draft-ietf-l3sm-l3vpn-service-model
L3SM Interim meeting 02252016

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Quick recap

Issue	Description	Status
1	When customer-nat-address used	Closed
2	Identify l3vpn svc using id or name	Closed
3	M to N availability	On going
4	Site-service-cloud-access as grouping	Closed
5	Multicast	On going
6	Inventory OPS state	On going
7	Generic VAS	Closed
8	Who keep site location info	Closed
9	Do we need to model transport constraints	On going
10	How to handle VPN merging easily	On going
11	MUST for site diversity ?	Closed
12	How to model customer informations	On going
13	To do list	Not processed yet
14	Notification support	On going
	Putting sites under vpn-svc	NEW

Issue#3 : M to N availability

- Last time we almost agreed on a new modeling :

```
+--rw sites [site-id]
  | +--rw site-id                  svc-id
  | +--rw apply-template?          leafref
  | +--rw requested-site-start?    yang:date-and-time
  | +--rw requested-site-stop?     yang:date-and-time
  | +--rw actual-site-start?       yang:date-and-time
  | +--rw actual-site-stop?        yang:date-and-time
  | +--rw location
  | +--rw site-diversity
  | +--rw management
  | +--rw vpn-policy
  | +--rw maximum-routes
  | +--rw security
  | +--rw service
  | +--rw routing-protocols
  | +--rw site-network-accesses
  |    +--rw site-network-access* [site-network-access-id]
  |       +--rw site-network-access-id    svc-id
  |       +--rw apply-template?           leafref
  |       +--rw access-diversity
  |       |  +--rw type?   placement-diversity
  |       +--rw bearer
  |       +--rw ip-connection
  |       +--rw security
  |       +--rw service
  |       +--rw routing-protocols
  |       +--rw availability
  |          +--rw traffic-protection
  |          |  +--rw enabled?   boolean
  |          +--rw access-priority?       uint32
```

Diversity for the site regarding the other sites

Diversity for the access regarding the other accesses of the site

Availability parameters

Issue#5 : multicast

- Still need to check feedback from multicast guys

Issue#6 : inventory ops state

- Any interest or proposal ?

Issue#9 : transport constraints

- We almost agreed on the modeling principle
- Here is the update done :

```
module: ietf-l3vpn-svc
  +--rw l3vpn-svc
     +--rw vpn-svc* [vpn-id]
     |  +--rw transport-constraints
     |     +--rw unicast-transport-constraints
     |     |  +--rw constraints* [constraint-id]
     |     |     +--rw constraint-id      svc-id
     |     |     +--rw site1?             svc-id
     |     |     +--rw site2?             svc-id
     |     |     +--rw constraint-list* [constraint-type]
     |     |        +--rw constraint-type            identityref
     |     |        +--rw constraint-opaque-value?   string
     |     +--rw multicast-transport-constraints
     |        +--rw constraints* [constraint-id]
     |           +--rw constraint-id      svc-id
     |           +--rw src-site?          svc-id
     |           +--rw dst-site?          svc-id
     |           +--rw constraint-list* [constraint-type]
     |              +--rw constraint-type            identityref
     |              +--rw constraint-opaque-value?   string
```

Available constraints
Tc-latency
Tc-bandwidth
Tc-jitter
Tc-path-diversity
Tc-site-diversity

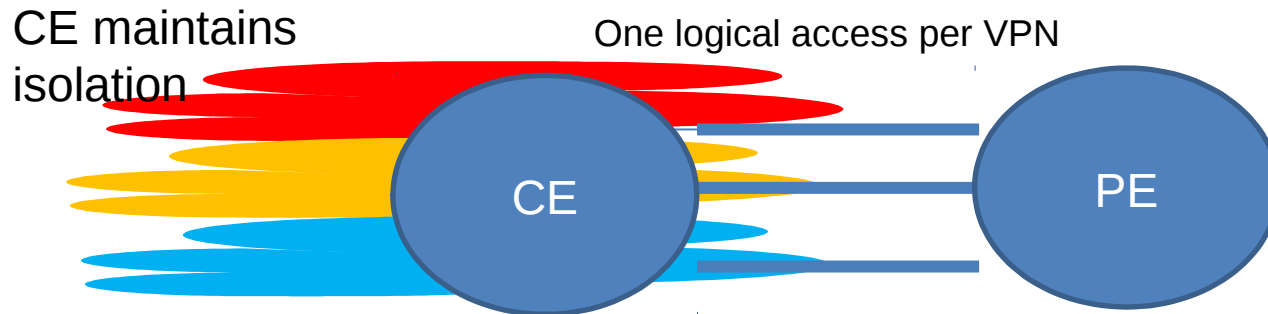- Draft provides guidance on the opaque-value

Issue#10 : VPN merging

- Pb statement :
  - how to handle extranet case without having to update all sites ?
  - How to handle subVPN case ? (a site having multiple logical connections to different VPNs)

Issue#10 : VPN merging

- Just as a reminder :
  - What is a multiVPN scenario :

Single logical access

CE

PE

VPN#

VPN#

VPN#

CE merges all
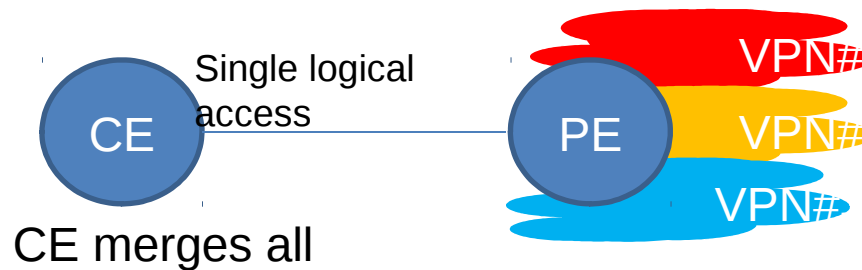
  - What is a subVPN scenario :

CE maintains isolation

One logical access per VPN

CE

PE

Issue#10 : VPN merging

- Proposals for extranet :
  - Proposal#1 : duplicating vpn-policy in vpn-svc
    - Inheritance is a single transaction cannot be done with RESTCONF ?

  - Proposal#2 : having a site-list in vpn-svc
    - Site attributes are in two subtrees which brings complexity

  - Proposal#3 : Site is moved to vpn-svc
    - the notion of « native VPN » we had comes back
    - A site belonging to multiple VPNs is really common

  - Proposal#4 :Creating an extranet-vpn container in vpn-svc to mark the attachment of the VPN
    - Sounds reasonable ?

```
+--rw vpn-svc
    |
    +--rw extranet-vpns
    |   +--rw extranet-vpn [vpn-id]
    |   |   +--rw vpn-id    svc-id
    |   |   +--rw sites-role
```

Issue#10 : VPN merging
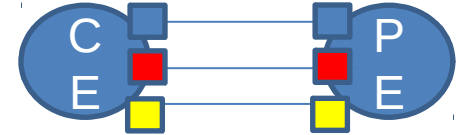
- Proposals for subVPN :
  - Proposal#1 : use a different site per subVPN site
    - Some parameters may be duplicated in case subsites use the same parameters (can use site template)

  - Proposal#2 : put VPN-policy under site-network-access
    - Need to take care about bad configuration (site level vpn-policy and site-network-access vpn-policy used at the same time)
      - Kenichi proposed a check
    - How do we differentiate multihoming from subVPN ?

  - Proposal#3 : create a sub-site hierarchy under site in case of subVPN
    - The tree becomes complex

  - From a service point of view a subVPN is a « separate site » but multiple separate sites are sharing a common physical properties (routers, bearer …)

Issue#12 : how to model customer informations

- Previously we had a dedicated customer informations container

- It has been removed and information dispatched in routing protocols (static, BGP …)

- Draft gives now rule to determine if routing protocol is related to PE-CE or Customer-CE depending of the management type

Issue#14 : notifications

- Is there a real need of notifications ?

- What kind of notifications ?

- Using YANG 1.0 or YANG 1.1 notifications ?

Putting sites under vpn-svc

- Aijun pointed that a hierarchical structure may be better for the following reason :
  - More service oriented ?
  - Some attributes of sites are VPN related

- There is no consensus on Aijun proposal :
  - A multiVPN site will require duplication of most parameters
  - If some containers are misplaced, we can move them to vpn-svc instead of site , can we identify such container ? Not clear in the discussion

Issue#13 : to-do list

1.Security parameters : encryption part to be reviewed !
2.Need to review if the current proposal fits any L3VPN rather than PE-Based only
3.What about interAS consideration ?
In my mind, nothing to do … but need to be discussed !
4.What about Hybrid VPNs (public+private sites) ?

- No progress