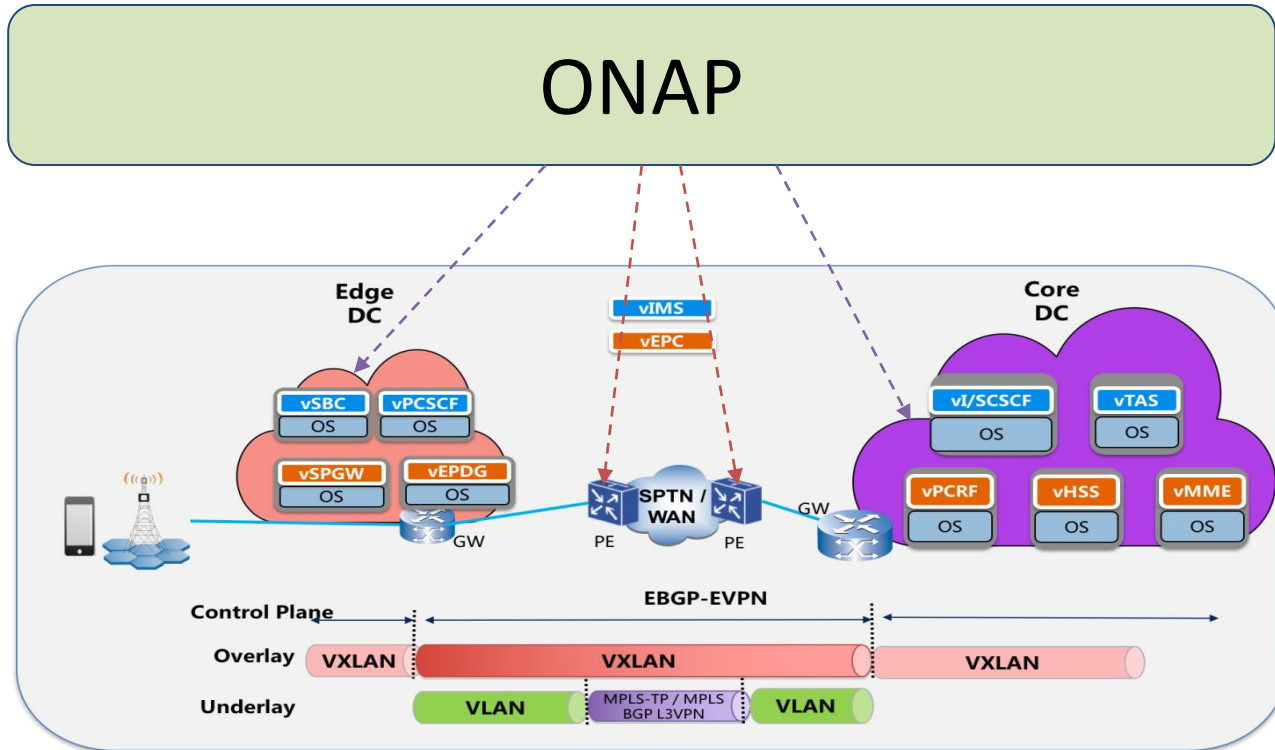


*VoLTE TOSCA Template
and Network Service*

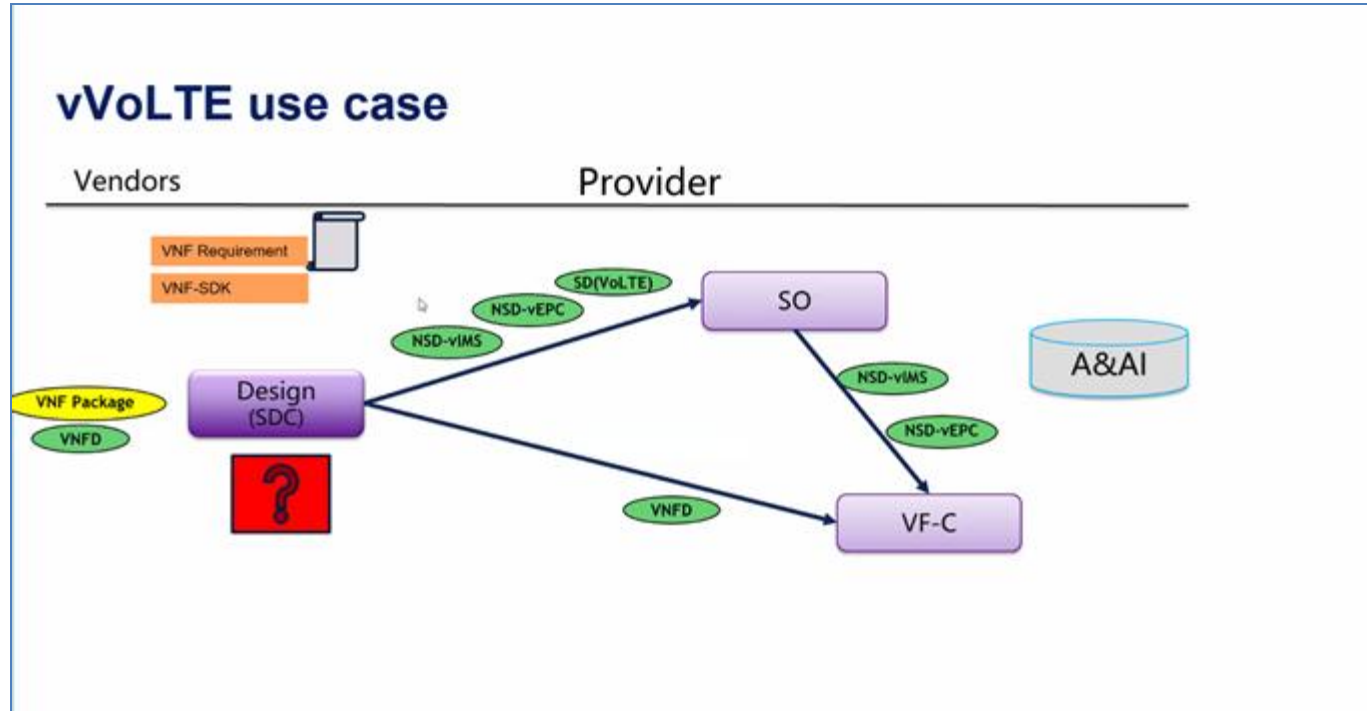
VoLTE Use Case



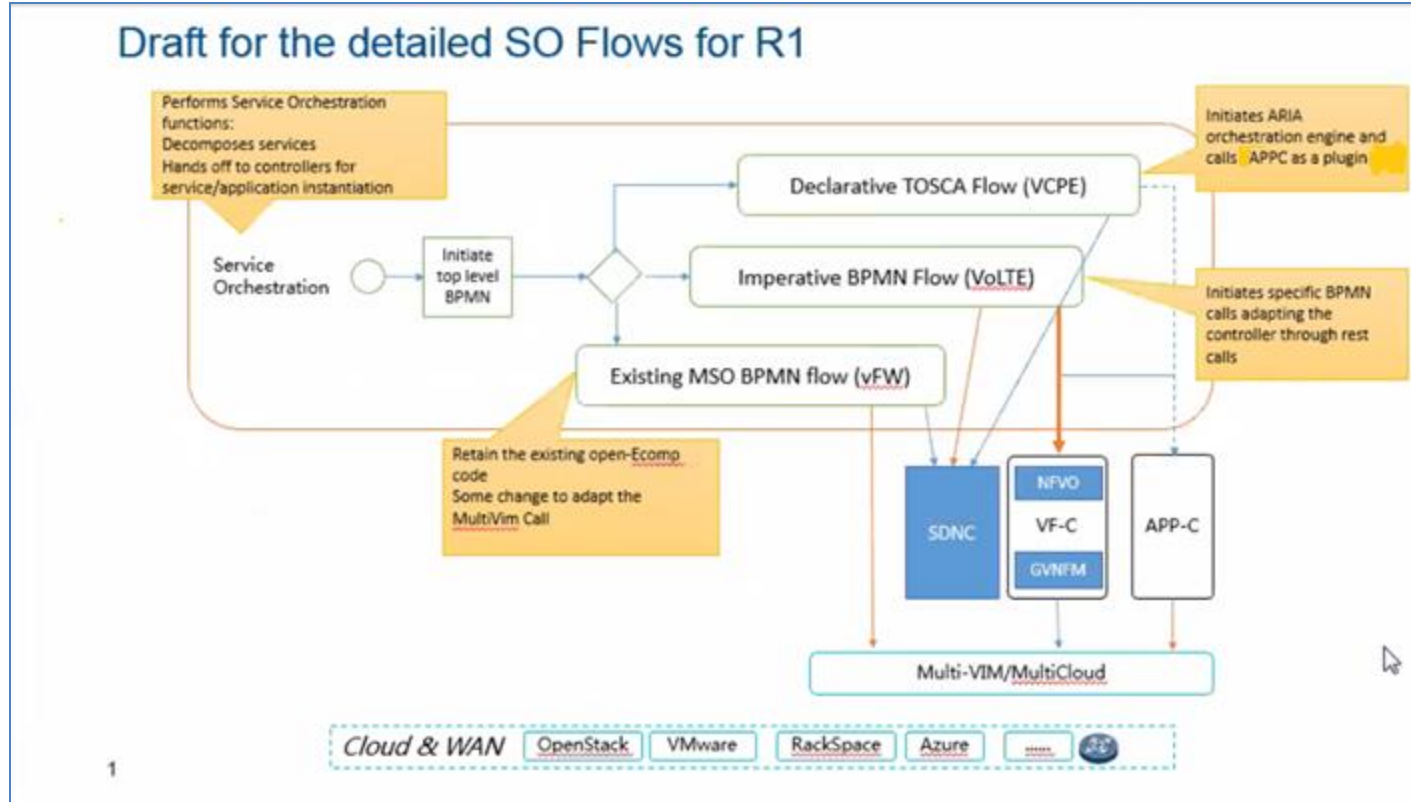
Highlights

- ❑ Commercial VFs and PFs are orchestrated
- ❑ Use TOSCA model for VNF onboarding and service design
- ❑ Deployed in multiple data centers interconnected by overlay and underlay networks across WAN
- ❑ Closed loop with intelligent alarm correlation

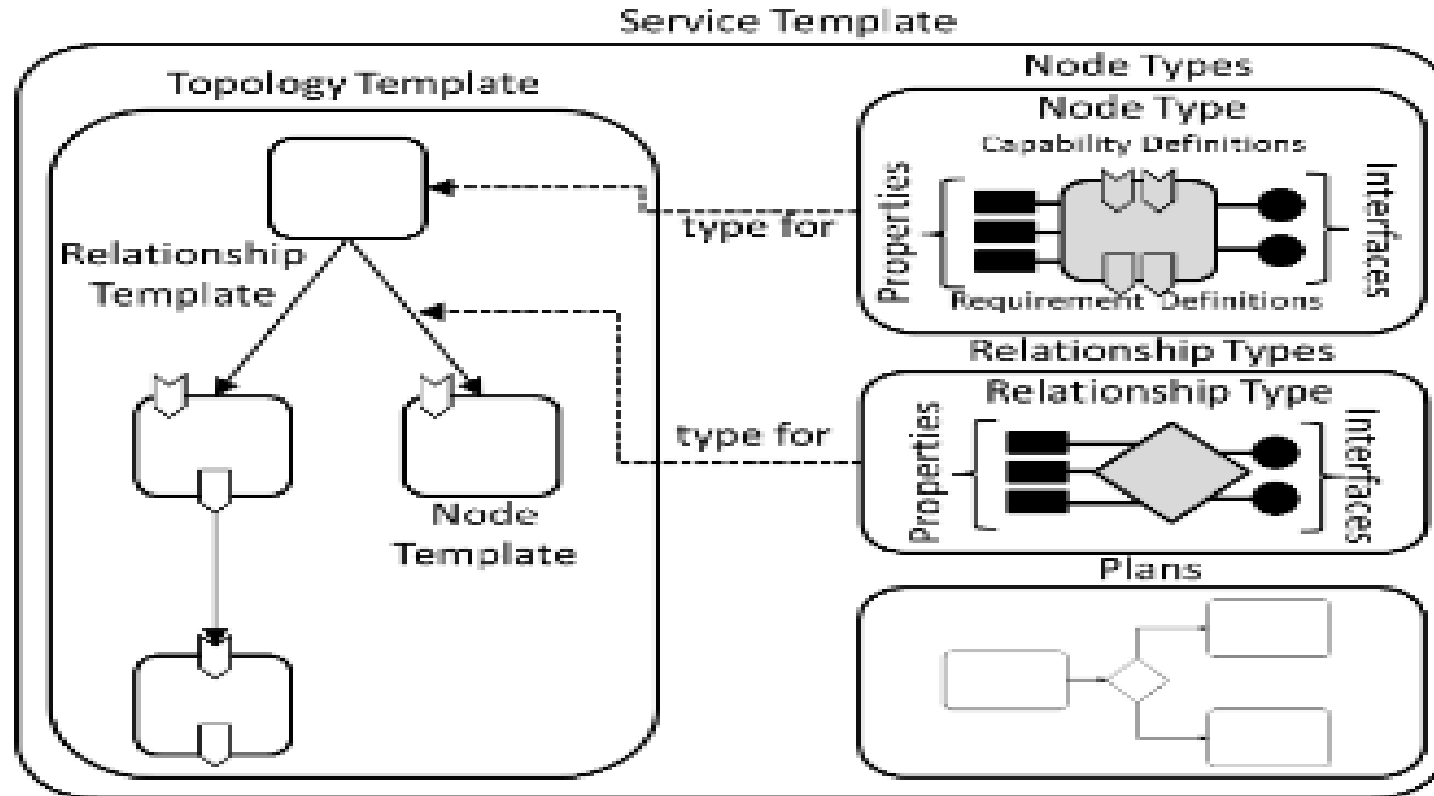
VoLTE Network Service Design



VoLTE Service Orchestration Workflow



TOSCA Service Template



vHSS

vSPGW-ZTE

vMME

vPCRF-ZTE

vSPGW-HW

vPCRF-HW

HW-CONTROL

ZTE_VNFM_2_VNF_NET

vUGW_External2

vUGW_External1

Eric-vMME05-vLC-P2

Eric-vMME05-vLC-P1

ZTE_VNFM_3_VNF_NET

mgmt_network

ZTE-CONTROL

public

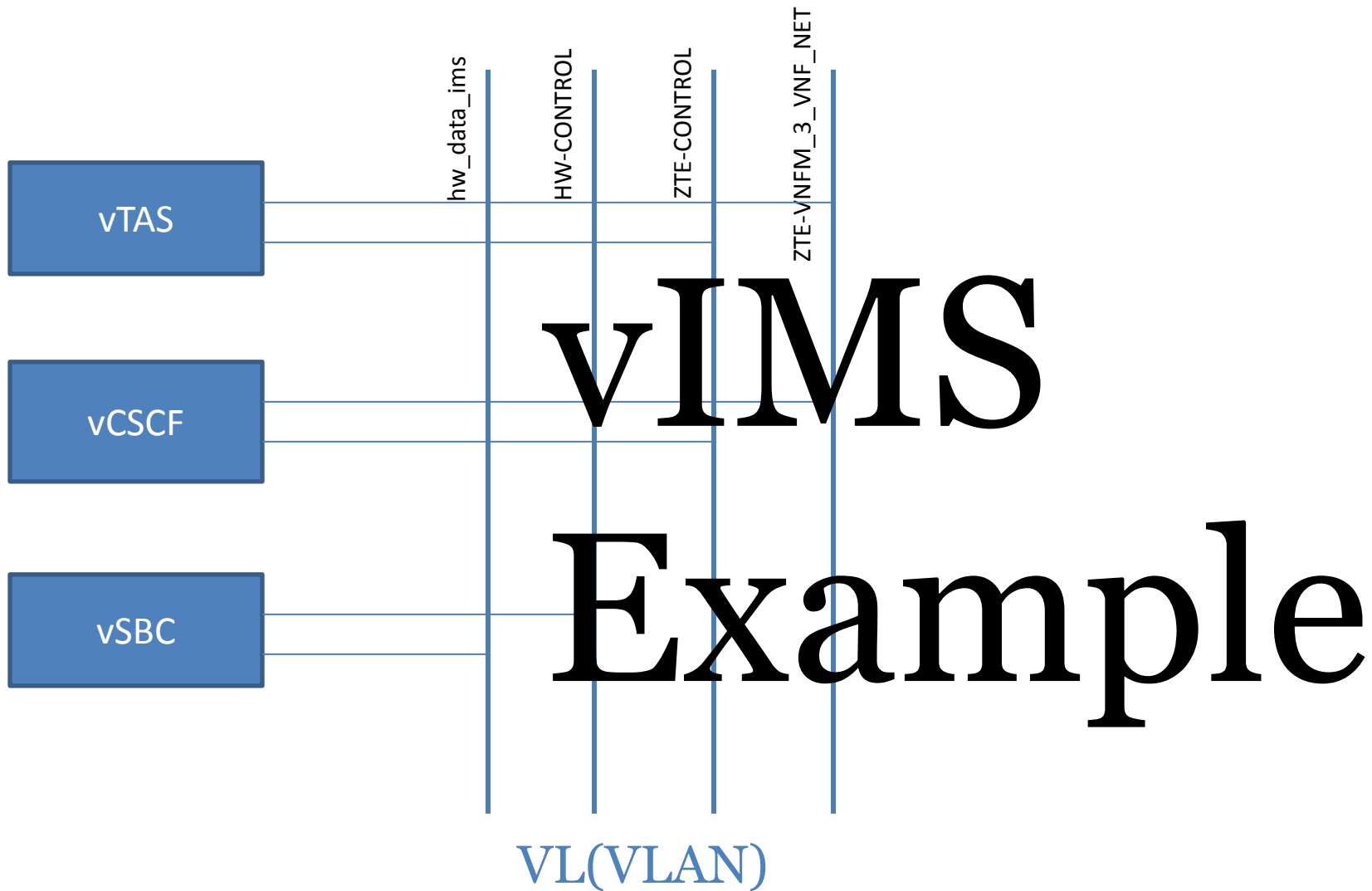
mgmt_network1

vEPC

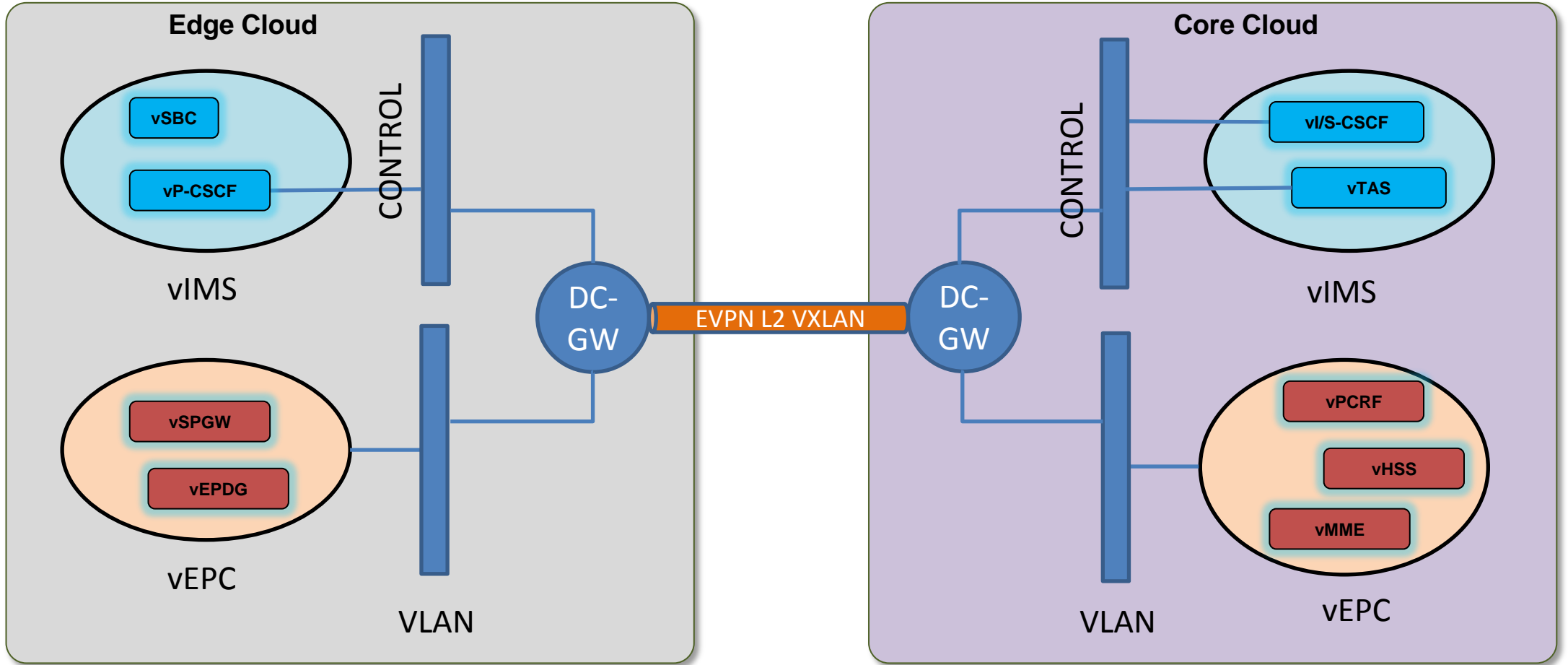
Example

VL(Non-VLAN)

VL(VLAN)

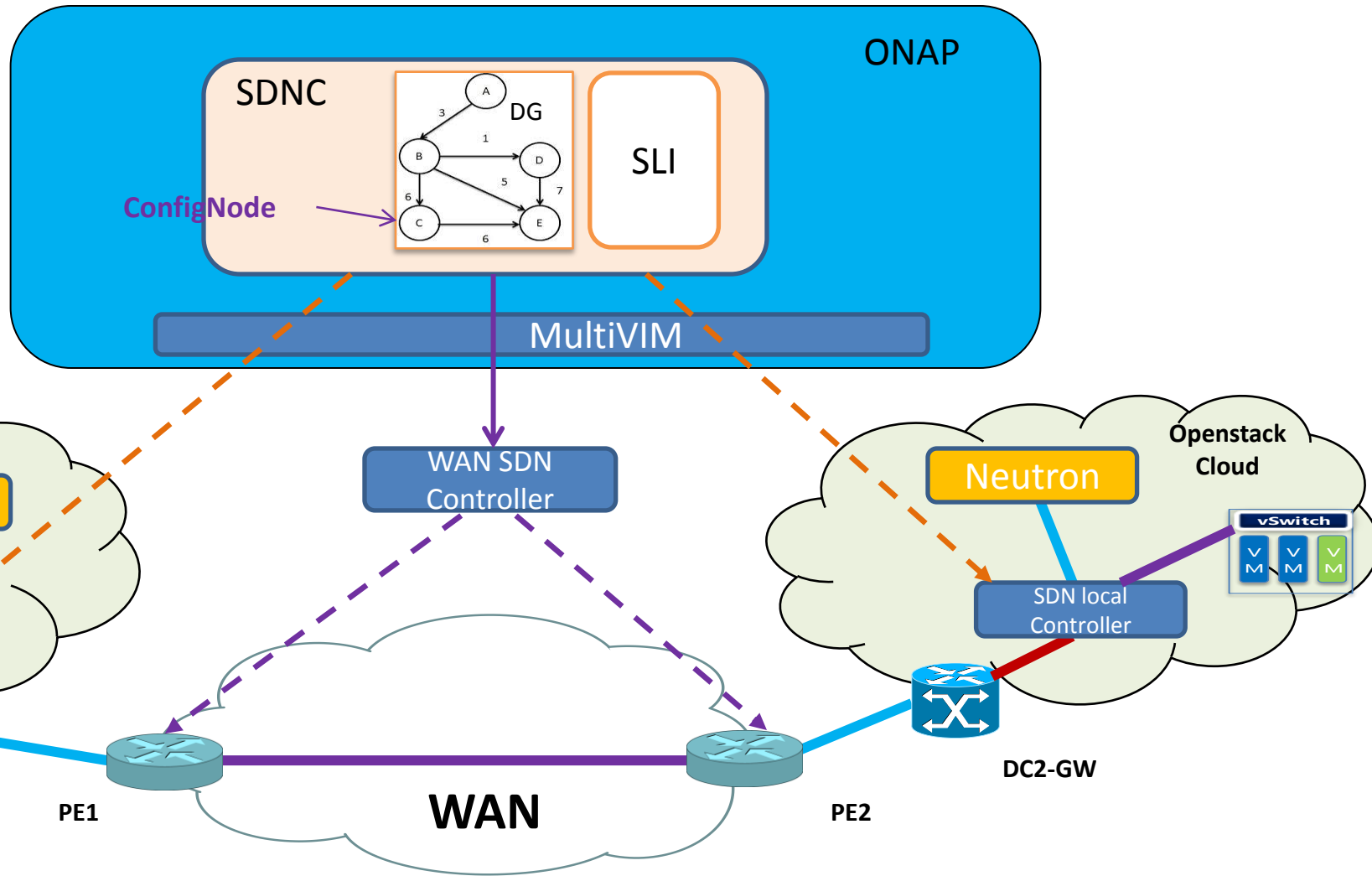


VLAN Interconnected by DCI Overlay Network



VoLTE Use Case DCI Overlay and Underlay Network Orchestration

- ❑ WAN SDN Controller is called by SDNC via REST API to set up MPLS L3VPN underlay between two PEs
- ❑ SDN Local Controller controls data center network and DC GW
- ❑ Neutron uses plugin to communicate with SDN Local Controller
- ❑ SDN Local Controller exposes REST API to MultiVIM to create VXLAN overlay network across data centers



REST API to Connect Local VLAN Network to Remote DC via EVPN L2 VXLAN Overlay

```
POST local-controller-ip:/v2.0/l2-dci-connects
{
  "l2_dci_connect": {
    "id": "CCB702C3-7719-4FE6-A5AD-3A9C9E265309",
    "name": "EDGE VLAN1",
    "description": "ZTE-CONTROL L2 CONNECT",
    "network_id": "6d2c55ee-f11c-4e1c-a756-91b803588e7b",
    "vni": "6000",
    "evpn_irts": ["1:6000"],
    "evpn_erts": ["1:6000"]
  }
}
```