



## Broadband IPv6 Counter Support at LNS

---

- [Finding Feature Information, page 1](#)
- [Information About Broadband IPv6 Counter Support at LNS, page 1](#)
- [How to Verify Broadband IPv6 Counter Support at LNS, page 2](#)
- [Configuration Examples for Broadband IPv6 Counter Support at LNS, page 4](#)
- [Additional References, page 5](#)
- [Feature Information for Broadband IPv6 Counter Support at LNS, page 6](#)

## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see [Bug Search Tool](#) and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to [www.cisco.com/go/cfn](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## Information About Broadband IPv6 Counter Support at LNS

### Broadband IPv6 Counter Support at LNS

This feature provides support for broadband PPP IPv6 sessions at the layer 2 tunneling protocol (L2TP) network server (LNS). The sessions are forwarded by L2TP access concentrator (LAC) using layer 2 tunneling protocol L2TP over IPv6.

This feature is enabled automatically when the user configures LNS and enables IPv6.

# How to Verify Broadband IPv6 Counter Support at LNS

## Verifying Broadband IPv6 Counter Support at the LNS

This feature is enabled automatically when the user configures LNS and enables IPv6. To verify information about this feature, you can use any or all of the following optional commands as needed.

### SUMMARY STEPS

1. **enable**
2. **show l2tp session** [all | packets [ipv6] | sequence | state | [brief | circuit | interworking] [hostname]] [ip-addr ip-addr[vcid vcid] | tunnel{id local-tunnel-id local-session-id| remote-name remote-tunnel-name local-tunnel-name} | username username | vcid vcid]
3. **show l2tp tunnel** [all | packets [ipv6] | state | summary | transport] [id local-tunnel-id | local-name local-tunnel-name remote-tunnel-name| remote-name remote-tunnel-name local-tunnel-name]
4. **show l2tun session** [l2tp | pptp] [all [filter] | brief [filter] [hostname] | circuit [filter] [hostname] | interworking [filter] [hostname] | packets ipv6] [filter] | sequence [filter] | state [filter]]
5. **show vpdn session** [l2f | l2tp | pptp] [all | packets [ipv6] | sequence | state [filter]]
6. **show vpdn tunnel** [l2f | l2tp | pptp] [all [filter] | packets ipv6] [filter] | state [filter] | summary [filter] | transport[filter]]

### DETAILED STEPS

|               | Command or Action                                                                                                                                                                                                                                                                                                                              | Purpose                                                                                                                   |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | <b>enable</b><br><br><b>Example:</b><br>Router> enable                                                                                                                                                                                                                                                                                         | Enables privileged EXEC mode.<br><br><ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul> |
| <b>Step 2</b> | <b>show l2tp session</b> [all   packets [ipv6]   sequence   state   [brief   circuit   interworking] [hostname]] [ip-addr ip-addr[vcid vcid]   tunnel{id local-tunnel-id local-session-id  remote-name remote-tunnel-name local-tunnel-name}   username username   vcid vcid]<br><br><b>Example:</b><br>Router# show l2tp session packets ipv6 | Displays information about L2TP sessions.                                                                                 |
| <b>Step 3</b> | <b>show l2tp tunnel</b> [all   packets [ipv6]   state   summary   transport] [id local-tunnel-id   local-name local-tunnel-name remote-tunnel-name  remote-name remote-tunnel-name local-tunnel-name]                                                                                                                                          | Displays details about L2TP tunnels.                                                                                      |

|               | Command or Action                                                                                                                                                                                                                                                                              | Purpose                                                                                                 |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|               | <b>Example:</b><br><pre>Router# show l2tp tunnel packets ipv6</pre>                                                                                                                                                                                                                            |                                                                                                         |
| <b>Step 4</b> | <b>show l2tun session</b> [l2tp   pptp] [all [filter]   brief [filter] [hostname]   circuit [filter] [hostname]   interworking [filter] [hostname]   packets ipv6] [filter]   sequence [filter]   state [filter]]<br><br><b>Example:</b><br><pre>Router# show l2tun session packets ipv6</pre> | Displays the current state of Layer 2 sessions and protocol information about L2TP control channels.    |
| <b>Step 5</b> | <b>show vpdn session</b> [l2f   l2tp   pptp] [all   packets ipv6]   sequence   state [filter]]<br><br><b>Example:</b><br><pre>Router# show vpdn session packets ipv6</pre>                                                                                                                     | Displays session information about active Layer 2 sessions for a virtual private dialup network (VPDN). |
| <b>Step 6</b> | <b>show vpdn tunnel</b> [l2f   l2tp   pptp] [all [filter]   packets ipv6] [filter]   state [filter]   summary [filter]   transport[filter]]<br><br><b>Example:</b><br><pre>Router# show vpdn tunnel packets ipv6</pre>                                                                         | Displays information about active Layer 2 tunnels for a VPDN.                                           |

# Configuration Examples for Broadband IPv6 Counter Support at LNS

## Examples: Verifying Broadband IPv6 Counter Support at the LNS

### Example: show l2tp session Command

The **show l2tp session** command used with the **packets** and **ipv6** keywords displays information about IPv6 packets and byte counts in an L2TP session.

```
Router# show l2tp session packets ipv6
```

```
L2TP Session Information Total tunnels 1 sessions 1
```

| LocID | RemID | TunID | Pkts-In  | Pkts-Out | Bytes-In    | Bytes-Out   |
|-------|-------|-------|----------|----------|-------------|-------------|
| 16791 | 53352 | 27723 | 30301740 | 30301742 | 20159754280 | 20523375360 |

### Example: show l2tp tunnel Command

The **show l2tp tunnel** command used with the **packets** and **ipv6** keywords displays information about IPv6 packet statistics and byte counts in L2TP tunnels.

```
Router# show l2tp tunnel packets ipv6
```

```
L2TP Tunnel Information Total tunnels 1 sessions 1
```

| LocTunID | Pkts-In  | Pkts-Out | Bytes-In    | Bytes-Out   |
|----------|----------|----------|-------------|-------------|
| 27723    | 63060379 | 63060383 | 39400320490 | 40157045438 |

### Example: show l2tun session Command

The **show l2tun session** command used with the **packets** and **ipv6** keywords displays information about IPv6 packet statistics and byte counts in an L2TUN session.

```
Router# show l2tun session packets ipv6
```

```
L2TP Session Information Total tunnels 1 sessions 1
```

| LocID | RemID | TunID | Pkts-In  | Pkts-Out | Bytes-In    | Bytes-Out   |
|-------|-------|-------|----------|----------|-------------|-------------|
| 16791 | 53352 | 27723 | 31120707 | 31120708 | 21285014938 | 21658462236 |

### Example: show vpdn session Command

The **show vpdn session** command used with the **l2tp**, **packets**, and **ipv6** keywords displays session information about IPv6 packet statistics and byte counts in an active layer 2 session for a VPDN.

```
Router# show vpdn session l2tp packets ipv6
```

```
L2TP Session Information Total tunnels 1 sessions 1
```

| LocID | RemID | TunID | Pkts-In  | Pkts-Out | Bytes-In    | Bytes-Out   |
|-------|-------|-------|----------|----------|-------------|-------------|
| 16791 | 53352 | 27723 | 35215536 | 35215538 | 22616342688 | 23038929320 |

## Example: show vpdn tunnel Command

The **show vpdn tunnel** command used with the **l2tp**, **packets**, and **ipv6** keywords displays session information about IPv6 packet statistics and byte counts in an active layer 2 tunnel for a VPDN.

```
Device# show vpdn tunnel l2tp packets ipv6
L2TP Tunnel Information Total tunnels 1 sessions 1
LocTunID   Pkts-In   Pkts-Out   Bytes-In   Bytes-Out
27723      61422447  61422451   37149801922 37886871686
```

## Additional References

### Related Documents

| Related Topic                    | Document Title                                               |
|----------------------------------|--------------------------------------------------------------|
| IPv6 addressing and connectivity | <i>IPv6 Configuration Guide</i>                              |
| Cisco IOS commands               | <a href="#">Cisco IOS Master Commands List, All Releases</a> |
| IPv6 commands                    | <a href="#">Cisco IOS IPv6 Command Reference</a>             |
| Cisco IOS IPv6 features          | <a href="#">Cisco IOS IPv6 Feature Mapping</a>               |

### Standards and RFCs

| Standard/RFC  | Title |
|---------------|-------|
| RFCs for IPv6 |       |

### MIBs

| MIB | MIBs Link                                                                                                                                                                                                                  |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL:<br><br><a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a> |

**Technical Assistance**

| Description                                                                                                                                                                                                                                                                                                                                                                           | Link                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password. | <a href="http://www.cisco.com/cisco/web/support/index.html">http://www.cisco.com/cisco/web/support/index.html</a> |

## Feature Information for Broadband IPv6 Counter Support at LNS

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to [www.cisco.com/go/cfn](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

**Table 1: Feature Information for Broadband IPv6 Counter Support at LNS**

| Feature Name                          | Releases                 | Feature Information                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Broadband IPv6 Counter Support at LNS | Cisco IOS XE Release 2.6 | <p>This feature provides support for broadband PPP IPv6 sessions at the L2TP LNS. The sessions are forwarded by LAC using layer 2 tunneling protocol L2TP over IPv4.</p> <p>The following commands were introduced or modified: <b>show l2tp session</b>, <b>show l2tp tunnel</b>, <b>show l2tun session</b>, <b>show vpdn session</b>, <b>show vpdn tunnel</b>.</p> |