



# Broadband IPv6 Counter Support at LNS

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## 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> <b>Example:</b> <pre>Router&gt; enable</pre>	Enables privileged EXEC mode. <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] <b>Example:</b> <pre>Router# show l2tp session packets ipv6</pre>	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] <b>Example:</b> <pre>Router# show l2tp tunnel packets ipv6</pre>	Displays details about L2TP tunnels.
<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]] <b>Example:</b> <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]] <b>Example:</b> <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]] <b>Example:</b>	Displays information about active Layer 2 tunnels for a VPDN.

	Command or Action	Purpose
	Router# show vpdn tunnel packets ipv6	

# 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>
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: <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>

