUP]NAME_QUERY	Add Group Name Query packets.
STATUS_QUERY	Status Query packets.
STATUS_RESPONSE	Status Response packets.
NAME_QUERY	Name Query packets.
NAME_RECOGNIZED	Name Recognized packets.
SESSION_INITIALIZE (pending)	NetBIOS session Initialize packets.

**Related Commands**

Command	Description
<b>netbios access-list</b>	Defines an IPX NetBIOS FindName access list filter.
<b>netbios input-access-filter</b>	Controls incoming IPX NetBIOS FindName messages.
<b>netbios output-access-filter</b>	Controls outgoing NetBIOS FindName messages.
<b>netbios name-cache</b>	Defines a static NetBIOS name cache entry, tying the server with the name netbios-name to the mac-address, and specifying that the server is accessible either locally through the interface-name specified, or remotely through the ring-group group-number specified.
<b>multilink-group</b>	Enables the NBF on an interface.
<b>show nbf cache</b>	Displays NetBIOS name cache contents.

# show node

To display information about LAT nodes, use the **show node** command in EXEC mode. The **show node** command with no further parameters shows a one-line summary of all known nodes. The **show node** command displays three different sets of information about a node: the node counters, the node status, or a one-line summary of the node status.

```
show node [all | node-name] [counters | status | summary]
```

Syntax Description	
<b>all</b>	(Optional) Specifies all nodes.
<i>node-name</i>	(Optional) Indicates the name of the node for which status is required.
<b>counters</b>	(Optional) Specifies the various node counters.
<b>status</b>	(Optional) Specifies detailed node status. This is the default if a node name is specified.
<b>summary</b>	(Optional) Specifies a status summary for the node. This is the default if no node name is specified.

Command Modes	
EXEC	

Command History	Release	Modification
	10.0	This command was introduced.

**Usage Guidelines**

Entering the **show node** command with no arguments is the same as entering **show node all summary**. You can enter the **show node** command with either a specific node name or the **all** keyword, but not both.

You can enter the **show node** command with only one of the **counters**, **status**, or **summary** keywords. If you enter **show node** and two of these keywords without specifying a node name, the first keyword is treated as a node name, causing an error. If you enter **show node node-name** and two of these keywords, the second keyword will be treated as ambiguous.

The **show node** command with a *node-name* argument but no **counters**, **status**, or **summary** keyword defaults to **show node node-name status**.

## Examples

### Examples with No Keywords

The following is an example of output from the **show node** command with no further keywords (the same as **show node all summary**):

```
router> show node
```

```
Node Name      Status      Identification
CHAOS          Reachable
MUDDY-RIVER    Reachable
TARMAC         Reachable
WHEEL          Reachable   Welcome to VAX/VMS V5.4-2
```

Table 97 describes significant fields shown in the display.

**Table 97** *show node Field Descriptions*

Field	Description
Node Name	Lists the names of the nodes.
Status	Indicates whether the node is reachable or not.
Identification	Identification string for the node.

#### Examples with a Node Name

The following is an example of output from the **show node** output that defaults to **show node chaos status**. It results in a display of the detailed status of node chaos.

```
router> show node chaos

Node: CHAOS      Address: 00-00-0C-01-05-09
LAT Protocol: V5.1  Data Link Frame Size: 1500
Identification:
Node Groups: 0
Service Name  Status      Rating  Identification
CHAOS        Available  80
```

Table 98 describes significant fields shown in the display.

**Table 98** *show node status Field Descriptions*

Field	Description
Node	Lists the node name as reported by the host computer.
Address	Identifies the MAC address of the node's Ethernet interface.
LAT protocol	Lists the version of the LAT protocol used by the node.
Data Link Frame Size	Lists the size of the largest packet that can be sent to the LAT host.
Identification	Lists the identification string for the node.
Node Groups	Lists the group code list that is advertised by the remote node, which comes from the remote node's service advertisement.
Service Name	Lists the LAT service name.
Status	Indicates whether the node is currently available on the network.
Rating	Indicates the rating of the service: An integer from 0 to 255, with the highest number being the preferred service. Used for load balancing.

### Examples with the Counters Keyword

The following example shows output for the counter information for a specific node:

```
router> show node tarmac counters

Node: tarmac
Seconds Since Zeroed: 100 Multiple Node Addresses: 0
Messages Received: 0 Duplicates Received: 0
Messages Transmitted: 0 Messages Re-transmitted: 0
Slots Received: 0 Illegal Messages Received: 0
Slots Transmitted: 0 Illegal Slots Received: 0
Bytes Received: 0 Solicitations Accepted: 0
Bytes Transmitted: 0 Solicitations Rejected: 0
```

### Additional Examples

In the following example, the **status** keyword is treated as the node name:

```
router> show node status counters

Local -710- Node STATUS not known
```

In the following example, the second keyword **counters** is treated as ambiguous:

```
router> show node lager status counters

Local -702- Keyword "COUNTERS" not known or ambiguous
```

# show ppp bap

To display the configuration settings and run-time status for a multilink bundle, use the **show ppp bap** command in privileged EXEC mode.

```
show ppp bap {group [name] | queues}
```

Syntax Description	group [name]	Displays information about all or, optionally, a specific BACP bundle group.
	queues	Displays information about the BACP queues.

**Command Modes** Privileged EXEC

Command History	Release	Modification
	11.3	This command was introduced.

## Examples

The following is an example of output from the **show ppp bap group** command for the bundle group named bap-peer:

```
Group bap-peer (multilink), id 35, peer has precedence, state Idle
Master interface: Dialer1
Outgoing requests: Call, Link Drop
Incoming requests: Call, Callback, Link Drop
Original number dialed 5773926
Transmit queue size threshold is not set
Peer link addition dependent upon load
Timers (secs): Call not set, Callback not set, Link Drop not set,
               Response 30, Pending 20
Retries: Request 3, Dial 1, Indication no limit
Link removal after 3 link drop retries not set
```

Table 99 describes the significant fields in this display.

**Table 99** show ppp bap Field Descriptions

Field	Description
Group bap-peer (multilink), id 35	Group name and internally assigned ID. “(multilink)” indicates the governing protocol.
peer has precedence	In BACP negotiations called “race condition scenarios” in the BACP specification, this peer is deemed to have precedence over the remote peer.
state Idle	Internal state.
Outgoing requests	Current requests configured for outbound negotiation.
Incoming requests	Current requests allowed inbound negotiation.
Peer link addition dependent upon load	Router is monitoring the load and subjecting requests to the load settings.

**Table 99** *show ppp bap Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Timers (secs): Call not set, Callback not set, Link Drop not set, Response 30, Pending 20	Settings for specified timers.
Retries: Request 3, Dial 1, Indication no limit	Limits set on specified types of retransmissions.
Link removal after 3 link drop retries not set	The link will not be removed after no response to the link removal request because default behavior was not changed and the relevant link drop parameter was not set.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>show ppp multilink</b>	Displays bundle information for the MLP bundles.

# show ppp multilink

To display bundle information for the Multilink PPP bundles, use the **show ppp multilink** command in EXEC mode.

**show ppp multilink**

**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 the output when no bundles are on a system:

```
Router# show ppp multilink

No active bundles
```

The following is the output when a single Multilink PPP bundle (named rudder) is on a system:

```
Router# show ppp multilink

Bundle rudder, 3 members, first link is BRI0: B-channel 1
0 lost fragments, 8 reordered, 0 unassigned, sequence 0x1E/0x1E rcvd/sent
```

The following is the output when two active bundles are on a system. Subsequent bundles would be displayed below the previous bundle.

```
Router# show ppp multilink

Bundle rudder, 3 members, first link is BRI0: B-Channel 1
  0 lost fragments, 8 reordered, 0 unassigned, sequence 0x1E/0x1E rcvd/sent
Bundle dallas, 4 members, first link is BRI2: B-Channel 1
  0 lost fragments, 28 reordered, 0 unassigned, sequence 0x12E/0x12E rcvd/sent
```

The following example shows output when a stack group has been created. On stack group member systema, Multilink PPP bundle hansolo has bundle interface Virtual-Access4. Two child interfaces are joined to this bundle interface. The first is a local PRI channel (serial 0:4), and the second is an interface from stack group member systemb.

```
systema# show ppp multilink

Bundle hansolo 2 members, Master link is Virtual-Access4
0 lost fragments, 0 reordered, 0 unassigned, 100/255 load
0 discarded, 0 lost received, sequence 40/66 rcvd/sent
members 2
Serial0:4
systemb:Virtual-Access6 (1.1.1.1)
```

The following is an example of output when the PPP BACP is enabled for the multilink bundle:

```

systema# show ppp multilink

Bundle bap-peer, 1 member, Master link is Virtual-Access1
Bundle under BAP control
Dialer Interface is Dialer1
    0 lost fragments, 0 reordered, 0 unassigned, sequence 0x0/0x0 rcvd/sent
    0 discarded, 0 lost received, 1/255 load

Member links: 1
BRI0:1

Discriminators Local Remote
BRI0:1          24      1

```

Table 100 describes significant fields when PPP BACP is enabled.

**Table 100** *show ppp multilink Field Descriptions*

Field	Description
Bundle	Configured name of the multilink bundle.
1 member	Number of interfaces in the group.
Master link is Virtual-Access1	Multilink bundle virtual interface.
Bundle under BAP control	Multilink bundle is controlled and bandwidth is allocated by BACP.
Dialer Interface is Dialer1	Name of the interface that dials the calls.
1/255 load	Load on the link in the range 1/255 to 255/255. (255/255 is a 100% load.)
Member links: 1	Number of child interfaces.
BRI0:1	Identity of the child interface. Link 1 is using physical interface BRI 0:1.
Discriminators Local Remote BRI0:1          24      1	LCP link discriminators, which are identifiers negotiated for each link in the bundle. This information is specific to BACP. BACP uses these discriminators to determine which link to drop during negotiations.

# show queuing virtual-access

To display information about interleaving, use the **show queuing virtual-access** command in EXEC mode.

**show queuing virtual-access** *number*

Syntax Description	<i>number</i>
	Virtual access interface number.

Command Modes	EXEC
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Command History	Release	Modification
	11.3	This command was introduced.

## Examples

The following is an example of output from the **show queuing virtual-access** command:

```
Router# show queuing virtual-access 1

  Input queue: 0/75/0 (size/max/drops); Total output drops: 164974
  Queueing strategy: weighted fair
  Output queue: 315/64/164974/31191 (size/threshold/drops/interleaves)
    Conversations 5/8 (active/max active)
    Reserved Conversations 2/2 (allocated/max allocated)

  (depth/weight/discards/interleaves) 64/4096/38669/0
  Conversation 36, linktype: ip, length: 52
  source: 140.3.3.201, destination: 225.1.2.3, id: 0x0001, ttl: 254,
  TOS: 0 prot: 17, source port 6789, destination port 2345

  (depth/weight/discards/interleaves) 64/4096/0/0
  Conversation 2, linktype: ip, length: 52
  source: 140.3.3.201, destination: 225.1.2.4, id: 0x0001, ttl: 254,
  TOS: 0 prot: 17, source port 5432, destination port 9870
```

Table 101 describes significant fields in the **show queuing virtual-access** command output.

**Table 101** *show queuing virtual-access* Field Descriptions

Field	Description
Input queue: size, max, drops	Input queue used for virtual access interface 1, with the current size, the maximum size, and the number of dropped packets.
Total output drops	Number of output packets dropped.
Output queue: size/threshold/drops/interleaves	Output queue counters. Maximum number of packets allowed in the queue, number in the queue, the number of packets dropped due to a full queue, and the number of real-time packets interleaved among fragments of larger packets.

**Table 101** *show queuing virtual-access Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Conversations (active/max active)	Fair queue conversation statistics: number of conversations currently active and the maximum that have been active.
Reserved conversations (allocated, max allocated)	Reserved conversations in the weighted fair queue. (current/maximum number allocated). Reserved conversations get the highest priority.
(depth/weight/discards/interleaves) 64/4096/38669/0	Depth of the queue, weight assigned to each packet in the queue, number of packets discarded in the queue so far, and the number of interleaves.
Conversation 36, linktype: ip, length: 52	Conversation identifier, protocol used on the link (IP), and the number of bytes.
source: 140.3.3.201, destination: 225.1.2.3,	Source IP address and destination IP address.
id: 0x0001	Protocol ID, identifying IP.
ttl: 254	Time to live, in seconds.
TOS: 0	Type of service.
prot: 17	Protocol field in IP. The value 17 indicates UDP.
source port 5432	Source TCP/UDP port.
destination port 9870	Destination TCP/UDP port.

# show resource-pool call

To display all active call information for all customer profiles and resource groups, use the **show resource-pool call** command in user and privileged EXEC mode.

**show resource-pool call**

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

**Defaults** If no calls are up, there is no output. Enter the command to see valid information for all current calls.

**Command Modes** User and privileged EXEC

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

**Usage Guidelines** Use the **show resource-pool call EXEC** command to see all active call information for all customer profiles and resource groups. Use this command to see output when one call is up.

**Examples** The following example shows output for the **show resource-pool call** command:

```
Router# show resource-pool call
Shelf 0, slot 0, port 0, channel 2, state RM_RPM_RES_ALLOCATED
  Customer profile cpl, resource group isdn1
  DNIS number 71017
```

Table 102 shows the significant display fields.

**Table 102** *show resource-pool call Field Descriptions*

Field	Description
Shelf	The shelf number where the call is being handled.
Slot	The slot number where the call is being handled.
Port	The port number where the call is being handled.
Channel	The channel number where the call is being handled.
State	The state of the call.
Customer profile	The customer profile name (alphanumeric).
Resource group	The name of the resource group being used for the call.
DNIS number	The DNIS number for the call.

# show resource-pool customer

To display the contents of one or more customer profiles, use the **show resource-pool customer** command in user and privileged EXEC mode.

**show resource-pool customer** [*name*]

<b>Syntax Description</b>	<i>name</i>	(Optional) Specifies the name of a specific customer profile. The name can have up to 23 characters.
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<b>Command Modes</b>	User and privileged EXEC
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.0(4)XI	This command was introduced.

<b>Usage Guidelines</b>	Use the <b>show resource-pool customer</b> EXEC command to see the contents of one or more customer profiles.
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<b>Examples</b>	<pre>Router# show resource-pool customer customer1_isp  5 active connections  3 calls accepted  8 max number of simultaneous connections  0 calls rejected due to profile limits  0 calls rejected due to resource unavailable  0 overflow connections  0 overflow states entered  0 minutes spent in overflow  28 minutes since last clear command</pre>
-----------------	---

Table 103 shows the significant display fields.

**Table 103** show resource-pool customer Field Descriptions

Field	Description
Active connections	Lists the number of active connections in the specified customer profile.
Calls accepted	Cumulative number of calls accepted since the last <b>clear</b> command in the customer profile—regardless of the call type.
Max number of simultaneous connections	Maximum number of simultaneous connections assigned for this customer profile.
Calls rejected due to profile limits	Cumulative number of calls rejected since the last <b>clear</b> command because the maximum number of allowable simultaneous connections was exceeded. You can configure each customer profile to not exceed a simultaneous call limit. This feature stops a single customer profile from consuming all the system resources.
Calls rejected due to resource unavailable	Cumulative number of calls rejected since the last <b>clear</b> command because no system resources were available to accept the call (such as a free modem for an analog call or an HDLC framer for a circuit switched data call).
Overflow connections	Number of overflow connections active since the last <b>clear</b> command.
Overflow states entered	Number of overflow states processed since the last <b>clear</b> command.
Minutes spent in overflow	Number of minutes that the overflow session has been in process since the last <b>clear</b> command.
Minutes since last clear command	Number of minutes since the <b>clear</b> command has been used.
List of Customer Profiles	Lists the customer profiles set up on the access server.

# show resource-pool discriminator

To see how many times an incoming call has been rejected due to a specific Dialed Number identification Service (DNIS)/call-type combination, use the **show resource-pool discriminator** command in user and privileged EXEC mode.

```
show resource-pool discriminator [name]
```

<b>Syntax Description</b>	<i>name</i> (Optional) Specifies the name of the specific DNIS/call-type that will be rejected. The name can have up to 23 characters.				
<b>Defaults</b>	None. You must configure a call discriminator for it to work or appear.				
<b>Command Modes</b>	User and privileged EXEC				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>12.0(4)XI</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	12.0(4)XI	This command was introduced.
Release	Modification				
12.0(4)XI	This command was introduced.				
<b>Usage Guidelines</b>	Use the <b>show resource-pool discriminator</b> EXEC command to see how many times an incoming call has been rejected due to a specific DNIS/call-type combination.				

## Examples

### Example 1

```
Router# show resource-pool discriminator
List of Call Discriminator Profiles:
  cd1
  cd2
  cd3
  cd4
Router# show resource-pool discriminator cd1
  0 calls rejected
```

Table 104 shows the significant field displays.

**Table 104** *show resource-pool discriminator* Command Field Descriptions

Field	Description
List of Call Discriminator Profiles	A list of the Call Discriminator Profile names currently assigned.
Calls rejected	Number of calls rejected since the last <b>clear</b> command was used, (This is cumulative.)

# show resource-pool resource

To see the resource groups configured in the network access server, use the **show resource-pool resource** command in user and privileged EXEC mode.

**show resource-pool resource** [*name*]

## Syntax Description

<i>name</i>	(Optional) Displays the contents of a specifically named resource group, which was set up by using the <b>resource-pool group resource</b> <i>name</i> command. The name can have up to 23 characters.
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## Command Modes

User and privileged EXEC

## Command History

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

## Usage Guidelines

Use the **show resource-pool resource** EXEC command to see the resource groups configured in the network access server. To see the contents of a specific resource group, use the **show resource-pool resource** *name* command.

## Examples

The following example shows the output for the **show resource-pool resource** EXEC command:

```
Router# show resource-pool resource
List of Resources:
  modem1
  rg1
  hi

Router# show resource-pool resource modem-group-1
  2 resources in the resource group
  0 resources currently active
  0 calls accepted in the resource group
  0 calls rejected due to resource unavailable
  0 calls rejected due to resource allocation errors
```

Table 105 shows the significant display fields.

**Table 105** *show resource-pool resource name* Field Descriptions

Field	Description
Resources in the resource group	Number of resources allocated to this pool. For example, you can limit a range of modems to five. You can limit a range of circuit-switched data calls to 50.
Resources currently active	Number of resources that are currently used in the resource group.
Calls accepted in the resource group	Number of calls accepted in the resource group (This is cumulative).

**Table 105** *show resource-pool resource name Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Calls rejected due to resource unavailable	Number of calls rejected because a resource was not available (This is cumulative).
Calls rejected due to resource allocation errors	Number of times the access server had an available resource, but the resource had an error when the access server tried to allocate it (for example, a bad modem). Therefore, the call was rejected. (This is cumulative.)

# show resource-pool vpdn

To see the contents of a specific virtual private dial-up network (VPDN) group or specific VPDN profile, use the **show resource-pool vpdn** command in user and privileged EXEC mode.

```
show resource-pool vpdn {group | profile} [name]
```

Syntax Description	group	Displays all the VPDN groups configured inside the network access server.
	profile	Displays all the VPDN profiles configured inside the network access server.
	name	(Optional) Specifies the name of a specific VPDN group or profile.

**Command Modes** User and privileged EXEC

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

**Usage Guidelines** Use the **show resource-pool vpdn** EXEC command to see the contents of a specific VPDN group or specific VPDN profile.

**Examples** Use the **show resource-pool vpdn group name** command to see the contents of a specific VPDN group. This example contains one domain name, one DNIS group, and one end point:

## Example 1

```
Router# show resource-pool vpdn group customer2-vpdng
VPDN Group customer2-vpdng found under Customer Profiles: customer2
```

```
Tunnel (LTP)
-----
dnis:customer2-calledg
hp.com
```

```
Endpoint          Session Limit Priority Active Sessions Status Reserved Sessions
-----
172.21.9.97      *              1           0              OK
-----
Total            *              0           0              0
```

**Example 2**

```
Router# show resource-pool vpdn group
List of VPDN Groups under Customer Profiles
Customer Profile user1: big
Customer Profile user2: green
List of VPDN Groups under VPDN Profiles
VPDN Profile lggate: vpdnlgate
VPDN Profile yellow: hi
```

Table 106 shows the significant field displays.

**Table 106** *show resource-pool vpdn group Field Descriptions*

Field	Description
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.
*	No limit is set.
List of VPDN Groups under Customer Profiles	A list of VPDN groups that are assigned to customer profiles. The customer profile name is listed first, followed by the name of the VPDN group assigned to it.
List of VPDN Groups under VPDN Profiles	A list of VPDN groups that are assigned to customer profiles. The VPDN profile name is listed first, followed by the VPDN group assigned to it.

**Example 3**

```
Router# show resource-pool vpdn profile
% List of VPDN Profiles:
  lg-hmgate
  lggate
  yellow
```

**Example 4**

```
Router# show resource-pool vpdn profile lggate
  0 active connections
  0 max number of simultaneous connections
  0 calls rejected due to profile limits
  0 calls rejected due to resource unavailable
  0 overflow connections
  0 overflow states entered
  0 overflow connections rejected
  3003 minutes since last clear command
```

Table 107 shows the significant field descriptions.

**Table 107** *show resource-pool vpdn profile Field Descriptions*

<b>Field</b>	<b>Description</b>
List of VPDN Profiles	A list of the VPDN profiles that have been assigned.
Active connections	Number of active VPDN connections counted by the VPDN profile.
Max number of simultaneous connections	Maximum number of VPDN simultaneous connections counted by the VPDN profile. This value helps you determine how many VPDN sessions to subscribe to a specific profile.
Calls rejected due to profile limits	Number of calls rejected since the last clear command because the profile limit has been exceeded.
Calls rejected due to resource unavailable	Number of calls rejected since the last clear command because the assigned resource was unavailable.
Overflow connections	Number of overflow connections used since the last <b>clear</b> command.
Overflow states entered	Number of overflow states entered since the last <b>clear</b> command.
Overflow connections rejected	Number of overflow connections rejected since the last <b>clear</b> command.
Minutes since last clear command	Number of minutes elapsed since the last <b>clear</b> command was used.

# show rlm group statistics

To display the network latency of the Redundant Link manager (RLM) group, use the **show rlm group statistics** command in privileged EXEC mode.

**show rlm group *group-number* statistics**

<b>Syntax Description</b>	<i>group-number</i>	RLM group number (0 to 255).
<b>Command Modes</b>	Privileged EXEC	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	11.3(7)	This command was introduced.

## Examples

The following is a sample output from the **show rlm group *group-number* statistics** command.

```
Router# show rlm group 1 statistics
RLM Group 1 Statistics
Link_up:
  last time occurred at 02:45:48.724, total transition=1
  avg=00:00:00.000, max=00:00:00.000, min=00:00:00.000, latest=00:00:00.000
Link_down:
  last time occurred at 02:42:33.724, total transition=1
  avg=00:03:15.000, max=00:03:15.000, min=00:00:00.000, latest=00:03:15.000
Link_recovered:
  last time occurred at 00:00:00.000, success=0(0%), failure=0
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
Link_switched:
  last time occurred at 00:00:00.000, success=0(0%), failure=0
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
Server_changed:
  last time occurred at 00:00:00.000 for totally 0 times
Server Link Group[r1-server]:
Open the link [10.1.1.1(Loopback1), 10.1.4.1]:
  last time occurred at 02:43:03.724, success=1(100%), failure=0
  avg=162.000s, max=162.000s, min=0.000s, latest=162.000s
Echo over link [10.1.1.1(Loopback1), 10.1.4.1]:
  last time occurred at 02:47:15.724, success=91(62%), failure=54
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
Open the link [10.1.1.2(Loopback2), 10.1.4.2]:
  last time occurred at 02:43:03.724, success=1(100%), failure=0
  avg=162.000s, max=162.000s, min=0.000s, latest=162.000s
Echo over link [10.1.1.2(Loopback2), 10.1.4.2]:
  last time occurred at 02:47:19.724, success=95(63%), failure=54
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s

Server Link Group[r2-server]:
Open the link [10.1.1.1(Loopback1), 10.1.5.1]:
  last time occurred at 02:46:06.724, success=0(0%), failure=1
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
Echo over link [10.1.1.1(Loopback1), 10.1.5.1]:
  last time occurred at 02:47:18.724, success=0(0%), failure=85
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
```

## show rlm group statistics

```

Open the link [10.1.1.2(Loopback2), 10.1.5.2]:
  last time occurred at 02:46:06.724, success=0(0%), failure=1
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s
Echo over link [10.1.1.2(Loopback2), 10.1.5.2]:
  last time occurred at 02:47:18.724, success=0(0%), failure=85
  avg=0.000s, max=0.000s, min=0.000s, latest=0.000s

```

Router#

Table 108 described the fields seen in this display.

**Table 108** *show rlm group statistics Field Descriptions*

Field	Description
Link_up	Statistics collected when RLM group is in link up state.
total transition	Total number of transitions into a particular RLM group state.
avg	How long the average time interval lasts.
max	How long the maximum time interval lasts.
min	How long the minimum time interval lasts.
latest	How long the most recent time interval lasts.
Link_down	Statistics collected when RLM group is in the link down state.
Link_recovered	Statistics collected when RLM group is in the link recovery state.
Link_switched	Statistics collected when RLM group is in the link switching state.
Server_changed	Statistics collected for when and how many times RLM server failover happens.
Server Link Group[r1-server]	Statistics collected for those signaling links defined under a particular server link group, for example, r1-server.
Open the link	Statistics collected when a particular signaling link connection is open (broken).
Echo over link	Statistics collected when a particular signaling link connection is established.

### Related Commands

Command	Description
<b>clear rlm group</b>	Clears all RLM group time stamps to zero.
<b>clear interface</b>	Resets the hardware logic on an interface.
<b>interface</b>	Defines the IP addresses of the server, configures an interface type, and enters interface configuration mode.
<b>link (RLM)</b>	Specifies the link preference.
<b>protocol rlm port</b>	Reconfigures the port number for the basic RLM connection for the whole rlm-group.
<b>retry keepalive</b>	Allows consecutive keepalive failures a certain amount of time before the link is declared down.
<b>server (RLM)</b>	Defines the IP addresses of the server.
<b>show rlm group status</b>	Displays the status of the RLM group.
<b>show rlm group timer</b>	Displays the current RLM group timer values.
<b>shutdown (RLM)</b>	Shuts down all of the links under the RLM group.
<b>timer</b>	Overwrites the default setting of timeout values.

# show rlm group status

To display the status of the Redundant Link Manager (RLM) group, use the **show rlm group status** command in privileged EXEC mode.

**show rlm group *group-number* status**

<b>Syntax Description</b>	<i>group-number</i>	RLM group number (0 to 255).
<b>Command Modes</b>	Privileged EXEC	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	11.3(7)	This command was introduced.

## Examples

The following is a sample output from the **show rlm group *group-number* status** command.

```
Router# show rlm group 1 status

RLM Group 1 Status
User/Port: RLM_MGR/3000
Link State: Up          Last Link Status Reported: Up
Next tx TID: 1         Last rx TID: 0
Server Link Group[r1-server]:
  link [10.1.1.1(Loopback1), 10.1.4.1] = socket[active]
  link [10.1.1.2(Loopback2), 10.1.4.2] = socket[standby]
Server Link Group[r2-server]:
  link [10.1.1.1(Loopback1), 10.1.5.1] = socket[opening]
  link [10.1.1.2(Loopback2), 10.1.5.2] = socket[opening]
```

Table 109 described the fields seen in this display.

**Table 109** *show rlm group status* Field Descriptions

Field	Description
User/Port	A list of registered RLM users and the corresponding port numbers associated with them.
RLM_MGR	RLM management module.
Link State	The current RLM group's link state for connecting to the remote end.
Last Link Status Reported	The most recent link status change is reported to RLM users.
Next tx TID	The next transaction ID for transmission.
Last rx TID	The most recent transaction ID has been received.
Server Link Group[r1-server]	The status of all signaling links configured under a particular RLM server link group r1-server.

**Table 109** show rlm group status Field Descriptions (continued)

Field	Description
socket	The status of the individual signaling link.
Server Link Group[r2-server]	The status of all signaling links configured under a particular RLM server link group (r2-server).

**Related Commands**

Command	Description
<b>clear rlm group</b>	Clears all RLM group time stamps to zero.
<b>clear interface</b>	Resets the hardware logic on an interface.
<b>interface</b>	Defines the IP addresses of the server, configures an interface type, and enters interface configuration mode.
<b>link (RLM)</b>	Specifies the link preference.
<b>protocol rlm port</b>	Reconfigures the port number for the basic RLM connection for the whole rlm-group.
<b>retry keepalive</b>	Allows consecutive keepalive failures a certain amount of time before the link is declared down.
<b>server (RLM)</b>	Defines the IP addresses of the server.
<b>show rlm group statistics</b>	Displays the network latency of the RLM group.
<b>show rlm group timer</b>	Displays the current RLM group timer values.
<b>shutdown (RLM)</b>	Shuts down all of the links under the RLM group.
<b>timer</b>	Overwrites the default setting of timeout values.

# show rlm group timer

To display the current timer values, use the **show rlm group timer** command in privileged EXEC mode.

**show rlm group *group-number* timer**

<b>Syntax Description</b>	<i>group-number</i>	RLM group number (0 to 255).
<b>Command Modes</b>	Privileged EXEC	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	11.3(7)	This command was introduced.

## Examples

The following is a sample output from the **show rlm group *group-number* timer** command.

```
Router# show rlm group 1 timer

RLM Group 1 Timer Values
open_wait = 3s           force-down = 30s
recovery   = 12s        switch-link = 5s
minimum-up = 60s       retransmit  = 1s
keepalive  = 1s
```

Table 110 describes the fields seen in this display.

**Table 110** show rlm group Field Descriptions

Field	Description
open_wait	Wait for the connection request to be acknowledged.
recovery	Time to allow the link to recover to backup link before declaring the link is down.
minimum-up	Minimum time to force RLM to stay in the down state to make sure the remote end detects the link state is down.
keepalive	A keepalive packet will be sent out from network access server to CSC periodically.
force-down	Minimum time to force RLM to stay in down state to make sure the remote end detects the link state is down
switch-link	The maximum transition period allows RLM to switch from a lower preference link to a higher preference link. If the switching link does not complete successfully before this timer expires, RLM will go into the recovery state.
retransmit	Because RLM is operating under UDP, it needs to resend the control packet if the packet is not acknowledged within this retransmit interval.

Related Commands	Command	Description
	<b>clear rlm group</b>	Clears all RLM group time stamps to zero.
	<b>clear interface</b>	Resets the hardware logic on an interface.
	<b>interface</b>	Defines the IP addresses of the server, configures an interface type, and enters interface configuration mode.
	<b>link (RLM)</b>	Specifies the link preference.
	<b>protocol rlm port</b>	Reconfigures the port number for the basic RLM connection for the whole rlm-group.
	<b>retry keepalive</b>	Allows consecutive keepalive failures a certain amount of time before the link is declared down.
	<b>server (RLM)</b>	Defines the IP addresses of the server.
	<b>show rlm group statistics</b>	Displays the network latency of the RLM group.
	<b>show rlm group status</b>	Displays the status of the RLM group.
	<b>shutdown (RLM)</b>	Shuts down all of the links under the RLM group.
	<b>timer</b>	Overwrites the default setting of timeout values.

# show service

To display specific local-area transport (LAT) learned services, use the **show service** command in EXEC mode.

```
show service [service-name]
```

## Syntax Description

*service-name* (Optional) The name of a specific LAT service.

## Command Modes

EXEC

## Command History

Release	Modification
10.0	This command was introduced.

## Usage Guidelines

The **show service** command without a service name displays a list of known LAT learned services. When entered with the *service-name* argument, it displays a more-detailed status of the named service. If no LAT learned service by the specified name is known, then a lookup is done for an IP host of that name.

## Examples

The following is output from the **show service** command:

```
router> show service

Service Name  Status      Identification
BLUE         Available  Welcome to VAX/VMS V5.4
CHAOS        Available
MRL12        Available
MUDDY-RIVER  Available
STELLA-BLUE  Available  Welcome to VAX/VMS V5.4
```

The following is output of the **show service** command for a specific service:

```
router> show service blue

Service BLUE - Available
Node Name  Status  Rating  Identification
BLUE      reachable 84      Welcome to VAX/VMS V5.4
```

Table 111 describes significant fields shown in the two previous displays.

**Table 111** *show service* Field Descriptions

Field	Description
Service	Name of the service.
Node Name	Name of the nodes advertising the service.

**Table 111** *show service Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Status	Status of the service: Available or Unknown when command is entered without a service name. Available, Unknown, Initializing, or Unreachable when command is entered with a service name.
Rating	Rating of the service: An integer from 0 to 255, with the highest number being the preferred service. Used for load balancing.
Identification	Identification string.

# 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 an example of output from the **show sessions** command:

```
sloth# show sessions

Conn Host                Address                Byte   Idle  Conn Name
  1 MATHOM                192.31.7.21           0      0    MATHOM
* 2 CHAFF                 131.108.12.19         0      0    CHAFF
```

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

Table 112 describes significant fields shown in the display.

**Table 112** *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.

**show sessions****Related Commands**

<b>Command</b>	<b>Description</b>
<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 an example of output from the **show sgbp** command:

```
systema# show sgbp

Group Name: stack State: 0 Ref: 0xC07B060
  Member Name: systemb State: ACTIVE Id: 1
  Ref: 0xC14256F
  Address: 1.1.1.1 Tcb: 0x60B34538

  Member Name: systemc State: ACTIVE Id: 2
  Ref: 0xA24256D
  Address: 1.1.1.2 Tcb: 0x60B34439

  Member Name: systemd State: IDLE Id: 3
  Ref: 0x0
  Address: 1.1.1.3 Tcb: 0x0
```

Table 113 describes the fields in the **show sgbp** command output display.

**Table 113** *show sgbp* Field Description

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:

```
systema# show sgbp queries

Seed bid: default, 50

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

Table 114 describes the fields in the **show sgbp queries** command example output.

**Table 114** *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.
1.1.1.2	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 [type number]
```

<b>Syntax Description</b>	<i>type number</i> (Optional) Interface type and number.				
<b>Command Modes</b>	EXEC				
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>10.3</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	10.3	This command was introduced.
Release	Modification				
10.3	This command was introduced.				

## Examples

The following is an example of 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 115 describes the fields shown in the display.

**Table 115** *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 if 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>

**Table 115** *show snapshot Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Length of each activation period	Length of the active period.
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 version

To display the Service Processing Element (SPE) download information such as the version and filename, use the **show spe version** command in EXEC mode.

```
show spe version [x/y/z] [x/y/z]
```

Syntax Description	
x/y/z	(Optional) First shelf/slot/SPE.
x/y/z	(Optional) Last shelf/slot/SPE.

**Command Modes** EXEC

Command History	Release	Modification
	12.0(6)T	This command was introduced.

**Usage Guidelines** To view SPE download information such as version and file names, use the **show spe version** EXEC command.

**Examples** 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               5.1.2.0  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
```

## 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

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

## 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
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

5300-1# **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.

```
5800# 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 116 shows the field descriptions for the **show spe version** command on the Cisco AS5800 access server.

**Table 116** show spe version Field Descriptions

Fields	Descriptions
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), reboot, or recover.
Firmware-Filename	This is the name of the firmware. You can use the <b>dir</b> command at the prompt to see what firmware filenames are available.
Firmware-Type	This describes which type of modem is associated with the firmware version.
IOS-Bundled Default Firmware-Filename	This shows which firmware filenames are bundled with the Cisco IOS (system:/ucode)
On-Flash Firmware-Filename	This shows which firmware filenames are on the Flash (flash:)

#### Related Commands

Command	Description
<b>show modem version</b>	Displays version information about the modem firmware, controller, and DSP code (for 56K modems only), and boot code.

# 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>Defaults</b>	<b>show tech-support modem</b>
-----------------	--------------------------------

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

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.1(13)	The commands <b>show tech-support modem</b> (for the Cisco AS5300 and AS5800 access servers) and <b>show tech-support spe</b> (for the Cisco AS5350, AS5400, AS5800, and AS5850 access servers) were introduced.
	12.2(11)T	The commands were migrated to Cisco IOS Release 12.2(11)T.

<b>Usage Guidelines</b>	<p>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 <b>show tech-support modem</b> command provides extensive output of many EXEC commands by entering a single command.</p>
-------------------------	--

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.

Table 117 lists the commands run by the **show tech-support modem** command, in the order run.

**Table 117 List of Commands Run by show tech-support modem Command**

<b>Commands Run by the show tech-support modem Command:</b>
<b>show version</b>
<b>show running-config</b>
<b>show modem version</b>
<b>show modem</b>
<b>show modem summary</b>
<b>show spe version</b>
<b>show controllers t1 call-counters</b>
<b>show controllers e1 call-counters</b>
<b>show modem connect-speeds</b>

**Table 117** List of Commands Run by show tech-support modem Command (continued)**Commands Run by the show tech-support modem Command:**

---

`show modem mapping`

---

`show line`

---

`show caller`

---

`show users all`

---

**Additional Commands Run by the show tech-support modem detail Command:**

---

`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 listed in Table 117 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
<code>execute-on</code>	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]**

Syntax Description	detail
	(Optional) Produces an extensive modem functionality report.

Defaults	show tech-support spe
----------	-----------------------

Command Modes	Privileged EXEC
---------------	-----------------

Command History	Release	Modification
	12.1(13)	The commands <b>show tech-support modem</b> (for the Cisco AS5300 and AS5800 access servers) and <b>show tech-support spe</b> (for the Cisco AS5350, AS5400, AS5800, and AS5850 access servers) were introduced.
	12.2(11)T	The commands were migrated to Cisco IOS Release 12.2(11)T.

Usage Guidelines	<p>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 <b>show tech-support spe</b> command provides extensive output of many EXEC commands by entering a single command.</p>
------------------	---

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. Table 118 summarizes the commands run by the **show tech-support spe** command.

**Table 118 List of Commands Run by show tech-support spe Command**

Commands Run by the show tech-support spe Command:
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

**Table 118** List of Commands Run by show tech-support spe Command (continued)**Commands Run by the show tech-support spe Command:**

---

`show nextport mm`

---

`show controllers e1 call-counters`

---

`show controllers t1 call-counters`

---

`show line`

---

`show caller`

---

`show users all`

---

**Additional Commands Run by the show tech-support spe detail Command:**

---

`show csm modem`

---

`show spe log`

---

`show port modem log`

---

To interpret the modem reports, refer to the descriptions for each command listed in Table 118 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
<code>execute-on</code>	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 terminal

To obtain information about the terminal configuration parameter settings for the current terminal line, use the **show terminal** command in EXEC mode.

## show terminal

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

**Command Modes** EXEC

Command History	Release	Modification
	10.0	This command was introduced.

**Examples** The following is an example of output from the **show terminal** command:

```
router# show terminal

Line 2, Location: "", Type: ""
Length: 24 lines, Width: 80 columns
Baud rate (TX/RX) is 9600/9600
Status: Ready, Active, No Exit Banner
Capabilities: Enabled
Modem state: Ready
Special Chars: Escape Hold Stop Start Disconnect Activation
                ^^x  none  -    -    none
Timeouts:      Idle EXEC  Idle Session  Modem Answer  Session  Dispatch
                never    never          0:00:15      not imp  not set

Session limit is not set.
Allowed transports are telnet rlogin. Preferred is telnet
No output characters are padded
```

Table 119 describes the fields in the first three lines of **show terminal** output.

**Table 119** show terminal Field Descriptions—First Three Lines of Output

Field	Description
Line 2	Current terminal line.
Location: ""	Location of the current terminal line, as specified using the <b>location</b> line configuration command.
Type: ""	Type of the current terminal line, as specified using the <b>line</b> global configuration command.
Length: 24 lines	Length of the terminal display.
Width: 80 columns	Width of the terminal display, in character columns.
Baud rate (TX/RX) is 9600/9600	Transmit rate/receive rate of the line.

The following line of output indicates the status of the line:

```
Status: Ready, Active, No Exit Banner
```

Table 120 describes possible values for the Status field.

**Table 120** *show terminal Field Descriptions—Status*

Field	Description
Active	A process is actively using the line.
Autobauding	The line is running the autobaud process.
Carrier Dropped	Some sense of “carrier” has been dropped, so the line process should be killed.
Connected	The line has at least one active connection.
Dialing Out	A DDR asynchronous interface is dialing a remote site on this line.
Echo Off	The line is not echoing what the user types in (for example because a password must be entered).
Escape Started	The first character of the escape sequence has been typed.
Escape Typed	Both characters of the escape sequence have been typed.
Hanging Up	The line state is “hanging up.”
Hardware XON/XOFF	The line uses a UART that supports XON/XOFF flow control in hardware. (This does not mean that the line is currently using software flow control.)
Hold Typed	The user typed the “hold character” (and the line is paused).
Idle	The line modem state is “idle” (see modem state diagrams).
Idle Timeout	An idle timeout has occurred.
Input Stopped	The input has been turned off because of hardware flow control or overflow.
No Exit Banner	The normal exit banner will not be displayed on this line.
PSI Enabled	The line is paying attention to typed escape characters.
Rcvd BREAK	A BREAK sequence has been received on the line.
Rcvd Command	The line has received a special command sequence (for example, ^^B for send break).
Rcvd CR	The last character received was a carriage return.
Ready	The line state is “ready.”
Ring Transition	A transition has occurred on the RING signal of the line.
Send Break Soon	You need to send a BREAK on the line soon.
Send XOFF Soon	Your buffers are full and you should send an XOFF soon.
Sending Break	You are in the process of sending a BREAK sequence on the line.
Sent XOFF	Your buffers were full, so we sent an XOFF.
SLIP Mode	The line is running SLIP or PPP.

The following line of output indicates the status of the capabilities of the line. These capabilities correspond closely to configurable parameters that can be set using configuration commands.

```
Capabilities: Enabled
```

Table 121 describes possible values for the Capabilities field.

**Table 121** *show terminal Field Descriptions—Capabilities*

Field	Description
Autobaud Full Range	Corresponds to the <b>autobaud</b> command.
Character Padding	At least one <b>pad c x</b> configuration command has been used.
Enabled	The user has “enabled” successfully.
EXEC Suppressed	Corresponds to the <b>no exec</b> command.
Hangup on Last Close	Corresponds to the <b>autohangup</b> command.
Hardware Flowcontrol In	Corresponds to the <b>flowcontrol hardware in</b> command.
Hardware Flowcontrol Out	Corresponds to the <b>flowcontrol hardware out</b> command.
Insecure	Corresponds to the <b>insecure</b> command.
Lockable	Corresponds to the <b>lockable</b> command.
Modem Callin	Corresponds to the <b>modem callin</b> command.
Modem Callout	Corresponds to the <b>modem callout</b> command.
Modem CTS-Required	Corresponds to the <b>modem cts-required</b> command.
Modem DTR-Active	Corresponds to the <b>modem dtr-active</b> command.
Modem RI is CD	Corresponds to the <b>modem ri-is-cd</b> command.
No Login Banner	Corresponds to the <b>no exec-banner</b> command.
Notification Set	Corresponds to the <b>notify</b> command.
Output Non-Idle	Corresponds to the <b>session-timeout</b> command.
Permanent SLIP	Corresponds to the <b>slip-dedicated</b> command.
Private Line	Corresponds to the <b>private</b> command.
Refuse Suppress-GA	Corresponds to the <b>telnet refuse</b> command.
Receives Logging Output	Corresponds to the <b>monitor</b> command.
Refuse Telnet Echo	Corresponds to the <b>telnet refuse</b> command.
Send BREAK on IP	Corresponds to the <b>telnet break-on-ip</b> command.
SLIP allowed	Corresponds to the <b>slip address</b> command.
Software Flowcontrol In	Corresponds to the <b>flowcontrol software in</b> command.
Software Flowcontrol Out	Corresponds to the <b>flowcontrol software out</b> command.
Telnet Transparent Mode	Corresponds to the <b>telnet transparent</b> command.

The following line of output indicates the modem state. Possible values include Autobauding, Carrier Dropped, Hanging Up, Idle, and Ready.

```
Modem state: Ready
```

The following lines of output indicate the special characters that can be entered to activate various terminal operations. The none or hyphen (-) values imply that no special characters are set.

```
Special Chars: Escape  Hold  Stop  Start  Disconnect  Activation
                ^^x    none  -     -       none
```

The following lines of output indicate the timeout values that have been configured for the line:

```
Timeouts:      Idle EXEC      Idle Session  Modem Answer  Session  Dispatch
              never          never         0:00:15      not imp   not set
```

Table 122 describes the fields in the preceding lines of output.

**Table 122** *show terminal Field Descriptions—Timeouts*

Field	Description
Idle EXEC	Interval that the EXEC command interpreter waits for user input before resuming the current connection; or if no connections exist, returning the terminal to the idle state and disconnecting the incoming session. This interval is set using the <b>exec-timeout</b> command.
Idle Session	Interval that the Cisco IOS software waits for traffic before closing the connection to a remote computer and returning the terminal to an idle state. This interval is set using the <b>session-timeout</b> command.
Modem Answer	Interval during which the software raises DTR in response to RING and the modem response to CTS. This interval is set using the <b>modem answer-timeout</b> command.
Session	Not implemented in this release.
Dispatch	Number of milliseconds the software waits after putting the first character into a packet buffer before sending the packet. This interval is set using the <b>dispatch-timeout</b> command.

The following lines of output indicate how various options have been configured:

```
Session limit is not set.
Allowed transports are telnet rlogin. Preferred is telnet
No output characters are padded
```

# show tn3270 ascii-hexval

To determine ASCII-hexadecimal character mappings, use the **show tn3270 ascii-hexval** command in EXEC mode.

```
show tn3270 ascii-hexval
```

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

**Command Modes** EXEC

Command History	Release	Modification
	10.3	This command was introduced.

**Usage Guidelines** Use the **show tn3270 ascii-hexval** command to display the hexadecimal value of a character on your keyboard. After entering the **show tn3270 ascii-hexval** command, you are prompted to press a key. The hexadecimal value of the ASCII character is displayed. This command is useful for users who do not know the ASCII codes associated with various keys or do not have manuals for their terminals.

**Examples** The following is an example of output from the **show tn3270 ascii-hexval** command:

```
router> show tn3270 ascii-hexval

Press key> 7 - hexadecimal value is 0x37.

chaff> show tn3270 ascii-hexval
Press key> f - hexadecimal value is 0x66.

tarmac> show tn3270 ascii-hexval
Press key> not printable - hexadecimal value is 0xD.
```

Related Commands	Command	Description
	<b>show tn3270 character-map</b>	Displays character mappings between ASCII and EBCDIC.
	<b>tn3270 character-map</b>	Converts incoming EBCDIC characters into ASCII characters for TN3270 connections.

# show tn3270 character-map

To display character mappings between ASCII and EBCDIC, use the **show tn3270 character-map** command in EXEC mode.

```
show tn3270 character-map {all | ebcdic-in-hex}
```

Syntax Description	all	Displays all nonstandard character mappings.
	<i>ebcdic-in-hex</i>	Displays the ASCII mapping for a specific EBCDIC character.

Command Modes	EXEC
---------------	------

Command History	Release	Modification
	11.1	This command was introduced.

**Examples** The following is an example of output from the **show tn3270 character-map** command:

```
router# show tn3270 character-map all

EBCDIC 0x81 <=> 0x78 ASCII
EBCDIC 0x82 <=> 0x79 ASCII
EBCDIC 0x83 <=> 0x7A ASCII
```

Related Commands	Command	Description
	<b>show tn3270 ascii-hexval</b>	Displays ASCII-hexadecimal character mappings.
	<b>tn3270 character-map</b>	Converts incoming EBCDIC characters into ASCII characters for TN3270 connections.

# show translate

To view translation sessions that have been configured, use the **show translate** command in privileged EXEC mode.

**show translate**

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

**Command Modes** Privileged EXEC

Command History	Release	Modification
	10.3	This command was introduced.

**Usage Guidelines** The display from this command shows each translation session set up on the router. It shows the incoming device and virtual terminal protocol as well as the outgoing device and protocol.

**Examples** The **show translate** output in this example is based on the following translation command configured:

```
translate x25 3131415912345 ppp ip-pool scope-name cardinal keepalive 0
```

If the previous **translate** command is enabled, the following output is created by the **show translate** command:

```
router# show translate

Translate From: x25 3131415912345
              To:   PPP ip-pool scope-name cardinal keepalive 0
              1/1 users active, 1 peak, 1 total, 0 failures
```

Table 123 describes fields shown in the display.

**Table 123** show translate Field Descriptions—X.25 to IP Translation

Field	Description
Translate From: x25 3131415912345	Protocol (X.25) and address (3131415912345) of the incoming device.
To: PPP	The virtual terminal protocol (PPP).
ip-pool	Obtain an IP address from a DHCP proxy client or a local pool.
scope-name cardinal	Specific local scope name (cardinal) from which to obtain an IP address.
keepalive 0	Indicates that keepalive updates have been disabled for the current translation session.
1/1 users active	Number of users active over the total number of users.

**Table 123** *show translate Field Descriptions—X.25 to IP Translation (continued)*

Field	Description
1 peak	Maximum number of translate sessions up at any given time.
1 total	Total number of translation sessions.
0 failures	Number of failed translation attempts resulting from this configuration.

The **show translate** output in this example is based on the following translation command configured:

```
translate x25 31301234 PPP 192.168.14.23 ipx-client Loopback0
```

If the previous **translate** command is enabled, the following output is created by the **show translate** command:

```
router# show translate

Translate From: x25 31301234
              To:  PPP 192.168.14.23 ipx-client Loopback0
              1/1 users active, 1 peak, 1 total, 0 failures
```

Table 124 describes fields shown in the display.

**Table 124** *show translate Field Descriptions—X.25 to IPX Translation*

Field	Description
Translate From: x25 31301234	Protocol (X.25) and address (31301234) of the incoming device.
To: PPP 192.168.14.23	The virtual terminal protocol (PPP) and IP address of the outgoing device.
ipx-client loopback0	Indicates that loopback interface 0 has been configured in client mode.
1/1 users active	Number of users active over the total number of users.
1 peak	Maximum number of translate sessions up at any given time.
1 total	Total number of translation sessions.
0 failures	Number of failed translation attempts resulting from this configuration.

# show ttycap

To test for the availability of a ttycap after a connection on a router takes place, use the **show ttycap** command in EXEC mode.

```
show ttycap [ttycap-name | all]
```

## Syntax Description

<i>ttycap-name</i>	(Optional) Name of a ttycap.
<b>all</b>	(Optional) Lists the names of all defined ttycaps. The name of the default ttycap is not listed.

## Command Modes

EXEC

## Command History

Release	Modification
10.0	This command was introduced.

## Usage Guidelines

The Cisco IOS software searches for the specified ttycap in its active configuration image, and lists the complete entry if found. If it is not found, an appropriate “not found” message appear.

If you do not include any arguments with the **show ttycap** command, then the current keymap used for the terminal is displayed.

## Examples

The following is an example of output from the **show ttycap** command:

```
router# show ttycap

d0|vt100|vt100-am|vt100am|dec vt100:do=^J:co#80:li#24:\
cl=50^[[;H^[[2J:bs:am:cm=5^[[%i%d;%dH:nd=2^[[C:up=2^[[A:\
ce=3^[[K:so=2^[[7m:se=2^[[m:us=2^[[4m:ue=2^[[m:md=2^[[1m:\
me=2^[[m:ho=^[[H:xn:sc=^[7:rc=^[8:cs=^[[%i%d;%dr:

router# show ttycap all

ttycap3    d0|vt100|vt100-am|vt100am|dec vt100
ttycap2    d1|vt200|vt220|vt200-js|vt220-js|dec vt200 series with jump scroll
ttycap1    ku|h19-u|h19u|heathkit with underscore cursor

router# show ttycap ttycap1

ttycap1    ku|h19-u|h19u|heathkit with underscore cursor:\:vs@:ve@:tc=h19-b:\
:al=1*\EL:am:le=^H:bs:cd=\EJ:ce=\EK:cl=\EE:cm=\EY%+ %+\
:co#80:dc=\EN:\:dl=1*\EM:do=\EB:ei=\EO:ho=\EH\
:im=\E@:li#24:mi:nd=\EC:as=\EF:ae=\EG:\
:ms:pt:sr=\EI:se=\Eq:so=\Ep:up=\EA:vs=\Ex4:ve=\Ey4:\
:kb=^h:ku=\EA:kd=\EB:k1=\ED:kr=\EC:kh=\EH:kn#8:ke=\E>:ks=\E=: \
:k1=\ES:k2=\ET:k3=\EU:k4=\EV:k5=\EW:\
:l6=blue:l7=red:l8=white:k6=\EP:k7=\EQ:k8=\ER:\
:es:hs:ts=\Ej\Ex5\Ex1\EY8%+ \Eo:fs=\EK\Ey5:ds=\Ey1:
```

# show users

To display information about the active lines on the router, use the **show users** command in EXEC mode.

**show users [all]**

<b>Syntax Description</b>	<b>all</b>	(Optional) Specifies that all lines be displayed, regardless of whether anyone is using them.
---------------------------	------------	---

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

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

**Usage Guidelines** This command displays the line number, connection name, idle time, hosts (including virtual access interfaces) and terminal location. An asterisk (\*) indicates the current terminal session.

**Examples** The following is an example of output from the **show users** command:

```
router# show users
      Line      User           Host(s)      Idle Location
      0 con 0
*    2 vty 0      rose         idle         0    BASHFUL.CISCO.COM
```

The following is an example of output identifying an active virtual access interface:

```
router# show users

Line      User           Host(s)      Idle   Location
*  0 con 0      idle         01:58
  10 vty 0      Virtual-Access2  0     1212321
```

The following is an example of output from the **show users all** command:

```
router# show users all
      Line      User           Host(s)      Idle   Location
*  0 vty 0      rose         idle         0     BASHFUL.CISCO.COM
  1 vty 1
  2 con 0
  3 aux 0
  4 vty 2
```

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

Table 125 describes significant fields shown in the displays.

**Table 125** *show users Field Descriptions*

Field	Description
Line	<p>Contains three subfields.</p> <ul style="list-style-type: none"> <li>The first subfield (0 in the sample output) is the absolute line number.</li> <li>The second subfield (vty) indicates the type of line. Possible values follow: <ul style="list-style-type: none"> <li>con—Console</li> <li>aux—Auxiliary port</li> <li>tty—Asynchronous terminal port</li> <li>vty—Virtual terminal</li> </ul> </li> <li>The third subfield (0 in the * sample output) indicates the relative line number within the type.</li> </ul>
User	User using the line. If no user is listed in this field, no one is using the line.
Host(s)	Host to which the user is connected (outgoing connection). A value of idle means that there is no outgoing connection to a host.
Idle	Interval (in minutes) since the user has entered something.
Location	Either the hard-wired location for the line or, if there is an incoming connection, the host from which incoming connection came.

**Related Commands**

Command	Description
<b>line</b>	Identifies a specific line for configuration and starts the line configuration command collection mode.
<b>show line</b>	Displays the parameters of a terminal line.
<b>username</b>	Establishes a username-based authentication system.

# show vpdn

To display information about active Level 2 Forwarding (L2F) protocol tunnel and message identifiers in a Virtual Private Dialup Network (VPDN), use the **show vpdn** command in EXEC mode.

**show vpdn**

## 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 an example of output from the **show vpdn** command:

```
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
phil@cisco.com  nas         As7       1             open
sam@cisco.com  nas         As8       2             open
```

Table 126 describes the fields in the **show vpdn** command display.

**Table 126** show vpdn Field Descriptions

Field	Description
Active L2F tunnels	
NAS Name	Host name of the network access server, which is the remote termination point of the tunnel.
Gateway Name	Host name of the home gateway, which is local termination point of the tunnel.
NAS CLID	A number uniquely identifying the VPDN tunnel on the network access server.
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.

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

Field	Description
NAS Name	Host name of the network access server.
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.

**Related Commands**

Command	Description
<b>vpdn enable</b>	Enables virtual private dialup networking on the router and informs the router to look for tunnel definitions in a local database and on a remote authorization server (home gateway), if one is present.
<b>vpdn-group</b>	Sets the failure history table depth beyond the default value of 20 entries.
<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 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.

**Usage Guidelines** Use the **show vpdn domain** EXEC command to see all VPDN domains and DNIS groups configured on the NAS.

## Examples

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

Table 127 shows the significant display fields.

**Table 127 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 user and privileged EXEC mode.

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

## Syntax Description

<b>name</b>	Name of the VPDN group.
<b>domain</b>	(Optional) DNIS/domain information.
<b>endpoint</b>	(Optional) Endpoint session information.

## Command Modes

User and privileged EXEC

## Command History

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

## Usage Guidelines

Use the **show vpdn group** EXEC command 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** group-name.

## Examples

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
vgnumber	-	-
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.

```
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

**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 “-”.

```
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

Table 128 shows the significant display fields.

**Table 128** *show vpdn group Field Descriptions*

<b>Field</b>	<b>Description</b>
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 [username]
```

## Syntax Description

*username* (Optional) Specifies the username. The specified username helps to display only the entries mapped to that particular user.

## Command Modes

EXEC

## Command History

Release	Modification
11.3T	This command was introduced.

## Usage Guidelines

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.

## Examples

The following is an example of output from the **show vpdn history failure** 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 129 describes the fields shown in the sample output.

**Table 129** 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.

**Table 129** *show vpdn history failure Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
IP address	IP address of the network access server or home gateway (HGW).
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**

<b>Command</b>	<b>Description</b>
<b>clear vpdn history failure</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 user and privileged EXEC mode.

**show vpdn multilink**

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

**Command Modes** User and privileged EXEC

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

**Usage Guidelines** Use the **show vpdn multilink EXEC** command to see the multilink sessions authorized for all VPDN groups.

**Examples** Following is sample output:

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

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

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	*/*

Router#

Table 130 shows the significant display fields.

**Table 130 show vpdn multilink Field Descriptions**

Field	Description
NAS CLID	The network access server Caller Line Identification number (CLID).
HGW CLID	The home gateway (HGW) Caller Line Identification number (CLID).
NAS Name	The name assigned to the NAS.

**Table 130** *show vpdn multilink Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
HGW Name	Name assigned to the HGW.
State	Operational state of the designated piece of equipment.
CLID	Calling Line Identification number.
MID	Modem Identification.
Username	Assigned user name.
Intf	Type of interface.
State	Operational state of the designated piece of equipment.
Multilink Bundle Name	The 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 x25 pad

To display information about current open connections, including packet transmissions, X.3 parameter settings, and the current status of virtual circuits, use the **show x25 pad** command in EXEC mode.

**show x25 pad**

**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 an example of output from the **show x25 pad** command:

```
router# show x25 pad

tty2, Incoming PAD connection
Total input: 61, control 6, bytes 129. Queued: 0 of 7 (0 bytes).
Total output: 65, control 6, bytes 696.
Flags: 1, State: 3, Last error: 1
ParamsIn: 1:1, 2:0, 3:2, 4:1, 5:1, 6:0, 7:21,
          8:0, 9:0, 10:0, 11:14, 12:0, 13:0, 14:0, 15:1,
          16:127, 17:21, 18:18, 19:0, 20:0, 21:0, 22:0,
ParamsOut: 1:1, 2:1, 3:2, 4:1, 5:0, 6:0, 7:4,
           8:0, 9:0, 10:0, 11:14, 12:0, 13:0, 14:0, 15:0,
           16:127, 17:21, 18:18, 19:0, 20:0, 21:0, 22:0,
LCI: 1, State: D1, Interface: Serial0
Started 0:11:10, last input 0:00:16, output 0:00:16
Connected to 313700540651
Window size input: 7, output: 7
Packet size input: 512, output: 512
PS: 1 PR: 5 ACK: 5 Remote PR: 1 RCNT: 0 RNR: FALSE
Retransmits: 0 Timer (secs): 0 Reassembly (bytes): 0
Held Fragments/Packets: 0/0
Bytes 696/129 Packets 65/61 Resets 0/0 RNRs 0/0 REJs 0/0 INTs 0/0
```

Table 131 describes significant fields shown in the output in the display.

**Table 131 show x25 pad Field Descriptions**

Field	Description
Total input/output	Number of packets received or sent for the connection.
control	Number of packets with Qbit set (X.29 control packets).
bytes	Number of bytes in each direction.
Queued	Number of unread packets waiting for the connection.
Waiting to send	Local data packet bit not sent (part of a line).

**Table 131** *show x25 pad Field Descriptions (continued)*

<b>Field</b>	<b>Description</b>
Flags, State, Last error	Displays data for detecting errors and tracing initialization status. Only useful to your Cisco-certified technical support personnel.
ParamsIn	Parameters read from the PAD at the start of the connection.
ParamsOut	Active X.3 parameters.
LCI, State, Interface	Status of the X.25 virtual circuit associated with the PAD connection. This is the same display that the <b>show x25 vc</b> command shows.

# show xremote

To display XRemote connections and monitor XRemote traffic through the router, use the **show xremote** command in EXEC mode.

## show xremote

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

**Command Modes** EXEC

Command History	Release	Modification
	10.0	This command was introduced.

**Usage Guidelines** The **show xremote** command displays XRemote parameters applied to the entire system, as well as statistics that are pulled for all active XRemote connections.

**Examples** The following is an example of output from the **show xremote** command when XRemote is enabled and XRemote sessions are active:

```
router# show xremote

XRemote server-wide parameters:
  Font buffersize:      72000           Font retries: 3
  Font memory errors:  0

TFTP font load statistics for host 172.16.1.111:
  Bytes read:          2697239         Files read: 258
  Network errors:     4               File errors: 0

LAT font load statistics for service WHEEL, incarnation 5:
  Bytes read          182401           Files read: 14
  Protocol errors:    0               Insufficient memory: 0

XRemote statistics for tty2:
  Current clients:    9               Total clients: 17
  Requesting client: 5               Current request size: 0
  Replying client:   6               Current reply size: 0
  XDM state:         10              Next timeout: 172460
  Retransmit counter: 0              Local UDP port: 53616
  Keepalive dormancy: 180            Session id: 94
  Unread input:      0               Unwritten output: 0
  Input buffer size: 1024            Output buffer size: 108
  Protocol version:  2               Line state: Connected
  Transmit packets: 50768            Receive packets: 49444
  Transmit errors:   0               Receive errors: 37
  Retransmissions:  403              Receive out of sequence: 76
  Round trip time:   383              Retransmit interval: 766
  Transmit window:  7               Receive window: 7
  Transmit next:     6               Receive next: 3
  Transmit unacked: 6               Receive unacked: 0
```

```

Connection 0 - TCP connection from 172.16.1.55 [Display Manager]
Client state:      CS_ACTIVE          Byte order: MSBfirst
Unread input:     0                  Unwritten output: 0
Input buffer size: 1024              Output buffer size: 1024

Connection 1 - LAT connection from WHEEL
Client state:      CS_ACTIVE          Byte order: LSBfirst
Unread input:     0                  Unwritten output: 0
Input buffer size: 1024              Output buffer size: 1024

```

Table 132 describes the significant fields shown in the display.

**Table 132** *show xremote Field Descriptions*

Field	Description
XRemote server-wide parameters	This section displays XRemote parameters that apply to the protocol translator.
Font buffer size	XRemote font buffer size that was specified with the <b>xremote tftp buffersize</b> global configuration command.
Font retries	Number of retries the font loader (host) will attempt before declaring an error condition.
Font memory errors	Number of font memory error conditions that have been declared for the protocol translator.
TFTP font load statistics for host 172.16.1.111	This section displays XRemote statistics for fonts that have been loaded from a TFTP font server at the IP address shown.
Bytes read	Number of bytes the host read in order to load the fonts.
Files read	Number of files the host read in order to load the fonts.
XRemote statistics for tty2	This section displays XRemote for the specified line.
Current clients	Number of clients using this line for active XRemote sessions.
Total clients	Includes the number of clients using this line for active XRemote sessions.
Requesting client	Number of clients requesting XRemote service.
Retransmit counter	Number of times that XRemote connection requests were retransmitted.
Local UDP port	Number assigned to the local UDP port.
Keepalive dormancy	Amount of time between keepalive messages.

# show xremote line

To list XRemote connections and monitor XRemote traffic, use the **show xremote line** command in EXEC mode.

**show xremote line** *number*

Syntax Description	<i>number</i>	A decimal value representing the number of virtual terminal lines about which to display information.
--------------------	---------------	---

Command Modes	EXEC
---------------	------

Command History	Release	Modification
	10.0	This command was introduced.

## Examples

The following is an example of output from the **show xremote line** command (line 3 is specified) when XRemote is enabled and XRemote sessions are active. Only information specific to an individual terminal line is provided. See Table 132 earlier in this chapter for output field descriptions.

```
router# show xremote line 3
Xremote statistics for tty3:
  Current clients:      11          Total clients: 19
  Requesting client:   10          Current request size: 0
  Replying client:     10          Current reply size: 0
  XDM state:           10          Next timeout: 173304
  Retransmit counter:  0           Local UDP port: 28384
  Keepalive dormancy: 180         Session id: 29
  Unread input:        0           Unwritten output: 0
  Input buffer size:   1024        Output buffer size: 108
  Protocol version:    2           Line state: Connected
  Transmit packets:   28875       Receive packets: 18644
  Transmit errors:     0           Receive errors: 13
  Retransmissions:    53          Receive out of sequence: 41
  Round trip time:     384         Retransmit interval: 768
  Transmit window:     7           Receive window: 7
  Transmit next:       2           Receive next: 7
  Transmit unacked:   2           Receive unacked: 0

Connection 0 - TCP connection from 172.16.1.27 [Display Manager]
  Client state:        CS_ACTIVE    Byte order: MSBfirst
  Unread input:        0           Unwritten output: 0
  Input buffer size:   1024        Output buffer size: 1024

Connection 1 - TCP connection from 172.16.1.27
  Client state:        CS_ACTIVE    Byte order: MSBfirst
  Unread input:        0           Unwritten output: 0
  Input buffer size:   1024        Output buffer size: 1024

Connection 2 - TCP connection from 172.16.1.27
  Client state:        CS_ACTIVE    Byte order: MSBfirst
  Unread input:        0           Unwritten output: 0
  Input buffer size:   1024        Output buffer size: 1024
```