YANG Models for the Northbound Interface of a Transport Network Controller: Requirements, Functions, and a List of YANG Models

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draft-zhang-ccamp-transport-ctrlnorth-yang-00.txt

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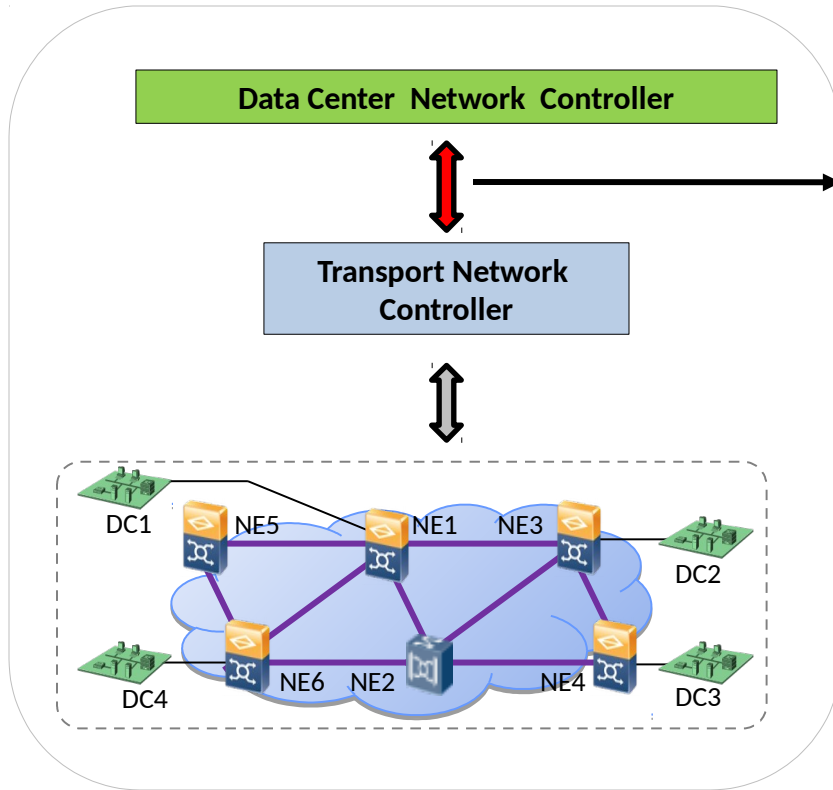
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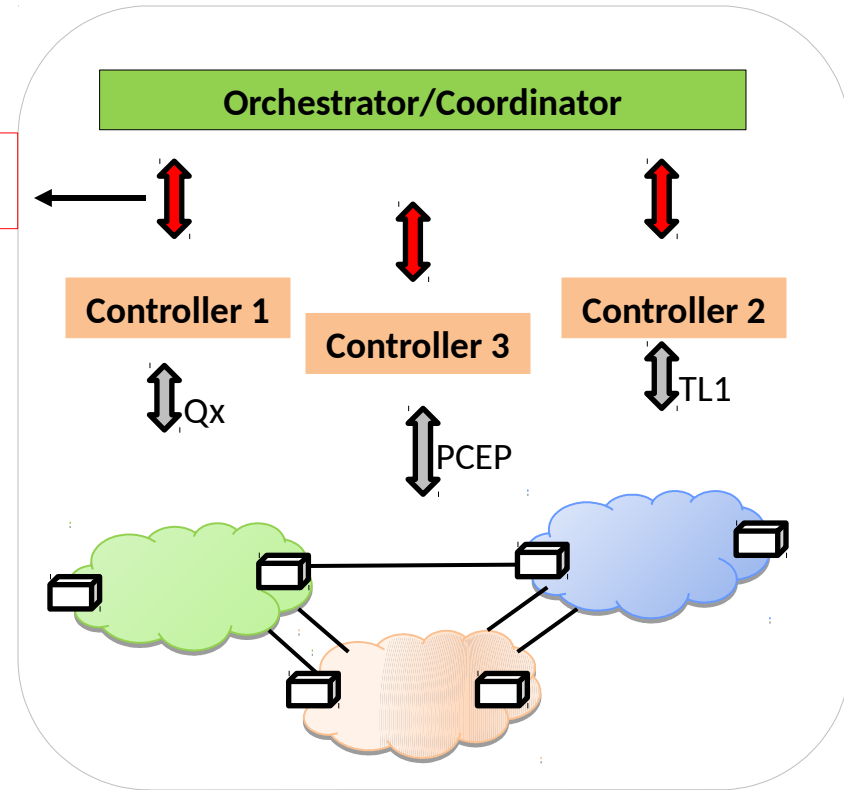Daniel King (Lancaster University)

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Use cases: Overview

Use case 1: Data Center Interconnection

Use case 2: Control of Multi-domain Networks

Summary of Functions and Related YANG Models

Function	Description	Related YANG Models
Obtaining Access link information	Getting the necessary access points/link information	[TE-TOPOLOGY]
Obtaining Topology	Getting the (abstracted) topology information	[TE-TOPOLOGY], [WDM-TOPO], [ODU-TOPO]
Tunnel Operations	Tunnel setup, deletion, modification and information retrieval	[TE-TUNNEL]
Service Requests	Requesting services (such as connectivity) and retrieval of the existing service requests details	[This I.D.]
Virtual Network Operations	Requesting a virtual network and related control operations (e.g., update, deletion)	[TE-TOPOLOGY], [WDM-TOPO], [ODU-TOPO]

Connectivity Service Model

```
module: ietf-transport-service
  +--rw transport_service
  |  +--rw service* [service-id]
  |     +--rw service-id            uint32
  |     +--rw service-name?         string
  |     +--rw source
  |     |  +--rw node-id?   node-id
  |     |  +--rw tp-id?     tp-id
  |     +--rw destination
  |     |  +--rw node-id?   node-id
  |     |  +--rw tp-id?     tp-id
  |     +--rw service-type?         service-types
  |     +--rw supporting-tunnel* [name]
  |     |  +--rw name     string
  |     +--rw bandwidth             decimal64
  |     +--rw SLA?                  SLAtypes
  |     +--rw intended-policies
  |        +--rw schedule
  |           +--rw schedules
  |              +--rw schedule* [schedule-id]
  |                 +--rw schedule-id          uint32
  |                 +--rw start?               yang:date-and-time
  |                 +--rw schedule-duration?   string
  |                 +--rw repeat-interval?     string
  +--rw service-state
```

Discussions

- Comments?
- Any missing models?