draft-boutros-bess-evpn-vpws-service-edge-gateway-00

Sami Boutros
Ali Sajassi
Patrice Brissette
[Cisco Systems]

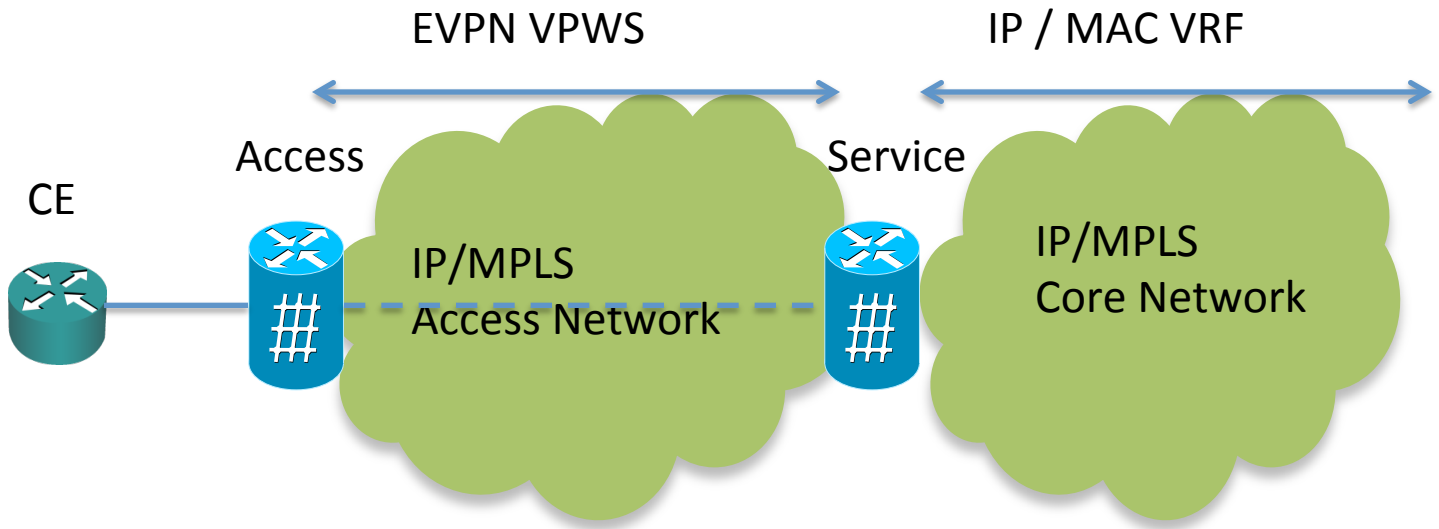
Daniel Voyer
[Bell Canada]

IETF 92, March 2015
Dallas, USA

What is this about?

Describes how a **service node** can **dynamically** terminate EVPN virtual private wire transport service (VPWS) from access nodes and offer **Layer 2, Layer 3 and Ethernet VPN overlay services** to Customer edge devices connected to the access nodes.

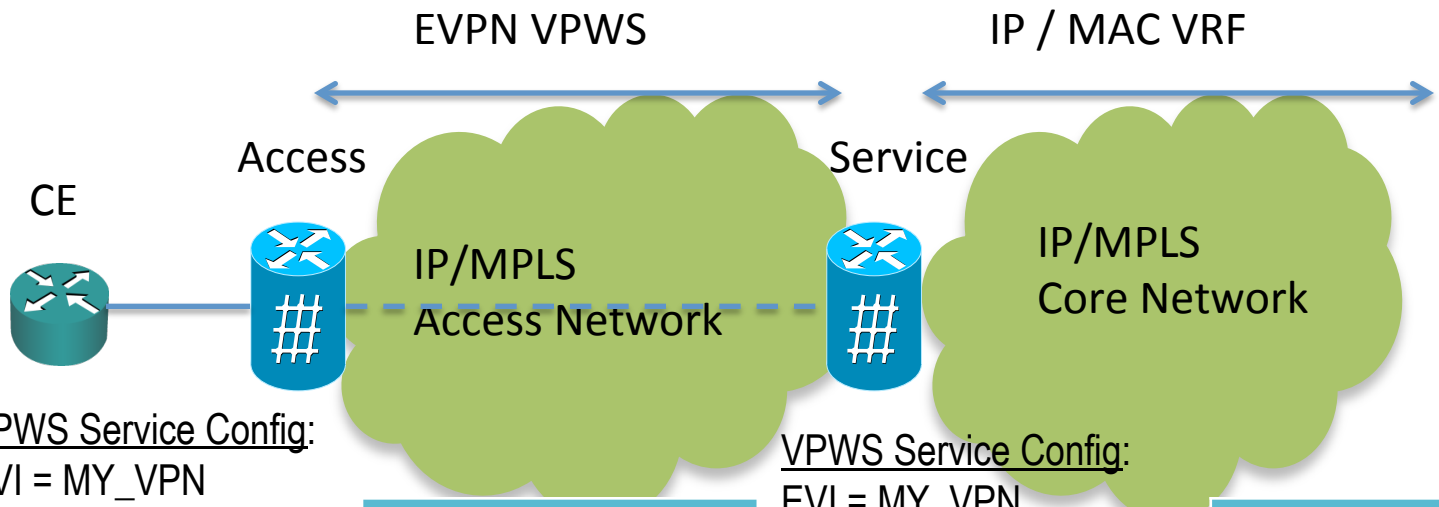
EVPN-VPWS Service Edge Gateway



On an **access node**, an **operator** specifies the **L2, L3** or **Ethernet VPN overlay service** needed by the customer edge device connected to the access node that will be transported over the EVPN- VPWS service.

Service nodes using EVPN advertise to access nodes the **L2, L3** and **Ethernet VPN overlay services** it can offer for the terminated EVPN VPWS transport service.

EVPN-VPWS SEG Basic Operation



VPWS Service Config:
EVI = MY_VPN
Local AC ID = AC1
Remote Core Service

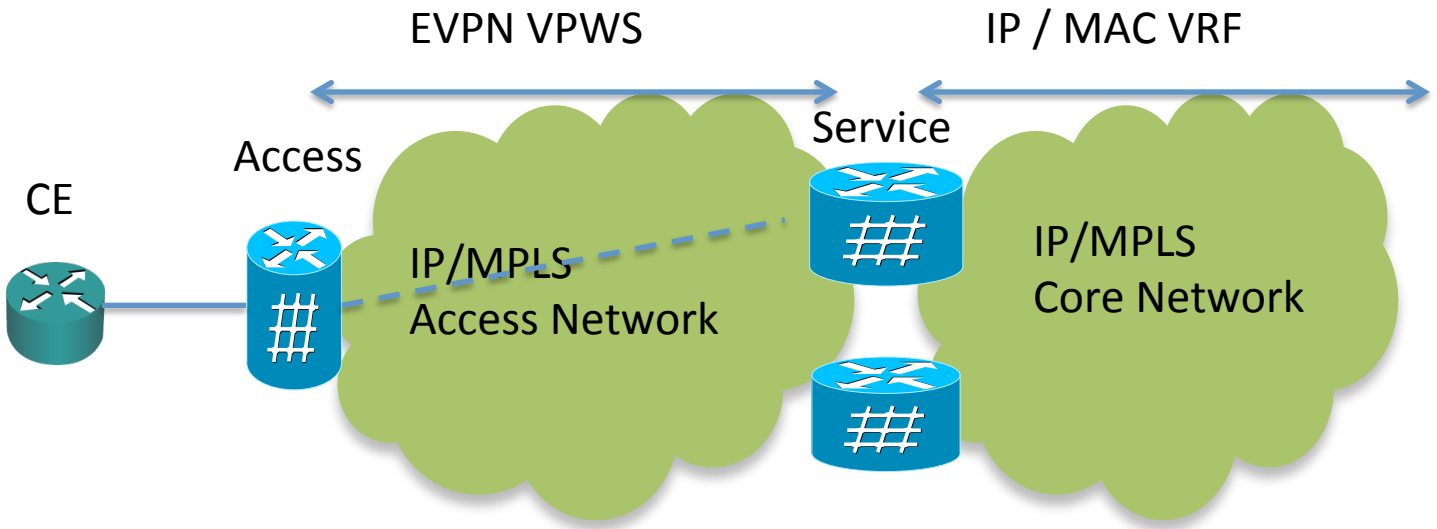
Spoke Eth A-D Route
RD-1
ESI = 0
Eth.Tag ID = AC1
Label (e.g. X)
RT ext. community
RT-a = [ASN:EVI]
RT=L2, L3 or EVPN overlay

VPWS Service Config:
EVI = MY_VPN
Local AC ID = Wildcard
Remote AC ID = Wildcard

Core Service Offering:
L2, L3 or EVPN Overlay

Hub Eth A-D Route
RD-2
ESI = 0
Eth.Tag ID = All'1s (wildcard)
Label (e.g. Y)
RT ext. community
RT-a = [ASN:EVI]
RT=L2, L3 or EVPN overlay

EVPN-VPWS SEG DH Operation



All nodes on that EVI are performing DF election to determine the service node terminating the EVPN VPWS service and offer L2, L3 or EVPN overlay service

HWR Algorithm as described in [draft-mohanty-l2vpn-evpn-df-election]:

Function of weight
[Service Node IP address, AC-ID]

Based on list of
Service Node IP addresses

Benefits

- An easy and **scalable mechanism** for **tunneling** (head-end) customer traffic **into** a common **IP/MPLS network** infra structure
- **Reduces CAPEX** in the access or aggregation network and service PE by **removing configuration operation** on **service** nodes.
- **Auto-discovery** of access nodes by service nodes
- **Auto-provision** of head-end functionality abd features such as QOS access lists (ACL), tunnel preference, bandwidth, L3VPN on a per head-end interface basis

Comments?

Next steps

- First draft and seeking for more comments.

Thank you