IETF Transport
Model Instance Diagrams

June 11th, 2016

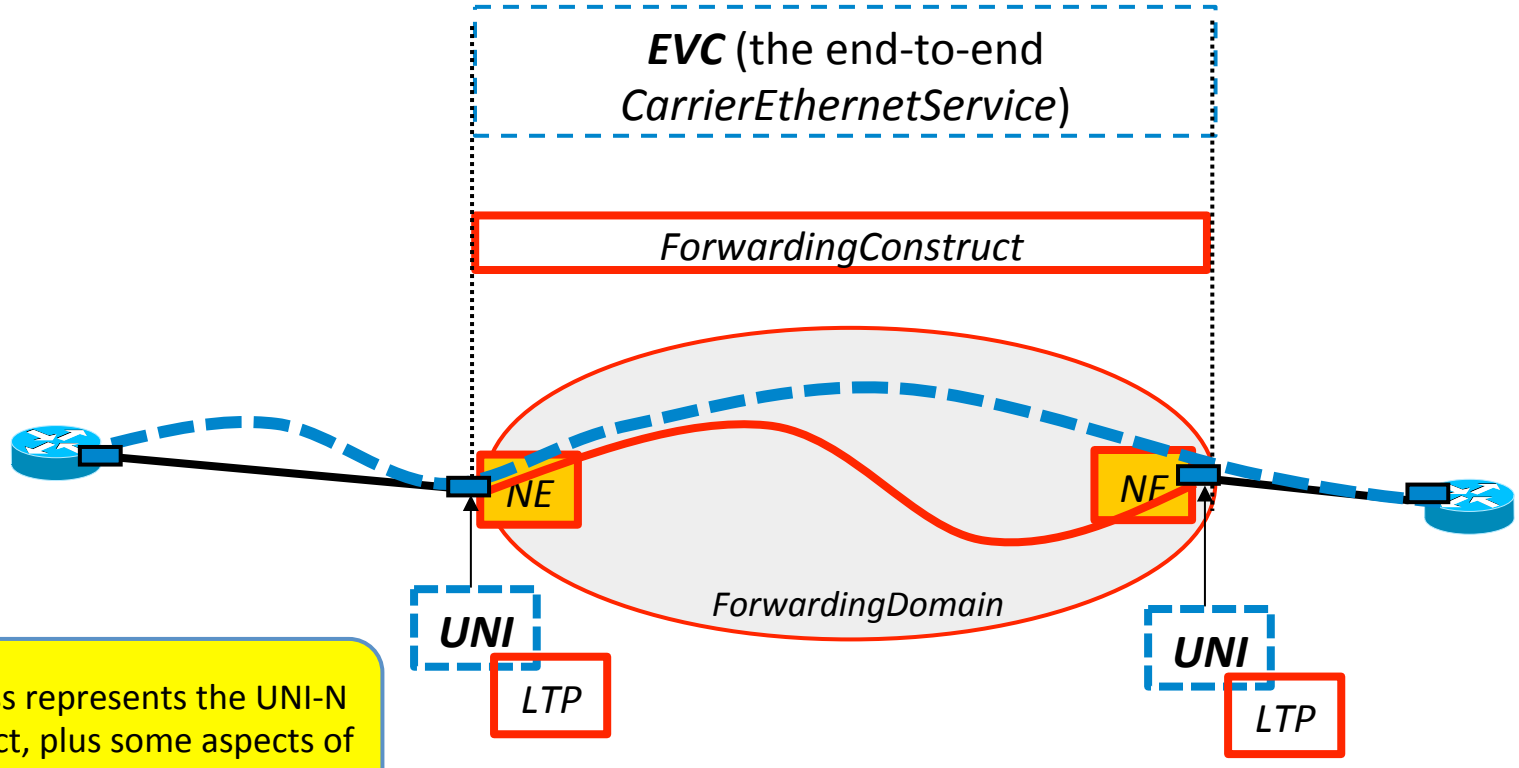
Use Case - 1

Point-to-Point Service,
Single Provider, Single Network Topology

Mapping from Service/EVC to ForwardingConstruct
Single Provider, single Forwarding Domain

managed object classes at Service level
(potentially appearing at Legato, Interlude)

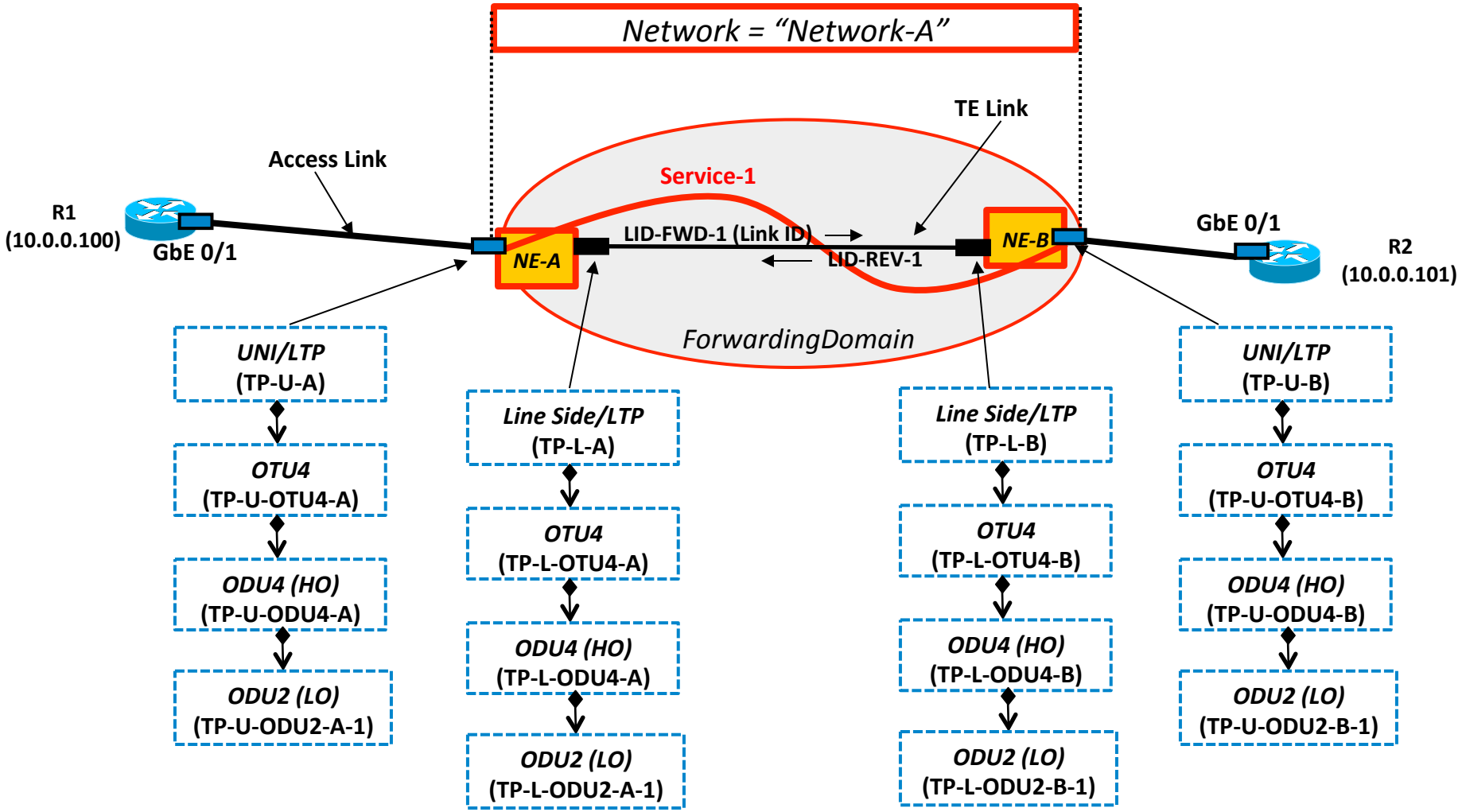
managed object classes at Resource level
(potentially appearing at Presto)



The MEF 7.3 *UNI* class represents the UNI-N architectural construct, plus some aspects of related Ethernet Link.

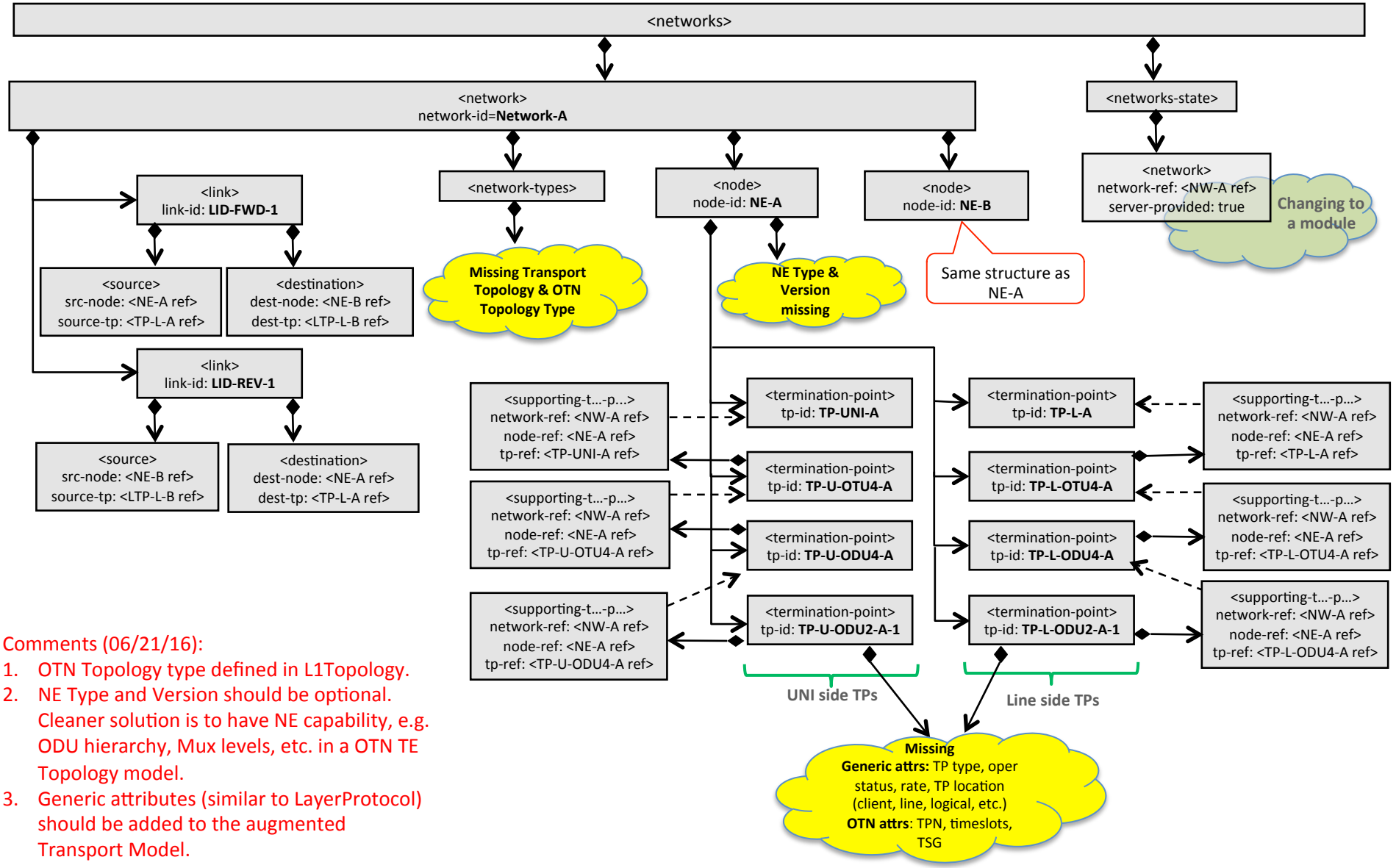
Source: MEF

Point-to-Point Service, Single Provider, Single Network Topology



Comments (06/21/16): Remove OTU4. Split ODU4 into ODU4 Edge Point and ODU4. Links associated with ODU4 edge points.

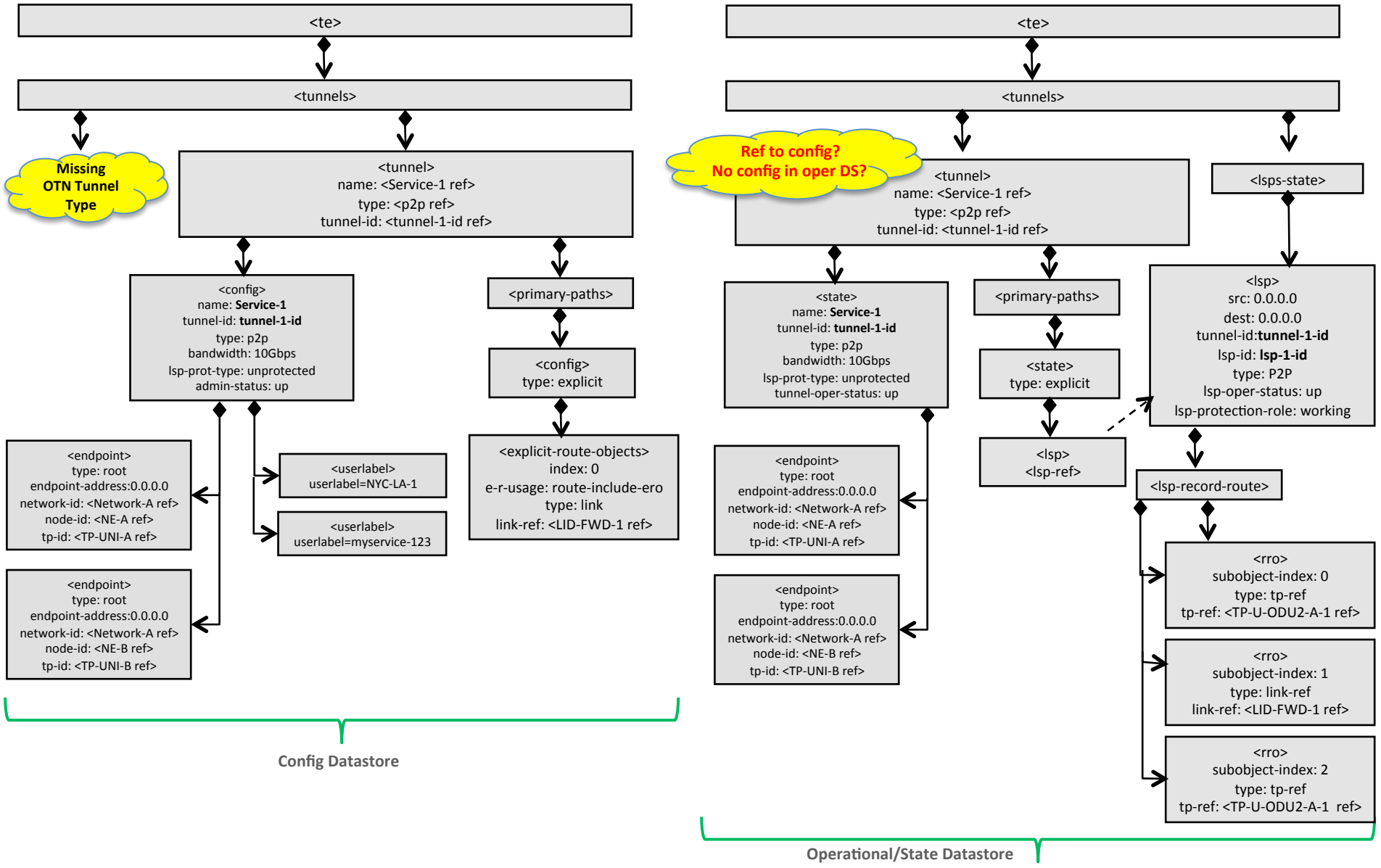
Network Topology (i2rs) Model Instantiation



Comments (06/21/16):

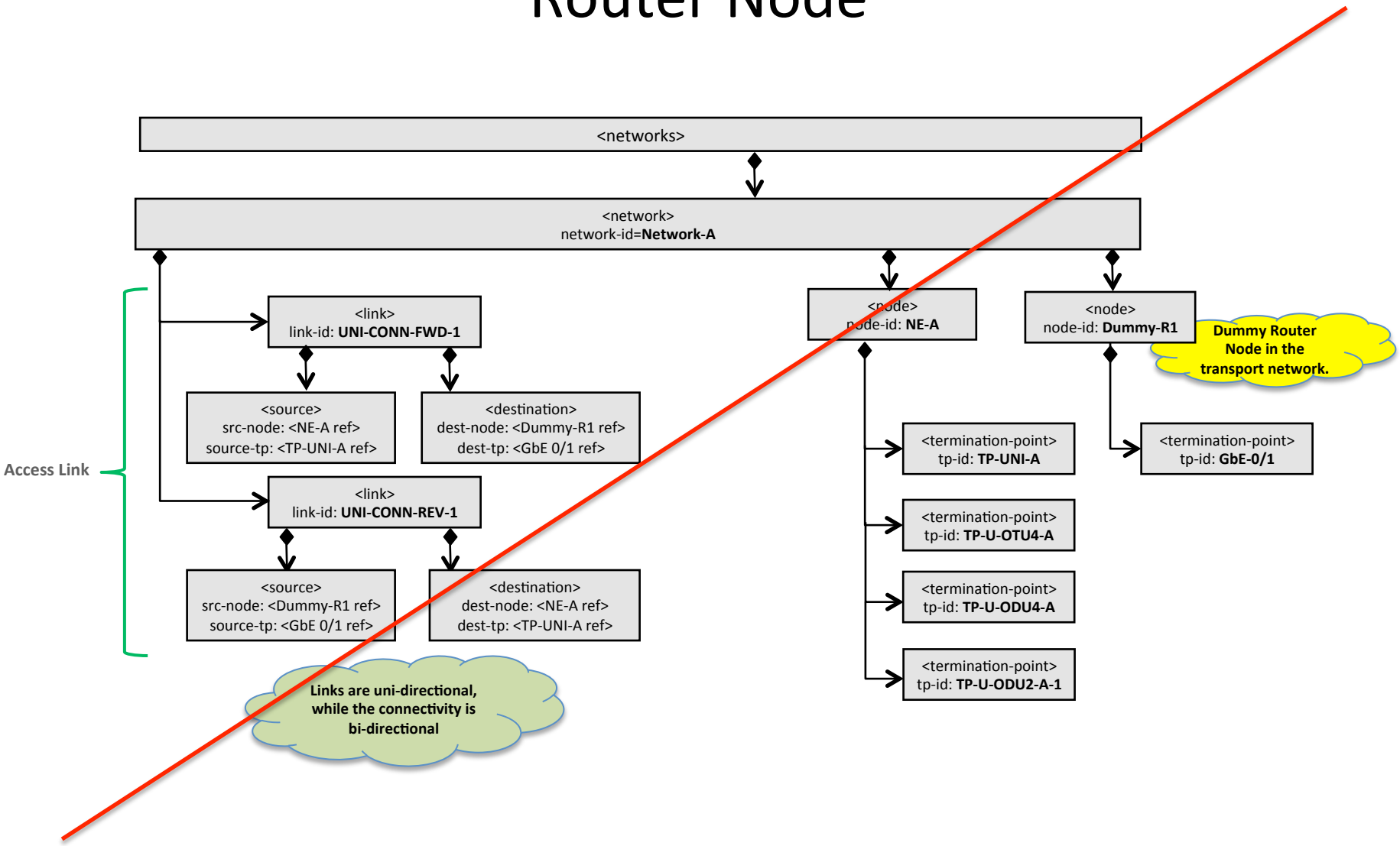
1. OTN Topology type defined in L1Topology.
2. NE Type and Version should be optional. Cleaner solution is to have NE capability, e.g. ODU hierarchy, Mux levels, etc. in a OTN TE Topology model.
3. Generic attributes (similar to LayerProtocol) should be added to the augmented Transport Model.

TEAS Tunnel Model Instantiation

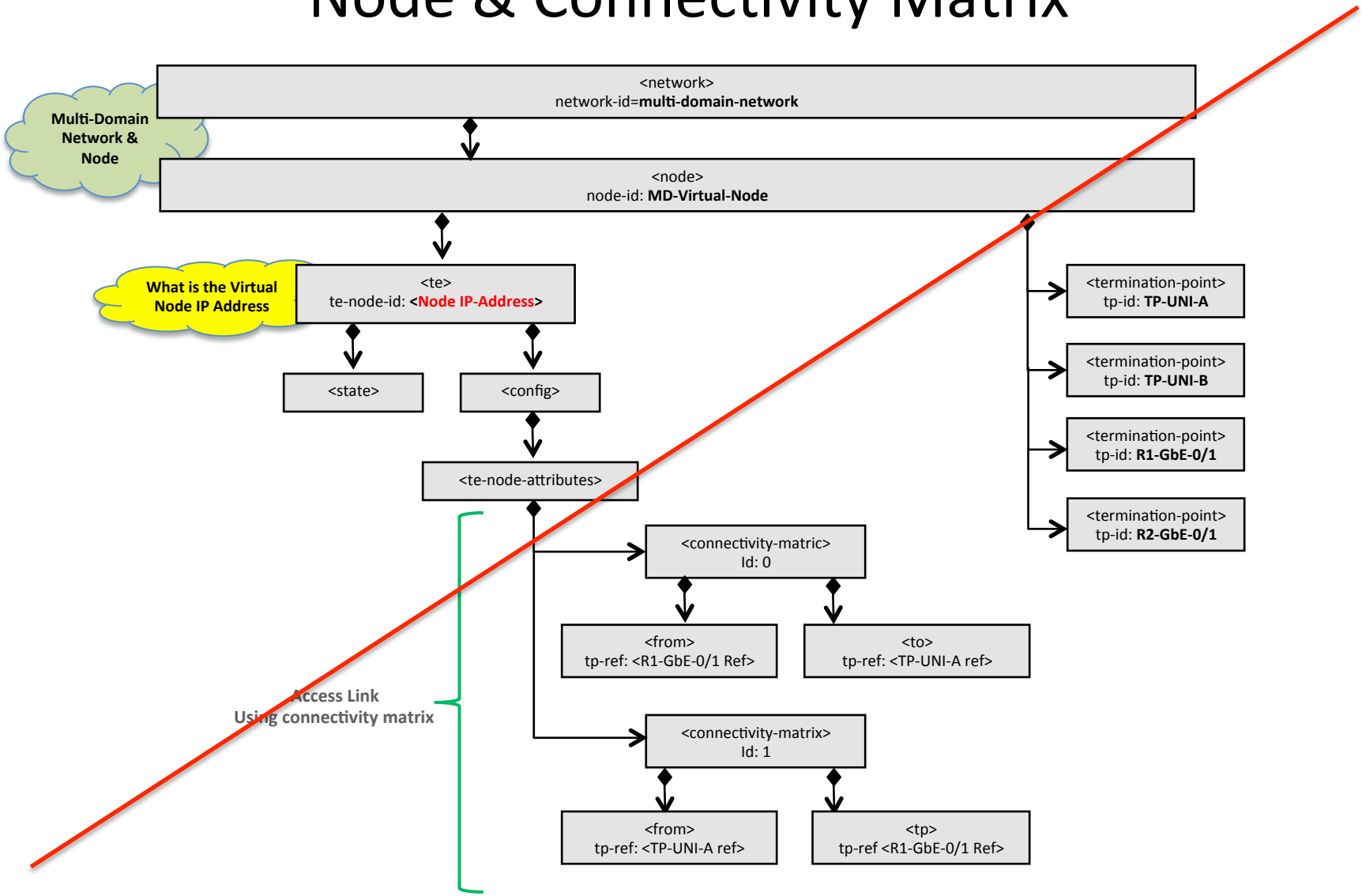


Access Link Modeling

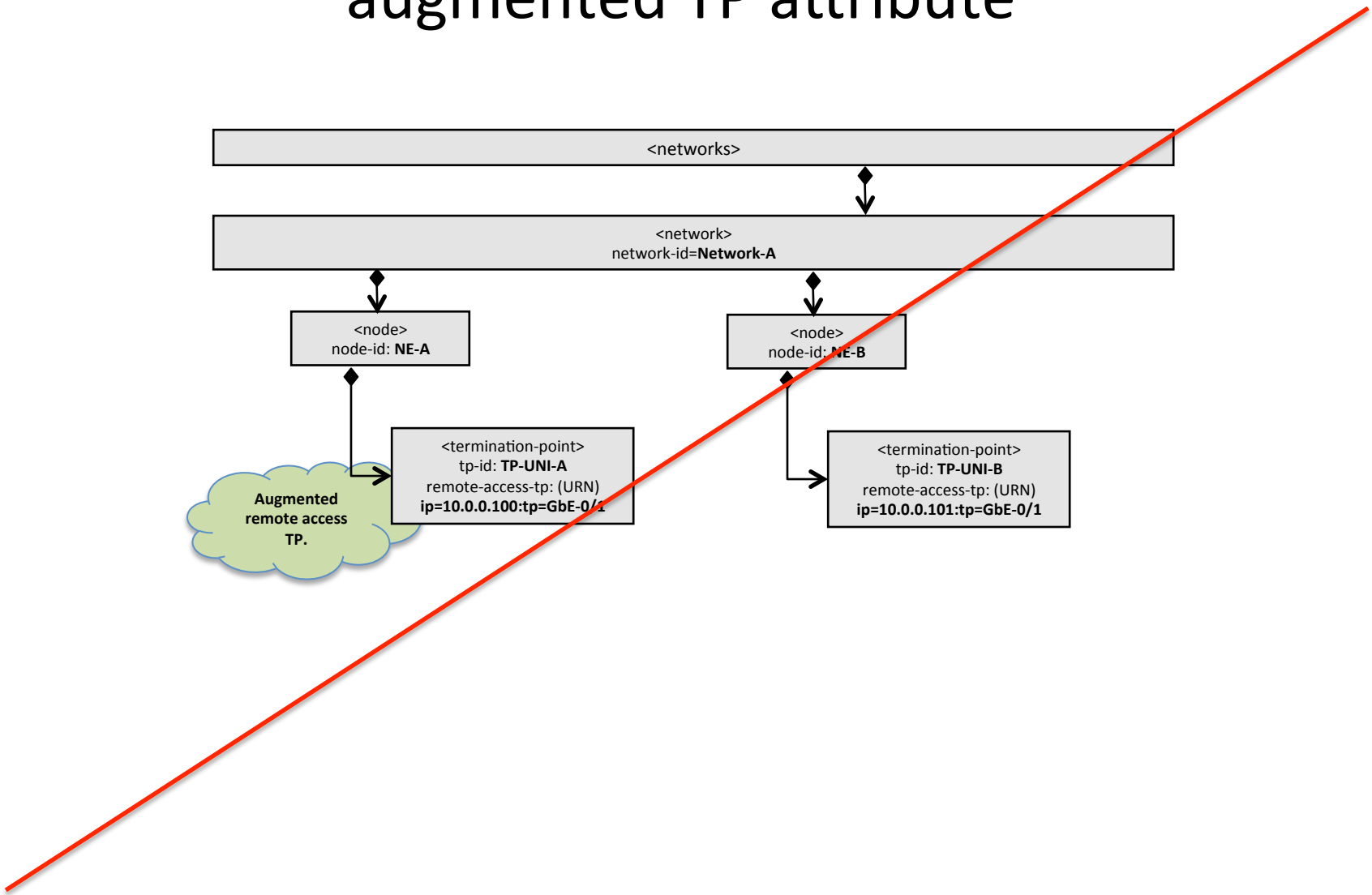
Option #1: Access Link Modeling using Dummy Router Node



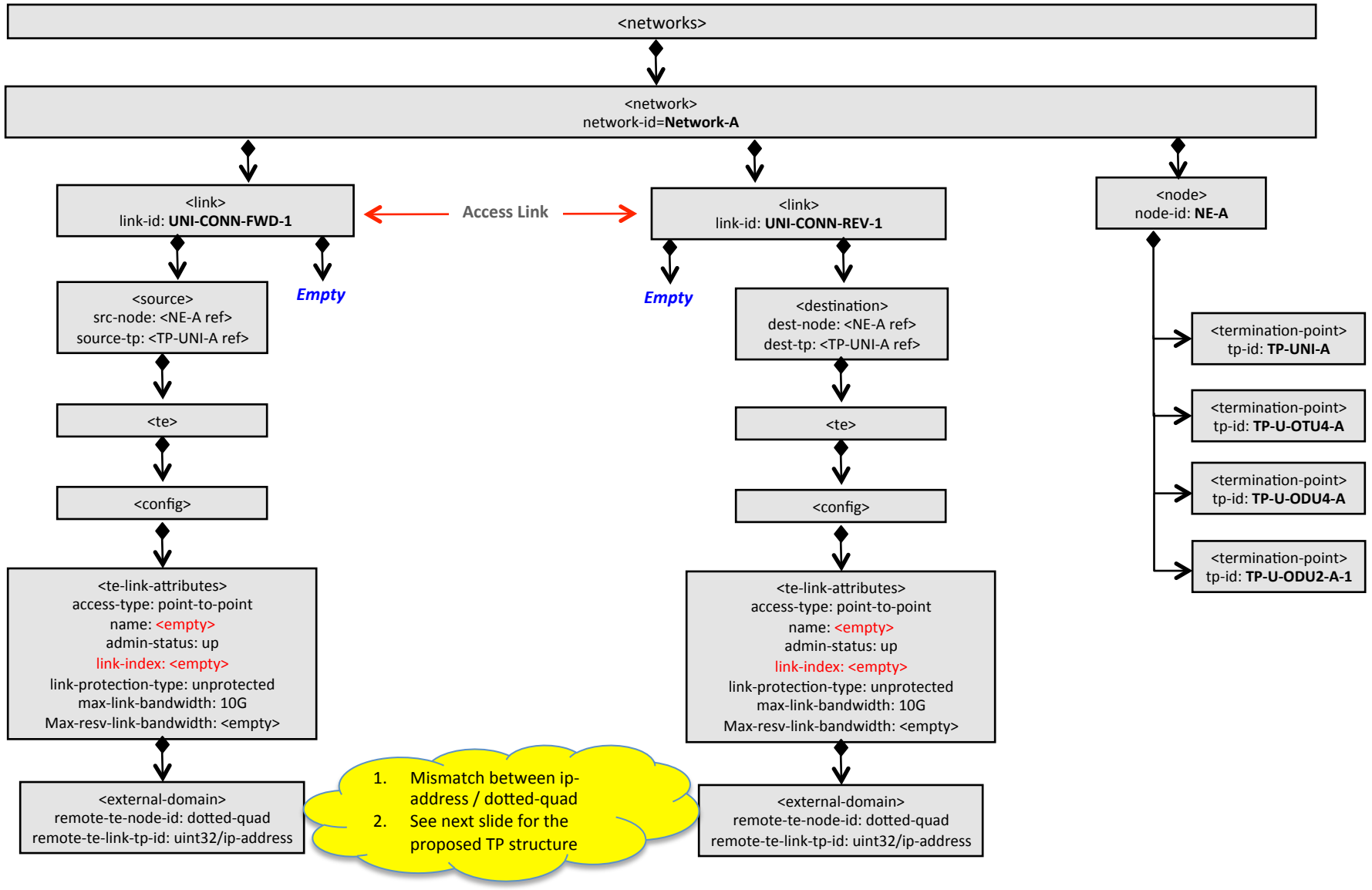
Option #2: Access Link Modeling using Virtual Node & Connectivity Matrix



Option #3: Access Link Modeling using augmented TP attribute



Option #4: Access Link Modeling using Remote Link TP



Option #4: Proposed Remote TP Type

```
container external-domain {
        leaf remote-te-node-id {
          type te-node-id;
        }
        leaf remote-te-link-tp-id {
          type te-tp-id;
        }
 }
```

```
typedef te-node-id {
    type yang:dotted-quad;
}
```

```
typedef te-tp-id {
   type union {
     // Unnumbered
     type uint32;
     // IPv4 or IPv6 address
     type inet:ip-address;
   }
}
```

Current Structure

```
container external-domain {
     choice type {
         case remote-router-tp {
               leaf remote-te-node-id {
                   type te-node-id;
                 }
                 leaf remote-te-link-tp-id {
                   type te-tp-id;
                 }
         }
         case remote-tp {
                   leaf remote-te-node-id {
                             type inet:uri;
                   }
                   leaf remote-te-link-tp-id {
                             type inet:uri;
                   }
         }
       }
     }
```

Proposed Structure

Access Link Modeling Summary

- Which option to go with?
  - On TE-Topology call (06/20/15), it was suggested to have keyword with remote TP information (similar to Option #3).
    - The discussion about the type of the keyword is in progress.
  - 06/26: Option #4 proposed by TE-Topology.
    - Remote TP structure/type needs to be updated.