

L2VPN Service YANG Data Model

draft-hu-bess-l2vpn-service-yang-00.txt

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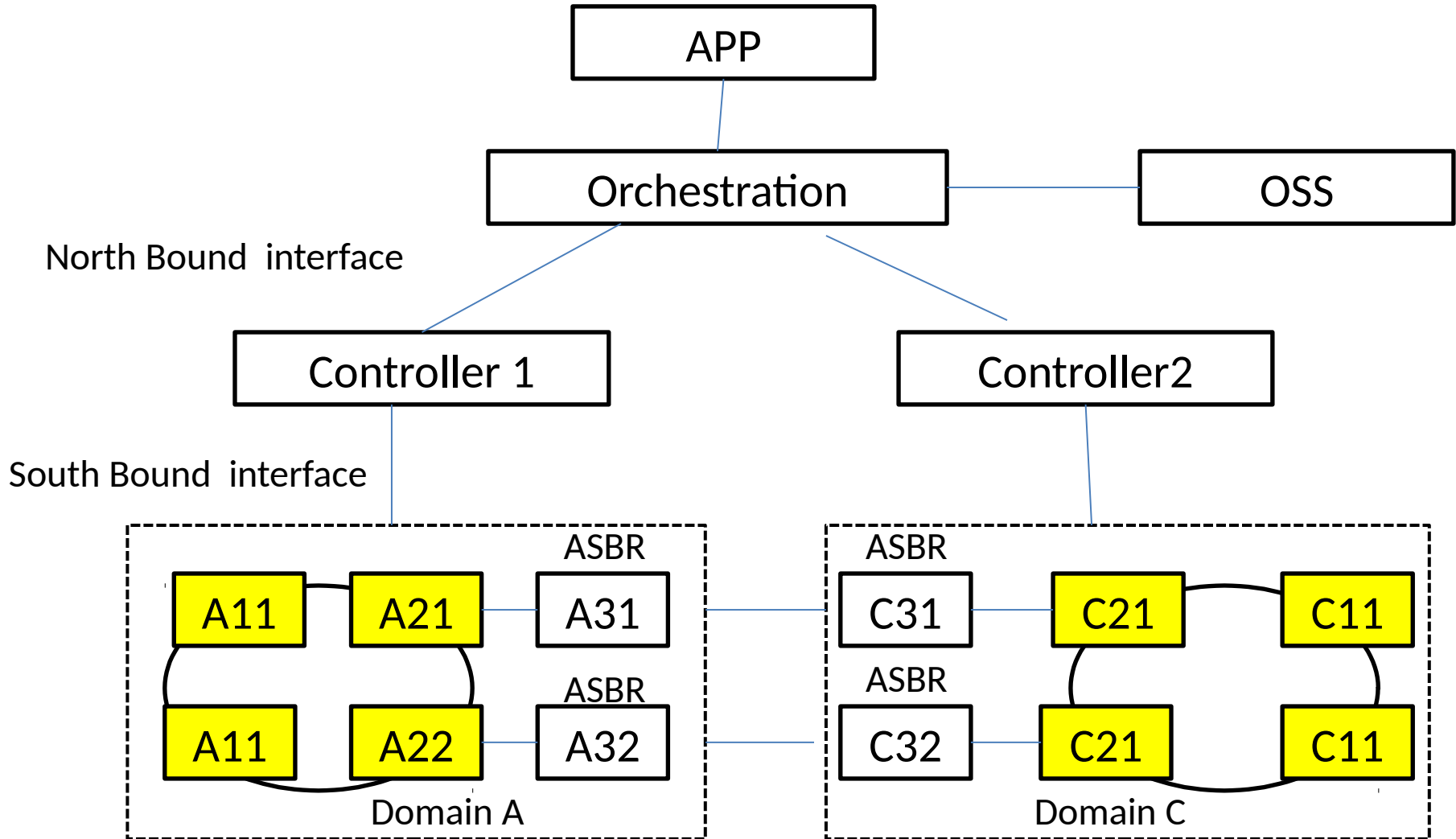
Jie Yao

ZTE Coporation

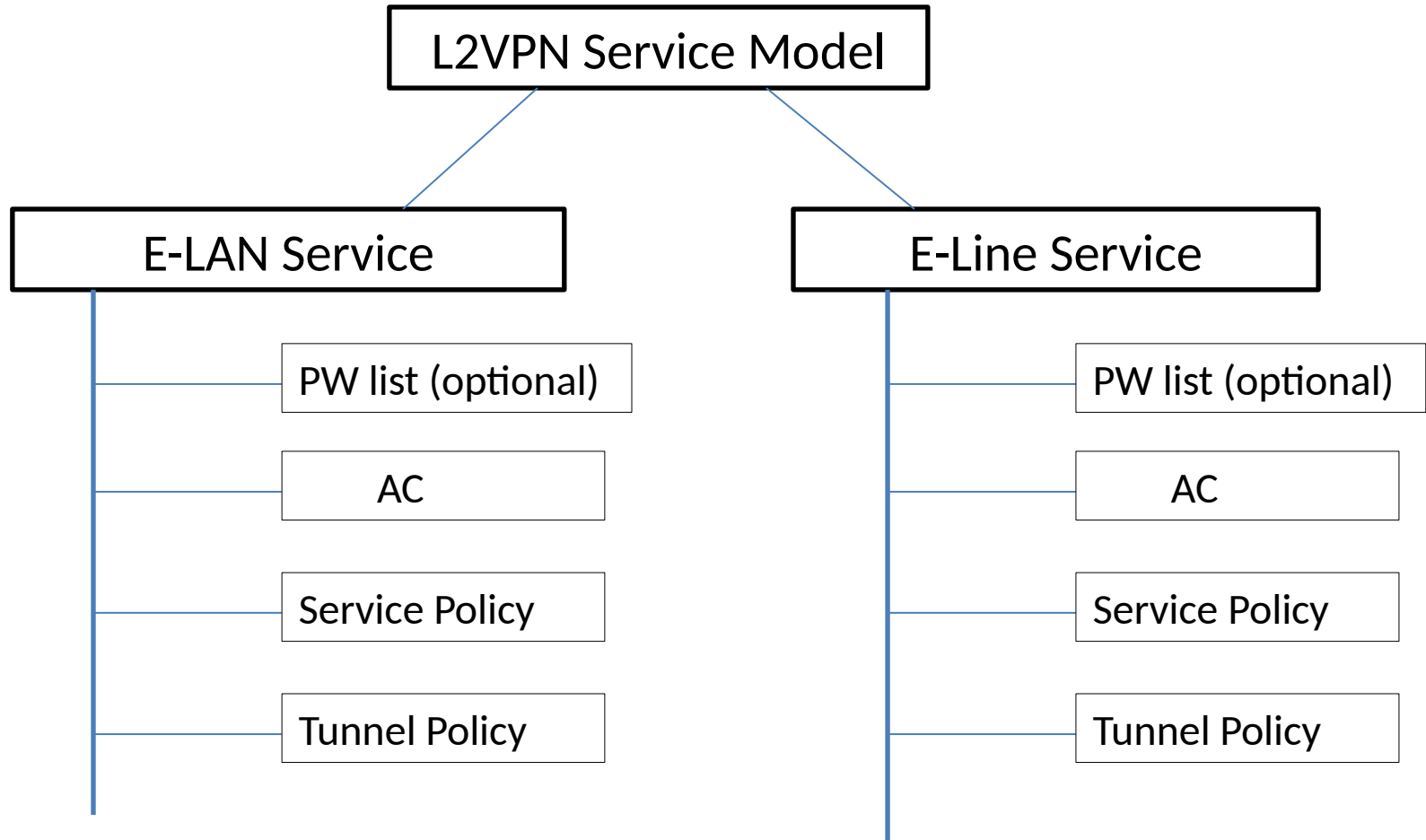
Motivation

- Define the L2VPN North Bound Service YANG Data Model:
 - Use this model as an input for an orchestration layer which is responsible to translate the application service to orchestrated configuration of network elements which will be part of the service.
- Both E-line service and E-LAN service are defined in this document

SDN based L2VPN Service



L2VPN Service Model Structure



E-line Service

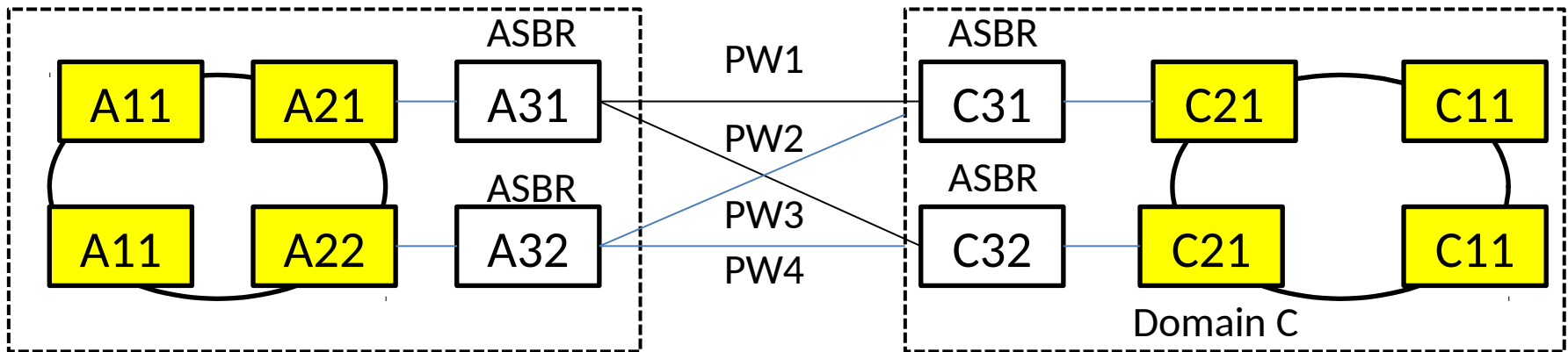
```
+--rw eline
  +--rw eline-instance* [name]
    +--rw name string
    +--rw description? string
    +--rw service-type? l2vpn-service-type
    +--rw signaling-type l2vpn-signaling-type
    +--rw pw* [name]
      .....
    +--rw ac* [name]
      | +--rw name string
      | +--rw ac-nodeid? string
      | +--rw link-discovery-protocol-type? link-discovery-protocol-type
      | +--rw (access-type)?
      | +--rw (access-action)?
      | +--rw qos-policy
      | +--.....
    +--rw service-policy* [id]
      | +--rw id uint8
      | +--rw communicate-unit? int32
      | +--rw ne-id? string
      | +--.....
    +--rw tunnel-policy
      | +--rw tunnel-signaling-type? tunnel-signaling-type
      | +--rw tunnel-mode? tunnel-mode
      | +--rw protect-type? protect-type
      | +--rw receive-mode? receive-mode
      | +--rw (revertive-type)?
```

E-LAN Service

```
+--rw elan-service
  +--rw elan-instance* [name]
    +--rw name string
    +--rw description? string
    +--rw mac-withdraw? boolean
    +--rw bgp-parameters
    +--rw service-type? l2vpn-service-type
    +--rw signaling-type l2vpn-signaling-type
    +--rw pw* [name]
      | +--rw name string
      | +--rw asbr-id? string
      | +--rw peer? inet:ip-address
      | +--rw hub-spoken? hub-spoken
      | +--.....
    +--rw ac* [name]
      | +--rw name string
      | +--rw ac-nodeid? string
      | +--rw link-discovery-protocol-type? link-discovery-protocol-type
      | +--rw split-horizon-group? string
      | +--rw qos-policy
      | .....
    +--rw service-policy* [id]
      | +--rw id uint8
      | .....
    +--rw tunnel-policy
```

PW list

- Configure the PW list among different AS domain.
 - Only configured for the inter-domain L2VPN service (E-Line and E-LAN Service).
 - No need to configure the PW for the intra-L2VPN service, for the device YANG data model can deal with it.



PW List

```
+--rw pw* [name]
  |--rw name          string
  |--rw asbr-id?     string
  |--rw peer?        inet:ip-address
  |--rw vcid?        uint32
  |--rw type?        pw-type
  |--rw tunnel-policy? string
  |--rw request-vlanid? uint16
  |--rw vlan-tpid?   string
```


AC list

```

+--rw ac* [name]
|   +--rw name                               string
|   +--rw ac-nodeid?                         string
|   +--rw link-discovery-protocol-type?     link-discovery-protocol-type
|   +--rw (access-type)?
|   |   +--:(port)
|   |   +--:(dot1q)
|   |   |   +--rw dot1q-vlan-bitmap?         int32
|   |   +--:(qinq)
|   |       +--rw qinq-svlan-bitmap?         int32
|   |       +--rw qinq-cvlan-bitmap?        int32
|   +--rw (access-action)?
|   |   +--:(keep)
|   |   +--:(push)
|   |   |   +--rw push-vlan-id?              int32
|   |   +--:(pop)
|   |   +--:(swap)
|   |       +--rw swap-vlan-id?              int32
|   +--rw qos-policy
|   |   +--rw qos-dscp2exp?                   dscp2exp
|   |   +--rw qos-cos2exp?                    cos2exp
|   |   +--rw qos-if-cars
|   |       +--rw direction?                  uint32
|   |       +--rw cir?                         uint32
|   |       +--rw pir?                         uint32
|   |       +--rw cbs?                         uint32
|   |       +--rw pbs?                         uint32

```

Service Policy

```
+--rw service-policy* [id]
|  +--rw id                               uint8
|  +--rw communicate-unit?                int32
|  +--rw ne-id?                           string
|  +--rw (primary)
|  |  +--:(primary-pw)
|  |  |  +--rw primary-pw* [name]
|  |  |  |  +--rw name          -> ../../../../pw/name
|  |  |  +--:(primary-ac)
|  |  |  |  +--rw primary-ac?      -> ../../ac/name
|  +--rw (backup)?
|  |  +--:(backup-pw)
|  |  |  +--rw backup-pw* [name]
|  |  |  |  +--rw name            -> ../../../../pw/name
|  |  |  |  +--rw precedence?    uint32
|  |  |  +--:(backup-ac)
|  |  |  |  +--rw backup-ac?      -> ../../ac/name
|  +--rw protect-type?                    protect-type
|  +--rw receive-mode?                    receive-mode
|  +--rw (revertive-type)?
```

Tunnel Policy

```
+--rw tunnel-policy
|   +--rw tunnel-signaling-type?           tunnel-signaling-type
|   +--rw tunnel-mode?                     tunnel-mode
|   +--rw protect-type?                    protect-type
|   +--rw receive-mode?                    receive-mode
|   +--rw (revertive-type)?
|       +--:(never)
|       +--:(wtr)
|       +--rw revert-delay?                uint16
```

Next Step

- Comments welcome.

Thanks!