

MPLS-LDP Configuration Mode Commands

Command Modes

The MPLS-LDP Configuration Mode is used to configure Label Distribution Protocol (LDP) specific parameters for MPLS-IP forwarding.

Exec > Global Configuration > Context Configuration > MPLS-IP Configuration > MPLS-LDP Configuration

configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-ldp)#`

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

Important For information on common commands available in this configuration mode, refer to the Common Commands chapter.

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- discovery, on page 2
- enable, on page 4
- router-id, on page 4
- session, on page 5

advertise-labels

Configures the Label Advertisement parameters.

Product

GGSN

P-GW

SAEGW

Privilege

Security Administrator, Administrator

Command Modes

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configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-ldp)#
```

Syntax Description

`[ no ] advertise-labels { explicit-null | implicit-null }`
`default advertise-labels`

no

Disables the label advertisement parameters.

default

Advertises the labels from the label space allocated for LDP protocol.

explicit-null

Advertises the Explicit NULL label for all the prefixes.

implicit-null

Advertises the Implicit NULL label for all the prefixes.

Usage Guidelines

Use this to configure advertisement of the Implicit NULL or Explicit NULL label for all the prefixes advertised by the system in this context.

Example

The following command configures the MPLS-IP forwarding to advertise the Explicit NULL label for all the prefixes:

`advertise-labels explicit-null`

The following command configures the MPLS-IP forwarding to advertise the Implicit NULL label for all the prefixes:

`advertise-labels implicit-null`

discovery

Configures the Label Distribution Protocol (LDP) neighbor discovery parameters.

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configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-ldp)#
```

Syntax Description

```
discovery { hello { hello-interval integer_value | hold-interval integer_value
 } | transport-address ipv4_addr }
default discovery hello
no discovery transport-address
```

default

Sets the LDP discovery hello interval at 5 seconds and hold interval at 15 seconds.

no

Disables the LDP neighbor discovery.

hello { hello-interval *integer_value* | hold-interval *integer_value* }

Configures the LDP Hello parameters.

hello-interval configures the frequency of sending the Discovery Hello packets in seconds.

integer_value is an integer from 5 through 21845.

Default: 5

hold-interval configures the Discovery Hold time interval in seconds.

integer_value is an integer from 15 through 65535.

Default: 15

transport-address *ipv4_addr*

Configures the LDP transport address as an IPv4 address entered in dotted-decimal notation. Transport address is the same as the LDP router ID.

Usage Guidelines

This is an optional command that is used to configure LDP peer discovery parameters. The LDP discovery hold-interval is always set to three times the LDP discovery hello-interval. Transport address is the address used for the TCP session over which LDP is running. If the transport address is not configured, the LDP router-id is used as transport address. Any update to transport address will take effect only if LDP is disabled and re-enabled. The "default" option sets the hello intervals to the default values.

Example

The following command sequence configures the LDP peer discovery parameters:

```
discovery hello hello-interval 10
discovery hello hold-interval 30
discovery transport-address 209.165.200.228
```

enable

Enables the Label Distribution Protocol (LDP).

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configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-ldp)#`

Syntax Description

`[ no ] enable`

no

Disables the LDP protocol.

Usage Guidelines

This command is used to enable or disable the LDP protocol. By default the LDP protocol is disabled.

Example

Use the following command to enable the LDP protocol:

`enable`

router-id

Configures the Label Distribution Protocol Router ID.

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Command Modes

Exec > Global Configuration > Context Configuration > MPLS-IP Configuration > MPLS-LDP Configuration

configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-ldp)#`

Syntax Description

router-id *ipv4_addr*
no router-id

no

Disables the router ID.

ipv4_addr

Must be an IPv4 address entered in dotted-decimal notation.

Usage Guidelines

This command is used to configure the LDP router-id. This is an optional parameter. If the ID is not configured, the largest operational loopback address is selected as the LDP router ID. If LDP has started, any change will take effect only after disabling and enabling LDP.

Example

The following command sequence configures an LDP router ID:

router-id 209.165.200.228

session

Configures the LDP session parameters.

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Command Modes

Exec > Global Configuration > Context Configuration > MPLS-IP Configuration > MPLS-LDP Configuration

configure > context *context_name* **> mpls-ip > protocol ldp**

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-ldp)#

Syntax Description

session timers { hold-interval *integer_value* **| keepalive-interval** *integer_value* **}**
default session timers

default

Configures the default values for hold-interval parameter at 45 and keepalive-interval parameter at 15.

timers

Configures the LDP session keepalive parameters.

hold-interval *integer_value*

Configures the session hold time interval in seconds.

integer_value is an integer from 45 through 65535.

Default: 45

keepalive-interval *integer_value*

Configures the frequency of sending keepalive packets in seconds.

integer_value is an integer from 15 through 21845.

Default: 15

Usage Guidelines

This optional command is used to configure LDP session timers. LDP session hold-interval is always set to three times the LDP session keepalive-interval. The "default" option sets the session keepalive and hold intervals to the default values.

Example

The following command sequence configures the LDP session parameters:

```
session timers keepalive-interval 30
session timers hold-interval 45
default session timers
```