YANG Data Model for FlexE Management

draft-wang-ccamp-flexe-yang-cm-00

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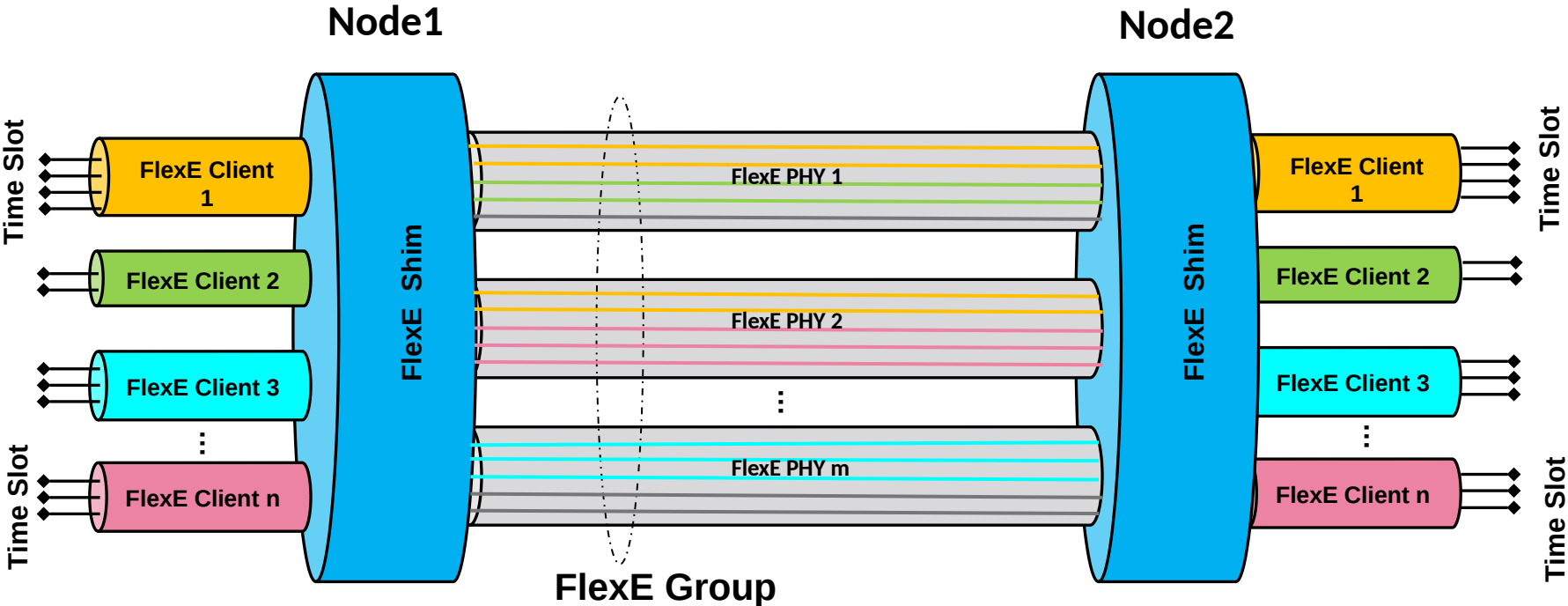Yuanlong Jiang

Huawei

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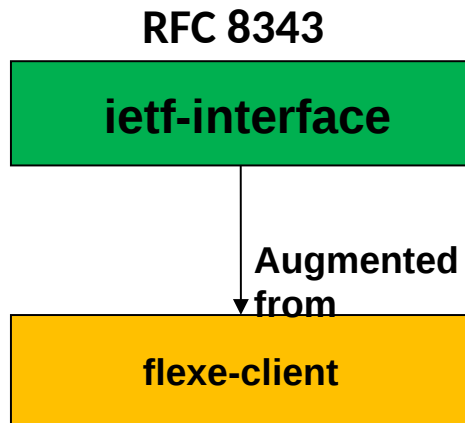111th IETF – Online

Objective of This Contribution

- Provides a YANG model for FlexE management from a service provider's perspective

- Configuration of FlexE Group as a whole, bonding of multiple FlexE PHYs, and their time slots in a FlexE Group

- Augment FlexE Client from a network interface, and configuration of FlexE Clients and their time slots on the basis of each client

- Support of FlexE synchronization configuration as it is crucial in a telecom network

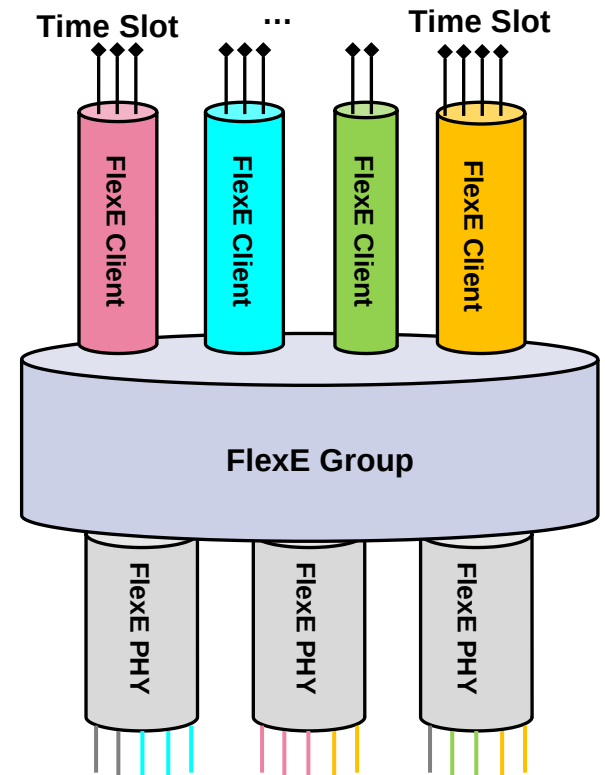- Support of FlexE management in SDN and NMS

FlexE data plane Overview

Time slot is a basic construct unit for both FlexE client and FlexE PHY in a FlexE Group

Abstraction of FlexE management

RFC 8343

ietf-interface

Augmented from

flexe-client

This draft

- ✓ FlexE Group is on the top layer, which contains multiple PHYs, resources such as free time slots and FlexE PHY used for synchronization can be retrieved
- ✓ FlexE Clients are modeled as network interfaces, and can be added, deleted, configured, or resized with FlexE slots

YANG Tree Diagrams

```
module: ietf-flexe
  +--rw flexe
    +--rw flexe-groups
      +--rw flexe-group* [group-index]
        +--rw index            uint32
        +--rw group-num?        uint32
        +--rw negotiation-mode?  negotiation-mode-type
        +--ro total-bandwidth?   string
        +--ro free-bandwidth?    string
        +--ro sync-phy-number    uint32
        +--rw flexe-phys
          +--rw flexe-phy-list* [port-name]
            +--rw port-name        if:interface-ref
            +--rw phy-number?       uint32
            +--ro free-timeslot-list? string
            +--ro used-timeslot-list? string
```

```
augment /if:interfaces/if:interface:
  +--rw flexe-client
    +--rw client-index?      uint32
    +--rw group-index?       leafref
    +--rw client-num?        uint32
    +--rw timeslot-lists
      +--rw timeslot-list*   [port-name]
        +--rw port-name?   if:interface-ref
        +--rw time-slot?     string
```

Next Step

- Update the draft according to WG feedbacks

Thank You