A YANG Data Model for Wavelength Switched Optical Networks (WSONs)

Abstract

   This document provides a YANG data model for the routing and
   wavelength assignment (RWA) TE topology in Wavelength Switched
   Optical Networks (WSONs). The YANG data model defined in this
   document conforms to the Network Management Datastore Architecture
   (NMDA).

Status of This Memo

   This is an Internet Standards Track document.

   This document is a product of the Internet Engineering Task Force
   (IETF). It represents the consensus of the IETF community. It has
   received public review and has been approved for publication by the
   Internet Engineering Steering Group (IESG). Further information on
   Internet Standards is available in Section 2 of RFC 7841.

   Information about the current status of this document, any errata,
   and how to provide feedback on it may be obtained at
   https://www.rfc-editor.org/info/rfc9094.

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1. Introduction

   This document provides a YANG data model for the routing and
   wavelength assignment (RWA) Traffic Engineering (TE) topology in
   transparent Wavelength Switched Optical Networks (WSONs). The YANG
   data model described in this document is a WSON technology-specific
   YANG data model based on the information model developed in [RFC7446]
   and the two encoding documents ([RFC7581] and [RFC7579]) that
   developed protocol-independent encodings based on [RFC7446].

   [ITU-Tg6982] defines amplified multichannel dense wavelength division
   multiplexing applications with single-channel optical interfaces.
   The YANG data model defined in this document refers to the standard
   application mode defined in [ITU-Tg6982].

   Neither impairment-aware optical networks nor flexi-grid are in scope
   for this document. Refer to [OPT-IMPAIR-AWARE-YANG] for the
   impairment-aware optical network topology model and [FLEXI-GRID-YANG]
   for the flexi-grid optical network topology model.

   Additionally, neither transponder models nor resource block models
   (e.g., 3R) are in scope for this document.

   This document defines one YANG module: "ietf-wson-topology"
   (Section 3). This document augments the generic TE topology
   specification [RFC8795].

   There are multiple applications for the YANG data model defined in
   this document. For example, nodes within the network can use the
   data model to capture their understanding of the overall WSON
   topology and expose it to a controller. A controller can further
   propagate the topology to other controllers. The YANG data model is
   used by NETCONF [RFC6020] [RFC8341] or a RESTCONF [RFC8040] protocol.
   The YANG data model defined in this document conforms to the Network
   Management Datastore Architecture [RFC8342].

1.1. Terminology and Notations

   Refer to [RFC7446] and [RFC7581] for the key terms used in this
   document. The following terms are defined in [RFC7950] and are not
   redefined here:

   * client

*   server

*   augment

*   data model

*   data node

The following terms are defined in [RFC6241] and are not redefined here:

*   configuration data

*   state data

The terminology for describing YANG data models is found in [RFC7950].

1.2. Tree Diagram

A simplified graphical representation of the data model is used in Section 2 of this document. The meaning of the symbols in these diagrams is defined in [RFC8340].

1.3. Prefix in Data Node Names

In this document, names of data nodes and other data model objects are prefixed using the standard prefix associated with the corresponding YANG imported modules, as shown in the following table.

Prefix	YANG module	Reference
l0-types	ietf-layer0-types	[RFC9093]
wsont	ietf-wson-topology	RFC 9094
nw	ietf-network	[RFC8345]
nt	ietf-network-topology	[RFC8345]
tet	ietf-te-topology	[RFC8795]

Table 1: Data Node Names

2. YANG Data Model (Tree Structure) for WSON Topology

```
module: ietf-wson-topology
  augment /nw:networks/nw:network/nw:network-types/tet:te-topology:
    +--rw wson-topology!
  augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes:
    +--rw wson-node!
       +--rw is-reconfigurable-node?   boolean
  augment /nw:networks/nw:network/nw:node/tet:te
```

```
                  /tet:te-node-attributes/tet:connectivity-matrices
                  /tet:label-restrictions/tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:te-node-attributes/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:from/tet:label-restrictions
                  /tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:te-node-attributes/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:to/tet:label-restrictions
                  /tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:label-restrictions/tet:label-restriction:
     +--ro grid-type?    identityref
     +--ro priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:from/tet:label-restrictions
                  /tet:label-restriction:
     +--ro grid-type?    identityref
     +--ro priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:to/tet:label-restrictions
                  /tet:label-restriction:
     +--ro grid-type?    identityref
     +--ro priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:tunnel-termination-point
                  /tet:local-link-connectivities/tet:label-restrictions
                  /tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:tunnel-termination-point
                  /tet:local-link-connectivities
                  /tet:local-link-connectivity/tet:label-restrictions
                  /tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nt:link/tet:te
                  /tet:te-link-attributes/tet:label-restrictions
                  /tet:label-restriction:
     +--rw grid-type?    identityref
     +--rw priority?     uint8
  augment /nw:networks/nw:network/nt:link/tet:te
                  /tet:information-source-entry/tet:label-restrictions
                  /tet:label-restriction:
     +--ro grid-type?    identityref
     +--ro priority?     uint8
```

```
augment /nw:networks/tet:te/tet:templates/tet:link-template
          /tet:te-link-attributes/tet:label-restrictions
          /tet:label-restriction:
  +--rw grid-type?   identityref
  +--rw priority?    uint8
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes/tet:connectivity-matrices
          /tet:label-restrictions/tet:label-restriction
          /tet:label-start/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes/tet:connectivity-matrices
          /tet:label-restrictions/tet:label-restriction
          /tet:label-end/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes/tet:connectivity-matrices
          /tet:label-restrictions/tet:label-restriction
          /tet:label-step/tet:technology:
  +--:(wson)
     +--rw (l0-grid-type)?
        +--:(dwdm)
        |  +--rw wson-dwdm-channel-spacing?   identityref
        +--:(cwdm)
           +--rw wson-cwdm-channel-spacing?   identityref
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes/tet:connectivity-matrices
          /tet:underlay/tet:primary-path/tet:path-element/tet:type
          /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw (single-or-super-channel)?
        |     +--:(single)
        |     |  +--rw dwdm-n?             l0-types:dwdm-n
        |     +--:(super)
        |        +--rw subcarrier-dwdm-n*  l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:te-node-attributes/tet:connectivity-matrices
          /tet:underlay/tet:backup-path/tet:path-element/tet:type
          /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
```

```
           │   +--rw (single-or-super-channel)?
           │      +--:(single)
           │      │  +--rw dwdm-n?              l0-types:dwdm-n
           │      +--:(super)
           │         +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
           +--:(cwdm)
              +--rw cwdm-n?                      l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:optimizations/tet:algorithm/tet:metric
        /tet:optimization-metric
        /tet:explicit-route-exclude-objects
        /tet:route-object-exclude-object/tet:type/tet:label
        /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        │  +--rw (single-or-super-channel)?
        │     +--:(single)
        │     │  +--rw dwdm-n?              l0-types:dwdm-n
        │     +--:(super)
        │        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                      l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:optimizations/tet:algorithm/tet:metric
        /tet:optimization-metric
        /tet:explicit-route-include-objects
        /tet:route-object-include-object/tet:type/tet:label
        /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        │  +--rw (single-or-super-channel)?
        │     +--:(single)
        │     │  +--rw dwdm-n?              l0-types:dwdm-n
        │     +--:(super)
        │        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                      l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:path-properties/tet:path-route-objects
        /tet:path-route-object/tet:type/tet:label/tet:label-hop
        /tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        │  +--ro (single-or-super-channel)?
        │     +--:(single)
        │     │  +--ro dwdm-n?              l0-types:dwdm-n
        │     +--:(super)
        │        +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                      l0-types:cwdm-n
```

```
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:connectivity-matrix/tet:from/tet:label-restrictions
        /tet:label-restriction/tet:label-start/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:connectivity-matrix/tet:from/tet:label-restrictions
        /tet:label-restriction/tet:label-end/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:connectivity-matrix/tet:from/tet:label-restrictions
        /tet:label-restriction/tet:label-step/tet:technology:
  +--:(wson)
     +--rw (l0-grid-type)?
        +--:(dwdm)
        |  +--rw wson-dwdm-channel-spacing?    identityref
        +--:(cwdm)
           +--rw wson-cwdm-channel-spacing?    identityref
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:connectivity-matrix/tet:to/tet:label-restrictions
        /tet:label-restriction/tet:label-start/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
        /tet:connectivity-matrix/tet:to/tet:label-restrictions
        /tet:label-restriction/tet:label-end/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:te-node-attributes/tet:connectivity-matrices
```

```
              /tet:connectivity-matrix/tet:to/tet:label-restrictions
              /tet:label-restriction/tet:label-step/tet:technology:
   +--:(wson)
      +--rw (l0-grid-type)?
         +--:(dwdm)
         |  +--rw wson-dwdm-channel-spacing?   identityref
         +--:(cwdm)
            +--rw wson-cwdm-channel-spacing?   identityref
augment /nw:networks/nw:network/nw:node/tet:te
              /tet:te-node-attributes/tet:connectivity-matrices
              /tet:connectivity-matrix/tet:underlay/tet:primary-path
              /tet:path-element/tet:type/tet:label/tet:label-hop
              /tet:te-label/tet:technology:
   +--:(wson)
      +--rw (grid-type)?
         +--:(dwdm)
         |  +--rw (single-or-super-channel)?
         |     +--:(single)
         |     |  +--rw dwdm-n?              l0-types:dwdm-n
         |     +--:(super)
         |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
         +--:(cwdm)
            +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
              /tet:te-node-attributes/tet:connectivity-matrices
              /tet:connectivity-matrix/tet:underlay/tet:backup-path
              /tet:path-element/tet:type/tet:label/tet:label-hop
              /tet:te-label/tet:technology:
   +--:(wson)
      +--rw (grid-type)?
         +--:(dwdm)
         |  +--rw (single-or-super-channel)?
         |     +--:(single)
         |     |  +--rw dwdm-n?              l0-types:dwdm-n
         |     +--:(super)
         |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
         +--:(cwdm)
            +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
              /tet:te-node-attributes/tet:connectivity-matrices
              /tet:connectivity-matrix/tet:optimizations/tet:algorithm
              /tet:metric/tet:optimization-metric
              /tet:explicit-route-exclude-objects
              /tet:route-object-exclude-object/tet:type/tet:label
              /tet:label-hop/tet:te-label/tet:technology:
   +--:(wson)
      +--rw (grid-type)?
         +--:(dwdm)
         |  +--rw (single-or-super-channel)?
         |     +--:(single)
         |     |  +--rw dwdm-n?              l0-types:dwdm-n
         |     +--:(super)
         |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
         +--:(cwdm)
            +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
```

```
                  /tet:te-node-attributes/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:optimizations/tet:algorithm
                  /tet:metric/tet:optimization-metric
                  /tet:explicit-route-include-objects
                  /tet:route-object-include-object/tet:type/tet:label
                  /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw (single-or-super-channel)?
        |     +--:(single)
        |     |  +--rw dwdm-n?               l0-types:dwdm-n
        |     +--:(super)
        |        +--rw subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:te-node-attributes/tet:connectivity-matrices
                  /tet:connectivity-matrix/tet:path-properties
                  /tet:path-route-objects/tet:path-route-object/tet:type
                  /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?               l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:label-restrictions/tet:label-restriction
                  /tet:label-start/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:label-restrictions/tet:label-restriction
                  /tet:label-end/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
                  /tet:information-source-entry/tet:connectivity-matrices
                  /tet:label-restrictions/tet:label-restriction
                  /tet:label-step/tet:technology:
  +--:(wson)
```

```
        +--ro (l0-grid-type)?
           +--:(dwdm)
           |  +--ro wson-dwdm-channel-spacing?    identityref
           +--:(cwdm)
              +--ro wson-cwdm-channel-spacing?    identityref
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:underlay/tet:primary-path/tet:path-element/tet:type
          /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?               l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:underlay/tet:backup-path/tet:path-element/tet:type
          /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?               l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:optimizations/tet:algorithm/tet:metric
          /tet:optimization-metric
          /tet:explicit-route-exclude-objects
          /tet:route-object-exclude-object/tet:type/tet:label
          /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?               l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:optimizations/tet:algorithm/tet:metric
          /tet:optimization-metric
          /tet:explicit-route-include-objects
          /tet:route-object-include-object/tet:type/tet:label
```

```
                    /tet:label-hop/tet:te-label/tet:technology:
   +--:(wson)
      +--ro (grid-type)?
         +--:(dwdm)
         |  +--ro (single-or-super-channel)?
         |     +--:(single)
         |     |  +--ro dwdm-n?               l0-types:dwdm-n
         |     +--:(super)
         |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
         +--:(cwdm)
            +--ro cwdm-n?                      l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:information-source-entry/tet:connectivity-matrices
           /tet:path-properties/tet:path-route-objects
           /tet:path-route-object/tet:type/tet:label/tet:label-hop
           /tet:te-label/tet:technology:
   +--:(wson)
      +--ro (grid-type)?
         +--:(dwdm)
         |  +--ro (single-or-super-channel)?
         |     +--:(single)
         |     |  +--ro dwdm-n?               l0-types:dwdm-n
         |     +--:(super)
         |        +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
         +--:(cwdm)
            +--ro cwdm-n?                      l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:information-source-entry/tet:connectivity-matrices
           /tet:connectivity-matrix/tet:from/tet:label-restrictions
           /tet:label-restriction/tet:label-start/tet:te-label
           /tet:technology:
   +--:(wson)
      +--ro (grid-type)?
         +--:(dwdm)
         |  +--ro dwdm-n?    l0-types:dwdm-n
         +--:(cwdm)
            +--ro cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:information-source-entry/tet:connectivity-matrices
           /tet:connectivity-matrix/tet:from/tet:label-restrictions
           /tet:label-restriction/tet:label-end/tet:te-label
           /tet:technology:
   +--:(wson)
      +--ro (grid-type)?
         +--:(dwdm)
         |  +--ro dwdm-n?    l0-types:dwdm-n
         +--:(cwdm)
            +--ro cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:information-source-entry/tet:connectivity-matrices
           /tet:connectivity-matrix/tet:from/tet:label-restrictions
           /tet:label-restriction/tet:label-step/tet:technology:
   +--:(wson)
      +--ro (l0-grid-type)?
         +--:(dwdm)
         |  +--ro wson-dwdm-channel-spacing?    identityref
```

```
            +--:(cwdm)
               +--ro wson-cwdm-channel-spacing?    identityref
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:to/tet:label-restrictions
          /tet:label-restriction/tet:label-start/tet:te-label
          /tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:to/tet:label-restrictions
          /tet:label-restriction/tet:label-end/tet:te-label
          /tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:to/tet:label-restrictions
          /tet:label-restriction/tet:label-step/tet:technology:
  +--:(wson)
     +--ro (l0-grid-type)?
        +--:(dwdm)
        |  +--ro wson-dwdm-channel-spacing?    identityref
        +--:(cwdm)
           +--ro wson-cwdm-channel-spacing?    identityref
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:underlay/tet:primary-path
          /tet:path-element/tet:type/tet:label/tet:label-hop
          /tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?             l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*  l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:underlay/tet:backup-path
          /tet:path-element/tet:type/tet:label/tet:label-hop
          /tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
```

```
            +--:(dwdm)
            |  +--ro (single-or-super-channel)?
            |     +--:(single)
            |     |  +--ro dwdm-n?              l0-types:dwdm-n
            |     +--:(super)
            |        +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
            +--:(cwdm)
               +--ro cwdm-n?                     l0-types:cwdm-n
  augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:optimizations/tet:algorithm
          /tet:metric/tet:optimization-metric
          /tet:explicit-route-exclude-objects
          /tet:route-object-exclude-object/tet:type/tet:label
          /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?              l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
  augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:optimizations/tet:algorithm
          /tet:metric/tet:optimization-metric
          /tet:explicit-route-include-objects
          /tet:route-object-include-object/tet:type/tet:label
          /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?              l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                     l0-types:cwdm-n
  augment /nw:networks/nw:network/nw:node/tet:te
          /tet:information-source-entry/tet:connectivity-matrices
          /tet:connectivity-matrix/tet:path-properties
          /tet:path-route-objects/tet:path-route-object/tet:type
          /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        |  +--ro (single-or-super-channel)?
        |     +--:(single)
        |     |  +--ro dwdm-n?              l0-types:dwdm-n
        |     +--:(super)
        |        +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
```

```
                  +--ro cwdm-n?                    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
            /tet:tunnel-termination-point
            /tet:local-link-connectivities/tet:label-restrictions
            /tet:label-restriction/tet:label-start/tet:te-label
            /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
            /tet:tunnel-termination-point
            /tet:local-link-connectivities/tet:label-restrictions
            /tet:label-restriction/tet:label-end/tet:te-label
            /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
            /tet:tunnel-termination-point
            /tet:local-link-connectivities/tet:label-restrictions
            /tet:label-restriction/tet:label-step/tet:technology:
  +--:(wson)
     +--rw (l0-grid-type)?
        +--:(dwdm)
        |  +--rw wson-dwdm-channel-spacing?   identityref
        +--:(cwdm)
           +--rw wson-cwdm-channel-spacing?   identityref
augment /nw:networks/nw:network/nw:node/tet:te
            /tet:tunnel-termination-point
            /tet:local-link-connectivities/tet:underlay
            /tet:primary-path/tet:path-element/tet:type/tet:label
            /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw (single-or-super-channel)?
        |     +--:(single)
        |     |  +--rw dwdm-n?                l0-types:dwdm-n
        |     +--:(super)
        |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
            /tet:tunnel-termination-point
            /tet:local-link-connectivities/tet:underlay
            /tet:backup-path/tet:path-element/tet:type/tet:label
            /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
```

```
        │    +--rw (single-or-super-channel)?
        │       +--:(single)
        │       │  +--rw dwdm-n?               l0-types:dwdm-n
        │       +--:(super)
        │          +--rw subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:tunnel-termination-point
        /tet:local-link-connectivities/tet:optimizations
        /tet:algorithm/tet:metric/tet:optimization-metric
        /tet:explicit-route-exclude-objects
        /tet:route-object-exclude-object/tet:type/tet:label
        /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        │    +--rw (single-or-super-channel)?
        │       +--:(single)
        │       │  +--rw dwdm-n?               l0-types:dwdm-n
        │       +--:(super)
        │          +--rw subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:tunnel-termination-point
        /tet:local-link-connectivities/tet:optimizations
        /tet:algorithm/tet:metric/tet:optimization-metric
        /tet:explicit-route-include-objects
        /tet:route-object-include-object/tet:type/tet:label
        /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        │    +--rw (single-or-super-channel)?
        │       +--:(single)
        │       │  +--rw dwdm-n?               l0-types:dwdm-n
        │       +--:(super)
        │          +--rw subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
        /tet:tunnel-termination-point
        /tet:local-link-connectivities/tet:path-properties
        /tet:path-route-objects/tet:path-route-object/tet:type
        /tet:label/tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--ro (grid-type)?
        +--:(dwdm)
        │    +--ro (single-or-super-channel)?
        │       +--:(single)
        │       │  +--ro dwdm-n?               l0-types:dwdm-n
        │       +--:(super)
        │          +--ro subcarrier-dwdm-n*    l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                       l0-types:cwdm-n
```

```
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:tunnel-termination-point
          /tet:local-link-connectivities
          /tet:local-link-connectivity/tet:label-restrictions
          /tet:label-restriction/tet:label-start/tet:te-label
          /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:tunnel-termination-point
          /tet:local-link-connectivities
          /tet:local-link-connectivity/tet:label-restrictions
          /tet:label-restriction/tet:label-end/tet:te-label
          /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?    l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:tunnel-termination-point
          /tet:local-link-connectivities
          /tet:local-link-connectivity/tet:label-restrictions
          /tet:label-restriction/tet:label-step/tet:technology:
  +--:(wson)
     +--rw (l0-grid-type)?
        +--:(dwdm)
        |  +--rw wson-dwdm-channel-spacing?    identityref
        +--:(cwdm)
           +--rw wson-cwdm-channel-spacing?    identityref
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:tunnel-termination-point
          /tet:local-link-connectivities
          /tet:local-link-connectivity/tet:underlay
          /tet:primary-path/tet:path-element/tet:type/tet:label
          /tet:label-hop/tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw (single-or-super-channel)?
        |     +--:(single)
        |     |  +--rw dwdm-n?              l0-types:dwdm-n
        |     +--:(super)
        |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                    l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
          /tet:tunnel-termination-point
          /tet:local-link-connectivities
          /tet:local-link-connectivity/tet:underlay/tet:backup-path
          /tet:path-element/tet:type/tet:label/tet:label-hop
```

```
                    /tet:te-label/tet:technology:
     +--:(wson)
        +--rw (grid-type)?
           +--:(dwdm)
           |  +--rw (single-or-super-channel)?
           |     +--:(single)
           |     |  +--rw dwdm-n?              l0-types:dwdm-n
           |     +--:(super)
           |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
           +--:(cwdm)
              +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:tunnel-termination-point
           /tet:local-link-connectivities
           /tet:local-link-connectivity/tet:optimizations
           /tet:algorithm/tet:metric/tet:optimization-metric
           /tet:explicit-route-exclude-objects
           /tet:route-object-exclude-object/tet:type/tet:label
           /tet:label-hop/tet:te-label/tet:technology:
     +--:(wson)
        +--rw (grid-type)?
           +--:(dwdm)
           |  +--rw (single-or-super-channel)?
           |     +--:(single)
           |     |  +--rw dwdm-n?              l0-types:dwdm-n
           |     +--:(super)
           |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
           +--:(cwdm)
              +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:tunnel-termination-point
           /tet:local-link-connectivities
           /tet:local-link-connectivity/tet:optimizations
           /tet:algorithm/tet:metric/tet:optimization-metric
           /tet:explicit-route-include-objects
           /tet:route-object-include-object/tet:type/tet:label
           /tet:label-hop/tet:te-label/tet:technology:
     +--:(wson)
        +--rw (grid-type)?
           +--:(dwdm)
           |  +--rw (single-or-super-channel)?
           |     +--:(single)
           |     |  +--rw dwdm-n?              l0-types:dwdm-n
           |     +--:(super)
           |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
           +--:(cwdm)
              +--rw cwdm-n?                     l0-types:cwdm-n
augment /nw:networks/nw:network/nw:node/tet:te
           /tet:tunnel-termination-point
           /tet:local-link-connectivities
           /tet:local-link-connectivity/tet:path-properties
           /tet:path-route-objects/tet:path-route-object/tet:type
           /tet:label/tet:label-hop/tet:te-label/tet:technology:
     +--:(wson)
        +--ro (grid-type)?
           +--:(dwdm)
```

```
        |     +--ro (single-or-super-channel)?
        |        +--:(single)
        |        |  +--ro dwdm-n?              l0-types:dwdm-n
        |        +--:(super)
        |           +--ro subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--ro cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
        /tet:te-link-attributes/tet:underlay/tet:primary-path
        /tet:path-element/tet:type/tet:label/tet:label-hop
        /tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |     +--rw (single-or-super-channel)?
        |        +--:(single)
        |        |  +--rw dwdm-n?              l0-types:dwdm-n
        |        +--:(super)
        |           +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
        /tet:te-link-attributes/tet:underlay/tet:backup-path
        /tet:path-element/tet:type/tet:label/tet:label-hop
        /tet:te-label/tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |     +--rw (single-or-super-channel)?
        |        +--:(single)
        |        |  +--rw dwdm-n?              l0-types:dwdm-n
        |        +--:(super)
        |           +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?                       l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
        /tet:te-link-attributes/tet:label-restrictions
        /tet:label-restriction/tet:label-start/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
        /tet:te-link-attributes/tet:label-restrictions
        /tet:label-restriction/tet:label-end/tet:te-label
        /tet:technology:
  +--:(wson)
     +--rw (grid-type)?
        +--:(dwdm)
        |  +--rw dwdm-n?   l0-types:dwdm-n
        +--:(cwdm)
           +--rw cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
```

```
                /tet:te-link-attributes/tet:label-restrictions
                /tet:label-restriction/tet:label-step/tet:technology:
     +--:(wson)
        +--rw (l0-grid-type)?
           +--:(dwdm)
           |  +--rw wson-dwdm-channel-spacing?   identityref
           +--:(cwdm)
              +--rw wson-cwdm-channel-spacing?   identityref
augment /nw:networks/nw:network/nt:link/tet:te
                /tet:information-source-entry/tet:label-restrictions
                /tet:label-restriction/tet:label-start/tet:te-label
                /tet:technology:
     +--:(wson)
        +--ro (grid-type)?
           +--:(dwdm)
           |  +--ro dwdm-n?   l0-types:dwdm-n
           +--:(cwdm)
              +--ro cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
                /tet:information-source-entry/tet:label-restrictions
                /tet:label-restriction/tet:label-end/tet:te-label
                /tet:technology:
     +--:(wson)
        +--ro (grid-type)?
           +--:(dwdm)
           |  +--ro dwdm-n?   l0-types:dwdm-n
           +--:(cwdm)
              +--ro cwdm-n?   l0-types:cwdm-n
augment /nw:networks/nw:network/nt:link/tet:te
                /tet:information-source-entry/tet:label-restrictions
                /tet:label-restriction/tet:label-step/tet:technology:
     +--:(wson)
        +--ro (l0-grid-type)?
           +--:(dwdm)
           |  +--ro wson-dwdm-channel-spacing?   identityref
           +--:(cwdm)
              +--ro wson-cwdm-channel-spacing?   identityref
augment /nw:networks/tet:te/tet:templates/tet:link-template
                /tet:te-link-attributes/tet:underlay/tet:primary-path
                /tet:path-element/tet:type/tet:label/tet:label-hop
                /tet:te-label/tet:technology:
     +--:(wson)
        +--rw (grid-type)?
           +--:(dwdm)
           |  +--rw (single-or-super-channel)?
           |     +--:(single)
           |     |  +--rw dwdm-n?                l0-types:dwdm-n
           |     +--:(super)
           |        +--rw subcarrier-dwdm-n*   l0-types:dwdm-n
           +--:(cwdm)
              +--rw cwdm-n?                l0-types:cwdm-n
augment /nw:networks/tet:te/tet:templates/tet:link-template
                /tet:te-link-attributes/tet:underlay/tet:backup-path
                /tet:path-element/tet:type/tet:label/tet:label-hop
                /tet:te-label/tet:technology:
     +--:(wson)
```

```
          +--rw (grid-type)?
             +--:(dwdm)
             |  +--rw (single-or-super-channel)?
             |     +--:(single)
             |     |  +--rw dwdm-n?                l0-types:dwdm-n
             |     +--:(super)
             |        +--rw subcarrier-dwdm-n*     l0-types:dwdm-n
             +--:(cwdm)
                +--rw cwdm-n?                       l0-types:cwdm-n
     augment /nw:networks/tet:te/tet:templates/tet:link-template
             /tet:te-link-attributes/tet:label-restrictions
             /tet:label-restriction/tet:label-start/tet:te-label
             /tet:technology:
       +--:(wson)
          +--rw (grid-type)?
             +--:(dwdm)
             |  +--rw dwdm-n?    l0-types:dwdm-n
             +--:(cwdm)
                +--rw cwdm-n?    l0-types:cwdm-n
     augment /nw:networks/tet:te/tet:templates/tet:link-template
             /tet:te-link-attributes/tet:label-restrictions
             /tet:label-restriction/tet:label-end/tet:te-label
             /tet:technology:
       +--:(wson)
          +--rw (grid-type)?
             +--:(dwdm)
             |  +--rw dwdm-n?    l0-types:dwdm-n
             +--:(cwdm)
                +--rw cwdm-n?    l0-types:cwdm-n
     augment /nw:networks/tet:te/tet:templates/tet:link-template
             /tet:te-link-attributes/tet:label-restrictions
             /tet:label-restriction/tet:label-step/tet:technology:
       +--:(wson)
          +--rw (l0-grid-type)?
             +--:(dwdm)
             |  +--rw wson-dwdm-channel-spacing?    identityref
             +--:(cwdm)
                +--rw wson-cwdm-channel-spacing?    identityref
```

3. YANG Module for WSON Topology

```
<CODE BEGINS> file "ietf-wson-topology@2021-08-13.yang"
module ietf-wson-topology {
  yang-version 1.1;
  namespace "urn:ietf:params:xml:ns:yang:ietf-wson-topology";
  prefix wsont;

  import ietf-network {
    prefix nw;
    reference
      "RFC 8345: A YANG Data Model for Network Topologies";
  }

  import ietf-network-topology {
    prefix nt;
    reference
```

```
      "RFC 8345: A YANG Data Model for Network Topologies";
}

import ietf-te-topology {
  prefix tet;
  reference
    "RFC 8795: YANG Data Model for
     Traffic Engineering (TE) Topologies";
}

import ietf-layer0-types {
  prefix l0-types;
  reference
    "RFC 9093: A YANG Data Model for Layer 0 Types";
}

organization
  "IETF CCAMP Working Group";

contact
  "WG Web: <https://datatracker.ietf.org/wg/ccamp/>
   WG List: <mailto:ccamp@ietf.org>

   Editor:    Haomian Zheng  <zhenghaomian@huawei.com>
   Editor:    Young Lee  <younglee.tx@gmail.com>
   Editor:    Aihua Guo  <aihuaguo.ietf@gmail.com>
   Editor:    Victor Lopez <victor.lopez@nokia.com>
   Editor:    Daniel King  <d.king@lancaster.ac.uk>";

description
  "This module provides a YANG data model for the routing and
   wavelength assignment (RWA) Traffic Engineering (TE)
   topology in Wavelength Switched Optical Networks (WSONs).
   The YANG data model described in this document is a WSON
   technology-specific YANG data model augmenting the generic TE
   topology module (ietf-te-topology) based on the information
   model developed in RFC 7446 and the two encoding documents
   RFC 7579 and RFC 7581.

   Copyright (c) 2021 IETF Trust and the persons identified
   as authors of the code.  All rights reserved.

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   subject to the license terms contained in, the Simplified
   BSD License set forth in Section 4.c of the IETF Trust's
   Legal Provisions Relating to IETF Documents
   (https://trustee.ietf.org/license-info).

   This version of this YANG module is part of RFC 9094; see
   the RFC itself for full legal notices.";

revision 2021-08-13 {
  description
    "Initial version";
```

```
      reference
        "RFC 9094: A YANG Data Model for Wavelength Switched
         Optical Networks (WSONs)";
  }

  /*
   * Data nodes
   */

  augment "/nw:networks/nw:network/nw:network-types"
        + "/tet:te-topology" {
    description
      "Augment network types to define the WSON topology type.";
    container wson-topology {
      presence "Its presence identifies the WSON topology type.";
      description
        "Introduce a new network type for WSON topology.";
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te"
        + "/tet:te-node-attributes" {
    when '/nw:networks/nw:network/nw:network-types'
       + '/tet:te-topology/wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE node attributes.";
    container wson-node {
      presence "The TE node is a WSON node.";
      description
        "WSON node attributes";
      leaf is-reconfigurable-node {
        type boolean;
        default "true";
        description
          "Indicates whether the WSON node is reconfigurable:
            - true: the node is reconfigurable, i.e.,
              it is representing a Reconfigurable Optical
              Add/Drop Multiplexer (ROADM) node;
            - false: the node is not reconfigurable, i.e.,
              it is representing a Fixed Optical Add/Drop
              Multiplexer (FOADM) node.";
      }
    }
  }

  /*
   * Augment TE label range information
   */

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:label-restrictions/tet:label-restriction" {
```

```
    when '../../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the TE node
       connectivity matrices.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:from/"
        + "tet:label-restrictions/tet:label-restriction" {
    when '../../../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the source LTP
       of the connectivity matrix entry.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:to/"
        + "tet:label-restrictions/tet:label-restriction" {
    when '../../../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the destination LTP
       of the connectivity matrix entry.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/"
        + "tet:connectivity-matrices/tet:label-restrictions/"
        + "tet:label-restriction" {
    when '../../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the TE node
```

```
             connectivity matrices information source.";
      uses l0-types:l0-label-range-info;
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:information-source-entry/tet:connectivity-matrices/"
      + "tet:connectivity-matrix/"
      + "tet:from/tet:label-restrictions/tet:label-restriction" {
   when '../../../../../../../nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
     description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
   }
   description
      "Augment TE label range information for the source LTP
       of the connectivity matrix entry information source.";
   uses l0-types:l0-label-range-info;
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:information-source-entry/tet:connectivity-matrices/"
      + "tet:connectivity-matrix/"
      + "tet:to/tet:label-restrictions/tet:label-restriction" {
   when '../../../../../../../nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
     description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
   }
   description
      "Augment TE label range information for the destination LTP
       of the connectivity matrix entry information source.";
   uses l0-types:l0-label-range-info;
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:label-restrictions/tet:label-restriction" {
   when '../../../../../nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
     description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
   }
   description
      "Augment TE label range information for the Tunnel
       Termination Point (TTP) Local Link Connectivities.";
   uses l0-types:l0-label-range-info;
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:local-link-connectivity/"
```

```
            + "tet:label-restrictions/tet:label-restriction" {
    when '../../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the TTP
       Local Link Connectivity entry.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/nw:network/nt:link/tet:te/"
        + "tet:te-link-attributes/"
        + "tet:label-restrictions/tet:label-restriction" {
    when '../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the TE link.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/nw:network/nt:link/tet:te/"
        + "tet:information-source-entry/"
        + "tet:label-restrictions/tet:label-restriction" {
    when '../../../../../nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range information for the TE link
       information source.";
    uses l0-types:l0-label-range-info;
  }

  augment "/nw:networks/tet:te/tet:templates/"
        + "tet:link-template/tet:te-link-attributes/"
        + "tet:label-restrictions/tet:label-restriction" {
    description
      "Augment TE label range information for the TE link template.";
    uses l0-types:l0-label-range-info;
  }

  /*
   * Augment TE label
   */

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
```

```
            + "tet:label-restrictions/tet:label-restriction/"
            + "tet:label-start/"
            + "tet:te-label/tet:technology" {
  when '../../../../../../../nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label range start for the TE node
     connectivity matrices.";
  case wson {
    uses l0-types:wson-label-start-end;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:label-restrictions/"
        + "tet:label-restriction/tet:label-end/"
        + "tet:te-label/tet:technology" {
  when '../../../../../../../nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label range end for the TE node
     connectivity matrices.";
  case wson {
    uses l0-types:wson-label-start-end;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:label-restrictions/"
        + "tet:label-restriction/tet:label-step/"
        + "tet:technology" {
  when '../../../../../../nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label range step for the TE node
     connectivity matrices.";
  case wson {
    uses l0-types:wson-label-step;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
```

```
               + "tet:te-node-attributes/tet:connectivity-matrices/"
               + "tet:underlay/tet:primary-path/tet:path-element/"
               + "tet:type/tet:label/tet:label-hop/"
               + "tet:te-label/tet:technology" {
       when '../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label hop for the underlay primary path of the
          TE node connectivity matrices.";
       case wson {
         uses l0-types:wson-label-hop;
       }
     }

     augment "/nw:networks/nw:network/nw:node/tet:te/"
               + "tet:te-node-attributes/tet:connectivity-matrices/"
               + "tet:underlay/tet:backup-path/tet:path-element/"
               + "tet:type/tet:label/tet:label-hop/"
               + "tet:te-label/tet:technology" {
       when '../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label hop for the underlay backup path of the
          TE node connectivity matrices.";
       case wson {
         uses l0-types:wson-label-hop;
       }
     }

     augment "/nw:networks/nw:network/nw:node/tet:te/"
               + "tet:te-node-attributes/tet:connectivity-matrices/"
               + "tet:optimizations/tet:algorithm/tet:metric/"
               + "tet:optimization-metric/"
               + "tet:explicit-route-exclude-objects/"
               + "tet:route-object-exclude-object/"
               + "tet:type/tet:label/tet:label-hop/"
               + "tet:te-label/tet:technology" {
       when '../../../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label hop for the explicit route objects excluded
```

```
          by the path computation of the TE node connectivity
          matrices.";
      case wson {
        uses l0-types:wson-label-hop;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:te-node-attributes/tet:connectivity-matrices/"
          + "tet:optimizations/tet:algorithm/tet:metric/"
          + "tet:optimization-metric/"
          + "tet:explicit-route-include-objects/"
          + "tet:route-object-include-object/"
          + "tet:type/tet:label/tet:label-hop/"
          + "tet:te-label/tet:technology" {
      when '../../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label hop for the explicit route objects included
         by the path computation of the TE node connectivity
         matrices.";
      case wson {
        uses l0-types:wson-label-hop;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:te-node-attributes/tet:connectivity-matrices/"
          + "tet:path-properties/tet:path-route-objects/"
          + "tet:path-route-object/tet:type/tet:label/tet:label-hop/"
          + "tet:te-label/tet:technology" {
      when '../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label hop for the computed path route objects
         of the TE node connectivity matrices.";
      case wson {
        uses l0-types:wson-label-hop;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:te-node-attributes/tet:connectivity-matrices/"
          + "tet:connectivity-matrix/tet:from/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-start/"
```

```
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range start for the source LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:from/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-end/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range end for the source LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:from/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-step/"
        + "tet:technology" {
    when '../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range step for the source LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-step;
    }
```

```
      }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:to/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-start/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range start for the destination LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:to/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-end/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range end for the destination LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:to/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-step/"
        + "tet:technology" {
    when '../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
```

```
    }
    description
      "Augment TE label range step for the destination LTP
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-step;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:underlay/tet:primary-path/tet:path-element/"
        + "tet:type/tet:label/tet:label-hop/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay primary path
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:underlay/tet:backup-path/tet:path-element/"
        + "tet:type/tet:label/tet:label-hop/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay backup path
       of the connectivity matrix entry.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:te-node-attributes/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/tet:optimizations/"
        + "tet:algorithm/tet:metric/tet:optimization-metric/"
        + "tet:explicit-route-exclude-objects/"
```

```
                  + "tet:route-object-exclude-object/tet:type/"
                  + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
        when '../../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the explicit route objects excluded
           by the path computation of the connectivity matrix entry.";
        case wson {
          uses l0-types:wson-label-hop;
        }
      }

      augment "/nw:networks/nw:network/nw:node/tet:te/"
              + "tet:te-node-attributes/tet:connectivity-matrices/"
              + "tet:connectivity-matrix/tet:optimizations/"
              + "tet:algorithm/tet:metric/tet:optimization-metric/"
              + "tet:explicit-route-include-objects/"
              + "tet:route-object-include-object/tet:type/"
              + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
        when '../../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the explicit route objects included
           by the path computation of the connectivity matrix entry.";
        case wson {
          uses l0-types:wson-label-hop;
        }
      }
      augment "/nw:networks/nw:network/nw:node/tet:te/"
              + "tet:te-node-attributes/tet:connectivity-matrices/"
              + "tet:connectivity-matrix/"
              + "tet:path-properties/tet:path-route-objects/"
              + "tet:path-route-object/tet:type/"
              + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
        when '../../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the computed path route objects
           of the connectivity matrix entry.";
        case wson {
```

```
        uses l0-types:wson-label-hop;
      }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/"
       + "tet:connectivity-matrices/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-start/tet:te-label/tet:technology" {
   when '../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
   description
     "Augment TE label range start for the TE node connectivity
      matrices information source.";
   case wson {
     uses l0-types:wson-label-start-end;
   }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/"
       + "tet:connectivity-matrices/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-end/tet:te-label/tet:technology" {
   when '../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
   description
     "Augment TE label range end for the TE node connectivity
      matrices information source.";
   case wson {
     uses l0-types:wson-label-start-end;
   }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/"
       + "tet:connectivity-matrices/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-step/tet:technology" {
   when '../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
```

```
    description
      "Augment TE label range step for the TE node connectivity
       matrices information source.";
    case wson {
      uses l0-types:wson-label-step;
    }
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:information-source-entry/tet:connectivity-matrices/"
      + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the underlay primary path
     of the TE node connectivity matrices of the information
     source entry.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:information-source-entry/tet:connectivity-matrices/"
      + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the underlay backup path
     of the TE node connectivity matrices of the information
     source entry.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:information-source-entry/tet:connectivity-matrices/"
      + "tet:optimizations/tet:algorithm/tet:metric/"
      + "tet:optimization-metric/"
      + "tet:explicit-route-exclude-objects/"
      + "tet:route-object-exclude-object/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
```

```
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the explicit route objects excluded
           by the path computation of the TE node connectivity matrices
           information source.";
        case wson {
          uses l0-types:wson-label-hop;
        }
      }

      augment "/nw:networks/nw:network/nw:node/tet:te/"
            + "tet:information-source-entry/tet:connectivity-matrices/"
            + "tet:optimizations/tet:algorithm/tet:metric/"
            + "tet:optimization-metric/"
            + "tet:explicit-route-include-objects/"
            + "tet:route-object-include-object/tet:type/"
            + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
        when '../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the explicit route objects included
           by the path computation of the TE node connectivity matrices
           information source.";
        case wson {
          uses l0-types:wson-label-hop;
        }
      }

      augment "/nw:networks/nw:network/nw:node/tet:te/"
            + "tet:information-source-entry/tet:connectivity-matrices/"
            + "tet:path-properties/tet:path-route-objects/"
            + "tet:path-route-object/tet:type/"
            + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
        when '../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
          description
            "Augmentation parameters apply only for networks with
             WSON topology type.";
        }
        description
          "Augment TE label hop for the computed path route objects
           of the TE node connectivity matrices information source.";
        case wson {
          uses l0-types:wson-label-hop;
        }
```

```
      }
  augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/tet:connectivity-matrices/"
       + "tet:connectivity-matrix/"
       + "tet:from/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-start/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range start for the source LTP
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }
  augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/tet:connectivity-matrices/"
       + "tet:connectivity-matrix/"
       + "tet:from/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-end/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range end for the source LTP
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:information-source-entry/tet:connectivity-matrices/"
       + "tet:connectivity-matrix/"
       + "tet:from/tet:label-restrictions/"
       + "tet:label-restriction/"
       + "tet:label-step/tet:technology" {
    when '../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
```

```
      description
        "Augment TE label range step for the source LTP
         of the connectivity matrix entry information source.";
      case wson {
        uses l0-types:wson-label-step;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:information-source-entry/tet:connectivity-matrices/"
          + "tet:connectivity-matrix/"
          + "tet:to/tet:label-restrictions/tet:label-restriction/"
          + "tet:label-start/tet:te-label/tet:technology" {
      when '../../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label range start for the destination LTP
         of the connectivity matrix entry information source.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:information-source-entry/tet:connectivity-matrices/"
          + "tet:connectivity-matrix/"
          + "tet:to/tet:label-restrictions/tet:label-restriction/"
          + "tet:label-end/tet:te-label/tet:technology" {
      when '../../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label range end for the destination LTP
         of the connectivity matrix entry information source.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/nw:network/nw:node/tet:te/"
          + "tet:information-source-entry/tet:connectivity-matrices/"
          + "tet:connectivity-matrix/"
          + "tet:to/tet:label-restrictions/tet:label-restriction/"
          + "tet:label-step/tet:technology" {
      when '../../../../../../../../../'
          + 'nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
```

```
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range step for the destination LTP
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-step;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay primary path
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay backup path
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:optimizations/tet:algorithm/tet:metric/"
```

```
          + "tet:optimization-metric/"
          + "tet:explicit-route-exclude-objects/"
          + "tet:route-object-exclude-object/tet:type/"
          + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the explicit route objects excluded
       by the path computation of the connectivity matrix entry
       information source.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:optimizations/tet:algorithm/tet:metric/"
        + "tet:optimization-metric/"
        + "tet:explicit-route-include-objects/"
        + "tet:route-object-include-object/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the explicit route objects included
       by the path computation of the connectivity matrix entry
       information source.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:information-source-entry/tet:connectivity-matrices/"
        + "tet:connectivity-matrix/"
        + "tet:path-properties/tet:path-route-objects/"
        + "tet:path-route-object/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
```

```
    }
    description
      "Augment TE label hop for the computed path route objects
       of the connectivity matrix entry information source.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-start/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range start for the TTP
       Local Link Connectivities.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-end/"
        + "tet:te-label/tet:technology" {
    when '../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range end for the TTP
       Local Link Connectivities.";
    case wson {
      uses l0-types:wson-label-start-end;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:label-restrictions/tet:label-restriction/"
        + "tet:label-step/"
```

```
           + "tet:technology" {
    when '../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label range step for the TTP
       Local Link Connectivities.";
    case wson {
      uses l0-types:wson-label-step;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay primary path
       of the TTP Local Link Connectivities.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the underlay backup path
       of the TTP Local Link Connectivities.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }
```

```
augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:optimizations/tet:algorithm/tet:metric/"
      + "tet:optimization-metric/"
      + "tet:explicit-route-exclude-objects/"
      + "tet:route-object-exclude-object/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the explicit route objects excluded
     by the path computation of the TTP Local Link
     Connectivities.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:optimizations/tet:algorithm/tet:metric/"
      + "tet:optimization-metric/"
      + "tet:explicit-route-include-objects/"
      + "tet:route-object-include-object/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the explicit route objects included
     by the path computation of the TTP Local Link
     Connectivities.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}

augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:path-properties/tet:path-route-objects/"
      + "tet:path-route-object/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
```

```
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
   description
     "Augment TE label hop for the computed path route objects
      of the TTP Local Link Connectivities.";
   case wson {
     uses l0-types:wson-label-hop;
   }
 }

 augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:tunnel-termination-point/"
       + "tet:local-link-connectivities/"
       + "tet:local-link-connectivity/"
       + "tet:label-restrictions/tet:label-restriction/"
       + "tet:label-start/tet:te-label/tet:technology" {
   when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
   description
     "Augment TE label range start for the TTP
      Local Link Connectivity entry.";
   case wson {
     uses l0-types:wson-label-start-end;
   }
 }

 augment "/nw:networks/nw:network/nw:node/tet:te/"
       + "tet:tunnel-termination-point/"
       + "tet:local-link-connectivities/"
       + "tet:local-link-connectivity/"
       + "tet:label-restrictions/tet:label-restriction/"
       + "tet:label-end/tet:te-label/tet:technology" {
   when '../../../../../../../../../'
       + 'nw:network-types/tet:te-topology/'
       + 'wsont:wson-topology' {
     description
       "Augmentation parameters apply only for networks with
        WSON topology type.";
   }
   description
     "Augment TE label range end for the TTP
      Local Link Connectivity entry.";
   case wson {
     uses l0-types:wson-label-start-end;
   }
 }

 augment "/nw:networks/nw:network/nw:node/tet:te/"
```

```
                  + "tet:tunnel-termination-point/"
                  + "tet:local-link-connectivities/"
                  + "tet:local-link-connectivity/"
                  + "tet:label-restrictions/tet:label-restriction/"
                  + "tet:label-step/tet:technology" {
         when '../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
           description
             "Augmentation parameters apply only for networks with
              WSON topology type.";
         }
         description
           "Augment TE label range step for the TTP
            Local Link Connectivity entry.";
         case wson {
           uses l0-types:wson-label-step;
         }
       }

       augment "/nw:networks/nw:network/nw:node/tet:te/"
                  + "tet:tunnel-termination-point/"
                  + "tet:local-link-connectivities/"
                  + "tet:local-link-connectivity/"
                  + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
                  + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
         when '../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
           description
             "Augmentation parameters apply only for networks with
              WSON topology type.";
         }
         description
           "Augment TE label hop for the underlay primary path
            of the TTP Local Link Connectivity entry.";
         case wson {
           uses l0-types:wson-label-hop;
         }
       }

       augment "/nw:networks/nw:network/nw:node/tet:te/"
                  + "tet:tunnel-termination-point/"
                  + "tet:local-link-connectivities/"
                  + "tet:local-link-connectivity/"
                  + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
                  + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
         when '../../../../../../../../../'
            + 'nw:network-types/tet:te-topology/'
            + 'wsont:wson-topology' {
           description
             "Augmentation parameters apply only for networks with
              WSON topology type.";
         }
         description
           "Augment TE label hop for the underlay backup path
```

```
        of the TTP Local Link Connectivity entry.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:local-link-connectivity/"
        + "tet:optimizations/tet:algorithm/tet:metric/"
        + "tet:optimization-metric/"
        + "tet:explicit-route-exclude-objects/"
        + "tet:route-object-exclude-object/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the explicit route objects excluded
       by the path computation of the TTP Local Link
       Connectivity entry.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }

  augment "/nw:networks/nw:network/nw:node/tet:te/"
        + "tet:tunnel-termination-point/"
        + "tet:local-link-connectivities/"
        + "tet:local-link-connectivity/"
        + "tet:optimizations/tet:algorithm/tet:metric/"
        + "tet:optimization-metric/"
        + "tet:explicit-route-include-objects/"
        + "tet:route-object-include-object/tet:type/"
        + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
    when '../../../../../../../../../../'
        + 'nw:network-types/tet:te-topology/'
        + 'wsont:wson-topology' {
      description
        "Augmentation parameters apply only for networks with
         WSON topology type.";
    }
    description
      "Augment TE label hop for the explicit route objects included
       by the path computation of the TTP Local Link
       Connectivity entry.";
    case wson {
      uses l0-types:wson-label-hop;
    }
  }
```

```
augment "/nw:networks/nw:network/nw:node/tet:te/"
      + "tet:tunnel-termination-point/"
      + "tet:local-link-connectivities/"
      + "tet:local-link-connectivity/"
      + "tet:path-properties/tet:path-route-objects/"
      + "tet:path-route-object/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the computed path route objects
     of the TTP Local Link Connectivity entry.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}
augment "/nw:networks/nw:network/nt:link/tet:te/"
      + "tet:te-link-attributes/"
      + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the underlay primary path
     of the TE link.";
  case wson {
    uses l0-types:wson-label-hop;
  }
}

augment "/nw:networks/nw:network/nt:link/tet:te/"
      + "tet:te-link-attributes/"
      + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
      + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
  when '../../../../../../../../'
      + 'nw:network-types/tet:te-topology/'
      + 'wsont:wson-topology' {
    description
      "Augmentation parameters apply only for networks with
       WSON topology type.";
  }
  description
    "Augment TE label hop for the underlay backup path
     of the TE link.";
  case wson {
    uses l0-types:wson-label-hop;
```

```
       }
     }

     augment "/nw:networks/nw:network/nt:link/tet:te/"
           + "tet:te-link-attributes/"
           + "tet:label-restrictions/tet:label-restriction/"
           + "tet:label-start/tet:te-label/tet:technology" {
       when '../../../../../../../nw:network-types/tet:te-topology/'
           + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label range start for the TE link.";
       case wson {
         uses l0-types:wson-label-start-end;
       }
     }

     augment "/nw:networks/nw:network/nt:link/tet:te/"
           + "tet:te-link-attributes/"
           + "tet:label-restrictions/tet:label-restriction/"
           + "tet:label-end/tet:te-label/tet:technology" {
       when '../../../../../../../nw:network-types/tet:te-topology/'
           + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label range end for the TE link.";
       case wson {
         uses l0-types:wson-label-start-end;
       }
     }

     augment "/nw:networks/nw:network/nt:link/tet:te/"
           + "tet:te-link-attributes/"
           + "tet:label-restrictions/tet:label-restriction/"
           + "tet:label-step/tet:technology" {
       when '../../../../../../nw:network-types/tet:te-topology/'
           + 'wsont:wson-topology' {
         description
           "Augmentation parameters apply only for networks with
            WSON topology type.";
       }
       description
         "Augment TE label range step for the TE link.";
       case wson {
         uses l0-types:wson-label-step;
       }
     }

     augment "/nw:networks/nw:network/nt:link/tet:te/"
           + "tet:information-source-entry/"
```

```
            + "tet:label-restrictions/tet:label-restriction/"
            + "tet:label-start/tet:te-label/tet:technology" {
      when '../../../../../../nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label range start for the TE link
         information source.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/nw:network/nt:link/tet:te/"
          + "tet:information-source-entry/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-end/tet:te-label/tet:technology" {
      when '../../../../../../nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label range end for the TE link
         information source.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/nw:network/nt:link/tet:te/"
          + "tet:information-source-entry/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-step/tet:technology" {
      when '../../../../../nw:network-types/tet:te-topology/'
          + 'wsont:wson-topology' {
        description
          "Augmentation parameters apply only for networks with
           WSON topology type.";
      }
      description
        "Augment TE label range step for the TE link
         information source.";
      case wson {
        uses l0-types:wson-label-step;
      }
    }

    augment "/nw:networks/tet:te/tet:templates/"
          + "tet:link-template/tet:te-link-attributes/"
          + "tet:underlay/tet:primary-path/tet:path-element/tet:type/"
          + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
```

```
      description
        "Augment TE label hop for the underlay primary path
         of the TE link template.";
      case wson {
        uses l0-types:wson-label-hop;
      }
    }

    augment "/nw:networks/tet:te/tet:templates/"
          + "tet:link-template/tet:te-link-attributes/"
          + "tet:underlay/tet:backup-path/tet:path-element/tet:type/"
          + "tet:label/tet:label-hop/tet:te-label/tet:technology" {
      description
        "Augment TE label hop for the underlay backup path
         of the TE link template.";
      case wson {
        uses l0-types:wson-label-hop;
      }
    }

    augment "/nw:networks/tet:te/tet:templates/"
          + "tet:link-template/tet:te-link-attributes/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-start/tet:te-label/tet:technology" {
      description
        "Augment TE label range start for the TE link template.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/tet:te/tet:templates/"
          + "tet:link-template/tet:te-link-attributes/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-end/tet:te-label/tet:technology" {
      description
        "Augment TE label range end for the TE link template.";
      case wson {
        uses l0-types:wson-label-start-end;
      }
    }

    augment "/nw:networks/tet:te/tet:templates/"
          + "tet:link-template/tet:te-link-attributes/"
          + "tet:label-restrictions/tet:label-restriction/"
          + "tet:label-step/tet:technology" {
      description
        "Augment TE label range step for the TE link template.";
      case wson {
        uses l0-types:wson-label-step;
      }
    }
  }
}
<CODE ENDS>
```

4. Security Considerations

The YANG module specified in this document defines a schema for data
that is designed to be accessed via network management protocols such
as NETCONF [RFC6241] or RESTCONF [RFC8040]. The lowest NETCONF layer
is the secure transport layer, and the mandatory-to-implement secure
transport is Secure Shell (SSH) [RFC6242]. The lowest RESTCONF layer
is HTTPS, and the mandatory-to-implement secure transport is TLS
[RFC8446].

The NETCONF protocol over Secure Shell (SSH) specification [RFC6242]
describes a method for invoking and running NETCONF within a Secure
Shell (SSH) session as an SSH subsystem. The NETCONF access control
model [RFC8341] provides the means to restrict access for particular
NETCONF or RESTCONF users to a preconfigured subset of all available
NETCONF or RESTCONF protocol operations and content.

There are a number of data nodes defined in this YANG module that are
writable/creatable/deletable (i.e., config true, which is the
default). These data nodes may be considered sensitive or vulnerable
in some network environments. Write operations (e.g., edit-config)
to these data nodes without proper protection can have a negative
effect on network operations. Considerations in Section 8 of
[RFC8795] are also applicable to the module defined in this document.

Some of the readable data nodes in this YANG module may be considered
sensitive or vulnerable in some network environments. It is thus
important to control read access (e.g., via get, get-config, or
notification) to these data nodes. Considerations in Section 8 of
[RFC8795] are also applicable to the module defined in this document.

Finally, the YANG module described in this document augments the
"ietf-network" YANG module [RFC8345] and the "ietf-te-topology" YANG
module [RFC8795] by adding data nodes. The security considerations
for the subtrees described in those RFCs apply equally to the new
data nodes that this module adds.

5. IANA Considerations

IANA has assigned new URIs from the "IETF XML Registry" [RFC3688] as
follows:

URI: urn:ietf:params:xml:ns:yang:ietf-wson-topology
Registrant Contact: The IESG
XML: N/A; the requested URI is an XML namespace.

This document registers a YANG module in the "YANG Module Names"
registry [RFC7950] [RFC6020].

Name: ietf-wson-topology
Namespace: urn:ietf:params:xml:ns:yang:ietf-wson-topology
Prefix: wsont
Reference: RFC 9094

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