



Example: Configure Event-driven Telemetry for LLDP

Telemetry supports NETCONF event notifications where the NETCONF client is configured to receive event notifications from a NETCONF server through a subscription. The NETCONF client must subscribe using a `create-subscription` request. Currently, only the events from Link Layer Discovery Protocol (LLDP) is supported. These event notifications are sent until either the NETCONF session or the subscription is terminated.



Note Configuring a sensor group and a subscription is not required for receiving NETCONF notifications. While sensor path and subscription configurations are required for receiving telemetry events, NETCONF `create-subscription` is required for receiving NETCONF notifications.

To generate NETCONF notifications:

1. Enable NETCONF agent and SSH sub system.

```
ssh server netconf
netconf-yang agent ssh
```

2. Enable model-driven telemetry.

```
telemetry model-driven
```

3. Enable LLDP.

```
lldp
```

This example shows event-driven telemetry for LLDP configuration data.

1. Create a destination group.

```
grpc
port 56782
address-family ipv4
!
telemetry model-driven
destination-group <destination-udp>
  address-family ipv4 <client-ip>1 port <udp port num>
  encoding self-describing-gpb
  protocol udp
```

```

!
!
destination-group <destination-tcp>
  address-family ipv4 <client-ip> port <tcp port num>
  encoding gpb
  protocol tcp
!
destination-group <destination-grpc>
  address-family ipv4 <grpc client ip>port <grpc port num>
  encoding self-describing-gpb
  protocol grpc no-tls

```

2. Create a sensor group.

```

sensor-group <sensor-group-name>
  sensor-path Cisco-IOS-XR-ethernet-lldp-oper:lldp/global-lldp/lldp-info
  sensor-path Cisco-IOS-XR-ethernet-lldp-oper:lldp/nodes/node/interfaces/interface
  sensor-path Cisco-IOS-XR-ethernet-lldp-oper:lldp/nodes/node/neighbors/details/detail
!

```

3. Create a subscription.

```

subscription udp-out
  sensor-group-id <sensor-group-name> sample-interval 0
  destination-id <destination-udp>
!

subscription <subscription-name>
  sensor-group-id <sensor-group-name> sample-interval 0
  destination-id <destination-tcp>

subscription <subscription-name>
  sensor-group-id <sensor-group-name> sample-interval 0
!
netconf-yang agent
ssh
!

```

4. Set the notification to stream data when an event occurs.

```

Router(config-lldp)#timer 12
Router(config-lldp)#commit

Router(config-lldp)#holdtime 150
Router (config-lldp)#commit

Router (config-lldp)#exit
#506
<?xml version="1.0"?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>Date-and-Time</eventTime>
  <lldp xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-ethernet-lldp-oper">
    <global-lldp>
      <lldp-info>
        <chassis-id>000b.1bc9.e700</chassis-id>
        <chassis-id-sub-type>4</chassis-id-sub-type>
        <system-name>ios</system-name>
        <timer>12</timer>
        <hold-time>120</hold-time>
        <re-init>2</re-init>
      </lldp-info>
    </global-lldp>
  </lldp>
</notification>

```

```
</lldp>
</notification>
Ready to send a request.
Paste your request or enter 'get', 'get-config', 'create-sub', or 'bye' to quit):
```

5. Validate response received from NETCONF agent.

```
#506
<?xml version="1.0"?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>Date-and-Time</eventTime>
  <lldp xmlns="http://cisco.com/ns/yang/Cisco-IOS-XR-ethernet-lldp-oper">
    <global-lldp>
      <lldp-info>
        <chassis-id>000b.1bc9.e700</chassis-id>
        <chassis-id-sub-type>4</chassis-id-sub-type>
        <system-name>ios</system-name>
        <timer>12</timer>
        <hold-time>150</hold-time>
        <re-init>2</re-init>
      </lldp-info>
    </global-lldp>
  </lldp>
</notification>
```

