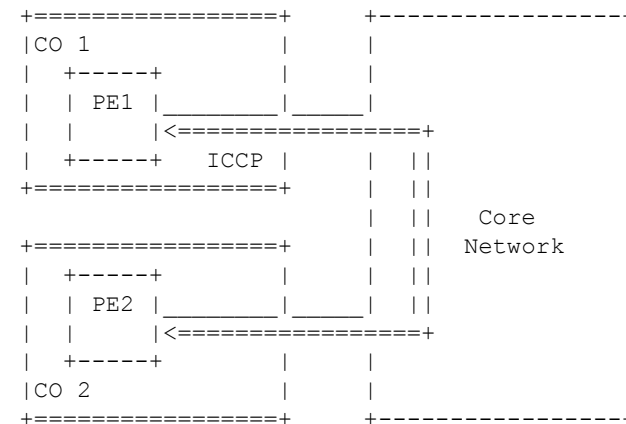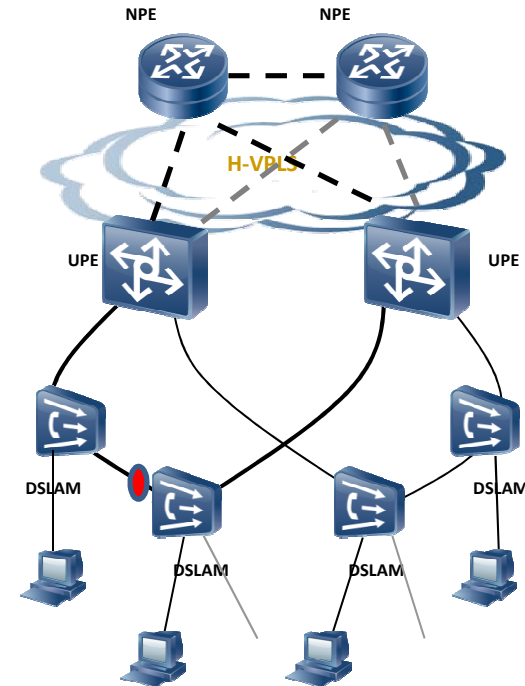# STP Application of ICCP

Mingui Zhang, Huafeng Wen

Huawei

Use Case

- DSLAMs running STP are geographically scattered.

- These DSLAMs need to access the L2VPN with high availability. The PEs may deploy ICCP.

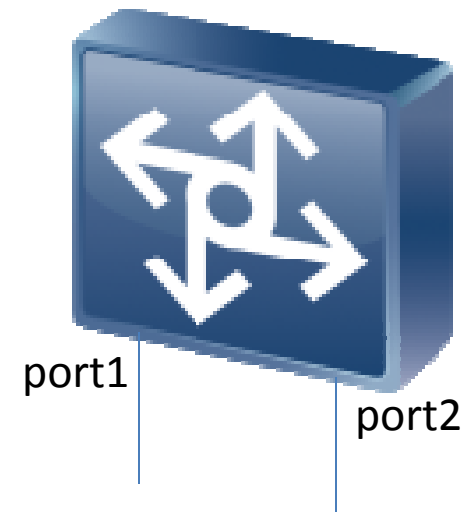- This draft talks about how to support STP application in ICCP.


```
+================+   +---------------+
|CO 1            |   |               |
|   +-----+      |   |               |
|   | PE1 |_____|___|_              |
|   |     |      |<===============+  |
|   +-----+  ICCP|     |   ||        |
+================+     |   ||        |
                      |   ||  Core  |
                      |   || Network |
+================+     |   ||        |
|   +-----+      |     |   ||        |
|   | PE2 |_____|___|_|   ||        |
|   |     |      |<===============+  |
|   +-----+      |     |   |        |
|CO 2            |     |   |        |
+================+     +---------------+
```

Virtual Root Bridge

- Access ports from different PEs.
- Pretending to be ports from a single 'Virtual Root Bridge'.

port1

port2

Virtual Root Bridge

- Access ports from different PEs.
- Pretending to be ports from a single 'Virtual Root Bridge'.

port1

port2
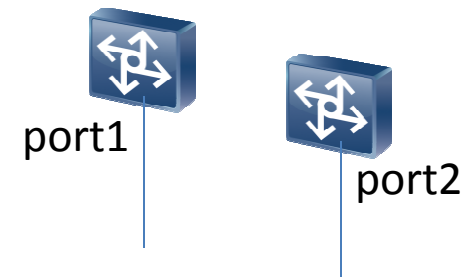
STP Application TLVs

- 3.1. STP Connect TLV
- 3.2. STP Disconnect TLV
- 3.2.1. STP Disconnect Cause TLV
- 3.3. STP Config TLVs
- 3.3.1. STP System Config
- 3.3.2. STP Topology Changed Instances
- 3.3.3. STP CIST Root Time
- 3.3.4. STP MSTI Root Time
- 3.3.5. STP Region Name
- 3.3.6. STP Revision Level
- 3.3.7. STP Instance Priority
- 3.3.8. STP Configuration Digest
- 3.4. STP Synchronization Request TLV
- 3.5. STP Synchronization Data TLV

STP System Config: MAC and ROID

- MAC: The MAC of the root
  - Elect the minimum as the BridgeIdentifier of the virtual root bridge

- ROID
  - Identify the RO.
  - As specified in [ICCP] Section 6.1.3.

STP Topology Changed Instances

- ## InstanceID List
  - To identify those instances whose topologies are changed.

- ## MAC address flushing
  - When the "TC" TLV is received, the peer SHOULD flush the MAC addresses related to those instances.
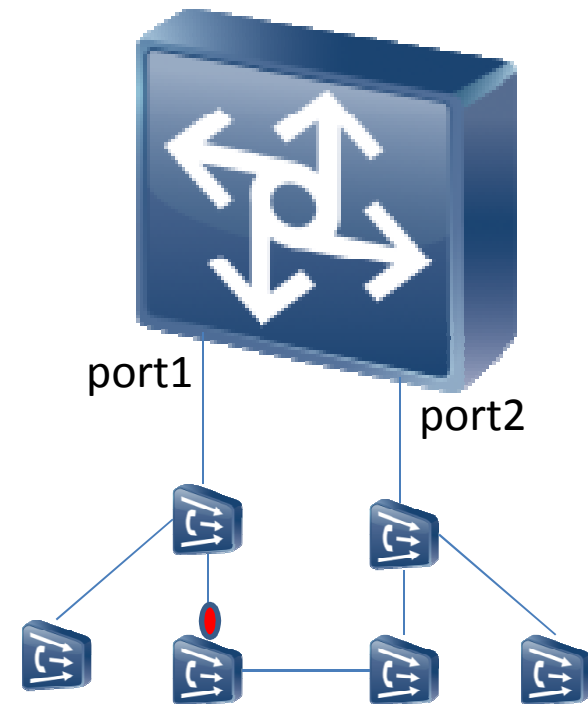
Example: topology changes

- The partition point changes for some instances.

- This change MUST be sync up between the two ports.

port1

port2

Example: topology changes

- The partition point changes for some instances.

- This change MUST be sync up between the two ports.

port1

port2
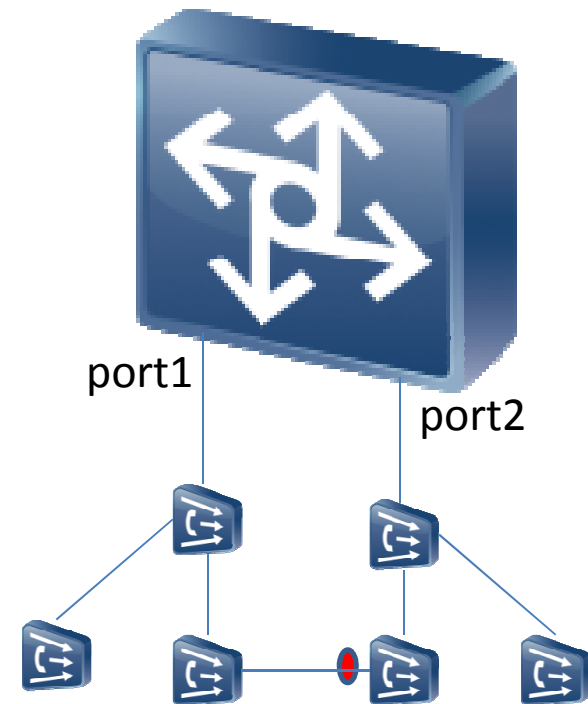
Next Steps

- Incorporate comments
- Call for WG adoption

Thanks!