YANG Models for Transport Client Signals

CCAMP WG, IETF104, Prague, Czech

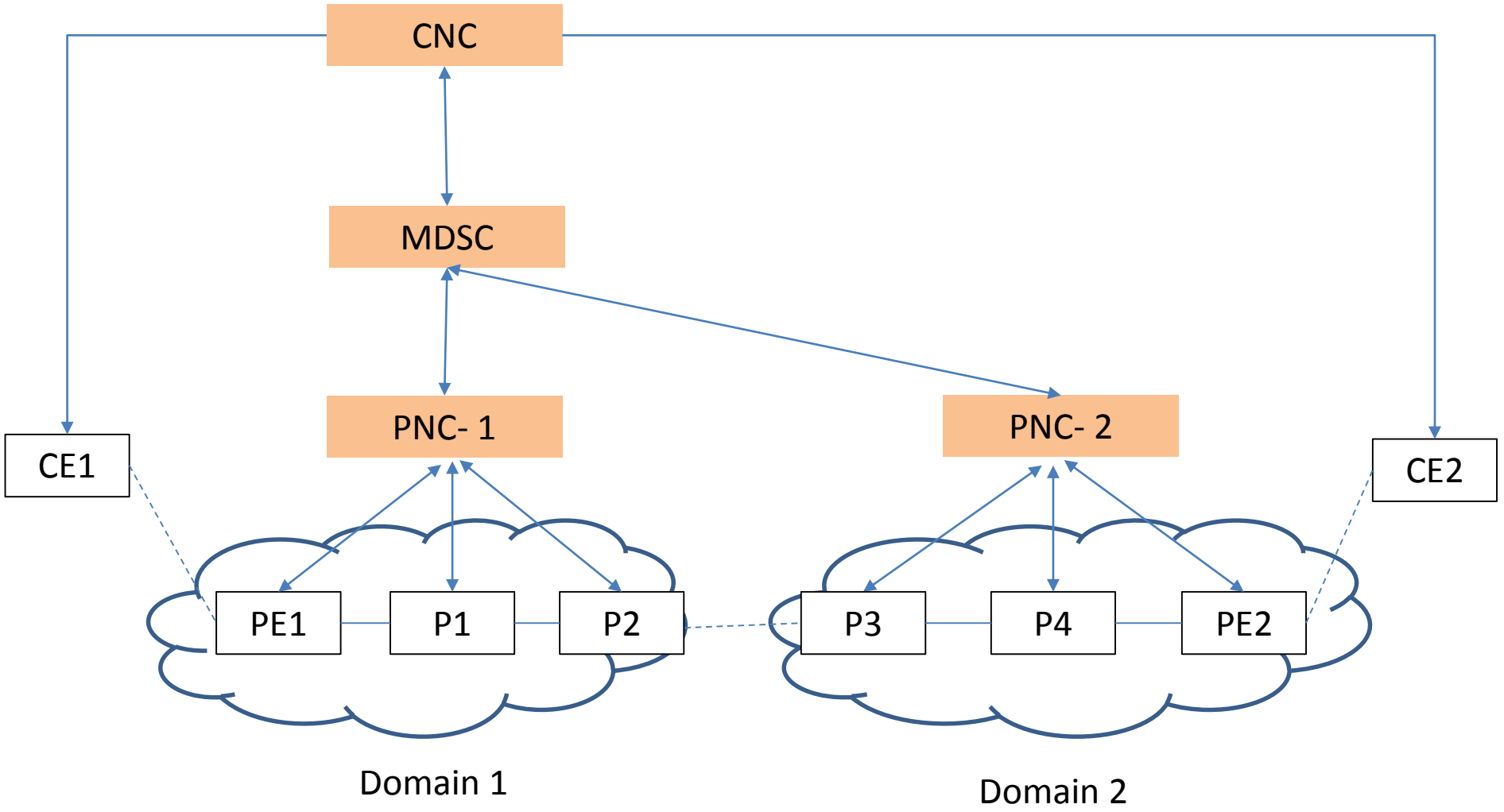
draft-zheng-ccamp-client-signal-yang-06

Authors:
Haomian Zheng (zhenghaomian@huawei.com)
Aihua Guo (aihuaguo@huawei.com)
Italo Busi (Italo.Busi@huawei.com)
Anton Snitser (antons@sedonasys.com)
Francesco Lazzeri (francesco.lazzeri@ericsson.com)
Yunbin Xu (xuyunbin@ritt.cn)
Yang Zhao (zhaoyangyjy@chinamobile.com)
Xufeng Liu (xufeng.liu.ietf@gmail.com)
Giuseppe Fioccola (giuseppe.fioccola@huawei.com)
Contributors:
Yanlei Zheng, Zhe Liu, Sergio Belotti, Yingxi Yao

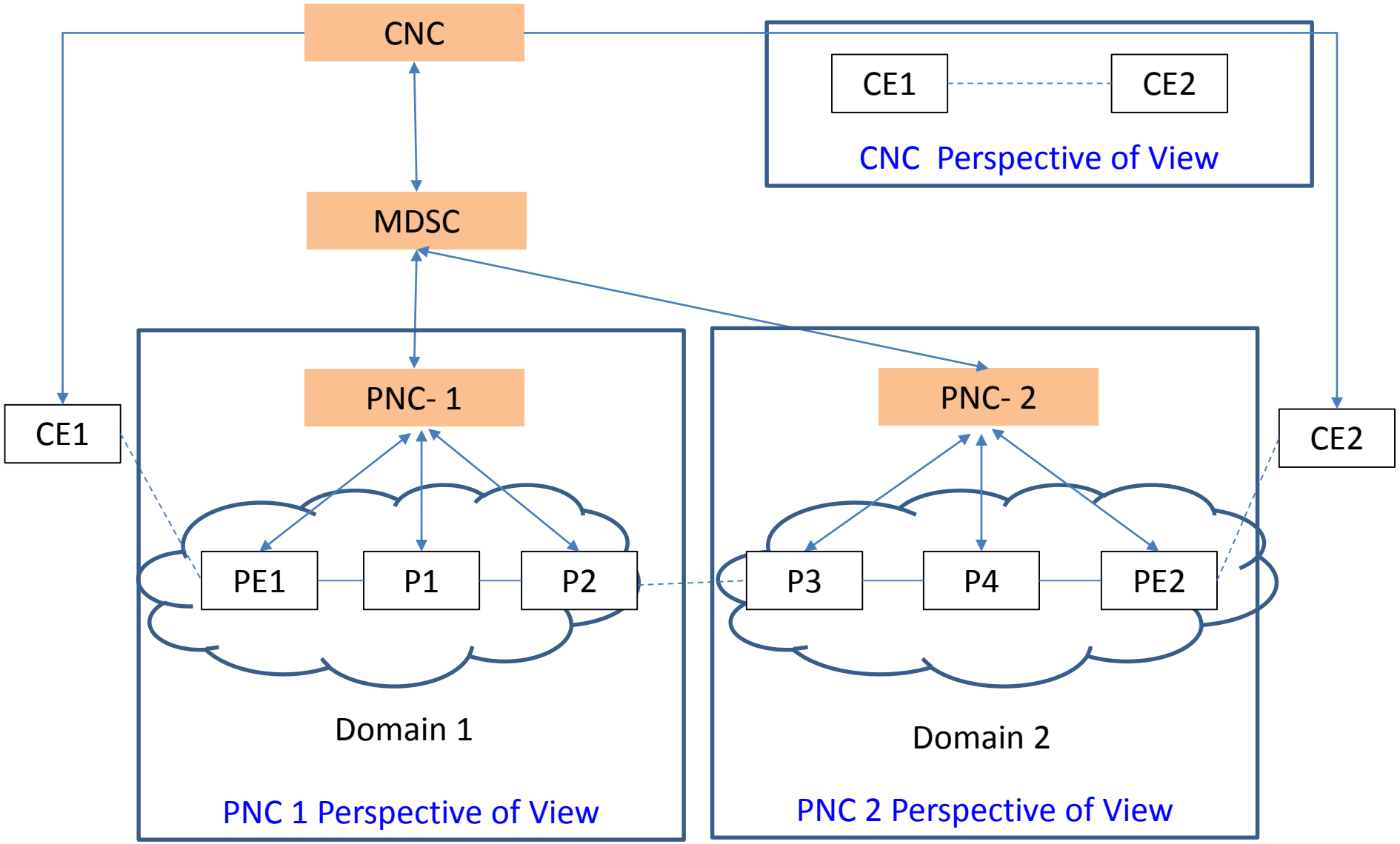
Changes from IETF 103

- On the draft:
  - Two more co-authors (welcome Anton and Francesco);
  - Add a new session indicating the necessity of models;
  - Add a new session indicating the usage of the models;
  - Add a table of prefix overview;
  - Add the IANA considerations;
- Revision on ietf-eth-tran-service:
  - Constructing multiple levels: instance/endpoint/access, and consider the resilience;
  - Add the information for pseudowire (pw);
  - Restructure the pm-config and the state monitoring;
- Revision on module ietf-trans-client-service:
  - Adding more log information (customer, create/update time);

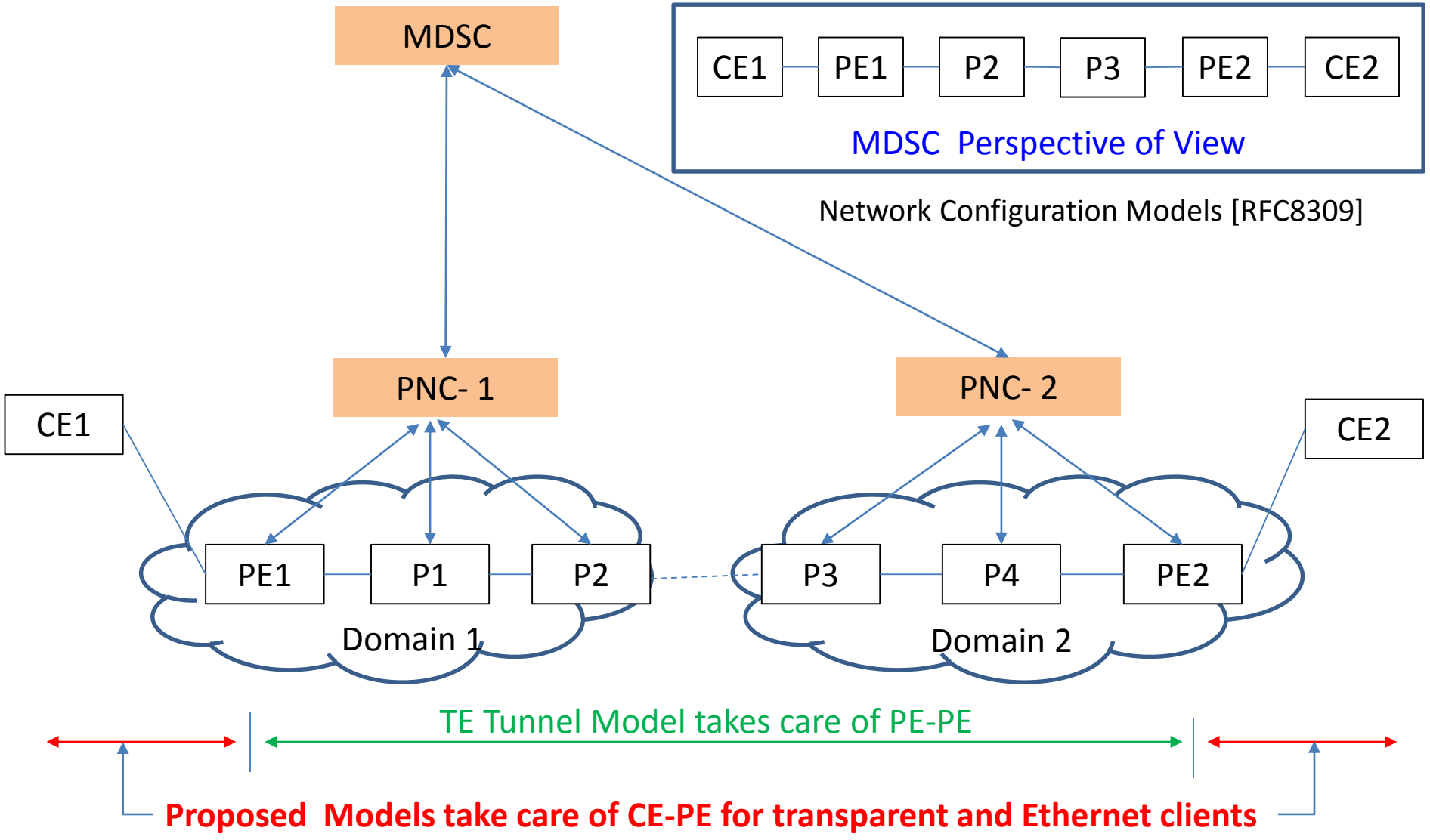
Necessity & Usage of Proposed Models (1)



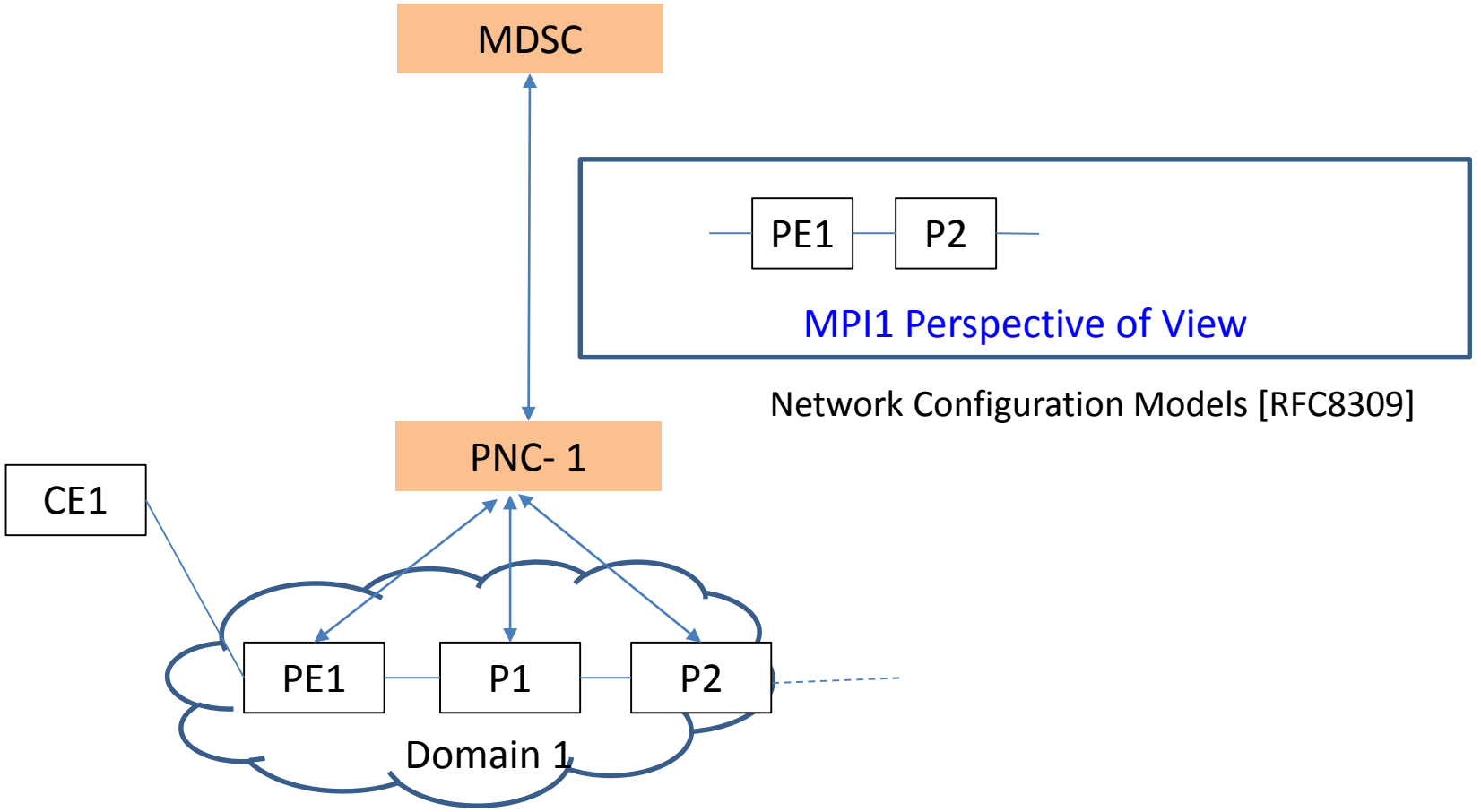
Necessity & Usage of Proposed Models (2)



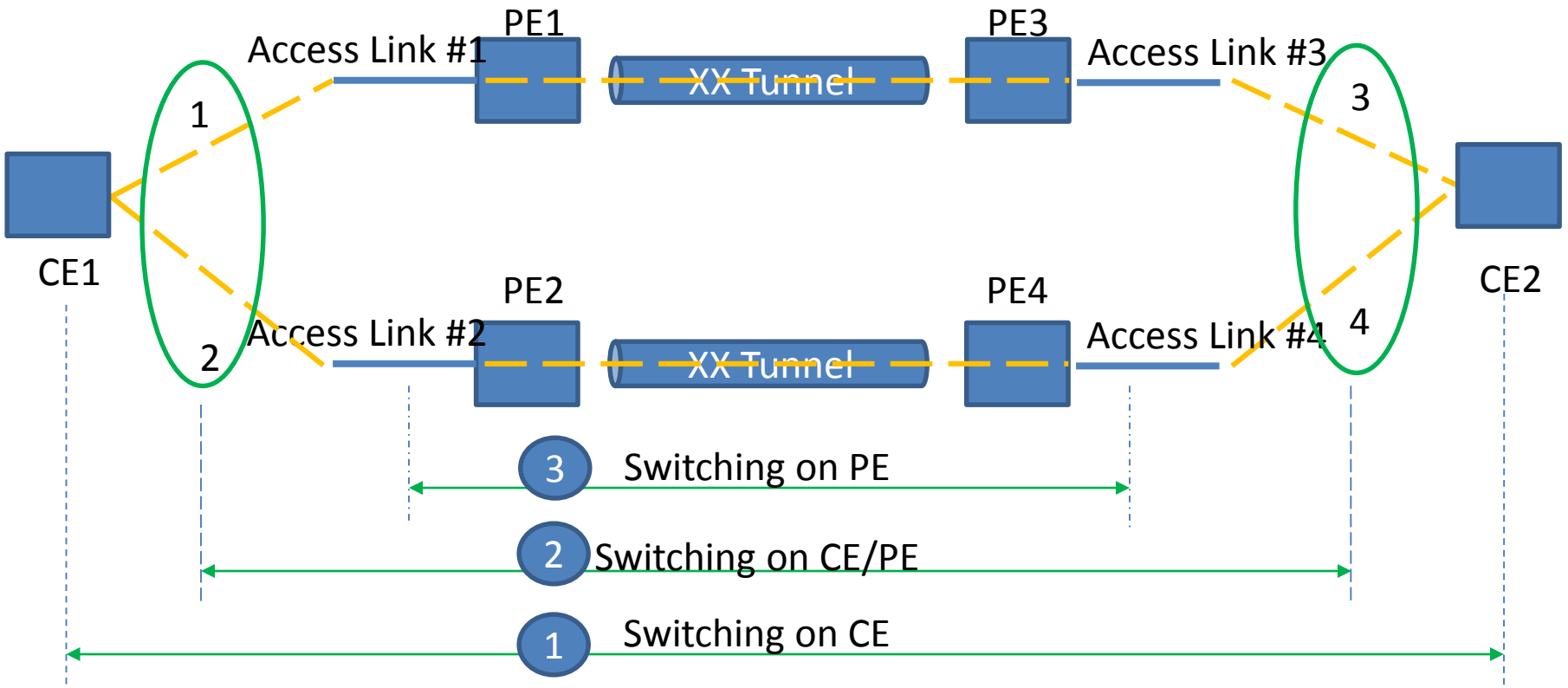
Necessity & Usage of Proposed Models (3)



Necessity & Usage of Proposed Models (4)



Levels with Resilience




```
module: ietf-eth-tran-service
  +--rw etht-svc
    +--rw etht-svc-instances* [etht-svc-name]
      +--rw etht-svc-end-points* [etht-svc-end-point-name]
        +--rw etht-svc-access-points* [access-point-id]
```

1
2
3

Placeholders for Resilience are left on various level, with details for future discussion;

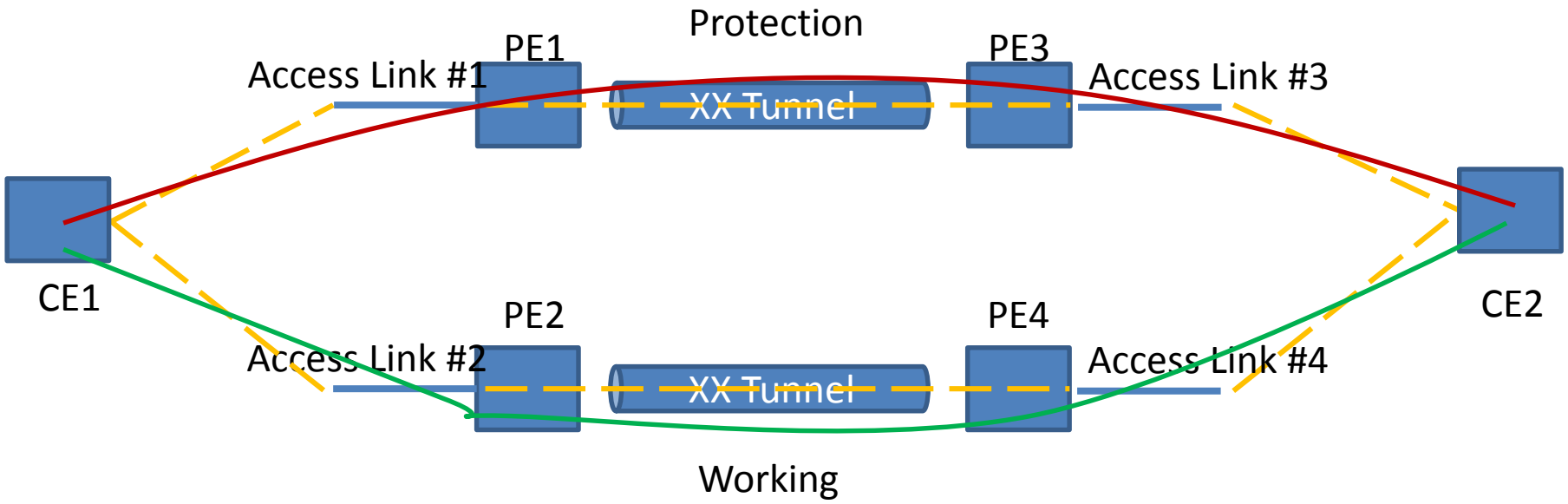
Resilience for CE Switching

Consider 1+1 as an example:

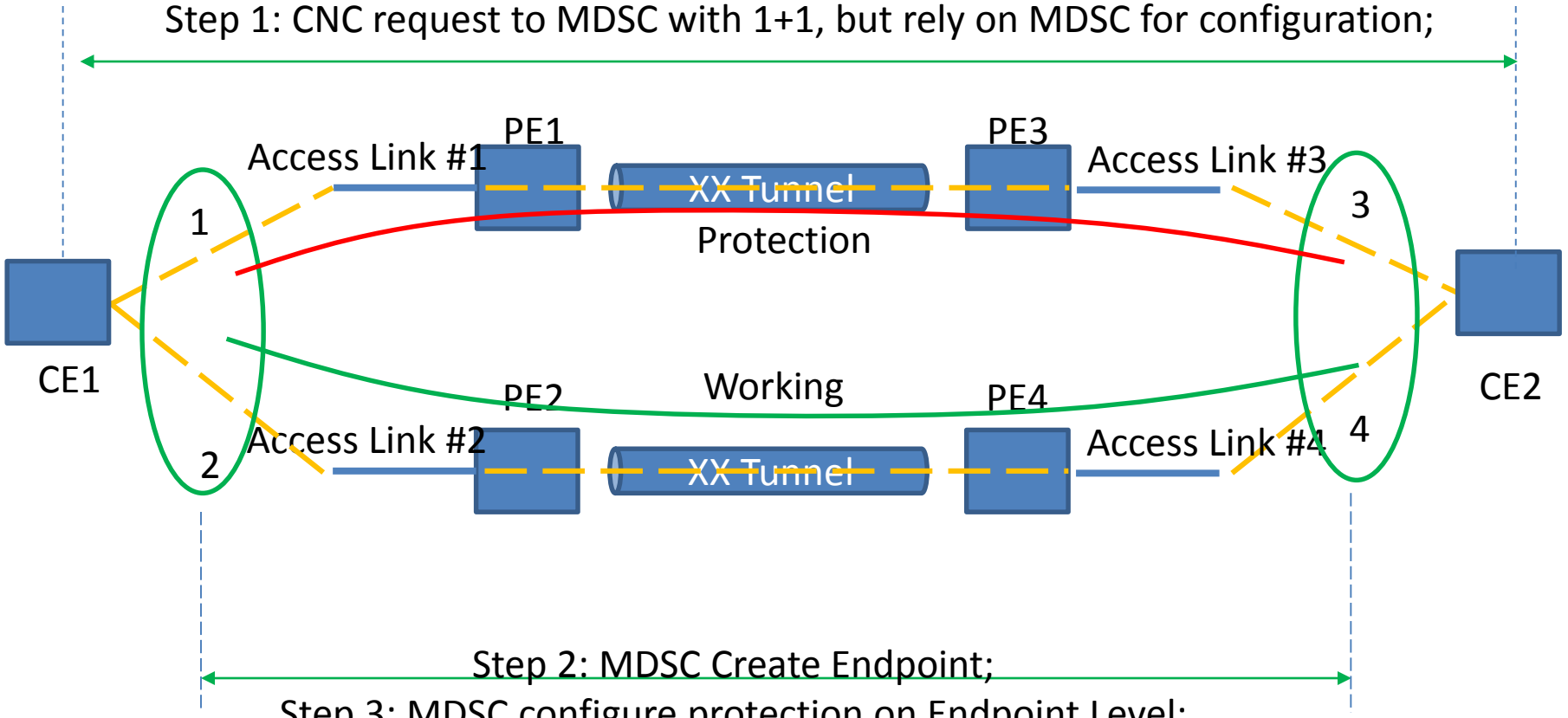
Step 1: CNC create CE1-CE2 1+1 protection;

Step 2: MDSC Create two separate tunnels for working/protection;

Step 3: CE takes care of the switching once there is failure reported;



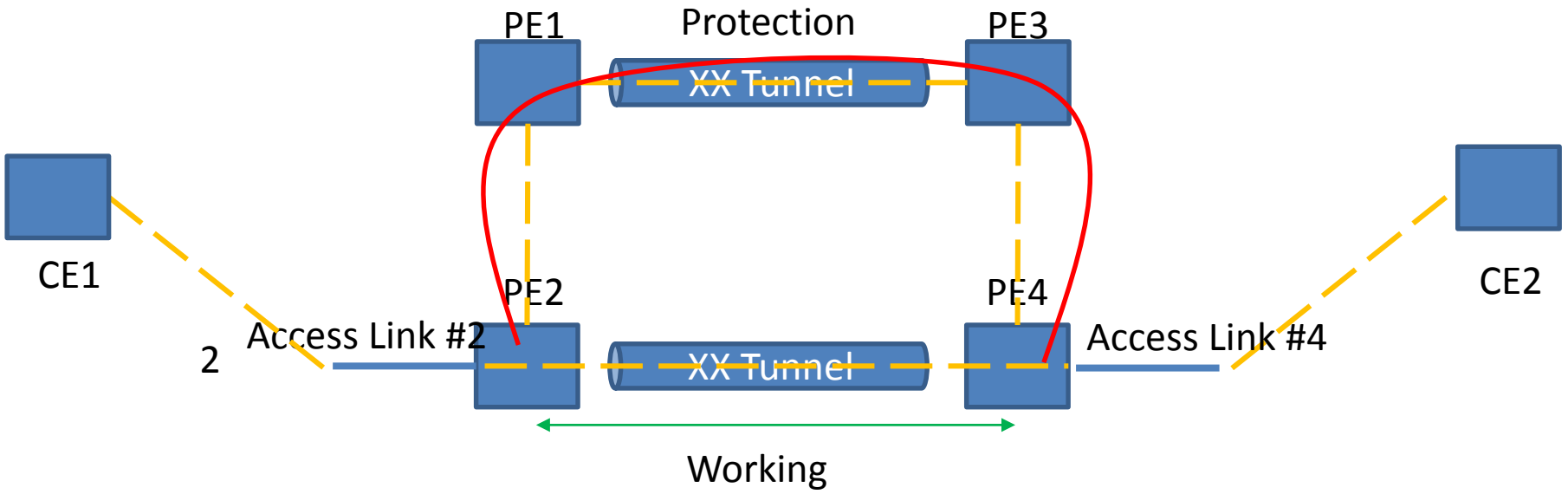
Resilience with CE+PE Switching



Endpoint Concept is consistent with MEF 7.3;

Resilience with PE Switching

Single Access with protection on tunnels;
Only PE will be involved for switching.



PseudoWire (PW) Segment

```
+--rw etht-svc-tunnels* [tunnel-name]
|  +--rw tunnel-name                    string
|  +--rw (svc-multiplexing-tag)?
|  |  +--:(other)
|  |  +--:(none)
|  |  +--:(vlan-tag)
|  |  +--:(pw-segment)
|  |     +--rw pw-id?                          string
|  |     +--rw pw-name?                        string
|  |     +--rw transmit-label?                 rt-types:mpls-label
|  |     +--rw receive-label?                  rt-types:mpls-label
|  |     +--rw encaplate-type?                 identityref
|  |     +--ro oper-status?                    identityref
|  |     +--rw ingress-bandwidth-profile
|  |        +--rw (style)?
|  |           +--:(named)
|  |           |  +--rw bandwidth-profile-name?   leafref
|  |           +--:(value)
|  |              +--rw bandwidth-profile-type?   etht-types:bandwidth-profile-type
|  |              +--rw CIR?                      uint64
|  |              +--rw CBS?                      uint64
|  |              +--rw EIR?                      uint64
|  |              +--rw EBS?                      uint64
```

PW Segment
Added here

Summary & Next Step

- Good Consistency with existing IETF models;
- Tested in ETSI Microwave plugtest;
- Implementation deployed among vendors & carriers;
- Ask for WG Adoption;

- Model available on: https://github.com/haomianzheng/IETF-ACTN-YANG-Model/tree/master/YANG/ccamp/Client-signal-yang ;
- Next Steps include:
  - Resilience and Performance Monitoring Details