

Chapter 30

L2TP Services Interfaces Operational Mode Commands

Table 55 summarizes the command-line interface (CLI) commands you can use to monitor and troubleshoot Layer 2 Tunneling Protocol (L2TP) services interfaces. In the table, the commands are grouped by functionality. In the remainder of this chapter, they are explained alphabetically.

Table 55: Commands for Monitoring L2TP Services Interfaces

Task or Information to Monitor	Command
Clear L2TP session.	clear services l2tp session on page 397
Clear L2TP tunnel.	clear services l2tp tunnel on page 399
Display L2TP output by multilink bundle.	show services l2tp multilink on page 400
Display active L2TP sessions.	show services l2tp session on page 403
Display L2TP summary information.	show services l2tp summary on page 408
Display active L2TP tunnels.	show services l2tp tunnel on page 409
Display active L2TP users.	show services l2tp user on page 413

clear services l2tp session

Syntax clear services l2tp session <statistics>
<interface sp-fpc/pic/port>
<local-gateway gateway-address>
<local-gateway-name gateway-name>
<local-session-id session-id>
<local-tunnel-id tunnel-id>
<peer-gateway gateway-address>
<peer-gateway-name gateway-name>
<tunnel-group group-name>
<user user-name>

Description Close L2TP sessions, or clear session statistics.

- Options** none—Close all L2TP sessions.
- statistics—(Optional) Clear all sessions' statistics.
- interface *sp-fpc/pic/port*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified interface name.
- local-gateway *gateway-address*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified local gateway address.
- local-gateway-name *gateway-name*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified local gateway name.
- local-session-id *session-id*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified local session identifier.
- local-tunnel-id *tunnel-id*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified local tunnel identifier.
- peer-gateway *gateway-address*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified peer gateway address.
- peer-gateway-name *gateway-name*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified peer gateway name.
- tunnel-group *group-name*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified tunnel group name. To display information about L2TP CPU and memory usage, you can include the tunnel group name in the `show services service-sets memory-usage <group-name>` and `show services service-sets cpu-usage <group-name>` commands.
- user *user-name*—(Optional) Close (or clear statistics of) only the L2TP sessions that have the specified username.

Required Privilege Level network

Output Fields Session—Session local ID, which is the identifier of the local end point of the L2TP session.

Sample Output: clear services l2tp session

```
user@host> clear services l2tp session
Session 26497 closed
```

Sample Output: clear services l2tp session statistics

```
user@host> clear services l2tp session statistics
Session 26497 statistics cleared
```

See Also “Service Sets Operational Mode Commands” on page 383.

clear services l2tp tunnel

Syntax clear services l2tp tunnel <statistics>
 <interface sp-fpc/pic/port>
 <local-gateway gateway-address>
 <local-gateway-name gateway-name>
 <local-tunnel-id tunnel-id>
 <peer-gateway gateway-address>
 <peer-gateway-name gateway-name>
 <tunnel-group group-name>

Description Close L2TP tunnels, or clear tunnel statistics.

Options none—Close all L2TP tunnels.

statistics—(Optional) Clear all tunnels' statistics.

interface sp-fpc/pic/port—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified interface name.

local-gateway gateway-address—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified local gateway address.

local-gateway-name gateway-name—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified local gateway name.

local-tunnel-id tunnel-id—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified local tunnel identifier.

peer-gateway gateway-address—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified peer gateway address.

peer-gateway-name gateway-name—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified peer gateway name.

tunnel-group group-name—(Optional) Close (or clear statistics of) only the L2TP tunnels that have the specified tunnel group. To display information about L2TP CPU and memory usage, you can include the tunnel group name in the show services service-sets memory-usage <group-name> and show services service-sets cpu-usage <group-name> commands.

Required Privilege Level network

Output Fields Tunnel—Tunnel local ID, which is the identifier of the local end point of the tunnel.

Sample Output: clear services l2tp tunnel
 user@host> clear services l2tp tunnel
 Tunnel 9933 closed

Sample Output: clear services l2tp tunnel statistics
 user@host> clear services l2tp tunnel statistics
 Tunnel 9933 statistics cleared

See Also “Service Sets Operational Mode Commands” on page 383.

show services l2tp multilink

Syntax	show services l2tp multilink <brief detail extensive statistics> <bundle-id <i>number</i> >
Description	Display L2TP output organized by multilink bundle.
Options	<p>none—Same as brief.</p> <p>brief—(Default) Display one line of L2TP bundle information for all multilink bundles.</p> <p>detail—(Optional) Display detailed L2TP multilink bundle information, including bundle ID, number of links, bundle end point, input and output maximum received reconstructed unit (MRRU), and one line of L2TP session information for each multilink member link.</p> <p>extensive—(Optional) Display very detailed L2TP multilink bundle information, including bundle ID, number of links, bundle end point, input and output MRRU, statistics, and detailed L2TP session information for each multilink member link.</p> <p>statistics—(Optional) Display L2TP multilink bundle statistics, including packets and bytes that have been encapsulated in the Multilink Protocol. Non-multilink packets received on member sessions are not counted here.</p> <p>bundle-id <i>number</i>—(Optional) Display L2TP multilink bundle information for only the specified bundle.</p>
Required Privilege Level	view
Output Fields	<p>Bundle ID—Bundle identifier.</p> <p>Links—Number of links in the multilink bundle.</p> <p>Bundle endpoint—End-point discriminator that represents the device transmitting the packet.</p> <p>Input MRRU—Maximum packet size that the input interface can process.</p> <p>Output MRRU—Maximum packet size that the output interface can process.</p> <p>Drop timeout—Drop timeout for a multilink bundle. Different tunnels might have different drop timeout values. To ensure consistency, we recommend using group profiles for L2TP tunnels. For more information about L2TP group profiles, see the <i>JUNOS System Basics Configuration Guide</i>.</p> <p>Fragmentation threshold—Fragmentation threshold for a multilink bundle. Different tunnels might have different fragmentation thresholds. To ensure consistency, we recommend using group profiles for L2TP tunnels. For more information about L2TP group profiles, see the <i>JUNOS System Basics Configuration Guide</i>.</p> <p>Session local ID—Identifier of the local end point of the L2TP session, as assigned by the L2TP network server (LNS).</p>

Session remote ID—Identifier of the remote end point of the L2TP session, as assigned by the L2TP access concentrator (LAC).

State—State of the L2TP session:

Established—The session is operating.

closed—The session is being closed.

destroyed—The session is being destroyed.

clean-up—The session is being cleaned up.

Ins-ic-accept-new—A new session is being accepted.

Ins-ic-idle—The session is created and is idle.

Ins-ic-reject-new—The new session is being rejected.

Ins-ic-wait-connect—The session is waiting for the peer's incoming call connected (ICCN) message.

Username—Name of the user logged in to the session.

Mode—Mode of the interface representing the multilink bundle: dedicated or shared.

Local IP—IP address of the local end point of the Point-to-Point Protocol (PPP) session.

Remote IP—IP address of the remote end point of the PPP session.

Local name—Name of the LNS instance in which the session was created.

Remote name—Name of the LAC from which the session was created.

Local MRU—Maximum receive unit (MRU) setting of the local device, in bytes.

Remote MRU—MRU setting of the remote device, in bytes.

Statistics since—Date and time when collection of the following statistics began:

Control Tx—Amount of control information transmitted, in packets and bytes.

Control Rx—Amount of control information received, in packets and bytes.

Data Tx—Amount of data transmitted, in packets and bytes.

Data Rx—Amount of data received, in packets and bytes.

Errors Tx—Number of errors transmitted, in packets.

Errors Rx—Number of errors received, in packets.

Sample Output: show services l2tp multilink brief

```
user@host> show services l2tp multilink
Bundle ID Links Endpoint
      1   2 user@juniper.com
```

Sample Output: show services l2tp multilink detail

```
user@host> show services l2tp multilink detail
Bundle ID: 1
Links: 2, Bundle endpoint: user@juniper.com
Input MRRU: 1524, Output MRRU: 1524
Local ID Remote ID State Bundle Username
  46122  39307 Established      1 user1@juniper.com
  4254   39308 Established      1 user2@juniper.com
```

Sample Output: show services l2tp multilink statistics

```
user@host> show services l2tp multilink statistics
Bundle ID: 1
Links: 2, Bundle endpoint: user@juniper.com
Statistics since: Mon May 17 11:47:35 2004
      Packets Bytes
Control Tx      7   196
Control Rx      3    90
Data Tx         0     0
Data Rx         0     0
Errors Tx       0
Errors Rx       0
```

Sample Output: show services l2tp multilink extensive

```
user@host> show services l2tp multilink extensive
Bundle ID: 1
Links: 2, Bundle endpoint: user@juniper.com
Input MRRU: 1524, Output MRRU: 1524
Session local ID: 46122, Session remote ID: 39307
State: Established, Username: user1@juniper.com, Mode: dedicated
Local IP: 10.58.255.129:1701, Remote IP: 10.58.255.131:1701
Local name: router3, Remote name: router4
Session local ID: 4254, Session remote ID: 39308
State: Established, Username: user2@juniper.com, Mode: dedicated
Local IP: 10.1.255.1:1701, Remote IP: 10.1.255.2:1701
Local name: router1, Remote name: router2
Statistics since: Mon May 17 11:47:35 2004
      Packets Bytes
Control Tx      7   196
Control Rx      3    90
Data Tx         0     0
Data Rx         0     0
Errors Tx       0
Errors Rx       0
```

show services l2tp session

Syntax show services l2tp session <brief | detail | extensive | statistics>
 <interface *sp-fpc/pic/port*>
 <local-gateway *gateway-address*>
 <local-gateway-name *gateway-name*>
 <local-session-id *session-id*>
 <local-tunnel-id *tunnel-id*>
 <peer-gateway *gateway-address*>
 <peer-gateway-name *gateway-name*>
 <tunnel-group *group-name*>
 <user *user-name*>

Description Display a list of the active L2TP sessions.

Options none—Same as brief.

brief—(Default) Display one line of L2TP session information.

detail—(Optional) Display detailed L2TP session information, including IP addresses and names of the local and remote devices.

extensive—(Optional) Display very detailed L2TP session information, including negotiated and configured parameters, when the session was created, up time, idle time, and statistics.

statistics—(Optional) Display L2TP session statistics, including packet and byte counts for each session.

interface *sp-fpc/pic/port*—(Optional) Display L2TP session information for only the specified adaptive services interface.

local-gateway *gateway-address*—(Optional) Display L2TP session information for only the specified local gateway address.

local-gateway-name *gateway-name*—(Optional) Display L2TP session information for only the specified local gateway name.

local-session-id *session-id*—(Optional) Display L2TP session information for only the specified local session identifier.

local-tunnel-id *tunnel-id*—(Optional) Display L2TP session information for only the specified local tunnel identifier.

peer-gateway *gateway-address*—(Optional) Display L2TP session information for only the specified peer gateway address.

peer-gateway-name *gateway-name*—(Optional) Display L2TP session information for only the specified peer gateway name.

tunnel-group *group-name*—(Optional) Display L2TP session information for only the specified tunnel group. To display information about L2TP CPU and memory usage, you can include the tunnel group name in the show services service-sets memory-usage <*group-name*> and show services service-sets cpu-usage <*group-name*> commands.

user *user-name*—(Optional) Display L2TP session information for only the specified username.

Required Privilege Level view

Output Fields Interface—Name of an adaptive services interface.

Tunnel group—Name of a tunnel group.

Tunnel local ID—Identifier of the local end point of the tunnel, as assigned by the L2TP network server (LNS).

Session local ID—Identifier of the local end point of the L2TP session, as assigned by the LNS.

Session remote ID—Identifier of the remote end point of the L2TP session, as assigned by the L2TP access concentrator (LAC).

State—State of the L2TP session:

Established—The session is operating.

closed—The session is being closed.

destroyed—The session is being destroyed.

clean-up—The session is being cleaned up.

Ins-ic-accept-new—A new session is being accepted.

Ins-ic-idle—The session is created and is idle.

Ins-ic-reject-new—The new session is being rejected.

Ins-ic-wait-connect—The session is waiting for the peer's incoming call connected (ICCN) message.

Bundle—Bundle identifier. Indicates the session is part of a multilink bundle. Sessions that have a blank Bundle field are not participating in the Multilink Protocol. Sessions in a multilink bundle might belong to different L2TP tunnels. For L2TP output organized by bundle ID, issue the show services l2tp multilink extensive command.

Username—Name of the user logged in to the session.

Mode—Mode of the interface representing the session: shared or exclusive.

Local IP—IP address of local end point of the Point-to-Point Protocol (PPP) session.

Remote IP—IP address of remote end point of the PPP session.

Local name—Name of the LNS instance in which the session was created.

Remote name—Name of the LAC from which the session was created.

Local MRU—Maximum receive unit (MRU) setting of the local device, in bytes.

Remote MRU—MRU setting of the remote device, in bytes.

Tx speed—Transmit speed of the physical PPP link, in bps.

Rx speed—Receive speed of the physical PPP link, in bps.

Bearer type—Type of bearer enabled:

0—Might indicate that the call was not received over a physical link (for example, when the LAC and PPP are located in the same subsystem).

1—Digital access requested

2—Analog access requested

4—Asynchronous Transfer Mode (ATM) bearer support

Framing type—Type of framing enabled:

1—Synchronous framing

2—Asynchronous framing

LCP renegotiation—Whether Link Control Protocol (LCP) renegotiation is configured:
On or Off.

Authentication—Type of authentication algorithm used: Challenge Handshake Authentication Protocol (CHAP) or Password Authentication Protocol (PAP).

Interface ID—Identifier used to look up the logical interface for this session.

Interface unit—Logical interface for this session.

Call serial number—Unique serial number assigned to the call.

Create time—Date and time when the call was created.

Up time—Amount of time elapsed since the call became active, in hours, minutes, and seconds.

Idle time—Amount of time elapsed since the call became idle, in hours, minutes, and seconds.

Statistics since—Date and time when collection of the following statistics began:

Control Tx—Amount of control information transmitted, in packets and bytes.

Control Rx—Amount of control information received, in packets and bytes.

Data Tx—Amount of data transmitted, in packets and bytes.

Data Rx—Amount of data received, in packets and bytes.

Errors Tx—Number of errors transmitted, in packets.

Errors Rx—Number of errors received, in packets.

Sample Output: show services l2tp session brief

```
user@host> show services l2tp session brief
Interface: sp-1/2/0, Tunnel group: 1, Tunnel local ID: 51283
Session local ID  Session remote ID  State    Bundle  Username
62598            111  Established  5  user1@juniper_1.com
18396            110  Established  5  user2@juniper_2.com
54321            99   Established  user3@juniper.net
```

Sample Output: show services l2tp session detail

```
user@host> show services l2tp session detail
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID: 56793, Session remote ID: 53304
State: Established, Bundle ID: 5, Username: usr1@juniper_1.net, Mode: shared
Local IP: 10.128.11.1:1701, Remote IP: 10.128.11.2:1701
Local name: router-1, Remote name: router-2
```

```
Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID: 39962, Session remote ID: 53303
State: Established, Bundle ID: 5, Username: usr1@company.com, Mode: shared
Local IP: 10.128.11.1:1701, Remote IP: 10.128.11.2:1701
Local name: router-1, Remote name: router-2
```

Sample Output: show services l2tp session statistics

```
user@host> show services l2tp session statistics
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID: 56793, Session remote ID: 53304
State: Established, Bundle ID: 5, Username: usr1@juniper_1.net
Statistics since: Tue Mar 23 14:13:13 2004
      Packets    Bytes
Control Tx      4      88
Control Rx      2      28
Data Tx         0        0
Data Rx        458    29.0k
Errors Tx       0
Errors Rx       0
```

```
Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID: 39962, Session remote ID: 53303
State: Established, Bundle ID: 5, Username: usr1@company_dns.com
Statistics since: Tue Mar 23 14:13:15 2004
      Packets    Bytes
Control Tx      6     196
Control Rx      4     150
Data Tx         0        0
Data Rx         1      80
Errors Tx       0
Errors Rx       0
```

Sample Output: show services l2tp session extensive

```

user@host> show services l2tp session extensive
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID: 56793, Session remote ID: 53304
State: Established, Bundle ID: 5, Username: usr1@juniper_1.net, Mode: shared
Local IP: 10.128.1.1:1701, Remote IP: 10.128.1.2:1701
Local name: router-1, Remote name: router-2
Local MRU: 4000, Remote MRU: 1500, Tx speed: 64000, Rx speed: 64000
Bearer type: 2, Framing type: 1
LCP renegotiation: Off, Authentication: CHAP, Interface ID: unit_20
Interface unit: 20, Call serial number: 4137941434
Create time: Tue Mar 23 14:13:15 2004, Up time: 01:16:41
Idle time: 00:00:00
Statistics since: Tue Mar 23 14:13:13 2004
      Packets   Bytes
Control Tx      4     88
Control Rx      2     28
Data Tx         0      0
Data Rx       461   29.0k
Errors Tx       0
Errors Rx       0

Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID: 39962, Session remote ID: 53303
State: Established, Bundle ID: 5, Username: usr1@company.com, Mode: shared
Local IP: 10.128.11.1:1701, Remote IP: 10.128.11.2:1701
Local name: router-1, Remote name: router-2
Local MRU: 4470, Remote MRU: 4470, Tx speed: 155000000, Rx speed: 155000000
Bearer type: 2, Framing type: 1
LCP renegotiation: Off, Authentication: CHAP, Interface ID: unit_31
Interface unit: 31, Call serial number: 4137941433
Create time: Tue Mar 23 14:13:17 2004, Up time: 01:16:39
Idle time: 01:16:36
Statistics since: Tue Mar 23 14:13:15 2004
      Packets   Bytes
Control Tx      6    196
Control Rx      4    150
Data Tx         0      0
Data Rx         1     80
Errors Tx       0
Errors Rx       0

```

See Also “Service Sets Operational Mode Commands” on page 383
 show services l2tp multilink on page 400.

show services l2tp summary

Syntax show services l2tp summary <interface *sp-fpc/pic/port*>

Description Display Layer 2 Tunneling Protocol (L2TP) summary information.

Options none—Display standard L2TP summary information.

interface sp-fpc/pic/port—(Optional) Display L2TP summary information for only the specified adaptive services interface.

Required Privilege Level view

Output Fields Tunnels—Number of tunnels established on the platform.

Sessions—Number of sessions established on the platform.

Errors—Number of errors.

Control—Amount of control information transmitted and received, in packets and bytes.

Data—Amount of data transmitted and received, in packets and bytes.

Sample Output: show services l2tp summary

```
user@host> show services l2tp summary
Tunnels: 2, Sessions: 2, Errors: 0
      Tx packets  Rx packets  Memory (bytes)
Control         6k         9k         688k
Data           70k         70k         3054
```

Sample Output: show services l2tp summary interface

```
user@host> show services l2tp summary interface sp-1/2/0
Interface name: sp-1/2/0
Tunnels: 2, Sessions: 2
      Tx packets  Rx packets
Control         167         6
Data             1         5.0k
Errors           0         0
```

show services l2tp tunnel

```
show services l2tp tunnel <brief | detail | extensive | statistics>
<interface sp-fpc/pic/port>
<local-gateway gateway-address>
<local-gateway-name gateway-name>
<local-tunnel-id tunnel-id>
<peer-gateway gateway-address>
<peer-gateway-name gateway-name>
<tunnel-group group-name>
```

Description Display a list of active Layer 2 Tunneling Protocol (L2TP) tunnels.

Options none—Same as brief.

brief—(Default) Display brief L2TP tunnel information.

detail—(Optional) Display detailed L2TP tunnel information.

extensive—(Optional) Display very detailed L2TP tunnel information.

statistics—(Optional) Display L2TP tunnel statistics.

interface *sp-fpc/pic/port*—(Optional) Display L2TP tunnel information for only the specified adaptive services interface.

local-gateway *gateway-address*—(Optional) Display L2TP tunnel information for only the specified local gateway address.

local-gateway-name *gateway-name*—(Optional) Display L2TP tunnel information for only the specified local gateway name.

local-tunnel-id *tunnel-id*—(Optional) Display L2TP tunnel information for only the specified local tunnel identifier.

peer-gateway *gateway-address*—(Optional) Display L2TP tunnel information for only the specified peer gateway address.

peer-gateway-name *gateway-name*—(Optional) Display L2TP tunnel information for only the specified peer gateway name.

tunnel-group *group-name*—(Optional) Display L2TP tunnel information for only the specified tunnel group.

Required Privilege Level view

Output Fields

- Interface—Name of an adaptive services interface.
- Tunnel group—Name of a tunnel group.
- Local ID—Numeric identifier of the local end point of the tunnel, as assigned by the L2TP network server (LNS).
- Remote ID—Numeric identifier of the remote end point of the tunnel, as assigned by the L2TP access concentrator (LAC).
- Sessions—Number of L2TP sessions established through the tunnel.
- State—State of the L2TP tunnel:
 - cc_responder_accept_new—The tunnel has received and accepted the start control connection request (SCCRQ).
 - cc_responder_reject_new—The tunnel has received and rejected the SCCRQ.
 - cc_responder_idle—The Tunnel is just created.
 - cc_responder_wait_ctl_conn—The tunnel has sent the start control connection response (SCCRP) and waits for the start control connection connected (SCCCN) message.
 - clean-up—The tunnel is being cleaned up.
 - closed—The tunnel is being closed.
 - destroyed—The tunnel is being destroyed.
 - Established—The tunnel is operating.
 - Terminate—The tunnel is terminating.
- Local IP—IP address of the local end point of the tunnel.
- Remote IP—IP address of the peer end point of the tunnel.
- Local name—Name used for local tunnel end point during tunnel negotiation.
- Remote name—Name used for remote tunnel end point during tunnel negotiation.
- Max sessions—Maximum number of sessions that can be established on this tunnel.
- Window size—Number of control messages that can be sent without receipt of an acknowledgement.
- Hello interval—Interval between the transmission of hello messages, in seconds.
- Create time—Date and time when the tunnel was created.
- Up time—Amount of time elapsed since the tunnel became active, in hours, minutes, and seconds.

Idle time—Amount of time elapsed since the tunnel became idle, in hours, minutes, and seconds.

Statistics since—Date and time when collection of the following statistics began:

Control Tx—Amount of control information transmitted, in packets and bytes.

Control Rx—Amount of control information received, in packets and bytes.

Data Tx—Amount of data transmitted, in packets and bytes.

Data Rx—Amount of data received, in packets and bytes.

Errors Tx—Number of errors transmitted, in packets.

Errors Rx—Number of errors received, in packets.

Sample Output: show services l2tp tunnel brief

```
user@host> show services l2tp tunnel brief
Interface: sp-1/2/0, Tunnel group: group1
Local ID Remote ID Remote IP Sessions State
62746 16930 192.168.1.2:1701 1 Established

Interface: sp-1/2/0, Tunnel group: group_company_dns
Local ID Remote ID Remote IP Sessions State
37266 36217 192.168.11.2:1701 1 Established
```

Sample Output: show services l2tp tunnel detail

```
user@host> show services l2tp tunnel detail
Interface: sp-1/3/0, Tunnel group: 1
Tunnel local ID: 10673, Tunnel remote ID: 32216
Local IP: 10.58.255.129:1701, Remote IP: 10.58.255.131:1701
Local name: router-1, Remote name: router-2
```

Sample Output: show services l2tp tunnel statistics

```
user@host> show services l2tp tunnel statistics
Interface: sp-1/2/0, Tunnel group: group1
Tunnel local ID: 62746, Tunnel remote ID: 16930
Sessions: 1, State: Established
Statistics since: Tue Mar 23 14:13:13 2004
Packets Bytes
Control Tx 80 1152
Control Rx 3 272
Data Tx 0 0
Data Rx 447 28.0k
Errors Tx 0
Errors Rx 0

Interface: sp-1/2/0, Tunnel group: group_company_dns
Tunnel local ID: 37266, Tunnel remote ID: 36217
Sessions: 1, State: Established
Statistics since: Tue Mar 23 14:13:13 2004
Packets Bytes
Control Tx 81 1164
Control Rx 3 273
Data Tx 0 0
Data Rx 1 80
Errors Tx 0
Errors Rx 0
```

Sample Output: show services l2tp tunnel extensive

```

user@host> show services l2tp tunnel extensive
Interface: sp-1/2/0, Tunnel group: group1
Tunnel local ID: 62746, Tunnel remote ID: 16930
Remote IP: 10.128.1.2:1701
Sessions: 1, State: Established
Local IP: 10.128.1.1:1701
Local name: router-1, Remote name: router-2
Max sessions: 50, Window size: 32, Hello interval: 60
Create time: Tue Mar 23 14:13:15 2004, Up time: 01:14:58
Idle time: 00:00:07
Statistics since: Tue Mar 23 14:13:13 2004
      Packets  Bytes
Control Tx      80  1152
Control Rx       3   272
Data Tx          0     0
Data Rx         450  28.0k
Errors Tx        0
Errors Rx        0
    
```

```

Interface: sp-1/2/0, Tunnel group: group_company_dns
Tunnel local ID: 37266, Tunnel remote ID: 36217
Remote IP: 10.128.11.2:1701
Sessions: 1, State: Established
Local IP: 10.128.11.1:1701
Local name: router-1, Remote name: router-2
Max sessions: unlimited, Window size: 32, Hello interval: 60
Create time: Tue Mar 23 14:13:15 2004, Up time: 01:14:59
Idle time: 01:14:55
Statistics since: Tue Mar 23 14:13:13 2004
      Packets  Bytes
Control Tx      81  1164
Control Rx       3   273
Data Tx          0     0
Data Rx          1    80
Errors Tx        0
Errors Rx        0
    
```

show services l2tp user

Syntax	show services l2tp user <brief detail extensive> <user <i>username</i> >
Description	Display a list of active Layer 2 Tunneling Protocol (L2TP) users.
Options	<p>none—Same as brief.</p> <p>brief—(Default) Display brief L2TP user information.</p> <p>detail—(Optional) Display detailed L2TP user information.</p> <p>extensive—(Optional) Display very detailed L2TP user information.</p> <p>user <i>username</i>—(Optional) Display L2TP user information for only the specified username.</p>
Required Privilege Level	view
Output Fields	<p>Interface—Name of an adaptive services interface.</p> <p>Tunnel group—Name of a tunnel group.</p> <p>Tunnel local ID—Local identifier of the tunnel, as assigned by the L2TP network server (LNS).</p> <p>Session local ID—Local identifier of the session, as assigned by the L2TP network server (LNS).</p> <p>Session remote ID—Remote identifier of the session, as assigned by the L2TP access concentrator (LAC).</p> <p>State—State of the L2TP session:</p> <p> Established—The session is operating.</p> <p> closed—The session is being closed.</p> <p> destroyed—The session is being destroyed.</p> <p> clean-up—The session is being cleaned up.</p> <p> Ins-ic-accept-new—A new session is being accepted.</p> <p> Ins-ic-idle—The session is created and is idle.</p> <p> Ins-ic-reject-new—The new session is being rejected.</p> <p> Ins-ic-wait-connect—The session is waiting for the peer's incoming call connected (ICCN) message.</p> <p>Username—Name of the user logged in to the session.</p> <p>Mode—Mode of the interface representing the session: shared or exclusive.</p>

Local IP—IP address of the local end point of the tunnel.

Remote IP—IP address of the peer end point of the tunnel.

Local name—Name of the local device.

Remote name—Name of the remote device.

Local MRU—Maximum receive unit (MRU) setting of the local device, in bytes.

Remote MRU—MRU setting of the remote device, in bytes.

Tx speed—Transmit speed of the tunnel session, in bps.

Rx speed—Receive speed of the tunnel session, in bps.

Bearer type—Type of bearer enabled:

0—Might indicate that the call was not received over a physical link (for example, when the LAC and PPP are located in the same subsystem).

1—Digital access requested

2—Analog access requested

4—Asynchronous Transfer Mode (ATM) bearer support

Framing type—Type of framing enabled:

1—Synchronous framing

2—Asynchronous framing

LCP renegotiation—Whether Link Control Protocol (LCP) renegotiation is configured:
On or Off.

Authentication—Type of authentication algorithm used: Challenge Handshake Authentication Protocol (CHAP) or Password Authentication Protocol (PAP).

Interface ID—Name of the logical unit.

Interface unit—Logical unit number.

Call serial number—Unique serial number assigned to the call.

Create time—Date and time when the call was created.

Up time—Amount of time elapsed since the call became active, in hours, minutes, and seconds.

Idle time—Amount of time elapsed since the call became idle, in hours, minutes, and seconds.

Statistics since—Date and time when collection of the following statistics began:

Control Tx—Amount of control information transmitted, in packets and bytes.

Control Rx—Amount of control information received, in packets and bytes.

Data Tx—Amount of data transmitted, in packets and bytes.

Data Rx—Amount of data received, in packets and bytes.

Errors Tx—Number of errors transmitted, in packets.

Errors Rx—Number of errors received, in packets.

Sample Output: show services l2tp user brief

```
user@host> show services l2tp session brief
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID Session remote ID State Username
56793 53304 Established usr1@juniper_1.net

Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID Session remote ID State Username
39962 53303 Established usr1@company_dns.com
```

Sample Output: show services l2tp user detail

```
user@host> show services l2tp session detail
Interface: sp-1/3/0, Tunnel group: 1, Tunnel local ID: 10673
Session local ID: 26231, Session remote ID: 54391
State: Established, Username: user@company.com, Mode: shared
Local IP: 10.58.255.129:1701, Remote IP: 10.58.255.131:1701
Local name: router-1, Remote name: router-2
```

Sample Output: show services l2tp user statistics

```
user@host> show services l2tp session statistics
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID: 56793, Session remote ID: 53304
State: Established, Username: usr1@juniper_1.net
Statistics since: Tue Mar 23 14:13:13 2004
      Packets  Bytes
Control Tx      4    88
Control Rx      2    28
Data Tx         0     0
Data Rx        458  29.0k
Errors Tx       0
Errors Rx       0

Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID: 39962, Session remote ID: 53303
State: Established, Username: usr1@company_dns.com
Statistics since: Tue Mar 23 14:13:15 2004
      Packets  Bytes
Control Tx      6    196
Control Rx      4    150
Data Tx         0     0
Data Rx         1     80
Errors Tx       0
Errors Rx       0
```

Sample Output: show services l2tp user extensive

```

user@host> show services l2tp session extensive
Interface: sp-1/2/0, Tunnel group: group1, Tunnel local ID: 62746
Session local ID: 56793, Session remote ID: 53304
State: Established, Username: usr1@juniper_1.net, Mode: shared
Local IP: 10.128.1.1:1701, Remote IP: 10.128.1.2:1701
Local name: router-1, Remote name: router-2
Local MRU: 4000, Remote MRU: 1500, Tx speed: 64000, Rx speed: 64000
Bearer type: 2, Framing type: 1
LCP renegotiation: Off, Authentication: CHAP, Interface ID: unit_20
Interface unit: 20, Call serial number: 4137941434
Create time: Tue Mar 23 14:13:15 2004, Up time: 01:16:41
Idle time: 00:00:00
Statistics since: Tue Mar 23 14:13:13 2004
      Packets    Bytes
Control Tx      4      88
Control Rx      2      28
Data Tx         0       0
Data Rx        461    29.0k
Errors Tx       0
Errors Rx       0
    
```

```

Interface: sp-1/2/0, Tunnel group: group_company_dns, Tunnel local ID: 37266
Session local ID: 39962, Session remote ID: 53303
State: Established, Username: usr1@company_dns.com, Mode: shared
Local IP: 10.128.11.1:1701, Remote IP: 10.128.11.2:1701
Local name: router-1, Remote name: router-2
Local MRU: 4470, Remote MRU: 4470, Tx speed: 155000000,
      Rx speed: 155000000
Bearer type: 2, Framing type: 1
LCP renegotiation: Off, Authentication: CHAP, Interface ID: unit_31
Interface unit: 31, Call serial number: 4137941433
Create time: Tue Mar 23 14:13:17 2004, Up time: 01:16:39
Idle time: 01:16:36
Statistics since: Tue Mar 23 14:13:15 2004
      Packets    Bytes
Control Tx      6     196
Control Rx      4     150
Data Tx         0       0
Data Rx         1      80
Errors Tx       0
Errors Rx       0
    
```