



## Terminal-device Model

The Terminal-device model is a industry-wide standard YANG model from standard bodies, such as IETF and IEEE. The terminal-device model provides a unique way to provision the Cisco NCS 1002 using YANG models that are defined for configuration data and operational data.

The gRPC (google-defined Remote Procedure Calls) and NETCONF (Network Configuration Protocol) communication protocols are used to establish connection between the client and Cisco NCS1002.

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## Structure of YANG Models

YANG data models can be represented in a hierarchical, tree-based structure with nodes. This representation makes the models easy to understand.

There are two Terminal-device models for Cisco NCS 1004, such as:

- OpenConfig Terminal model
- OpenConfig Platform model

For more details on supported versions, see [Supported YANG Models in NCS 1004](#).

The following is the tree structure of the OpenConfig Terminal model:

```
module: openconfig-terminal-device
  +--rw terminal-device
    +--ro state
    +--rw logical-channels
      | +--rw channel* [index]
      |   +--rw index
      |   +--rw config
      |     | +--rw index?                uint32
      |     | +--rw description?         string
      |     | +--rw admin-state?        oc-opt-types:admin-state-type
      |     | +--rw rate-class?         identityref
      |     | +--rw trib-protocol?      identityref
      |     | +--rw logical-channel-type? identityref
      |     | +--rw loopback-mode?     oc-opt-types:loopback-mode-type
```

```

|         +---ro state
|         | +---ro index?                uint32
|         | +---ro description?          string
|         | +---ro admin-state?         oc-opt-types:admin-state-type
|         | +---ro rate-class?          identityref
|         | +---ro trib-protocol?       identityref
|         | +---ro logical-channel-type? identityref
|         | +---ro loopback-mode?      oc-opt-types:loopback-mode-type
|         | +---ro link-state?          enumeration
|         +---rw otn
|         | +---rw config
|         | | +---rw tti-msg-transmit?   string
|         | | +---rw tti-msg-expected?   string
|         | | +---rw tti-msg-auto?       boolean
|         | +---ro state
|         | | +---ro tti-msg-transmit?   string
|         | | +---ro tti-msg-expected?   string
|         | | +---ro tti-msg-recv?       string
|         | | +---ro errored-seconds?    yang:counter64
|         | | +---ro severely-errored-seconds? yang:counter64
|         | | +---ro unavailable-seconds? yang:counter64
|         | | +---ro fec-corrected-bits?  yang:counter64
|         | | +---ro background-block-errors? yang:counter64
|         | | +---ro fec-uncorrectable-words
|         | | +---ro pre-fec-ber
|         | | | +---ro instant?          decimal64
|         | | | +---ro avg?              decimal64
|         | | | +---ro min?              decimal64
|         | | | +---ro max?              decimal64
|         | | +---ro post-fec-ber
|         | | | +---ro instant?          decimal64
|         | | | +---ro avg?              decimal64
|         | | | +---ro min?              decimal64
|         | | | +---ro max?              decimal64
|         +---rw ethernet
|         | +---rw config
|         | +---ro state
|         | | +---ro in-mac-pause-frames? yang:counter64
|         | | +---ro in-oversize-frames?  yang:counter64
|         | | +---ro in-jabber-frames?    yang:counter64
|         | | +---ro in-fragment-frames?  yang:counter64
|         | | +---ro in-crc-errors?       yang:counter64
|         | | +---ro out-mac-pause-frames? yang:counter64
|         +---rw ingress
|         | +---rw config
|         | | +---rw transceiver?         -> /oc-platform:components/component/name
|         | | +---rw physical-channel*    ->
|         | +---ro state
|         | | +---ro transceiver?         -> /oc-platform:components/component/name
|         | | +---ro physical-channel*    ->
|         | +---rw logical-channel-assignments
|         | | +---rw assignment* [index]
|         | | | +---rw index              -> ../config/index
|         | | | +---rw config
|         | | | | +---rw index?            uint32
|         | | | | +---rw description?      string
|         | | | | +---rw assignment-type?  enumeration
|         | | | | +---rw logical-channel?  ->
|         | +---rw optical-channel?      -> /oc-platform:components/component/name

```

```

|         | +--rw allocation?          decimal64
|         +--ro state
|           +--ro index?              uint32
|           +--ro description?        string
|           +--ro assignment-type?    enumeration
|           +--ro logical-channel?    ->
/terminal-device/logical-channels/channel/index
|           +--ro optical-channel?    -> /oc-platform:components/component/name
|           +--ro allocation?         decimal64
+--rw operational-modes
  +--ro mode* [mode-id]
    +--ro mode-id    -> ../state/mode-id
    +--ro config
    +--ro state
      +--ro mode-id?    uint16
      +--ro description? string
      +--ro vendor-id?  string

```

The following is the tree structure of the OpenConfig Platform model:

```

module: openconfig-platform
  +--rw components
    +--rw component* [name]
      +--rw name                -> ../config/name
      +--rw config
        | +--rw name?          string
      +--ro state
        | +--ro name?          string
        | +--ro type?          union
        | +--ro id?            string
        | +--ro description?   string
        | +--ro mfg-name?      string
        | +--ro version?       string
        | +--ro serial-no?     string
        | +--ro part-no?       string
      +--rw oc-transceiver:transceiver
        | +--ro oc-transceiver:state
        | | +--ro oc-transceiver:form-factor?          identityref
        | | +--ro oc-transceiver:present?             enumeration
        | | +--ro oc-transceiver:connector-type?      identityref
        | | +--ro oc-transceiver:internal-temp?       int16
        | | +--ro oc-transceiver:vendor?              string
        | | +--ro oc-transceiver:vendor-part?         string
        | | +--ro oc-transceiver:vendor-rev?          string
        | | +--ro oc-transceiver:ethernet-compliance-code? identityref
        | | +--ro oc-transceiver:sonet-sdh-compliance-code? identityref
        | | +--ro oc-transceiver:otn-compliance-code? identityref
        | | +--ro oc-transceiver:serial-no?           string
        | | +--ro oc-transceiver:date-code?           yang:date-and-time
        | | +--ro oc-transceiver:fault-condition?     boolean
        | +--rw oc-transceiver:physical-channels
        |   +--rw oc-transceiver:channel* [index]
        |     +--rw oc-transceiver:index    -> ../config/index
        |     +--ro oc-transceiver:output-frequency?  oc-opt-types:frequency-type
        |
        |     +--ro oc-transceiver:output-power
        |     | +--ro oc-transceiver:instant?  decimal64
        |     | +--ro oc-transceiver:avg?     decimal64
        |     | +--ro oc-transceiver:min?     decimal64
        |     | +--ro oc-transceiver:max?     decimal64
        |     +--ro oc-transceiver:input-power
        |     | +--ro oc-transceiver:instant?  decimal64
        |     | +--ro oc-transceiver:avg?     decimal64
        |     | +--ro oc-transceiver:min?     decimal64

```

```

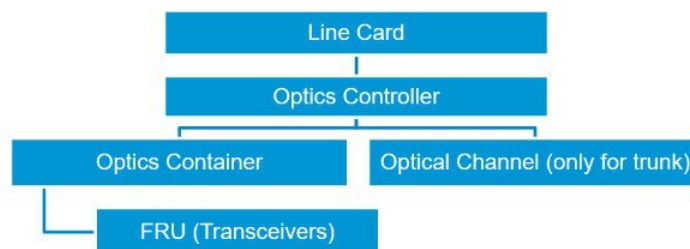
|          | +--ro oc-transceiver:max?          decimal64
|          +--ro oc-transceiver:laser-bias-current
|          +--ro oc-transceiver:instant?       decimal64
|          +--ro oc-transceiver:avg?          decimal64
|          +--ro oc-transceiver:min?          decimal64
|          +--ro oc-transceiver:max?          decimal64
+--rw oc-opt-term:optical-channel
  +--rw oc-opt-term:config
    | +--rw oc-opt-term:frequency?            oc-opt-types:frequency-type
    | +--rw oc-opt-term:target-output-power? decimal64
    | +--rw oc-opt-term:operational-mode?     uint16
    | +--rw oc-opt-term:line-port?           ->
/oc-platform:components/component/name
  +--ro oc-opt-term:state
  +--ro oc-opt-term:frequency?
oc-opt-types:frequency-type
  +--ro oc-opt-term:target-output-power?     decimal64
  +--ro oc-opt-term:operational-mode?        uint16
  +--ro oc-opt-term:line-port?               ->
/oc-platform:components/component/name
  +--ro oc-opt-term:chromatic-dispersion
  | +--ro oc-opt-term:instant?               decimal64
  | +--ro oc-opt-term:avg?                   decimal64
  | +--ro oc-opt-term:min?                   decimal64
  | +--ro oc-opt-term:max?                   decimal64
  +--ro oc-opt-term:second-order-polarization-mode-dispersion
  | +--ro oc-opt-term:instant?               decimal64
  | +--ro oc-opt-term:avg?                   decimal64
  | +--ro oc-opt-term:min?                   decimal64
  | +--ro oc-opt-term:max?                   decimal64
  +--ro oc-opt-term:polarization-dependent-loss
  +--ro oc-opt-term:instant?                 decimal64
  +--ro oc-opt-term:avg?                     decimal64
  +--ro oc-opt-term:min?                     decimal64
  +--ro oc-opt-term:max?                     decimal64

```

## Inventory Details of Terminal-device Model

The hierarchy of Cisco NCS 1004 inventory is shown below:

**Figure 1: Hierarchy of Cisco NCS 1004 Inventory**



The inventory details and the naming convention of the components used in the Cisco NCS 1004 Terminal-device model are as follows:

**Table 1: Inventory Details**

Components	Naming Convention
Optics Controller	R/S-OpticsCtrlR/S/I/P
Optics Container	R/S-OpticsContainerR/S/I/P
Transceivers	R/S-OpticsR/S/I/P
Optical Channel Module	R/S-OpticalChannelR/S/I/P

The following table lists all the valid transceivers and optical channels that can be used for configuring Cisco NCS 1004 using Terminal-device model:

**Table 2: Transceiver and Optical Channel Details**

Components	Applicable Channels
Transceivers	0/0-Optics0/0/0/0 to 0/0-Optics0/0/0/13 0/1-Optics0/1/0/0 to 0/1-Optics0/1/0/13 0/2-Optics0/2/0/0 to 0/2-Optics0/2/0/13 0/3-Optics0/3/0/0 to 0/3-Optics0/3/0/13
Optical Channels	<ul style="list-style-type: none"> <li>• 0/0-OpticalChannel0/0/0/0</li> <li>• 0/0-OpticalChannel0/0/0/1</li> <li>• 0/1-OpticalChannel0/1/0/0</li> <li>• 0/1-OpticalChannel0/1/0/1</li> <li>• 0/2-OpticalChannel0/2/0/0</li> <li>• 0/2-OpticalChannel0/2/0/1</li> <li>• 0/3-OpticalChannel0/3/0/0</li> <li>• 0/3-OpticalChannel0/3/0/1</li> </ul>



**Note** Only the optical channels of trunk ports must be mapped to the line ports. For more information about the port details, see [Slice and Port Numbering](#).

## Configuring Cisco NCS1004 Using Terminal-device Model

The following configurations are supported on the 1.2 Tbps line card. Client port operate at 100GE and OTU4 and map to trunk ports operating at 200G, 300G, 400G, 500G, or 600G.

You can configure the client port to OTU4 only in the muxponder configuration. LLDP drop, L1 encryption, and AINS are not supported on the OTU4 configuration.

The following table displays the client and trunk ports that are enabled for the muxponder configuration.

Trunk Data Rate	Client Data Rate (100GE/OTU4)	Trunk Ports	Client Ports
200	100GE/OTU4	0, 1	2,3, 4, 5
300	100GE/OTU4	0, 1	2, 3, 4, 5, 6, 7
400	100GE	0, 1	2, 3, 4, 5, 6, 7, 8, 9
500	100GE	0, 1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11
600	100GE	0,1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

The following table displays the client and trunk ports that are enabled for the muxponder slice 0 configuration.

Trunk Data Rate	Client Data Rate	Trunk Ports	Client Ports
200	100	0	2, 3
300	100	0	2, 3, 4
400	100	0	2, 3, 4, 5
500	100	0	2, 3, 4, 5, 6
600	100	0	2, 3, 4, 5, 6, 7

The following table displays the client and trunk ports that are enabled for the muxponder slice 1 configuration.

Trunk Data Rate	Client Data Rate	Trunk Ports	Client Ports
200	100	1	8, 9
300	100	1	8, 9, 10
400	100	1	8, 9, 10, 11
500	100	1	8, 9, 10, 11, 12
600	100	1	8, 9, 10, 11, 12, 13

All configurations can be accomplished using appropriate values for client bitrate and trunk bitrate parameters of the **hw-module** command.

The following table displays the trunk parameter ranges.

Trunk Payload	FEC	Min BPS	Max BPS	Min GBd	Max GBd
200G	27%	2	4.40625	31.51	69.43
300G	27%	2.8984375	6	34.7175497	71.8681352
400G	27%	3.8671875	6	46.2900663	71.8197392

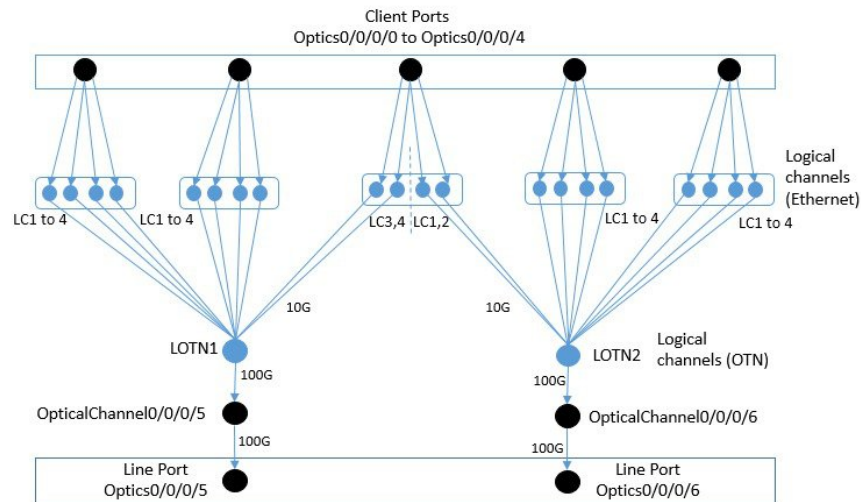
Trunk Payload	FEC	Min BPS	Max BPS	Min GBd	Max GBd
500G	27%	4.8281250	6	57.8625828	71.9068991
600G	15%	5.2578125	-	-	71.9552971

## 10Gx100G Configuration

For 10G to 100G configuration on slice 0, connect the client ports, Optics0/0/0/0 to Optics0/0/0/4 to the Logical OTN channels (LOTN1 and LOTN2). Each client port has four logical channels such as LC1, LC2, LC3, and LC4 and are identified by a unique identifier. These logical channels are the transceiver physical channels with which the logical channels are connected to the client ports. The LC1, LC2, LC3, and LC4 of client port Optics0/0/0/0 and client port Optics0/0/0/1 and the LC3, and LC4 of client port Optics0/0/0/2 are connected to the LOTN1. The LC1, LC2, LC3, and LC4 of client port Optics0/0/0/3 and client port Optics0/0/0/4 and the LC1, and LC2 of client port Optics0/0/0/2 are connected to the LOTN2. The LOTN1 is connected to the optical channel 5 and LOTN2 is connected to the Optical Channel0/0/0/6. Then the optical channel 5 is connected to the line port, Optics0/0/0/5 and the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 10G each for all the logical channels (LC) and the bandwidth allocation for LOTN1, LOTN2, Optical channel 5 and 6 is 100G.

The following figure explains the 10G to 100G configuration in slice 0.

**Figure 2: 10Gx100G Configuration**

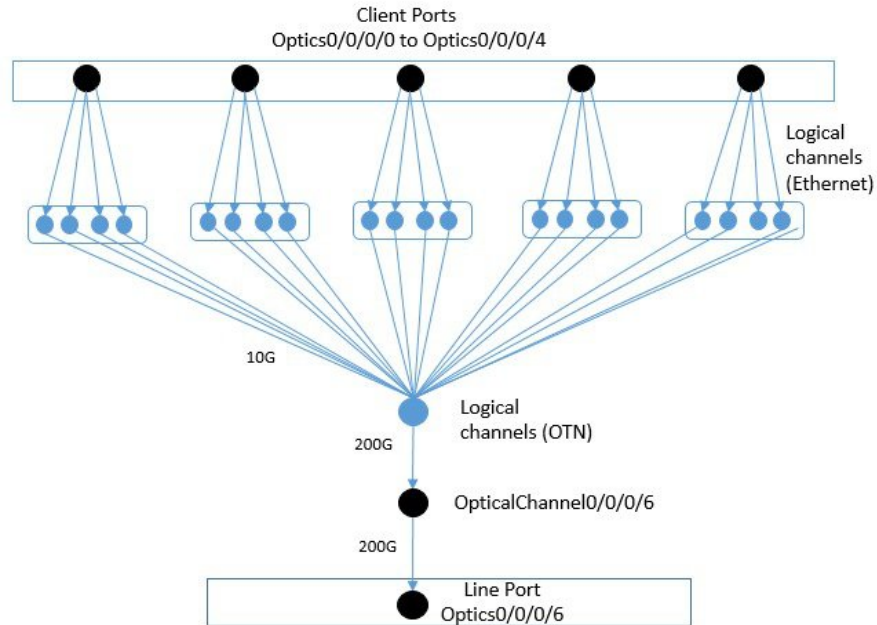


## 10Gx200G Configuration

For 10G to 200G configuration on slice 0, connect the 20 logical channels of client ports, Optics0/0/0/0 to Optics0/0/0/4 to the Logical OTN channel (LOTN). The Logical OTN channel is connected to the Optical Channel0/0/0/6. Then the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 10G each for all the logical channels and the bandwidth allocation for logical OTN channel, and Optical Channel0/0/0/6 is 200G.

The following figure explains 10G to 200G configuration in slice 0.

Figure 3: 10Gx200G Configuration



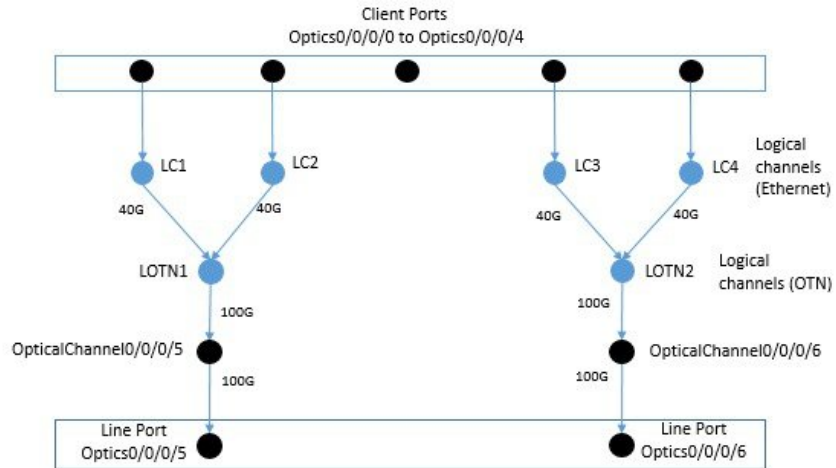
## 40Gx100G Configuration

For 40G to 100G configuration on slice 0, connect the client ports, Optics0/0/0/0, Optics0/0/0/1, Optics0/0/0/3, and Optics0/0/0/4 to the corresponding four Logical Channels, LC1, LC2, LC3 and LC4. The client port, Optics0/0/0/2 is not used. The LC1 and LC2 are connected to the first logical OTN channel (LOTN1) and the LC3 and LC4 are connected to the second logical OTN channel (LOTN2). The LOTN1 is connected to the optical channel 5 and LOTN2 is connected to the Optical Channel0/0/0/6. Then the optical channel 5 is connected to the line port, Optics0/0/0/5 and the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 40G each for all the logical channels (LC) and the bandwidth allocation for LOTN1, LOTN2, Optical channel 5 and 6 is 100G.

The following figure explains the 40G to 100G configuration in slice 0.



Figure 4: 40Gx100G Configuration

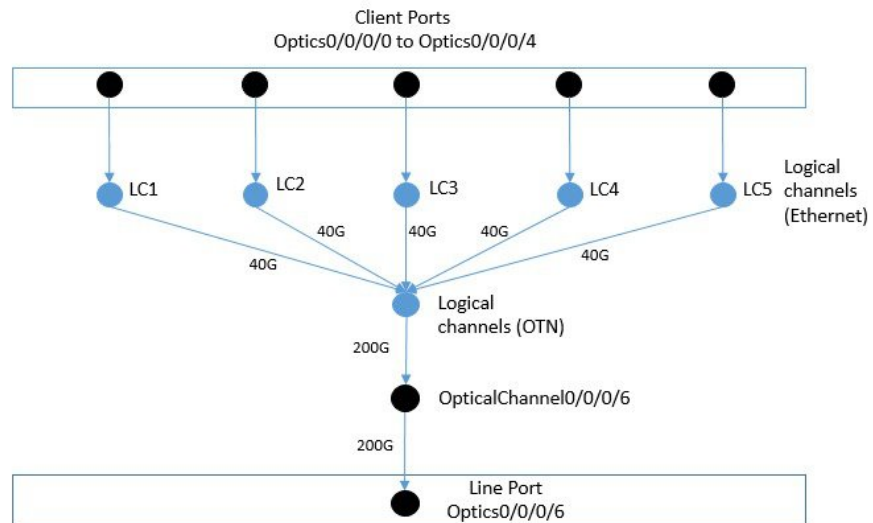


## 40Gx200G Configuration

For 40G to 200G configuration on slice 0, connect the Logical Channels, LC1, LC2, LC3, LC4 and LC5 of client ports, Optics0/0/0/0 to Optics0/0/0/4 to the Logical OTN channel (LOTN). The Logical OTN channel is connected to the Optical Channel0/0/0/6. Then the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 40G each for all the logical channels and the bandwidth allocation for logical OTN channel, and Optical Channel0/0/0/6 is 200G.

The following figure explains 40G to 200G configuration in slice 0.

Figure 5: 40Gx200G Configuration

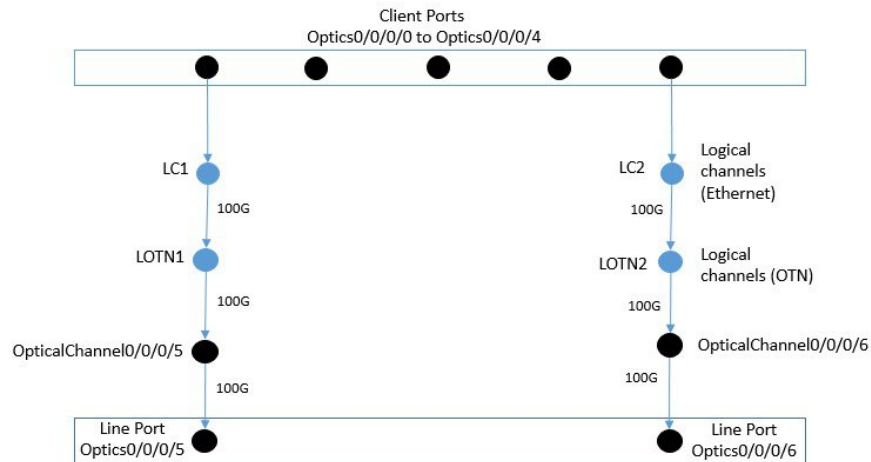


## 100Gx100G Configuration

For 100G to 100G configuration on slice 0, connect the logical channels LC1 and LC2 of the client ports, Optics0/0/0/0 and Optics0/0/0/4 to the Logical OTN channels, LOTN 1 and LOTN2. The client port Optics0/0/0/1, client port Optics0/0/0/2 and client port Optics0/0/0/3 are not used. The LOTN1 is connected to the optical channel 5 and LOTN2 is connected to the Optical Channel0/0/0/6. Then the optical channel 5 is connected to the line port Optics0/0/0/5 and the Optical Channel0/0/0/6 is connected to the line port Optics0/0/0/6. The bandwidth allocation is 100G each for the LC1, LC2, LOTN1, LOTN2, optical channel 5 and Optical Channel0/0/0/6.

The following figure explains 100G to 100G configuration in slice 0.

**Figure 6: 100Gx100G Configuration**

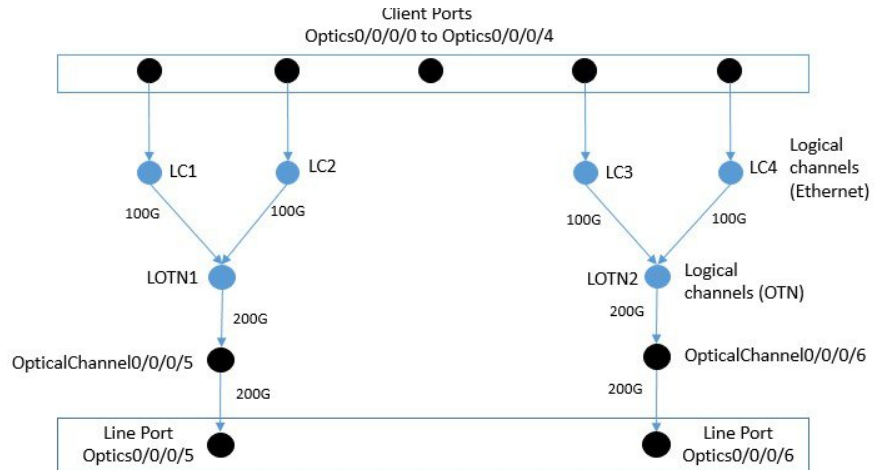


## 100Gx200G Configuration

For 100G to 200G configuration on slice 0, connect the client ports, Optics0/0/0/0, Optics0/0/0/1, Optics0/0/0/3, and Optics0/0/0/4 to the corresponding four Logical Channels, LC1, LC2, LC3 and LC4. The client port, Optics0/0/0/2 is not used. The LC1 and LC2 are connected to the first logical OTN channel (LOTN1) and the LC3 and LC4 are connected to the second logical OTN channel (LOTN2). The LOTN1 is connected to the optical channel 5 and LOTN2 is connected to the Optical Channel0/0/0/6. Then the optical channel 5 is connected to the line port, Optics0/0/0/5 and the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 100G each for all the logical channels and the bandwidth allocation for LOTN1, LOTN2, Optical channel 5 and 6 is 200G.

The following figure explains the 100G to 200G configuration in slice 0.

Figure 7: 100Gx200G Configuration

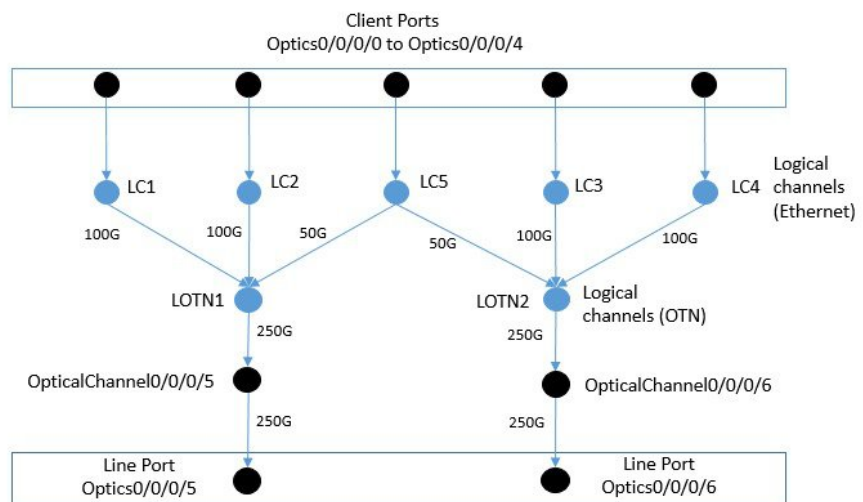


## 100Gx250G Configuration

For 100G to 250G configuration on slice 0, connect the logical channels, LC1, LC2, LC3, LC4 and LC5 of the client ports, Optics0/0/0/0, Optics0/0/0/1, Optics0/0/0/3, Optics0/0/0/4 and Optics0/0/0/2 to the Logical OTN channels (LOTN1 and LOTN2). The LC1 and LC2 are connected to the first logical OTN channel (LOTN1) and the LC3 and LC4 are connected to the second logical OTN channel (LOTN2). LC5 is divided and connected to LOTN1 and LOTN2. The LOTN1 is connected to the optical channel 5 and LOTN2 is connected to the Optical Channel0/0/0/6. Then the optical channel 5 is connected to the line port, Optics0/0/0/5 and the Optical Channel0/0/0/6 is connected to the line port, Optics0/0/0/6. The bandwidth allocation is 100G each for all the logical channels (LC) and the bandwidth allocation for LOTN1, LOTN2, Optical channel 5 and 6 is 250G.

The following figure explains the 100G to 250G configuration in slice 0.

Figure 8: 100Gx250G Configuration

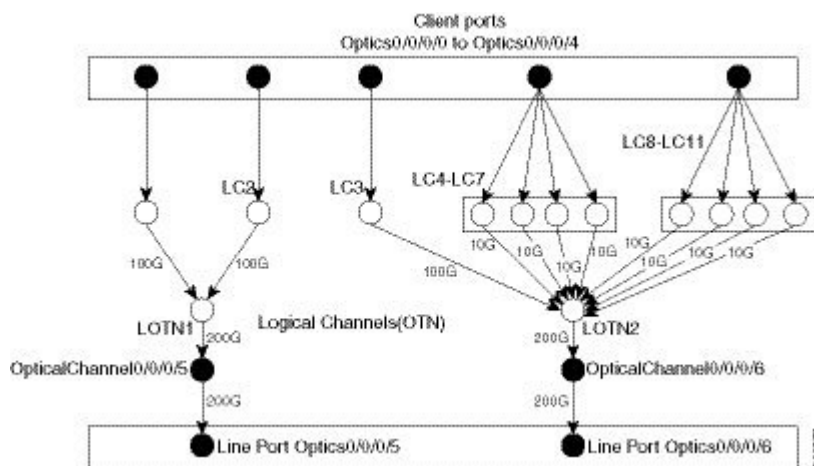


## 10G-100Gx200G Configuration (Mixed Mode Configuration)

For 10G-100G to 200G(Mixed mode) configuration on slice 0, connect the 11 logical channels(LC1 to LC11) of the client ports Optics0/0/0/0, Optics0/0/0/1, Optics0/0/0/2, Optics0/0/0/3 and Optics0/0/0/4 to the Logical OTN channels (LOTN1 and LOTN2). The LC1 and LC2 are connected to the first logical OTN channel (LOTN1) and the LC3 to LC11 are connected to the second logical OTN channel (LOTN2). The LOTN1 is connected to the Optical Channel 0/0/0/5 and LOTN2 is connected to the Optical Channel 0/0/0/6. Then the Optical Channel 0/0/0/5 is connected to the line port Optics0/0/0/5 and the Optical Channel 0/0/0/6 is connected to the line port Optics0/0/0/6. The bandwidth allocation is 100G for the logical channels LC1 to LC3 and it is 10G for LC4 to LC11. The bandwidth allocation for LOTN1, LOTN2, Optical channels 0/0/0/5 and 0/0/0/6 is 200G.

The following figure explains the 10G-100G to 200G configuration in slice 0.

**Figure 9: 10G-100G to 200G Configuration**



## Sample Configuration

The following is a sample in which slice 0 is configured to send the traffic with 100G client rate and 200G trunk rate in .json and .xml format.

### Sample .xml file:

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
<edit-config>
<target>
<candidate/>
</target>
<config xmlns:xc="urn:ietf:params:xml:ns:netconf:base:1.0">
<terminal-device xmlns="http://openconfig.net/yang/terminal-device">
  <logical-channels>
    <channel>
      <index>201</index>
      <config>
        <index>201</index>
        <rate-class>TRIB_RATE_100G</rate-class>
        <admin-state>ENABLED</admin-state>
        <description>Logical channel 201</description>
        <loopback-mode>NONE</loopback-mode>
        <trib-protocol>PROT_100G_MLG</trib-protocol>
        <logical-channel-type>PROT_ETHERNET</logical-channel-type>
      </config>
    </channel>
  </logical-channels>
</terminal-device>
</config>
</edit-config>
</rpc>
```

```

</config>
<ingress>
  <config>
    <transceiver>0/0-Optics0/0/0/14</transceiver>
  </config>
</ingress>
<logical-channel-assignments>
  <assignment>
    <index>1</index>
    <config>
      <index>1</index>
      <allocation>100</allocation>
      <assignment-type>LOGICAL_CHANNEL</assignment-type>
      <description>Logical channel assigned 203</description>
      <logical-channel>203</logical-channel>
    </config>
  </assignment>
</logical-channel-assignments>
</channel>
<channel>
  <index>202</index>
  <config>
    <index>202</index>
    <rate-class>TRIB_RATE_100G</rate-class>
    <admin-state>ENABLED</admin-state>
    <description>Logical channel 202</description>
    <loopback-mode>NONE</loopback-mode>
    <trib-protocol>PROT_100G_MLG</trib-protocol>
    <logical-channel-type>PROT_ETHERNET</logical-channel-type>
  </config>
<ingress>
  <config>
    <transceiver>0/0-Optics0/0/0/15</transceiver>
  </config>
</ingress>
<logical-channel-assignments>
  <assignment>
    <index>1</index>
    <config>
      <index>1</index>
      <allocation>100</allocation>
      <assignment-type>LOGICAL_CHANNEL</assignment-type>
      <description>Logical channel assigned 203</description>
      <logical-channel>203</logical-channel>
    </config>
  </assignment>
</logical-channel-assignments>
</channel>
<channel>
  <index>203</index>
  <config>
    <index>203</index>
    <admin-state>ENABLED</admin-state>
    <description>Logical channel 203</description>
    <loopback-mode>NONE</loopback-mode>
    <logical-channel-type>PROT_OTN</logical-channel-type>
  </config>
<otn>
  <config>
    <tti-msg-expected>test1</tti-msg-expected>
    <tti-msg-transmit>test1</tti-msg-transmit>
  </config>
</otn>
<logical-channel-assignments>

```

```

    <assignment>
      <index>1</index>
      <config>
        <index>1</index>
        <allocation>200</allocation>
        <assignment-type>OPTICAL_CHANNEL</assignment-type>
        <description>Optical channel assigned a</description>
        <optical-channel>0/0-OpticalChannel0/0/0/19</optical-channel>
      </config>
    </assignment>
  </logical-channel-assignments>
</channel>
<channel>
  <index>204</index>
  <config>
    <index>204</index>
    <admin-state>ENABLED</admin-state>
    <description>Logical channel 204</description>
    <loopback-mode>NONE</loopback-mode>
    <logical-channel-type>PROT_OTN</logical-channel-type>
  </config>
  <otn>
    <config>
      <tti-msg-expected>test2</tti-msg-expected>
      <tti-msg-transmit>test2</tti-msg-transmit>
    </config>
  </otn>
  <logical-channel-assignments>
    <assignment>
      <index>1</index>
      <config>
        <index>1</index>
        <allocation>200</allocation>
        <assignment-type>OPTICAL_CHANNEL</assignment-type>
        <description>Optical channel assigned a</description>
        <optical-channel>0/0-OpticalChannel0/0/0/20</optical-channel>
      </config>
    </assignment>
  </logical-channel-assignments>
</channel>
<channel>
  <index>205</index>
  <config>
    <index>205</index>
    <rate-class>TRIB_RATE_100G</rate-class>
    <admin-state>ENABLED</admin-state>
    <description>Logical channel 205</description>
    <loopback-mode>NONE</loopback-mode>
    <trib-protocol>PROT_100G_MLG</trib-protocol>
    <logical-channel-type>PROT_ETHERNET</logical-channel-type>
  </config>
  <ingress>
    <config>
      <transceiver>0/0-Optics0/0/0/17</transceiver>
    </config>
  </ingress>
  <logical-channel-assignments>
    <assignment>
      <index>1</index>
      <config>
        <index>1</index>
        <allocation>100</allocation>
        <assignment-type>LOGICAL_CHANNEL</assignment-type>
        <description>Logical channel assigned 204</description>

```

```

        <logical-channel>204</logical-channel>
      </config>
    </assignment>
  </logical-channel-assignments>
</channel>
<channel>
  <index>206</index>
  <config>
    <index>206</index>
    <rate-class>TRIB_RATE_100G</rate-class>
    <admin-state>ENABLED</admin-state>
    <description>Logical channel 206</description>
    <loopback-mode>NONE</loopback-mode>
    <trib-protocol>PROT_100G_MLG</trib-protocol>
    <logical-channel-type>PROT_ETHERNET</logical-channel-type>
  </config>
  <ingress>
    <config>
      <transceiver>0/0-Optics0/0/0/18</transceiver>
    </config>
  </ingress>
  <logical-channel-assignments>
    <assignment>
      <index>1</index>
      <config>
        <index>1</index>
        <allocation>100</allocation>
        <assignment-type>LOGICAL_CHANNEL</assignment-type>
        <description>Logical channel assigned 204</description>
        <logical-channel>204</logical-channel>
      </config>
    </assignment>
  </logical-channel-assignments>
</channel>
</logical-channels>
</terminal-device>
<components xmlns="http://openconfig.net/yang/platform">
<component>
  <name>0/0-OpticalChannel0/0/0/19</name>
  <optical-channel xmlns="http://openconfig.net/yang/terminal-device">
    <config>
      <target-output-power>100</target-output-power>
      <frequency>191600000</frequency>
      <line-port>0/0-Optics0/0/0/19</line-port>
      <operational-mode>2</operational-mode>
    </config>
  </optical-channel>
</component>
<component>
  <name>0/0-OpticalChannel0/0/0/20</name>
  <optical-channel xmlns="http://openconfig.net/yang/terminal-device">
    <config>
      <target-output-power>100</target-output-power>
      <frequency>191600000</frequency>
      <line-port>0/0-Optics0/0/0/20</line-port>
      <operational-mode>2</operational-mode>
    </config>
  </optical-channel>
</component>
<component>
  <name>0/0-Optics0/0/0/20</name>
</component>
<component>
  <name>0/0-Optics0/0/0/19</name>

```

```
    </component>
  </components>
</config>
</edit-config>
</rpc>
```

**Sample .json file:**

```
{
  "openconfig-interfaces:interfaces": {
    "interface": [
      {
        "name": "Optics0/0/0/5",
        "config": {
          "name": "Optics0/0/0/5",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/6",
        "config": {
          "name": "Optics0/0/0/6",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/12",
        "config": {
          "name": "Optics0/0/0/12",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/13",
        "config": {
          "name": "Optics0/0/0/13",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/19",
        "config": {
          "name": "Optics0/0/0/19",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/20",
        "config": {
          "name": "Optics0/0/0/20",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      },
      {
        "name": "Optics0/0/0/26",
        "config": {
          "name": "Optics0/0/0/26",
          "type": "iana-if-type:opticalChannel",
          "enabled": false
        }
      }
    ]
  }
}
```



```

    }
  },
  {
    "name": "Optics0/0/0/27",
    "config": {
      "name": "Optics0/0/0/27",
      "type": "iana-if-type:opticalChannel",
      "enabled": false
    }
  }
]
},
"openconfig-terminal-device:terminal-device": {
  "logical-channels": {
    "channel": [
      {
        "index": 201,
        "config": {
          "rate-class": "TRIB_RATE_100G",
          "admin-state": "ENABLED",
          "description": "Logical channel 201",
          "trib-protocol": "PROT_100G_MLG",
          "logical-channel-type": "PROT_ETHERNET",
          "loopback-mode": "NONE"
        },
        "ingress": {
          "config": {
            "transceiver": "0/0-Optics0/0/0/14"
          }
        },
        "logical-channel-assignments": {
          "assignment": [
            {
              "index": 1,
              "config": {
                "allocation": 100,
                "assignment-type": "LOGICAL_CHANNEL",
                "description": "Logical channel assigned 203",
                "logical-channel": 203
              }
            }
          ]
        }
      },
      {
        "index": 202,
        "config": {
          "rate-class": "TRIB_RATE_100G",
          "admin-state": "ENABLED",
          "description": "Logical channel 202",
          "trib-protocol": "PROT_100G_MLG",
          "logical-channel-type": "PROT_ETHERNET",
          "loopback-mode": "NONE"
        },
        "ingress": {
          "config": {
            "transceiver": "0/0-Optics0/0/0/15"
          }
        },
        "logical-channel-assignments": {
          "assignment": [
            {
              "index": 1,
              "config": {

```





```

    },
    "openconfig-platform:components": {
      "component": [
        {
          "name": "0/0-OpticalChannel0/0/0/19",
          "openconfig-terminal-device:optical-channel": {
            "config": {
              "line-port": "0/0-Optics0/0/0/19",
              "operational-mode": 2,
              "target-output-power": 100,
              "frequency": 191600000
            }
          }
        },
        {
          "name": "0/0-OpticalChannel0/0/0/20",
          "openconfig-terminal-device:optical-channel": {
            "config": {
              "line-port": "0/0-Optics0/0/0/20",
              "operational-mode": 2,
              "target-output-power": 100,
              "frequency": 191600000
            }
          }
        }
      ]
    }
  }
}

```

### Sample configuration for mixed mode configuration

#### Sample .json file:

```

{
  "openconfig-interfaces:interfaces": {
    "interface": [
      {
        "name": "Optics0/0/0/5",
        "config": {
          "name": "Optics0/0/0/5",
          "type": "iana-if-type:opticalChannel",
          "enabled": true
        }
      },
      {
        "name": "Optics0/0/0/6",
        "config": {
          "name": "Optics0/0/0/6",
          "type": "iana-if-type:opticalChannel",
          "enabled": true
        }
      },
      {
        "name": "Optics0/0/0/12",
        "config": {
          "name": "Optics0/0/0/12",
          "type": "iana-if-type:opticalChannel",
          "enabled": true
        }
      },
      {
        "name": "Optics0/0/0/13",
        "config": {
          "name": "Optics0/0/0/13",
          "type": "iana-if-type:opticalChannel",

```

```

        "enabled": true
    }
},
{
    "name": "Optics0/0/0/19",
    "config": {
        "name": "Optics0/0/0/19",
        "type": "iana-if-type:opticalChannel",
        "enabled": true
    }
},
{
    "name": "Optics0/0/0/20",
    "config": {
        "name": "Optics0/0/0/20",
        "type": "iana-if-type:opticalChannel",
        "enabled": true
    }
},
{
    "name": "Optics0/0/0/26",
    "config": {
        "name": "Optics0/0/0/26",
        "type": "iana-if-type:opticalChannel",
        "enabled": true
    }
},
{
    "name": "Optics0/0/0/27",
    "config": {
        "name": "Optics0/0/0/27",
        "type": "iana-if-type:opticalChannel",
        "enabled": true
    }
}
]
},
"openconfig-platform:components": {
    "component": [
        {
            "name": "0/0-OpticalChannel0/0/0/19",
            "openconfig-terminal-device:optical-channel": {
                "config": {
                    "target-output-power": -100,
                    "frequency": 192700000,
                    "line-port": "0/0-Optics0/0/0/19",
                    "operational-mode": 1
                }
            }
        },
        {
            "name": "0/0-OpticalChannel0/0/0/20",
            "openconfig-terminal-device:optical-channel": {
                "config": {
                    "target-output-power": -100,
                    "frequency": 192700000,
                    "line-port": "0/0-Optics0/0/0/20",
                    "operational-mode": 1
                }
            }
        }
    ]
},
"openconfig-terminal-device:terminal-device": {

```

```

"logical-channels": {
  "channel": [
    {
      "index": 1001,
      "config": {
        "rate-class": "TRIB_RATE_100G",
        "admin-state": "ENABLED",
        "description": "Logical channel 1001",
        "trib-protocol": "PROT_100G_MLG",
        "logical-channel-type": "PROT_ETHERNET"
      },
      "ingress": {
        "config": {
          "transceiver": "0/0-Optics0/0/0/14"
        }
      },
      "logical-channel-assignments": {
        "assignment": [
          {
            "index": 1,
            "config": {
              "allocation": 100,
              "assignment-type": "LOGICAL_CHANNEL",
              "description": "Logical channel assigned 1003",
              "logical-channel": 1003
            }
          }
        ]
      }
    },
    {
      "index": 1003,
      "config": {
        "admin-state": "ENABLED",
        "description": "Logical channel 1003",
        "logical-channel-type": "PROT_OTN"
      },
      "logical-channel-assignments": {
        "assignment": [
          {
            "index": 1,
            "config": {
              "allocation": 200,
              "assignment-type": "OPTICAL_CHANNEL",
              "description": "Optical channel assigned a",
              "optical-channel": "0/0-OpticalChannel0/0/0/19"
            }
          }
        ]
      }
    },
    {
      "index": 1004,
      "config": {
        "admin-state": "ENABLED",
        "description": "Logical channel 1004",
        "logical-channel-type": "PROT_OTN"
      },
      "otn": {
        "config": {
          "tti-msg-transmit": "abcd",
          "tti-msg-expected": "abcd"
        }
      }
    }
  ]
}

```

```

"logical-channel-assignments": {
  "assignment": [
    {
      "index": 1,
      "config": {
        "allocation": 200,
        "assignment-type": "OPTICAL_CHANNEL",
        "description": "Optical channel assigned a",
        "optical-channel": "0/0-OpticalChannel0/0/0/20"
      }
    }
  ]
},
{
  "index": 1005,
  "config": {
    "rate-class": "TRIB_RATE_100G",
    "admin-state": "ENABLED",
    "description": "Logical channel 1005",
    "trib-protocol": "PROT_100G_MLG",
    "logical-channel-type": "PROT_ETHERNET"
  },
  "ingress": {
    "config": {
      "transceiver": "0/0-Optics0/0/0/15"
    }
  },
  "logical-channel-assignments": {
    "assignment": [
      {
        "index": 1,
        "config": {
          "allocation": 100,
          "assignment-type": "LOGICAL_CHANNEL",
          "description": "Logical channel assigned 1003",
          "logical-channel": 1003
        }
      }
    ]
  }
},
{
  "index": 1013,
  "config": {
    "rate-class": "TRIB_RATE_10G",
    "admin-state": "ENABLED",
    "description": "Logical channel 1013",
    "trib-protocol": "PROT_10GE_LAN",
    "logical-channel-type": "PROT_ETHERNET"
  },
  "ingress": {
    "config": {
      "transceiver": "0/0-Optics0/0/0/17",
      "physical-channel": [
        1
      ]
    }
  },
  "logical-channel-assignments": {
    "assignment": [
      {
        "index": 1,

```

```

        "config": {
            "allocation": 10,
            "assignment-type": "LOGICAL_CHANNEL",
            "description": "Logical channel assigned 1004",
            "logical-channel": 1004
        }
    ]
}
},
{
    "index": 1014,
    "config": {
        "rate-class": "TRIB_RATE_10G",
        "admin-state": "ENABLED",
        "description": "Logical channel 1014",
        "trib-protocol": "PROT_10GE_LAN",
        "logical-channel-type": "PROT_ETHERNET"
    },
    "ingress": {
        "config": {
            "transceiver": "0/0-Optics0/0/0/17",
            "physical-channel": [
                2
            ]
        }
    },
    "logical-channel-assignments": {
        "assignment": [
            {
                "index": 1,
                "config": {
                    "allocation": 10,
                    "assignment-type": "LOGICAL_CHANNEL",
                    "description": "Logical channel assigned 1004",
                    "logical-channel": 1004
                }
            }
        ]
    }
},
{
    "index": 1015,
    "config": {
        "rate-class": "TRIB_RATE_10G",
        "admin-state": "ENABLED",
        "description": "Logical channel 1015",
        "trib-protocol": "PROT_10GE_LAN",
        "logical-channel-type": "PROT_ETHERNET"
    },
    "ingress": {
        "config": {
            "transceiver": "0/0-Optics0/0/0/17",
            "physical-channel": [
                3
            ]
        }
    },
    "logical-channel-assignments": {
        "assignment": [
            {
                "index": 1,
                "config": {
                    "allocation": 10,

```



```

        "assignment-type": "LOGICAL_CHANNEL",
        "description": "Logical channel assigned 1004",
        "logical-channel": 1004
    }
}
],
},
{
    "index": 1016,
    "config": {
        "rate-class": "TRIB_RATE_10G",
        "admin-state": "ENABLED",
        "description": "Logical channel 1016",
        "trib-protocol": "PROT_10GE_LAN",
        "logical-channel-type": "PROT_ETHERNET"
    },
    "ingress": {
        "config": {
            "transceiver": "0/0-Optics0/0/0/17",
            "physical-channel": [
                4
            ]
        }
    },
    "logical-channel-assignments": {
        "assignment": [
            {
                "index": 1,
                "config": {
                    "allocation": 10,
                    "assignment-type": "LOGICAL_CHANNEL",
                    "description": "Logical channel assigned 1004",
                    "logical-channel": 1004
                }
            }
        ]
    }
},
{
    "index": 1017,
    "config": {
        "rate-class": "TRIB_RATE_10G",
        "admin-state": "ENABLED",
        "description": "Logical channel 1017",
        "trib-protocol": "PROT_10GE_LAN",
        "logical-channel-type": "PROT_ETHERNET"
    },
    "ingress": {
        "config": {
            "transceiver": "0/0-Optics0/0/0/18",
            "physical-channel": [
                1
            ]
        }
    },
    "logical-channel-assignments": {
        "assignment": [
            {
                "index": 1,
                "config": {
                    "allocation": 10,
                    "assignment-type": "LOGICAL_CHANNEL",
                    "description": "Logical channel assigned 1004",

```



```

    }
  ]
}
},
{
  "index": 1020,
  "config": {
    "rate-class": "TRIB_RATE_10G",
    "admin-state": "ENABLED",
    "description": "Logical channel 1020",
    "trib-protocol": "PROT_10GE_LAN",
    "logical-channel-type": "PROT_ETHERNET"
  },
  "ingress": {
    "config": {
      "transceiver": "0/0-Optics0/0/0/18",
      "physical-channel": [
        4
      ]
    }
  },
  "logical-channel-assignments": {
    "assignment": [
      {
        "index": 1,
        "config": {
          "allocation": 10,
          "assignment-type": "LOGICAL_CHANNEL",
          "description": "Logical channel assigned 1004",
          "logical-channel": 1004
        }
      }
    ]
  }
},
{
  "index": 1007,
  "config": {
    "rate-class": "TRIB_RATE_100G",
    "admin-state": "ENABLED",
    "description": "Logical channel 1006",
    "trib-protocol": "PROT_100G_MLG",
    "logical-channel-type": "PROT_ETHERNET"
  },
  "ingress": {
    "config": {
      "transceiver": "0/0-Optics0/0/0/16"
    }
  },
  "logical-channel-assignments": {
    "assignment": [
      {
        "index": 1,
        "config": {
          "allocation": 100,
          "assignment-type": "LOGICAL_CHANNEL",
          "description": "Logical channel assigned 1004",
          "logical-channel": 1004
        }
      }
    ]
  }
}
]

```

```

    }
  }
}

```

## Verifying Terminal-device Configuration

Use the following commands to verify that you have correctly configured terminal-device configuration for Cisco NCS1004.

To view the configuration layout of channels, use the following command:

```

Router#show terminal-device layout-all osa
Wed Aug 28 07:49:47.495 UTC

```

Output format: Channel-name [Channel-type, Bandwidth]

CP - Client port : LP - Line port : OP - Optics  
 OTN - OTN Logical channel : ETH - Ethernet Logical channel

```

Optics0/0/0/2 [CP, 100] 30002 [ETH, 100] 30020 [ODU4, 100] 30000 [OTU, 500]
0/0-OpticalChannel0/0/0/0 [OP, 500] Optics0/0/0/0 [LP, 500]
Optics0/0/0/3 [CP, 100] 30003 [ETH, 100] 30021 [ODU4, 100] 30000 [OTU, 500]
0/0-OpticalChannel0/0/0/0 [OP, 500] Optics0/0/0/0 [LP, 500]
Optics0/0/0/4 [CP, 100] 30004 [ETH, 100] 30022 [ODU4, 100] 30000 [OTU, 500]
0/0-OpticalChannel0/0/0/0 [OP, 500] Optics0/0/0/0 [LP, 500]
Optics0/0/0/5 [CP, 100] 30005 [ETH, 100] 30023 [ODU4, 100] 30000 [OTU, 500]
0/0-OpticalChannel0/0/0/0 [OP, 500] Optics0/0/0/0 [LP, 500]
Optics0/0/0/6 [CP, 100] 30006 [ETH, 100] 30024 [ODU4, 100] 30000 [OTU, 500]
0/0-OpticalChannel0/0/0/0 [OP, 500] Optics0/0/0/0 [LP, 500]
Optics0/0/0/8 [CP, 100] 30007 [ETH, 100] 30025 [ODU4, 100] 30001 [OTU, 500]
0/0-OpticalChannel0/0/0/1 [OP, 500] Optics0/0/0/1 [LP, 500]
Optics0/0/0/9 [CP, 100] 30008 [ETH, 100] 30026 [ODU4, 100] 30001 [OTU, 500]
0/0-OpticalChannel0/0/0/1 [OP, 500] Optics0/0/0/1 [LP, 500]
Optics0/0/0/10 [CP, 100] 30009 [ETH, 100] 30027 [ODU4, 100] 30001 [OTU, 500]
0/0-OpticalChannel0/0/0/1 [OP, 500] Optics0/0/0/1 [LP, 500]
Optics0/0/0/11 [CP, 100] 30010 [ETH, 100] 30028 [ODU4, 100] 30001 [OTU, 500]
0/0-OpticalChannel0/0/0/1 [OP, 500] Optics0/0/0/1 [LP, 500]
Optics0/0/0/12 [CP, 100] 30011 [ETH, 100] 30029 [ODU4, 100] 30001 [OTU, 500]
0/0-OpticalChannel0/0/0/1 [OP, 500] Optics0/0/0/1 [LP, 500]
Optics0/1/0/2 [CP, 100] 40002 [ETH, 100] 40020 [ODU4, 100] 40000 [OTU, 500]
0/1-OpticalChannel0/1/0/0 [OP, 500] Optics0/1/0/0 [LP, 500]
Optics0/1/0/3 [CP, 100] 40003 [ETH, 100] 40021 [ODU4, 100] 40000 [OTU, 500]
0/1-OpticalChannel0/1/0/0 [OP, 500] Optics0/1/0/0 [LP, 500]
Optics0/1/0/4 [CP, 100] 40004 [ETH, 100] 40022 [ODU4, 100] 40000 [OTU, 500]
0/1-OpticalChannel0/1/0/0 [OP, 500] Optics0/1/0/0 [LP, 500]
Optics0/1/0/5 [CP, 100] 40005 [ETH, 100] 40023 [ODU4, 100] 40000 [OTU, 500]
0/1-OpticalChannel0/1/0/0 [OP, 500] Optics0/1/0/0 [LP, 500]
Optics0/1/0/6 [CP, 100] 40006 [ETH, 100] 40024 [ODU4, 100] 40000 [OTU, 500]
0/1-OpticalChannel0/1/0/0 [OP, 500] Optics0/1/0/0 [LP, 500]
Optics0/1/0/8 [CP, 100] 40007 [ETH, 100] 40025 [ODU4, 100] 40001 [OTU, 500]
0/1-OpticalChannel0/1/0/1 [OP, 500] Optics0/1/0/1 [LP, 500]
Optics0/1/0/9 [CP, 100] 40008 [ETH, 100] 40026 [ODU4, 100] 40001 [OTU, 500]
0/1-OpticalChannel0/1/0/1 [OP, 500] Optics0/1/0/1 [LP, 500]
Optics0/1/0/10 [CP, 100] 40009 [ETH, 100] 40027 [ODU4, 100] 40001 [OTU, 500]
0/1-OpticalChannel0/1/0/1 [OP, 500] Optics0/1/0/1 [LP, 500]
Optics0/1/0/11 [CP, 100] 40010 [ETH, 100] 40028 [ODU4, 100] 40001 [OTU, 500]
0/1-OpticalChannel0/1/0/1 [OP, 500] Optics0/1/0/1 [LP, 500]
Optics0/1/0/12 [CP, 100] 40011 [ETH, 100] 40029 [ODU4, 100] 40001 [OTU, 500]
0/1-OpticalChannel0/1/0/1 [OP, 500] Optics0/1/0/1 [LP, 500]
Optics0/2/0/2 [CP, 100] 50002 [ETH, 100] 50020 [ODU4, 100] 50000 [OTU, 500]
0/2-OpticalChannel0/2/0/0 [OP, 500] Optics0/2/0/0 [LP, 500]
Optics0/2/0/3 [CP, 100] 50003 [ETH, 100] 50021 [ODU4, 100] 50000 [OTU, 500]
0/2-OpticalChannel0/2/0/0 [OP, 500] Optics0/2/0/0 [LP, 500]

```

```

Optics0/2/0/4 [CP, 100] 50004 [ETH, 100] 50022 [ODU4, 100] 50000 [OTU, 500]
0/2-OpticalChannel0/2/0/0 [OP, 500] Optics0/2/0/0 [LP, 500]
Optics0/2/0/5 [CP, 100] 50005 [ETH, 100] 50023 [ODU4, 100] 50000 [OTU, 500]
0/2-OpticalChannel0/2/0/0 [OP, 500] Optics0/2/0/0 [LP, 500]
Optics0/2/0/6 [CP, 100] 50006 [ETH, 100] 50024 [ODU4, 100] 50000 [OTU, 500]
0/2-OpticalChannel0/2/0/0 [OP, 500] Optics0/2/0/0 [LP, 500]
Optics0/2/0/8 [CP, 100] 50007 [ETH, 100] 50025 [ODU4, 100] 50001 [OTU, 500]
0/2-OpticalChannel0/2/0/1 [OP, 500] Optics0/2/0/1 [LP, 500]
Optics0/2/0/9 [CP, 100] 50008 [ETH, 100] 50026 [ODU4, 100] 50001 [OTU, 500]
0/2-OpticalChannel0/2/0/1 [OP, 500] Optics0/2/0/1 [LP, 500]
Optics0/2/0/10 [CP, 100] 50009 [ETH, 100] 50027 [ODU4, 100] 50001 [OTU, 500]
0/2-OpticalChannel0/2/0/1 [OP, 500] Optics0/2/0/1 [LP, 500]
Optics0/2/0/11 [CP, 100] 50010 [ETH, 100] 50028 [ODU4, 100] 50001 [OTU, 500]
0/2-OpticalChannel0/2/0/1 [OP, 500] Optics0/2/0/1 [LP, 500]
Optics0/2/0/12 [CP, 100] 50011 [ETH, 100] 50029 [ODU4, 100] 50001 [OTU, 500]
0/2-OpticalChannel0/2/0/1 [OP, 500] Optics0/2/0/1 [LP, 500]
Optics0/3/0/2 [CP, 100] 60002 [ETH, 100] 60020 [ODU4, 100] 60000 [OTU, 500]
0/3-OpticalChannel0/3/0/0 [OP, 500] Optics0/3/0/0 [LP, 500]
Optics0/3/0/3 [CP, 100] 60003 [ETH, 100] 60021 [ODU4, 100] 60000 [OTU, 500]
0/3-OpticalChannel0/3/0/0 [OP, 500] Optics0/3/0/0 [LP, 500]
Optics0/3/0/4 [CP, 100] 60004 [ETH, 100] 60022 [ODU4, 100] 60000 [OTU, 500]
0/3-OpticalChannel0/3/0/0 [OP, 500] Optics0/3/0/0 [LP, 500]
Optics0/3/0/5 [CP, 100] 60005 [ETH, 100] 60023 [ODU4, 100] 60000 [OTU, 500]
0/3-OpticalChannel0/3/0/0 [OP, 500] Optics0/3/0/0 [LP, 500]
Optics0/3/0/6 [CP, 100] 60006 [ETH, 100] 60024 [ODU4, 100] 60000 [OTU, 500]
0/3-OpticalChannel0/3/0/0 [OP, 500] Optics0/3/0/0 [LP, 500]
Optics0/3/0/8 [CP, 100] 60007 [ETH, 100] 60025 [ODU4, 100] 60001 [OTU, 500]
0/3-OpticalChannel0/3/0/1 [OP, 500] Optics0/3/0/1 [LP, 500]
Optics0/3/0/9 [CP, 100] 60008 [ETH, 100] 60026 [ODU4, 100] 60001 [OTU, 500]
0/3-OpticalChannel0/3/0/1 [OP, 500] Optics0/3/0/1 [LP, 500]
Optics0/3/0/10 [CP, 100] 60009 [ETH, 100] 60027 [ODU4, 100] 60001 [OTU, 500]
0/3-OpticalChannel0/3/0/1 [OP, 500] Optics0/3/0/1 [LP, 500]
Optics0/3/0/11 [CP, 100] 60010 [ETH, 100] 60028 [ODU4, 100] 60001 [OTU, 500]
0/3-OpticalChannel0/3/0/1 [OP, 500] Optics0/3/0/1 [LP, 500]
Optics0/3/0/12 [CP, 100] 60011 [ETH, 100] 60029 [ODU4, 100] 60001 [OTU, 500]
0/3-OpticalChannel0/3/0/1 [OP, 500] Optics0/3/0/1 [LP, 500]

```

To view specific logical channel details, use the following command:

```

Router#show terminal-device logical-channel osa number 30000
Wed Aug 28 12:25:27.054 UTC
Logical Channel Index:      30000
Name:                       CoherentDSP0/0/0/0
Admin-State:                Enable
Loopback-Mode:              None
Rate-Class:                  Not Configured
Trib-Protocol:               Not Configured
Protocol-Type:               OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:    0
TTI Transmit:                NA
TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:              NA
Optical Channel:              0_0-OpticalChannel0_0_0_0
Allocation:                   500G
Assignment Type:              Optical
RP/0/RP0/CPU0: BH1_P2A4#

```

To view all the logical channels details, use the following command:

```

Router#show terminal-device logical-channel osa all
Wed Aug 28 12:23:25.611 UTC

```

```

Logical Channel Index:    30000
Name:                    CoherentDSP0/0/0/0
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           Not Configured
Protocol-Type:           OTN protocol framing
Ingress Client Port:     NA
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         NA
Optical Channel:         0_0-OpticalChannel0_0_0_0
Allocation:              500G
Assignment Type:         Optical

```

```

Logical Channel Index:    30001
Name:                    CoherentDSP0/0/0/1
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           Not Configured
Protocol-Type:           OTN protocol framing
Ingress Client Port:     NA
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         NA
Optical Channel:         0_0-OpticalChannel0_0_0_1
Allocation:              500G
Assignment Type:         Optical

```

```

Logical Channel Index:    30002
Name:                    HundredGigECtrlr0/0/0/2
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              100G tributary signal rate
Trib-Protocol:           100G MLG protocol
Protocol-Type:           Ethernet protocol framing
Ingress Client Port:     Optics0/0/0/2
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         30020
Optical Channel:         NA
Allocation:              100G
Assignment Type:         Logical

```

```

Logical Channel Index:    30003
Name:                    HundredGigECtrlr0/0/0/3
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              100G tributary signal rate
Trib-Protocol:           100G MLG protocol
Protocol-Type:           Ethernet protocol framing
Ingress Client Port:     Optics0/0/0/3
Ingress Physical Channel: 0
TTI Transmit:           NA

```

```

TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             30021
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       30004
Name:                        HundredGigEctrler0/0/0/4
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  100G tributary signal rate
Trib-Protocol:               100G MLG protocol
Protocol-Type:               Ethernet protocol framing
Ingress Client Port:         Optics0/0/0/4
Ingress Physical Channel:    0
TTI Transmit:                NA
TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             30022
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       30005
Name:                        HundredGigEctrler0/0/0/5
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  100G tributary signal rate
Trib-Protocol:               100G MLG protocol
Protocol-Type:               Ethernet protocol framing
Ingress Client Port:         Optics0/0/0/5
Ingress Physical Channel:    0
TTI Transmit:                NA
TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             30023
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       30006
Name:                        HundredGigEctrler0/0/0/6
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  100G tributary signal rate
Trib-Protocol:               100G MLG protocol
Protocol-Type:               Ethernet protocol framing
Ingress Client Port:         Optics0/0/0/6
Ingress Physical Channel:    0
TTI Transmit:                NA
TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             30024
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       30007
Name:                        HundredGigEctrler0/0/0/8

```

```

Admin-State:          Enable
Loopback-Mode:       None
Rate-Class:          100G tributary signal rate
Trib-Protocol:        100G MLG protocol
Protocol-Type:        Ethernet protocol framing
Ingress Client Port:  Optics0/0/0/8
Ingress Physical Channel: 0
TTI Transmit:         NA
TTI Expected:         NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      30025
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 30008
Name:                  HundredGigECtrlr0/0/0/9
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            100G tributary signal rate
Trib-Protocol:         100G MLG protocol
Protocol-Type:         Ethernet protocol framing
Ingress Client Port:   Optics0/0/0/9
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        30026
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index: 30009
Name:                  HundredGigECtrlr0/0/0/10
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            100G tributary signal rate
Trib-Protocol:         100G MLG protocol
Protocol-Type:         Ethernet protocol framing
Ingress Client Port:   Optics0/0/0/10
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        30027
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index: 30010
Name:                  HundredGigECtrlr0/0/0/11
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            100G tributary signal rate
Trib-Protocol:         100G MLG protocol
Protocol-Type:         Ethernet protocol framing
Ingress Client Port:   Optics0/0/0/11
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1

```



```

Logical Assignment Name:    NA
Logical Channel:           30028
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     30011
Name:                      HundredGigECtrlr0/0/0/12
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/0/0/12
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           30029
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     30020
Name:                      ODU40/0/0/0/1
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                Not Configured
Trib-Protocol:             ODU 4 protocol
Protocol-Type:             OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           30000
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     30021
Name:                      ODU40/0/0/0/2
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                Not Configured
Trib-Protocol:             ODU 4 protocol
Protocol-Type:             OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           30000
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     30022
Name:                      ODU40/0/0/0/3
Admin-State:               Enable
Loopback-Mode:             None

```

Rate-Class: Not Configured  
 Trib-Protocol: ODU 4 protocol  
 Protocol-Type: OTN protocol framing  
 Ingress Client Port: NA  
 Ingress Physical Channel: 0  
 TTI Transmit: NA  
 TTI Expected: NA  
 Logical Assignment Index: 1  
 Logical Assignment Name: NA  
 Logical Channel: 30000  
 Optical Channel: NA  
 Allocation: 100G  
 Assignment Type: Logical

Logical Channel Index: 30023  
 Name: ODU40/0/0/0/4  
 Admin-State: Enable  
 Loopback-Mode: None  
 Rate-Class: Not Configured  
 Trib-Protocol: ODU 4 protocol  
 Protocol-Type: OTN protocol framing  
 Ingress Client Port: NA  
 Ingress Physical Channel: 0  
 TTI Transmit: NA  
 TTI Expected: NA  
 Logical Assignment Index: 1  
 Logical Assignment Name: NA  
 Logical Channel: 30000  
 Optical Channel: NA  
 Allocation: 100G  
 Assignment Type: Logical

Logical Channel Index: 30024  
 Name: ODU40/0/0/0/5  
 Admin-State: Enable  
 Loopback-Mode: None  
 Rate-Class: Not Configured  
 Trib-Protocol: ODU 4 protocol  
 Protocol-Type: OTN protocol framing  
 Ingress Client Port: NA  
 Ingress Physical Channel: 0  
 TTI Transmit: NA  
 TTI Expected: NA  
 Logical Assignment Index: 1  
 Logical Assignment Name: NA  
 Logical Channel: 30000  
 Optical Channel: NA  
 Allocation: 100G  
 Assignment Type: Logical

Logical Channel Index: 30025  
 Name: ODU40/0/0/1/1  
 Admin-State: Enable  
 Loopback-Mode: None  
 Rate-Class: Not Configured  
 Trib-Protocol: ODU 4 protocol  
 Protocol-Type: OTN protocol framing  
 Ingress Client Port: NA  
 Ingress Physical Channel: 0  
 TTI Transmit: NA  
 TTI Expected: NA  
 Logical Assignment Index: 1  
 Logical Assignment Name: NA  
 Logical Channel: 30001

```

Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 30026
Name:                 ODU40/0/0/1/2
Admin-State:          Enable
Loopback-Mode:        None
Rate-Class:           Not Configured
Trib-Protocol:         ODU 4 protocol
Protocol-Type:         OTN protocol framing
Ingress Client Port:  NA
Ingress Physical Channel: 0
TTI Transmit:         NA
TTI Expected:         NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      30001
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 30027
Name:                 ODU40/0/0/1/3
Admin-State:          Enable
Loopback-Mode:        None
Rate-Class:           Not Configured
Trib-Protocol:         ODU 4 protocol
Protocol-Type:         OTN protocol framing
Ingress Client Port:  NA
Ingress Physical Channel: 0
TTI Transmit:         NA
TTI Expected:         NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      30001
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 30028
Name:                 ODU40/0/0/1/4
Admin-State:          Enable
Loopback-Mode:        None
Rate-Class:           Not Configured
Trib-Protocol:         ODU 4 protocol
Protocol-Type:         OTN protocol framing
Ingress Client Port:  NA
Ingress Physical Channel: 0
TTI Transmit:         NA
TTI Expected:         NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      30001
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 30029
Name:                 ODU40/0/0/1/5
Admin-State:          Enable
Loopback-Mode:        None
Rate-Class:           Not Configured
Trib-Protocol:         ODU 4 protocol

```

```

Protocol-Type:           OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        30001
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index:   40000
Name:                   CoherentDSP0/1/0/0
Admin-State:            Enable
Loopback-Mode:          None
Rate-Class:             Not Configured
Trib-Protocol:          Not Configured
Protocol-Type:          OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        NA
Optical Channel:        0_1-OpticalChannel0_1_0_0
Allocation:             500G
Assignment Type:        Optical

Logical Channel Index:   40001
Name:                   CoherentDSP0/1/0/1
Admin-State:            Enable
Loopback-Mode:          None
Rate-Class:             Not Configured
Trib-Protocol:          Not Configured
Protocol-Type:          OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        NA
Optical Channel:        0_1-OpticalChannel0_1_0_1
Allocation:             500G
Assignment Type:        Optical

Logical Channel Index:   40002
Name:                   HundredGigECtrlr0/1/0/2
Admin-State:            Enable
Loopback-Mode:          None
Rate-Class:             100G tributary signal rate
Trib-Protocol:          100G MLG protocol
Protocol-Type:          Ethernet protocol framing
Ingress Client Port:    Optics0/1/0/2
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        40020
Optical Channel:        NA
Allocation:             100G

```

```

Assignment Type:           Logical

Logical Channel Index:    40003
Name:                     HundredGigEctrler0/1/0/3
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:            100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/1/0/3
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          40021
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    40004
Name:                     HundredGigEctrler0/1/0/4
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:            100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/1/0/4
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          40022
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    40005
Name:                     HundredGigEctrler0/1/0/5
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:            100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/1/0/5
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          40023
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    40006
Name:                     HundredGigEctrler0/1/0/6
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:            100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/1/0/6

```

```

Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40024
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 40007
Name: HundredGigECtrlr0/1/0/8
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/1/0/8
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40025
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 40008
Name: HundredGigECtrlr0/1/0/9
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/1/0/9
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40026
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 40009
Name: HundredGigECtrlr0/1/0/10
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/1/0/10
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40027
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

```

```

Logical Channel Index: 40010
Name: HundredGigECtrlr0/1/0/11
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/1/0/11
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40028
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

```

```

Logical Channel Index: 40011
Name: HundredGigECtrlr0/1/0/12
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/1/0/12
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40029
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

```

```

Logical Channel Index: 40020
Name: ODU40/1/0/0/1
Admin-State: Enable
Loopback-Mode: None
Rate-Class: Not Configured
Trib-Protocol: ODU 4 protocol
Protocol-Type: OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 40000
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

```

```

Logical Channel Index: 40021
Name: ODU40/1/0/0/2
Admin-State: Enable
Loopback-Mode: None
Rate-Class: Not Configured
Trib-Protocol: ODU 4 protocol
Protocol-Type: OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit: NA

```

```

TTI Expected:                NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             40000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       40022
Name:                        ODU40/1/0/0/3
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  Not Configured
Trib-Protocol:               ODU 4 protocol
Protocol-Type:               OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:    0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             40000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       40023
Name:                        ODU40/1/0/0/4
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  Not Configured
Trib-Protocol:               ODU 4 protocol
Protocol-Type:               OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:    0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             40000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       40024
Name:                        ODU40/1/0/0/5
Admin-State:                 Enable
Loopback-Mode:              None
Rate-Class:                  Not Configured
Trib-Protocol:               ODU 4 protocol
Protocol-Type:               OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:    0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:    1
Logical Assignment Name:     NA
Logical Channel:             40000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:             Logical

Logical Channel Index:       40025
Name:                        ODU40/1/0/1/1

```



```

Admin-State:          Enable
Loopback-Mode:       None
Rate-Class:          Not Configured
Trib-Protocol:       ODU 4 protocol
Protocol-Type:       OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit:       NA
TTI Expected:       NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:     40001
Optical Channel:    NA
Allocation:         100G
Assignment Type:     Logical

Logical Channel Index: 40026
Name:                ODU40/1/0/1/2
Admin-State:        Enable
Loopback-Mode:      None
Rate-Class:        Not Configured
Trib-Protocol:     ODU 4 protocol
Protocol-Type:     OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit:     NA
TTI Expected:     NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:   40001
Optical Channel:  NA
Allocation:       100G
Assignment Type:  Logical

Logical Channel Index: 40027
Name:                ODU40/1/0/1/3
Admin-State:        Enable
Loopback-Mode:      None
Rate-Class:        Not Configured
Trib-Protocol:     ODU 4 protocol
Protocol-Type:     OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit:     NA
TTI Expected:     NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:   40001
Optical Channel:  NA
Allocation:       100G
Assignment Type:  Logical

Logical Channel Index: 40028
Name:                ODU40/1/0/1/4
Admin-State:        Enable
Loopback-Mode:      None
Rate-Class:        Not Configured
Trib-Protocol:     ODU 4 protocol
Protocol-Type:     OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit:     NA
TTI Expected:     NA
Logical Assignment Index: 1

```

## Verifying Terminal-device Configuration

```

Logical Assignment Name:    NA
Logical Channel:           40001
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     40029
Name:                       ODU40/1/0/1/5
Admin-State:                Enable
Loopback-Mode:              None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:           40001
Optical Channel:           NA
Allocation:                 100G
Assignment Type:           Logical

Logical Channel Index:     50000
Name:                       CoherentDSP0/2/0/0
Admin-State:                Enable
Loopback-Mode:              None
Rate-Class:                 Not Configured
Trib-Protocol:              Not Configured
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:           NA
Optical Channel:           0_2-OpticalChannel0_2_0_0
Allocation:                 500G
Assignment Type:           Optical

Logical Channel Index:     50001
Name:                       CoherentDSP0/2/0/1
Admin-State:                Enable
Loopback-Mode:              None
Rate-Class:                 Not Configured
Trib-Protocol:              Not Configured
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:           NA
Optical Channel:           0_2-OpticalChannel0_2_0_1
Allocation:                 500G
Assignment Type:           Optical

Logical Channel Index:     50002
Name:                       HundredGigECtrlr0/2/0/2
Admin-State:                Enable
Loopback-Mode:              None

```

```

Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/2/0/2
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           50020
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     50003
Name:                      HundredGigECtrlr0/2/0/3
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/2/0/3
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           50021
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     50004
Name:                      HundredGigECtrlr0/2/0/4
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/2/0/4
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           50022
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     50005
Name:                      HundredGigECtrlr0/2/0/5
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/2/0/5
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           50023

```

```

Optical Channel:      NA
Allocation:          100G
Assignment Type:     Logical

Logical Channel Index: 50006
Name:                HundredGigECtrlr0/2/0/6
Admin-State:         Enable
Loopback-Mode:       None
Rate-Class:          100G tributary signal rate
Trib-Protocol:        100G MLG protocol
Protocol-Type:        Ethernet protocol framing
Ingress Client Port: Optics0/2/0/6
Ingress Physical Channel: 0
TTI Transmit:        NA
TTI Expected:        NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      50024
Optical Channel:      NA
Allocation:          100G
Assignment Type:     Logical

Logical Channel Index: 50007
Name:                HundredGigECtrlr0/2/0/8
Admin-State:         Enable
Loopback-Mode:       None
Rate-Class:          100G tributary signal rate
Trib-Protocol:        100G MLG protocol
Protocol-Type:        Ethernet protocol framing
Ingress Client Port: Optics0/2/0/8
Ingress Physical Channel: 0
TTI Transmit:        NA
TTI Expected:        NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      50025
Optical Channel:      NA
Allocation:          100G
Assignment Type:     Logical

Logical Channel Index: 50008
Name:                HundredGigECtrlr0/2/0/9
Admin-State:         Enable
Loopback-Mode:       None
Rate-Class:          100G tributary signal rate
Trib-Protocol:        100G MLG protocol
Protocol-Type:        Ethernet protocol framing
Ingress Client Port: Optics0/2/0/9
Ingress Physical Channel: 0
TTI Transmit:        NA
TTI Expected:        NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      50026
Optical Channel:      NA
Allocation:          100G
Assignment Type:     Logical

Logical Channel Index: 50009
Name:                HundredGigECtrlr0/2/0/10
Admin-State:         Enable
Loopback-Mode:       None
Rate-Class:          100G tributary signal rate
Trib-Protocol:        100G MLG protocol

```

```

Protocol-Type:           Ethernet protocol framing
Ingress Client Port:    Optics0/2/0/10
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        50027
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index:  50010
Name:                  HundredGigEctr1r0/2/0/11
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            100G tributary signal rate
Trib-Protocol:         100G MLG protocol
Protocol-Type:         Ethernet protocol framing
Ingress Client Port:    Optics0/2/0/11
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        50028
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index:  50011
Name:                  HundredGigEctr1r0/2/0/12
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            100G tributary signal rate
Trib-Protocol:         100G MLG protocol
Protocol-Type:         Ethernet protocol framing
Ingress Client Port:    Optics0/2/0/12
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        50029
Optical Channel:        NA
Allocation:             100G
Assignment Type:        Logical

Logical Channel Index:  50020
Name:                  ODU40/2/0/0/1
Admin-State:           Enable
Loopback-Mode:         None
Rate-Class:            Not Configured
Trib-Protocol:         ODU 4 protocol
Protocol-Type:         OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:          NA
TTI Expected:          NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:        50000
Optical Channel:        NA
Allocation:             100G

```

```

Assignment Type:           Logical

Logical Channel Index:    50021
Name:                     ODU40/2/0/0/2
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:               Not Configured
Trib-Protocol:            ODU 4 protocol
Protocol-Type:            OTN protocol framing
Ingress Client Port:      NA
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          50000
Optical Channel:          NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:    50022
Name:                     ODU40/2/0/0/3
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:               Not Configured
Trib-Protocol:            ODU 4 protocol
Protocol-Type:            OTN protocol framing
Ingress Client Port:      NA
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          50000
Optical Channel:          NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:    50023
Name:                     ODU40/2/0/0/4
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:               Not Configured
Trib-Protocol:            ODU 4 protocol
Protocol-Type:            OTN protocol framing
Ingress Client Port:      NA
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          50000
Optical Channel:          NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:    50024
Name:                     ODU40/2/0/0/5
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:               Not Configured
Trib-Protocol:            ODU 4 protocol
Protocol-Type:            OTN protocol framing
Ingress Client Port:      NA

```

```

Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 50000
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 50025
Name: ODU40/2/0/1/1
Admin-State: Enable
Loopback-Mode: None
Rate-Class: Not Configured
Trib-Protocol: ODU 4 protocol
Protocol-Type: OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 50001
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 50026
Name: ODU40/2/0/1/2
Admin-State: Enable
Loopback-Mode: None
Rate-Class: Not Configured
Trib-Protocol: ODU 4 protocol
Protocol-Type: OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 50001
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 50027
Name: ODU40/2/0/1/3
Admin-State: Enable
Loopback-Mode: None
Rate-Class: Not Configured
Trib-Protocol: ODU 4 protocol
Protocol-Type: OTN protocol framing
Ingress Client Port: NA
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 50001
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

```

```

Logical Channel Index:      50028
Name:                      ODU40/2/0/1/4
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            50001
Optical Channel:            NA
Allocation:                 100G
Assignment Type:            Logical

Logical Channel Index:      50029
Name:                      ODU40/2/0/1/5
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            50001
Optical Channel:            NA
Allocation:                 100G
Assignment Type:            Logical

Logical Channel Index:      60000
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              Not Configured
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            NA
Optical Channel:            0_3-OpticalChannel0_3_0_0
Allocation:                 500G
Assignment Type:            Optical

Logical Channel Index:      60001
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              Not Configured
Protocol-Type:              OTN protocol framing
Ingress Client Port:       NA
Ingress Physical Channel:   0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:   1

```



```

Logical Assignment Name:    NA
Logical Channel:           NA
Optical Channel:           0_3-OpticalChannel0_3_0_1
Allocation:                500G
Assignment Type:           Optical

Logical Channel Index:     60002
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/3/0/2
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           60020
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     60003
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/3/0/3
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           60021
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     60004
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/3/0/4
Ingress Physical Channel:  0
TTI Transmit:              NA
TTI Expected:              NA
Logical Assignment Index:  1
Logical Assignment Name:   NA
Logical Channel:           60022
Optical Channel:           NA
Allocation:                100G
Assignment Type:           Logical

Logical Channel Index:     60005
Admin-State:               Enable
Loopback-Mode:             None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:             Ethernet protocol framing
Ingress Client Port:       Optics0/3/0/5

```

```

Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 60023
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 60006
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/3/0/6
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 60024
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 60007
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/3/0/8
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 60025
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 60008
Admin-State: Enable
Loopback-Mode: None
Rate-Class: 100G tributary signal rate
Trib-Protocol: 100G MLG protocol
Protocol-Type: Ethernet protocol framing
Ingress Client Port: Optics0/3/0/9
Ingress Physical Channel: 0
TTI Transmit: NA
TTI Expected: NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel: 60026
Optical Channel: NA
Allocation: 100G
Assignment Type: Logical

Logical Channel Index: 60009
Admin-State: Enable
Loopback-Mode: None

```

```
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/3/0/10
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          60027
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    60010
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/3/0/11
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          60028
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    60011
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                100G tributary signal rate
Trib-Protocol:             100G MLG protocol
Protocol-Type:            Ethernet protocol framing
Ingress Client Port:      Optics0/3/0/12
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          60029
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical

Logical Channel Index:    60020
Admin-State:              Enable
Loopback-Mode:            None
Rate-Class:                Not Configured
Trib-Protocol:             ODU 4 protocol
Protocol-Type:            OTN protocol framing
Ingress Client Port:      NA
Ingress Physical Channel: 0
TTI Transmit:             NA
TTI Expected:             NA
Logical Assignment Index: 1
Logical Assignment Name:  NA
Logical Channel:          60000
Optical Channel:          NA
Allocation:                100G
Assignment Type:          Logical
```

```

Logical Channel Index:      60021
Admin-State:                Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:   0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            60000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:            Logical

```

```

Logical Channel Index:      60022
Admin-State:                Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:   0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            60000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:            Logical

```

```

Logical Channel Index:      60023
Admin-State:                Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:   0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:   1
Logical Assignment Name:    NA
Logical Channel:            60000
Optical Channel:            NA
Allocation:                  100G
Assignment Type:            Logical

```

```

Logical Channel Index:      60024
Admin-State:                Enable
Loopback-Mode:             None
Rate-Class:                 Not Configured
Trib-Protocol:              ODU 4 protocol
Protocol-Type:              OTN protocol framing
Ingress Client Port:        NA
Ingress Physical Channel:   0
TTI Transmit:               NA
TTI Expected:               NA
Logical Assignment Index:   1
Logical Assignment Name:    NA

```

```
Logical Channel:          60000
Optical Channel:         NA
Allocation:              100G
Assignment Type:         Logical

Logical Channel Index:   60025
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           ODU 4 protocol
Protocol-Type:           OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         60001
Optical Channel:         NA
Allocation:              100G
Assignment Type:         Logical

Logical Channel Index:   60026
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           ODU 4 protocol
Protocol-Type:           OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         60001
Optical Channel:         NA
Allocation:              100G
Assignment Type:         Logical

Logical Channel Index:   60027
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           ODU 4 protocol
Protocol-Type:           OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
TTI Transmit:           NA
TTI Expected:           NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:         60001
Optical Channel:         NA
Allocation:              100G
Assignment Type:         Logical

Logical Channel Index:   60028
Admin-State:             Enable
Loopback-Mode:          None
Rate-Class:              Not Configured
Trib-Protocol:           ODU 4 protocol
Protocol-Type:           OTN protocol framing
Ingress Client Port:    NA
Ingress Physical Channel: 0
```

```

TTI Transmit:          NA
TTI Expected:         NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      60001
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

Logical Channel Index: 60029
Admin-State:          Enable
Loopback-Mode:       None
Rate-Class:           Not Configured
Trib-Protocol:        ODU 4 protocol
Protocol-Type:        OTN protocol framing
Ingress Client Port:  NA
Ingress Physical Channel: 0
TTI Transmit:        NA
TTI Expected:        NA
Logical Assignment Index: 1
Logical Assignment Name: NA
Logical Channel:      60001
Optical Channel:      NA
Allocation:           100G
Assignment Type:      Logical

```

To view the supported operational modes, use the following command:

```

Router#show terminal-device operational-modes
Wed Aug 28 12:24:58.115 UTC
Mode  FEC      Baud-Rate      Description
3     SD_15      0.000000      SoftDecision_FEC15:Baud_Default
4     SD_27      0.000000      SoftDecision_FEC27:Baud_Default
101   SD_27      24.020791     SoftDecision_FEC27:Baud_24.02079115
102   SD_27      24.053296     SoftDecision_FEC27:Baud_24.05329561
103   SD_27      24.064150     SoftDecision_FEC27:Baud_24.06414998
104   SD_27      24.085888     SoftDecision_FEC27:Baud_24.08588815
105   SD_27      24.107666     SoftDecision_FEC27:Baud_24.10766562
106   SD_27      24.118569     SoftDecision_FEC27:Baud_24.11856914
107   SD_27      24.151339     SoftDecision_FEC27:Baud_24.15133893
108   SD_27      24.184198     SoftDecision_FEC27:Baud_24.1841979
109   SD_27      24.195171     SoftDecision_FEC27:Baud_24.19517076
110   SD_27      24.217146     SoftDecision_FEC27:Baud_24.21714639
111   SD_27      24.239162     SoftDecision_FEC27:Baud_24.23916198
112   SD_27      24.250185     SoftDecision_FEC27:Baud_24.25018479
113   SD_27      24.283313     SoftDecision_FEC27:Baud_24.28331346
114   SD_27      24.316533     SoftDecision_FEC27:Baud_24.31653277
115   SD_27      24.327626     SoftDecision_FEC27:Baud_24.32762608
116   SD_27      24.349843     SoftDecision_FEC27:Baud_24.34984309
117   SD_27      24.372101     SoftDecision_FEC27:Baud_24.37210071
118   SD_27      24.383245     SoftDecision_FEC27:Baud_24.38324479
119   SD_27      24.416738     SoftDecision_FEC27:Baud_24.41673826
120   SD_27      24.450324     SoftDecision_FEC27:Baud_24.45032387
121   SD_27      24.461540     SoftDecision_FEC27:Baud_24.46153962
122   SD_27      24.484002     SoftDecision_FEC27:Baud_24.484002
123   SD_27      24.506506     SoftDecision_FEC27:Baud_24.50650568
124   SD_27      24.517773     SoftDecision_FEC27:Baud_24.51777304
125   SD_27      24.551637     SoftDecision_FEC27:Baud_24.55163737
126   SD_27      24.585595     SoftDecision_FEC27:Baud_24.58559537
127   SD_27      24.596936     SoftDecision_FEC27:Baud_24.59693559
128   SD_27      24.619647     SoftDecision_FEC27:Baud_24.61964744
129   SD_27      24.642401     SoftDecision_FEC27:Baud_24.64240128
130   SD_27      24.653794     SoftDecision_FEC27:Baud_24.65379397
131   SD_27      24.688035     SoftDecision_FEC27:Baud_24.68803535
132   SD_27      24.722372     SoftDecision_FEC27:Baud_24.72237198

```

133 SD\_27 24.733839 SoftDecision\_FEC27:Baud\_24.73383876

## Migrating CLI to Terminal-device Configuration

Cisco NCS 1004 supports migration from CLI to OC configuration only, vice-versa is not supported. The transition from CLI to terminal-device must be done via merge-config operation in gRPC.

To migrate from CLI configuration to the terminal-device configuration, perform the following:

- 
- Step 1** You must configure a slice using the CLI configuration command. For more details, see [Configure the Slice](#).
- Note** Do not use all keyword to configure all slices, instead you must configure each slice individually.
- Note** Configure the trunk port frequencies with 100MHz spacing as after the migration to OC Models only 100MHz spacing is supported.
- Note** Ignore this step if you are migrating a configured slice. You cannot change the slice configuration while performing migration. For example, if you have configured 100G to 200 G traffic on a slice using CLI, then you can perform OC configuration for the same 100G to 200G slice configuration.
- Step 2** Apply OC configuration using Netconf or gRPC. For more details, see [Configuring Cisco NCS1004 Using Terminal-device Model, on page 5](#).
- 

To disable the transition from CLI configuration to the terminal-device configuration, use the following command:

```
terminal-device transition cli-to-yang disable
```

## OpenConfig Terminal Device Revision

*Table 3: Feature History*

Feature Name	Release	Description
OC (Open Configuration) Terminal Device Revision	Cisco IOS XR Release 7.3.1	The Open Configuration terminal device revision to 1.7.2 allows you to provide LLDP support on the client optics. This feature allows you to learn LLDP neighbors and the topology of the devices for Operations, Administration, and Maintenance (OAM) purposes.

The client-side LLDP is enabled by default. The LLDP state data is collected over gNMI telemetry.

**Limitations:**

- There is no support on configuration, since LLDP is enabled by default.
- There is no support for LLDP counters.
- There is no support for leafs age and last update in LLDP neighbor discovery.

Sample gNMI telemetry output for LLDP:

```
{
  "openconfig-terminal-device": {
    "terminal-device": {
      "logical-channels": {
        "channel": {
          "10005": {
            "ethernet": {
              "lldp": {
                "neighbors": {
                  "neighbor": {
                    "nncs5500_node1#HundredGigE0/0/0/30": {
                      "state": {
                        "chassis-id": "008a.96cd.34df",
                        "chassis-id-type": "MAC_ADDRESS",
                        "id": "nncs5500_node1#HundredGigE0/0/0/30",
                        "management-address": "10.127.60.23",
                        "management-address-type": "ipv4",
                        "port-id": "HundredGigE0/0/0/30",
                        "port-id-type": "INTERFACE_NAME",
                        "system-description": " 7.2.1.36I, NCS-5500",
                        "system-name": "nncs5500_node1"
                      }
                    }
                  }
                }
              }
            }
          }
        }
      },
      "state": {
        "enabled": true,
        "snooping": true
      }
    }
  }
}
```



```
        }  
    }  
}  
}
```

