L Commands

This chapter describes the Cisco NX-OS Multiprotocol Label Switching commands that begin with L.

l2vpn vfi context

To establish a Layer 2 VPN (L2VPN) virtual forwarding interface (VFI) between two or more separate networks, use the **l2vpn vfi context** command. To delete the VFI and the associated configuration, use the **no** form of this command.

l2vpn vfi context *context-name*

no l2vpn vfi context *context-name*

Syntax Description		
context-name	VFI context name. The range is from 0 to 65535.	

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
6.2.2	This command was introduced.

Usage Guidelines This command requires the MPLS Services license.

Examples This example shows how to establish an L2VPN VFI between two or more separate networks:

```
switch# configure terminal
switch(config)# l2vpn vfi context vpls80
switch(config-l2vpn-vfi)#
```

This example shows how to delete the VFI and the associated configuration:

```
switch(config-l2vpn-vfi)# no l2vpn vfi context vpls80
```

Related Commands

Command	Description
member pseudowire	Binds a static pseudowire to this VFI.

l2vpn xconnect context

To enter the Xconnect configuration mode and establish a Layer 2 VPN (L2VPN) context for identifying the two members in a Virtual Private Wire Service (VPWS), multi segment pseudowire, or local connect service, use the **l2vpn xconnect context** command. To delete the Xconnect context and the associated configuration, use the **no** form of this command.

> **l2vpn xconnect context** *context-name*

> **no l2vpn xconnect context** *context-name*

Syntax Description	*context-name*	Xconnect context name. The maximum range is 100 alphanumeric, case-sensitive characters.

Defaults   None

Command Modes   Global configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
6.2.2	This command was introduced.

Usage Guidelines   The context name argument is a unique per-interface identifier for this context.

This command requires the MPLS Services license.

Examples   This example shows how to enter Xconnect configuration mode and establish an L2VPN context for identifying the two members in a VPWS, multi segment pseudowire, or local connect service:

```
switch# configure terminal
switch(config)# l2vpn xconnect context XCON1
switch(config-xconnect)#
```

This example shows how to delete the Xconnect configuration:

```
switch(config-xconnect)# l2vpn xconnect context XCON1
switch(config-xconnect)#
```

Related Commands	Command	Description
	member pseudowire	Adds an active pseudowire to the XConnect context.
	remote link failure notification	Enables AToM MPLS remote link failure notification and shutdown.

label allocate global

To configure local label allocation filters for the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP), use the **label allocate global** command. To return to the default setting, use the **no** form of this command.

label allocate global {**all-routes** | **host-routers** | **prefix-list** *prefix-list*}

no label allocate global {**all-routes** | **host-routers** | **prefix-list** *prefix-list*}

Syntax Description		
all-routes	Specifies the allocation local labels for all routes.
host-routes	Specifies the allocation local labels for host routes only.
prefix-list	Specifies the prefix list for local label filtering.
prefix-list	IP prefix list.

Defaults	None

Command Modes	LDP configuration mode

SupportedUserRoles	network-admin vdc-admin

Command History	**Release**	**Modification**
	5.2(1)	This command was introduced.

Usage Guidelines	This command requires the MPLS Services license.

Examples

This example shows how to configure local label allocation filters for MPLS LDP:

```
switch# configure terminal
switch(config)# mpls ldp configuration
switch(config-ldp)# label allocate global prefix-list p1
switch(config-ldp)#
```

Related Commands	**Command**	**Description**
	mpls ldp configuration	Configures the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP).

link-management timers

To configure the link management hold timers, use the **link-management timers** command. To return to the default setting, use the **no** form of this command.

> **link-management timers** {**bandwidth-hold** *sec* | **periodic-flooding** *sec*}

> **no link-management timers**

Syntax Description

bandwidth-hold	Specifies the length of time that bandwidth is held for an RSVP path (setup) message while you wait for the corresponding RSVP Resv message to come back.
sec	Seconds. The range is from 1 to 300 seconds.
period-flooding	Specifies the link state information changes that do not trigger immediate action. For example, a change to the amount of allocated bandwidth that does not cross a threshold.
sec	Seconds. The range is from 0 to 3600 seconds. A value of 0 turns off periodic flooding. If you set this value from 1 to 29, it is treated as 30.

Defaults

Bandwidth hold is 15 seconds

Periodic flooding is 60 seconds

Command Modes

TE configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command requires the MPLS Services license.

Examples

This example shows how to configure the link management bandwidth hold timer:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# link management timers bandwidth-hold 200
switch(config-te)#
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

list (LSP attribute configuration mode)

To display the contents of the label switched path (LSP) attribute list, use the **list** command.

list

Syntax Description

This command has no arguments or keywords.

Command Modes

LSP attribute configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command requires the MPLS Services license.

Examples

This example shows how to display the content of the LSP attribute list:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# lsp attributes 1
switch(config-lsp-attr)# list
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

list (TE explicit-path configuration mode)

To display the contents of the explicit-path entries, use the **list** command.

list

Syntax Description   This command has no arguments or keywords.

Command Modes   TE explicit-path configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to display the content of the LSP attribute list:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# explicit-path name test
switch(config-lsp-attr)# list
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

load-interval

To configure the interval over which the input and output rates for the interface are averaged, use the **load-interval** command. To restore the system to its default condition, use the **no** form of this command.

> **load-interval** *seconds*

> **no load-interval**

Syntax Description	*seconds*	Length of time for which data is used to compute load statistics. The value is a multiple of 30, from 120 to 300 (120, 150, 180, and so on).

Defaults 300

Command Modes Interface configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines For a **tunnel-te interface**, the bandwidth command configures the initial tunnel bandwidth, which then can be adjusted by the auto bandwidth mechanism based on interface traffic statistics The load-interval command specifies how often the interface traffic statistics are calculated.

Examples This example shows how to configure the interval over which the input and output rates for the interface are averaged:

```
switch# configure terminal
switch(config)# interface tunnel-te 1
switch(config-if-te)# load-interval 180
switch(config-if-te)#
```

Related Commands

Command	Description
interface tunnel-te	Configures the traffic engineering (TE) interface.

lockdown

To disable reoptimization of the label switched path (LSP), use the **lockdown** command. To restore the system to its default condition, use the **no** form of this command.

> **lockdown**

> **no lockdown**

Syntax Description	This command has no arguments or keywords.

Command Modes	LSP attribute configuration mode

SupportedUserRoles	network-admin vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines	This command requires the MPLS Services license.

Examples

This example shows how to disable reoptimization of the LSP:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# lsp attributes 1
switch(config-lsp-attr)# lockdown
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

Cisco Nexus 7000 Series NX-OS MPLS Command Reference

logging events all

To configure the generation of system logs for all nontunnel TE events, use the **logging events all** command. To stop logging these system messages, use the **no** form of the command.

> **logging events all**

> **no logging events all**

Syntax Description   This command has no arguments or keywords.

Command Modes   TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Examples   The following example shows how to configure generation of system messages for all nontunnel events:.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging events all
switch(config-te)#
```

logging events frr-protection all

To configure the generation of system logs when an FRR event occurs, use the **logging events frr-protection all** command. To stop logging these system messages, use the **no** form of the command.

> **logging events frr-protection all**

> **no logging events frr-protection all**

Syntax Description   This command has no arguments or keywords.

Command Modes   TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines   No system message is logged if this feature is not configured.

Examples   The following example shows how to configure generation of system messages when an FRR event occurs:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging events frr-protection all
switch(config-te)#
```

logging events frr-protection backup

To configure the generation of system logs when a primary LSP is assigned an FRR backup tunnel, use the **logging events frr-protection backup** command. To stop logging these system messages, use the **no** form of the command.

logging events frr-protection backup

no logging events frr-protection backup

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

| Command Modes | TE global configuration (config-te). |

| Supported User Roles | network-admin |
| | vdc-admin |

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines

No system message is logged if this feature is not configured.

If this feature and FRR-ready logging are both configured, the initial backup assignment for a new primary LSP will generate two separate system logs.

Examples

The following example shows how to configure FRR backup assignment.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging events frr-protection backup
switch(config-te)#
```

logging events frr-protection primary active

To configure the generation of system logs when a protected primary LSP transitions to the FRR-active state, use the **logging events frr-protection primary active** command. To stop logging these system messages, use the **no** form of the command.

> **logging events frr-protection primary active**

> **no logging events frr-protection primary active**

Syntax Description   This command has no arguments or keywords.

Command Modes   TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines   No system message is logged if this feature is not configured.

Examples   The following example shows how to configure FRR-active logging.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging events frr-protection primary active
switch(config-te)#
```

logging events frr-protection primary ready

To configure the generation of system logs when a primary LSP moves to FRR-ready state on assigning a backup tunnel, use the **logging events frr-protection primary ready** command. To stop logging these system messages, use the **no** form of the command.

logging events frr-protection primary ready

no logging events frr-protection primary ready

Syntax Description	This command has no arguments or keywords.
Command Modes	TE global configuration (config-te).
Supported User Roles	network-admin vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines No system message is logged if this feature is not configured.

Examples The following example shows how to configure generation of system messages when a FRR event occurs:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging events frr-protection primary ready
switch(config-te)#
```

logging lsp

To log label switched path (LSP) traps, use the **logging lsp** command. To return to the default setting, use the **no** form of this command.

> **logging lsp {path-errors | preemption | reservation-errors | setups | teardowns} [*prefix-list*]**

> **no logging lsp {path-errors | preemption | reservation-errors | setups | teardowns}**

Syntax Description

path-errors	Specifies to log LSP path error traps.
preemption	Specifies to log LSP preemption traps.
reservation-errors	Specifies to log LSP reservation error traps.
setups	Specifies to log LSP establishment traps.
teardowns	Specifies to log LSP teardown traps.
prefix-list	(Optional) Prefix list.

Command Modes   TE configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to log LSP path error traps:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging lsp path-errors prefix-list1
switch(config-te)#
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

logging neighbor-changes

To log Label Distribution Protocol (LDP) neighbor state changes, use the **logging neighbor-changes** command. To return to the default setting, use the **no** form of this command.

logging neighbor-changes

no logging neighbor-changes

Syntax Description   This command has no arguments or keywords.

Defaults   None

Command Modes   LDP configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to log Label Distribution Protocol (LDP) neighbor state changes:

```
switch# configure terminal
switch(config)# mpls ldp configuration
switch(config-ldp)# logging neighbor-changes
switch(config-ldp)#
```

Related Commands

Command	Description
mpls ldp configuration	Configures the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP).

logging password configuration

To enable the display of events related to password configuration changes, use the **logging password configuration** command. To return to the default setting, use the **no** form of this command.

> **logging password configuration [rate-limit** *number***]**

> **no logging password configuration [rate-limit** *number***]**

Syntax Description		
	rate-limit	(Optional) Specifies rate limit logging.
	number	(Optional) Messages per minute. The range is from 1 to 60 messages per minute.

Defaults   None

Command Modes   LDP configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to enable the display of events related to password changes:

```
switch# configure terminal
switch(config)# mpls ldp configuration
switch(config-ldp)# logging password configuration rate-limit 20
switch(config-ldp)#
```

Related Commands	Command	Description
	mpls ldp configuration	Configures the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP).

logging password rollover

To enable password rollover events, use the **logging password rollover** command. To return to the default setting, use the **no** form of this command.

> **logging password rollover [rate-limit *number*]**

> **no logging password rollover [rate-limit *number*]**

Syntax Description	rate-limit	(Optional) Specifies the rate limit logging.
	number	(Optional) Messages per minute. The range is from 1 to 60 messages per minute.

Defaults   None

Command Modes   LDP configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to enable password rollover events:

```
switch# configure terminal
switch(config)# mpls ldp configuration
switch(config-ldp)# logging password rollover rate-limit 10
switch(config-ldp)#
```

Related Commands	Command	Description
	mpls ldp configuration	Configures the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP).

logging tunnel

To configure the tunnel specific traps logging, use the **logging tunnel** command. To return to the default setting, use the **no** form of this command.

> **logging tunnel {lsp-selection | path change}** [*prefix-list*]

> **no logging tunnel {lsp-selection | path change}**

Syntax Description

lsp-selection	Specifies the log tunnel LSP selection traps.
path change	Specifies the log tunnel LSP path change traps.
prefix-list	(Optional) Prefix list.

Command Modes   TE configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to specify the log tunnel LSP selection traps.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging tunnel lsp-selection prefix-list1
switch(config-te)#
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).

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logging tunnel state

To configure the generation of system logs when a TE tunnel changes operational state, use the **logging tunnel state** command. To stop logging these system messages, use the **no** form of the command.

logging tunnel state

no logging tunnel state

Syntax Description   This command has no arguments or keywords.

Command Modes   TE interface configuration (config-te-if)

TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines   No system message is logged if this feature is not configured.

This feature can be configured either for an individual TE tunnel or all the TE tunnels.

Examples   This example shows how to configure tunnel state logging for an individual TE tunnel.

```
switch# configure terminal
switch(config)# interface tunnel-te number
switch(config-te-if)# logging tunnel state
switch(config-te-if)#
```

logging tunnel reoptimize

To configure the generation of system logs when a TE tunnel is re-optimized successfully, use the **logging tunnel reoptimize** command.

> **logging tunnel reoptimize**

Syntax Description   This command has no arguments or keywords.

Command Modes   TE interface configuration (config-te-if)

TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines   No system message is logged if this feature is not configured.

This feature can be configured either for an individual TE tunnel or all the TE tunnels.

No system message is logged if the reoptimization attempt is abandoned before completion or if the reoptimization attempt does not result in a better path than the current one.

Examples   The following example shows how to configure system logs for an individual TE tunnel when it successfully reoptimizes:

```
switch# configure terminal
switch(config)# interface tunnel-te number
switch(config-te-if)# logging tunnel reoptimize
switch(config-te-if)#
```

logging tunnel reroute

To configure the generation of system logs when a TE tunnel's reroute pending state changes, use the **logging tunnel reroute** command. To stop logging these system messages, use the **no** form of the command.

> **logging tunnel reroute**

> **no logging tunnel reroute**

Syntax Description This command has no arguments or keywords.

Command Modes TE interface configuration (config-te-if)

TE global configuration (config-te).

Supported User Roles network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines No system message is logged if this feature is not configured.

This feature can be configured either for an individual TE tunnel or all the TE tunnels.

Reroute pending state change messages are not logged if the tunnel exits reroute pending state by going down.

Examples This example shows how to configure system logs for all TE tunnels when their reroute pending state changes.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging tunnel reroute
switch(config-te)#
```

logging tunnel all

To configure the generation of system logs for all TE tunnel events, use the **logging tunnel all** command. To stop logging these system messages, use the **no** form of the command.

logging tunnel all

no logging tunnel all

Syntax Description   This command has no arguments or keywords.

Command Modes   TE interface configuration (config-te-if)

TE global configuration (config-te).

Supported User Roles   network-admin
vdc-admin

Command History

Release	Modification
7.3(0)D1(1)	This command was introduced.

Usage Guidelines   No system message is logged if this feature is not configured.

This feature can be configured either for an individual TE tunnel or all the TE tunnels.

Examples   This example shows how to configure system logs for all TE tunnels when any event occurs.

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# logging tunnel all
switch(config-te)#
```

lsp attribute

To configure an label switched path (LSP) attribute list, use the **lsp attribute** command.

lsp attribute *string*

Syntax Description	*string*	LSP attribute list that can be any case-sensitive, alphanumeric string up to 63 characters.

Defaults   None

Command Modes   TE configuration mode

SupportedUserRoles   network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines   This command requires the MPLS Services license.

Examples   This example shows how to configure an LSP attribute list:

```
switch# configure terminal
switch(config)# mpls traffic-eng configuration
switch(config-te)# lsp attribute 1
switch(config-lsp-attr)#
```

Related Commands

Command	Description
mpls traffic-eng configuration	Configures the Multiprotocol Label Switching (MPLS) Traffic Engineering Protocol (MPLS-TE).