

Chapter 13

Monitoring L2TP Dial-Out

This chapter describes how to monitor the configuration, status, and statistics for the Layer 2 Tunneling Protocol (L2TP) dial-out feature.

Monitoring Chassis-wide Configuration for L2TP Dial-out

Purpose To display the chassis-wide configuration, operational state, and statistics for L2TP dial-out.

This command displays aspects of the dial-out state machine and details about the dial-out routes themselves. This section presents sample output. The actual output on your router may differ significantly.

Action To display chassis-wide configuration, operational state, and statistics for L2TP dial-out:

```
host1#show l2tp dial-out
Operational status: inService
Connecting timer value: 30 seconds
Dormant timer value: 300 seconds
```

To display detailed chassis-wide configuration information:

```
host1#show l2tp dial-out detail
Dial-out Chassis Configuration and Operational Status
  Chassis operational status :    inService
  Dormant timeout           :    30 seconds
  Connecting timeout        :    30 seconds

Dial-out Chassis Statistics
  Current sessions:                0
  Maximum sessions:                0
  Current sessions in the process of connecting: 0
  Maximum sessions connecting at one time: 0
  Current sessions pending:        0
  Maximum sessions pending:        0
  Current targets inhibited:        0
  Maximum targets inhibited:        0
  Authentication grant for nonexistent session: 0
  Authentication deny for nonexistent session: 0

Dial-out Virtual router statistics
  Virtual routers active:          0
  Virtual routers created:         0
  Virtual routers removed:         0
```

```

Virtual routers in init-pending state:      0
Virtual routers in init-failed state:       0
Virtual routers in down state:              0
Virtual routers in in-service state:        0
IP Discarded trigger frames:                0
Trigger frames received for unknown route:  0
Sessions in dormant state:                  0
Sessions in pending state:                  0
Sessions in authenticating state:           0
Sessions in connecting state:               0
Sessions in in-service state:               0
Sessions in inhibited state:                0
Sessions in post-inhibited state:           0
Sessions in failed state:                   0

Dial-out target statistics
Targets active:                             0
Targets created:                           0
Targets removed:                           0
Targets in down state:                     0
Targets in inhibited state:                 0
Targets in in-service state:               0
Triggers discarded:                         0

Dial-out session statistics
Sessions active:                            0
Sessions created:                           0
Sessions removed:                           0
Sessions reset:                             0
Triggers received:                         0
Triggers enqueued:                         0
Triggers discarded:                         0
Triggers forwarded:                        0
Triggers max enqueued:                     0
Authentication requests:                   0
No resources for authentication:             0
Authentication grants:                     0
Authentication Denies:                     0
Dial-outs requested:                       0
Dial-outs rejected:                        0
Dial-outs established:                     0
Dial-outs timed out:                       0
Dial-outs torn down:                       0

```

To display summary information for chassis-wide configuration:

```

host1#show l2tp dial-out summary
Virtual routers in init pending state :      0
Virtual routers in init failed state :       0
Virtual routers in down state :              0
Virtual routers in inService state :         0
Targets in down state :                      0
Targets in inhibited state :                  0
Targets in inService state :                 0
Sessions in dormant state :                  0
Sessions in pending state :                  0
Sessions in authenticating state :           0
Sessions in connecting state :               0
Sessions in inService state :                0
Sessions in inhibited state :                 0
Sessions in postInhibited state :            0
Sessions in failed state :                   0

```

To display information about the operational or administrative state:

```
host1#show l2tp dial-out state inService
```

Meaning Table 40 lists the **show l2tp dial-out** command output fields.

Table 40: show l2tp dial-out Output Fields

Field Name	Field Description
Operational status	Current operational status of the chassis
Connecting timer value	Configuration of the connecting timeout
Dormant timer valu	Configuration of the dormant timeout
Dial-out Chassis Statistics	Statistics at the chassis level
Current sessions	Total number of session currently active on the chassis
Maximum sessions	Highest value of current sessions recorded on the chassis since the last router restart
Current sessions in the process of connecting	Sessions currently in the connecting state
Maximum sessions connecting at one time	Highest number of sessions recorded on the chassis at the same time since the last router restart
Current sessions pending	Sessions in the pending state
Maximum sessions pending	Highest number of sessions recorded in the pending state since the last router restart
Current targets inhibited	Targets currently in the inhibited state
Maximum targets inhibited	Highest value of targets recorded in the inhibited state since the last router restart
Authentication grant for nonexistent session	Number of authentication requests granted to nonexistent sessions
Authentication deny for nonexistent session	Number of authentication requests denied to nonexistent sessions
Dial-out Virtual router statistics	Statistics at the virtual router level
Virtual routers active	VRs in use by the state machine
Virtual routers created	VRs that have been used by the state machine
Virtual routers removed	VRs no longer used by the state machine
Virtual routers in init-pending state	VRs in the initializationPending state
Virtual routers in init-failed state	VRs in the initializationFailed state
Virtual routers in down state	VRs in the down state
Virtual routers in in-service state	VRs in the inService state
IP Discarded trigger frames	Trigger frames that IP discarded
Trigger frames received for unknown route	Trigger frames received for an unknown route
Sessions in dormant state	Sessions on the VR that are in the dormant state
Sessions in pending state	Sessions on the VR that are in the pending state
Sessions in authenticating state	Sessions on the VR that are in the authenticating state

Table 40: show l2tp dial-out Output Fields (continued)

Field Name	Field Description
Sessions in connecting state	Sessions on the VR that are in the connecting state
Sessions in in-service state	Sessions on the VR that are in the inService state
Sessions in inhibited state	Sessions on the VR that are in the inhibited state
Sessions in post-inhibited state	Sessions on the VR that are in the postInhibited state
Sessions in failed state	Sessions on the VR that are in the failed state
Dial-out target statistics	Statistics at the route target level
Targets active	Current active targets
Targets created	All targets created
Targets removed	Targets deleted
Targets in down state	Targets in the down state
Targets in inhibited state	Targets in the inhibited state
Targets in in-service state	Targets in the inService state
Triggers discarded	Trigger packets discarded
Dial-out session statistics	Statistics at the session level
Sessions active	Currently active sessions
Sessions created	All sessions created
Sessions removed	Sessions deleted
Sessions reset	Sessions reset using the l2tp dial-out session reset command
Triggers received	Triggers received for dial-out sessions
Triggers enqueued	Triggers that have been put into the queue
Triggers discarded	Trigger packets discarded
Triggers forwarded	Trigger packets forwarded
Triggers max enqueued	Maximum number of triggers that have been enqueued simultaneously since the last router reset
Authentication requests	Authentication requests received
No resources for authentication	Authentication requests not processed because of insufficient resources
Authentication grants	Authentication requests granted
Authentication Denies	Authentication requests denied
Dial-outs requested	Outgoing calls requested for sessions
Dial-outs rejected	Outgoing call requests that were rejected
Dial-outs established	Successful outgoing calls before the connecting timer expired
Dial-outs timed out	Number of times the connecting timer expired
Dial-outs torn down	Successful outgoing calls that were terminated

Related Topics

- For detailed information about operational states, see *Dial-Out Operational States* on page 332

- **show l2tp dial-out** command
- **show l2tp dial-out virtual-router** command

Monitoring Status of Dial-out Sessions

Purpose Display the status of dial-out sessions.

This command displays aspects of the dial-out state machine and details about the dial-out routes themselves. This section presents sample output. The actual output on your router may differ significantly.

Action To display all sessions within the current virtual router context:

```
host1#show l2tp dial-out session
Session          Status
-----
10.10.1.1        connected
10.10.2.1        dormant
```

To display detailed information about a particular session, specify the trigger IP address for the session:

```
host1#show l2tp dial-out session 10.1.1.1
Session 10.1.1.1
Operational status: dormant
```

To display aggregate counts for dial-out sessions in each of the possible operational and administrative states:

```
host1#show l2tp dial-out session summary
```

To display detailed configuration, state, and statistics:

```
host1#show l2tp dial-out session detail
```

To display information about the operational or administrative state:

```
host1#show l2tp dial-out session state connecting
```

To display dial-out information across all virtual routers

```
host1#show l2tp dial-out session allVirtualRouters
```



NOTE: The level of a user's permission determines the use of the **allVirtualRouters** option. For example, if you have permission to view only the current virtual router, then that is all that is displayed when you enter a command.

Meaning Table 41 lists the **show l2tp dial-out session** command output fields.

Table 41: show l2tp dial-out session Output Fields

Field Name	Field Description
Session	IP address of the session

Table 41: show l2tp dial-out session Output Fields (continued)

Field Name	Field Description
Status	Current status of the session
Operational status	Current operational status of session

Related Topics

- For detailed information about operational states, see *Dial-Out Operational States* on page 332
- `show l2tp dial-out session` command

Monitoring Dial-out Targets within the Current VR Context

Purpose Display configured dial-out targets within the current virtual router context.

This command displays aspects of the dial-out state machine and details about the dial-out routes themselves. This section presents sample output. The actual output on your router may differ significantly.

Action To display general information for all targets within the virtual router:

```
host1:dialout#show l2tp dial-out target
Target      Status      Active Sessions
-----
10.10.1.1/16 up          14
10.1.1.0/24 up          10
```

To display detailed information about a particular target, specify the target IP address and mask:

```
host1:dialout#show l2tp dial-out target 10.1.1.0/24
Target 10.1.1.0/24
Operational status: up
Active sessions: 10
Total triggers: 127
Failed sessions: 2
Connected sessions: 8
```

To display aggregate counts for targets in each of the possible operational and administrative states:

```
host1:dialout#show l2tp dial-out target summary
```

To display detailed configuration, state, and statistics:

```
host1:dialout#show l2tp dial-out target detail
```

To display information about the operational or administrative state:

```
host1:dialout#show l2tp dial-out target state inService
```

To displays dial-out information across all virtual routers:

```
host1:dialout#show l2tp dial-out target allVirtualRouters
```



NOTE: The level of a user's permission determines the use of the **allVirtualRouters** option. For example, if you have permission to view only the current virtual router, then that is all that is displayed when you enter a command.

Meaning Table 42 lists the **show l2tp dial-out target** command output fields.

Table 42: show l2tp dial-out target Output Fields

Field Name	Field Description
Target	Address of the target
Status	Status of the connection to the target
Active Sessions	Currently active session to the target
Total triggers	Trigger packets received for the target
Failed sessions	Sessions that are currently in the failed state
Connected sessions	Sessions that are currently in the connected state

Related Topics

- For detailed information about operational states, see *Dial-Out Operational States* on page 332
- **show l2tp dial-out target** command

Monitoring Operational Status within the Current VR Context

Purpose Display dial-out state machine operational status and statistics within the current VR context.

This command displays aspects of the dial-out state machine and details about the dial-out routes themselves. This section presents sample output. The actual output on your router may differ significantly.

Action To display dial-out state machine operational status and statistics within the current VR context:

```
host1#show l2tp dial-out virtual-router
Dial-out Virtual Router Configuration and Operational Status
Virtual router host1:
  Virtual router operational status: inService
  Maximum trigger buffers per session: 0
```

To display aggregate counts for dial-out state machines in each of the possible operational and administrative states:

```
host1:dialout#show l2tp dial-out virtual-router summary
```

To display detailed configuration, state, and statistics:

```
host1:dialout#show l2tp dial-out virtual-router detail
```

To display information about the operational or administrative state:

```
host1:dialout#show l2tp dial-out virtual-router state down
```

To displays dial-out information across all virtual routers:

```
host1:dialout#show l2tp dial-out virtual-router allVirtualRouters
```



NOTE: The level of a user's permission determines the use of the **allVirtualRouters** option. For example, if you have permission to view only the current virtual router, then that is all that is displayed when you enter a command.

Meaning Table 43 lists the **show l2tp dial-out virtual-router** command output fields.

Table 43: show l2tp dial-out virtual-router Output Fields

Field Name	Field Description
Virtual router	Name of VR
Virtual router operational status	Operational status of the VR
Maximum trigger buffers per session	Maximum number of trigger packets held in buffer while the dial-out session is being established

Related Topics

- For detailed information about operational states, see *Dial-Out Operational States* on page 332
- **show l2tp dial-out virtual-router** command