



# End to End Test Cases Discussion

Helen Chen, PTL of ONAP Integration Project

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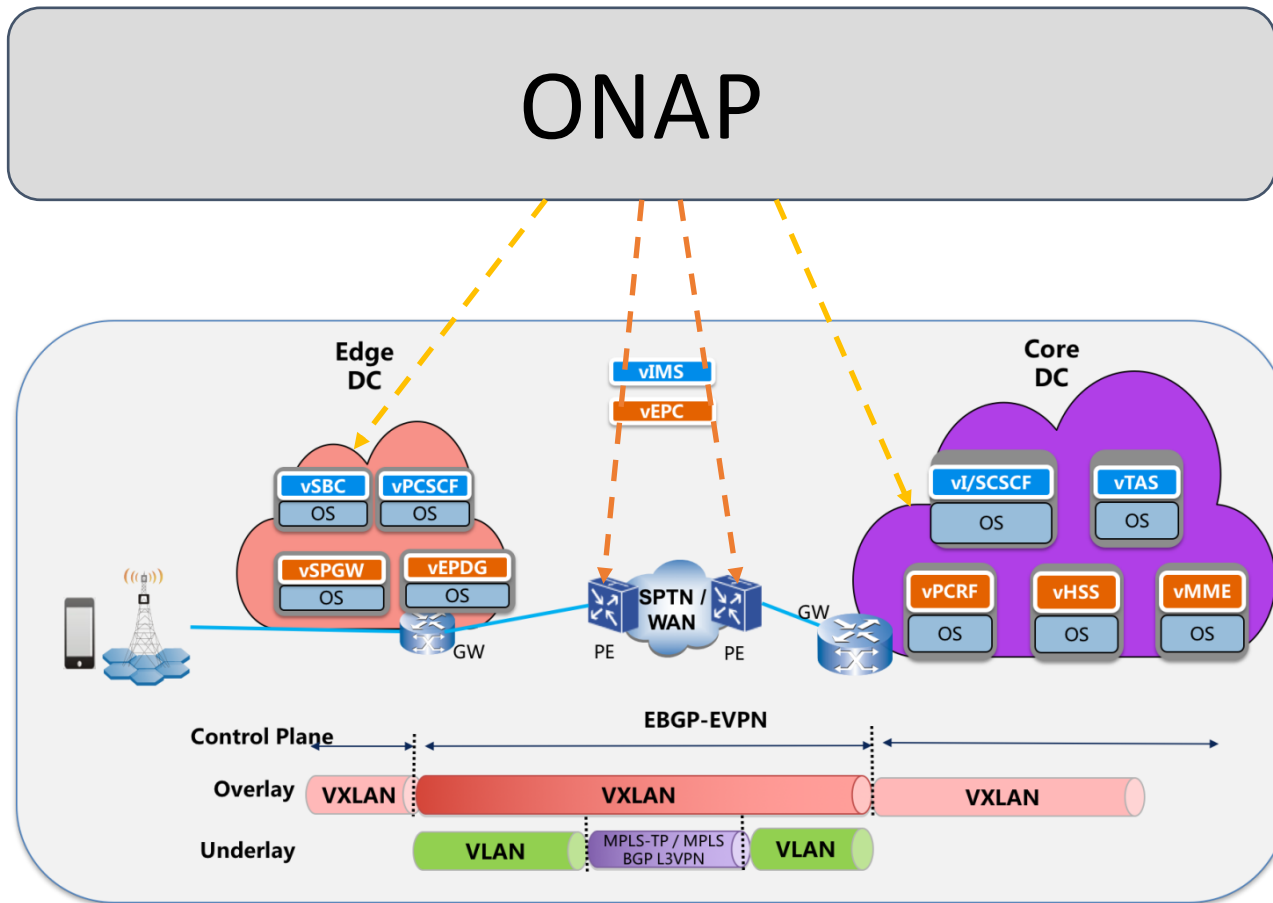
# Overall Guidance

**The primary goal for E2E test case is to test the capabilities of ONAP as a platform.**

## **Basic guidance:**

- The test case could be easily duplicated in any similar env (2+)
- All key features required in the board approved release use cases will be covered
  - VoLTE
  - vCPE
  - vFW / vDNS (this one will be covered in our CSIT in Developer Lab)

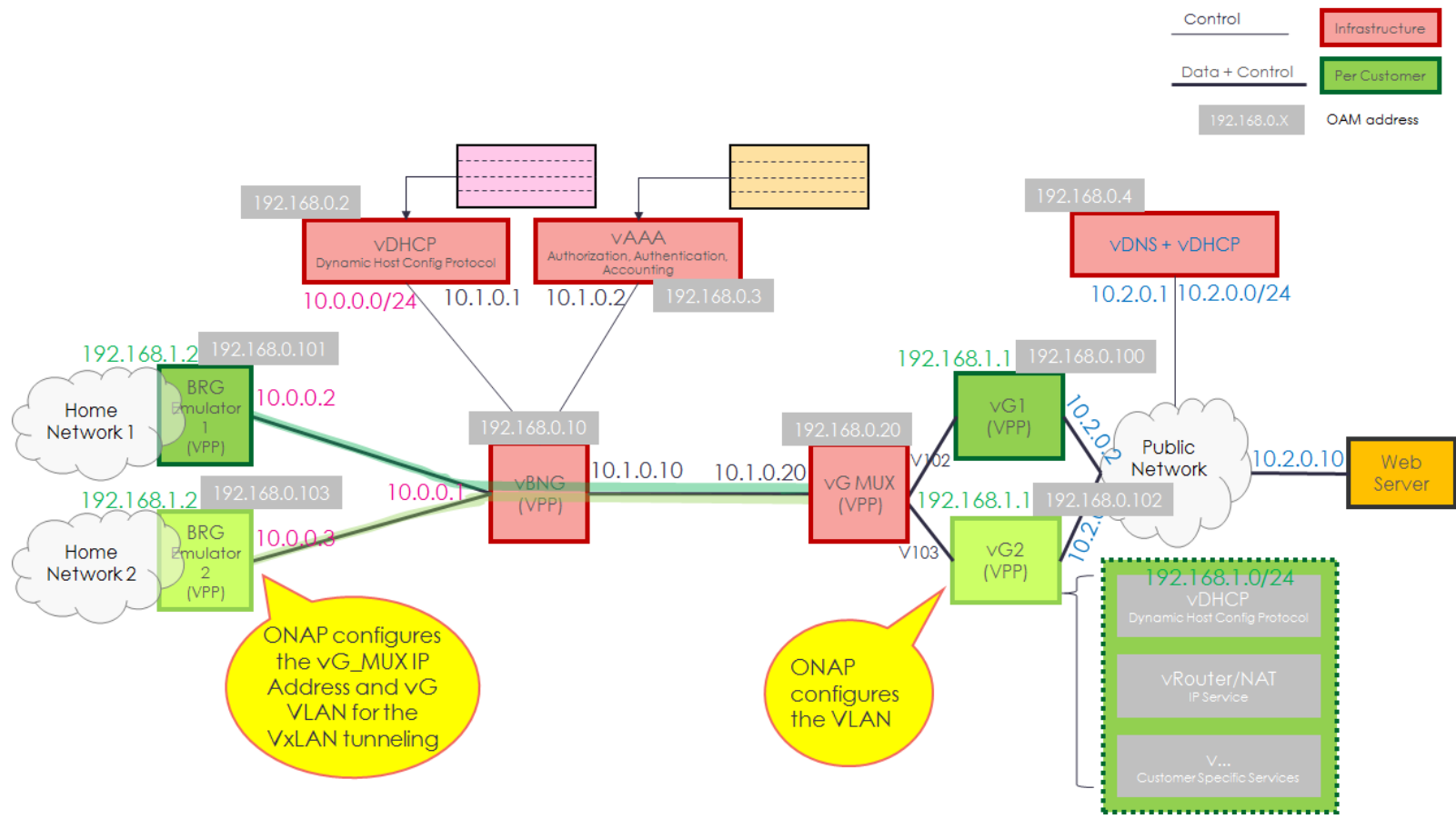
# VoLTE Use Case



## Highlights

- ❑ Commercial VFs and PFs are orchestrated
- ❑ Multi data centers deployment
- ❑ Data centers are interconnected by overlay and underlay networks across WAN
- ❑ Not include APPC

# vCPE Use Case – Release 1



## Highlights

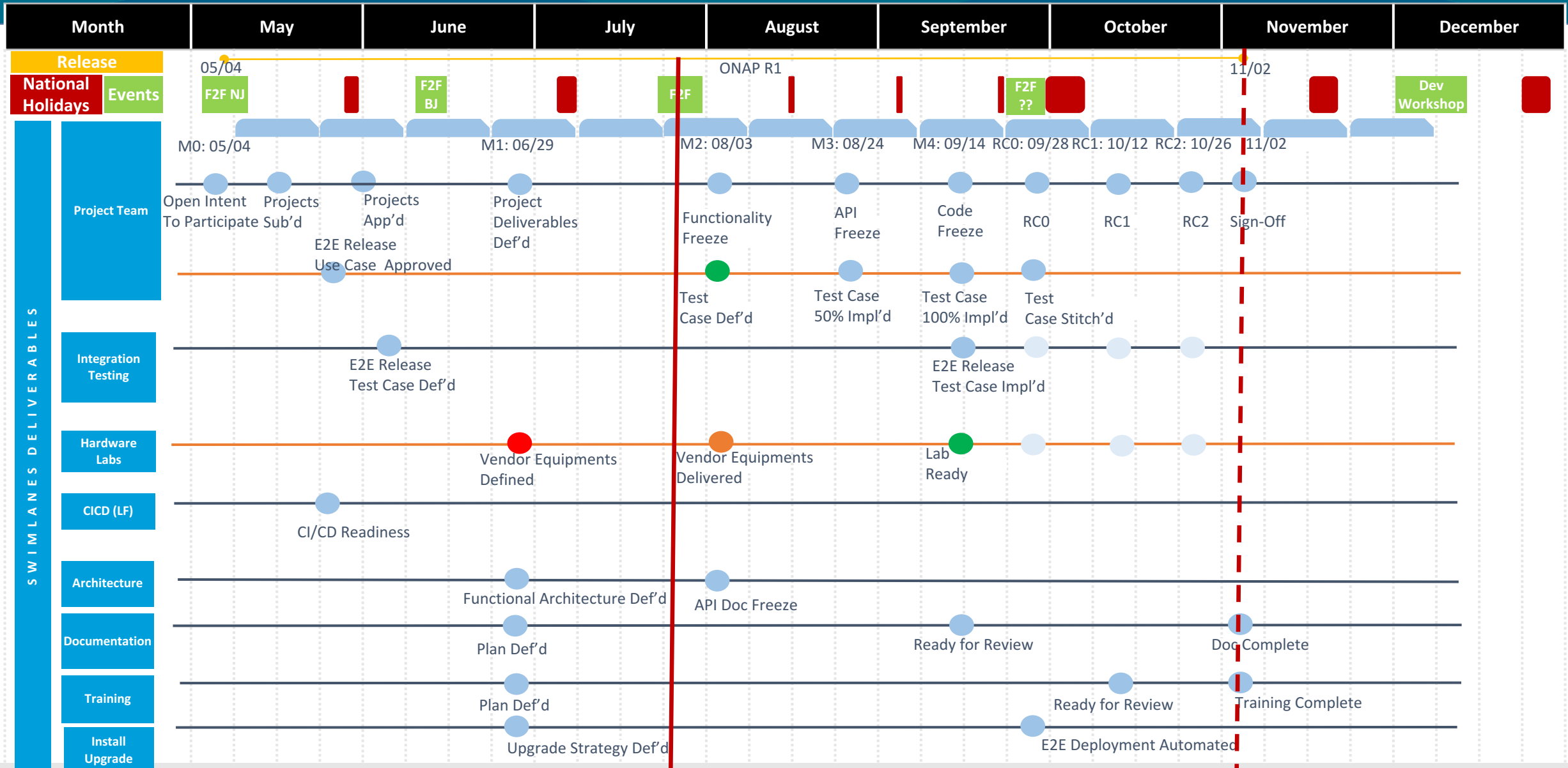
- ❑ VNFs are either from Opensource or developed in ONAP community.
- ❑ No physical device, it could be very easy duplicated in other labs
- ❑ Not include VFC

- Red blocks are infrastructure. They are shared among all the users.
- Green blocks are used by customers. Each customer needs a vBRG and a vG.
- Data plane: packet exchange between vBRG and Web Server.

# Key Operations

- Infrastructure instantiation
  - Bring up and configure vBNG, vG\_MUX, vAAA, vDNS, vDHCP
- Per-customer service instantiation
  - Bring up vBRG, pass AAA, and allocate IP address
  - Bring up vG and set up VLAN between vG and vG\_MUX
  - Set up VxLAN tunnel between vBRG and vG\_MUX
  - Configure vG\_MUX to enable cross-connect between VxLAN and VLAN
- Closed loop control
  - Emulate packet loss in vG\_MUX
  - DCAE detects packet loss and reports the event to Policy
  - Policy invokes APPC to restart vG\_MUX

# ONAP Amsterdam Release Time Check: ~3.5 months away



# Test Cases (just use it to capture the main features, not a final test case doc, )

	Test Case	Description	Source	Notes
1	VNFs compliant test	<ol style="list-style-type: none"><li>1. It will compare VNF with VNF guidance. Output: document</li><li>2. It will test VNFs against VNF compliant program, output, go/no go</li></ol>	vFW / vDNS	
2	vCPE service design test	<ol style="list-style-type: none"><li>1. Design the service using SDC and CLAMP</li><li>2. Distribute artifacts to SO, Policy, DCAE, AAI, APPC, and SDNC</li></ol>	vCPE	
3	vCPE infrastructure provisioning	Instantiate vBNG, vGMUX, vDHCP, vDNS, and vAAA. Get ready to provide services to customers.	vCPE	
4	vCPE customer service provisioning	<ol style="list-style-type: none"><li>1. Upon customer request, instantiate vBRG and vG</li><li>2. Configure vBRG, vGMUX, and vG to enable internet access from the customer side</li><li>3. Test packet exchange between customer side and web server</li></ol>	vCPE	
5	vCPE closed loop test	<ol style="list-style-type: none"><li>1. Emulate packet loss inside vGMUX. The event is then reported to DCAE</li><li>2. DCAE generates an event and sends it to DMaaP</li><li>3. Policy captures the event and invokes APPC to restart vGMUX. After the restart, the service is back to normal.</li></ol>	vCPE	

# Test Cases (just use it to capture the main features, not a final test case doc, )

	Test Case	Description	Source	Notes
6	VoLTE service design	<ol style="list-style-type: none"> <li>1. vEPC and vIMS VNF onboarding</li> <li>2. PNFs (DC-GW and PE) onboarding and network service design for underlay and overlay DCI network</li> <li>3. VoLTE service creation with two VNFs(vEPC and vIMS), and DCI network service</li> </ol>	VoLTE	
7	VoLTE closed loop provision	<ol style="list-style-type: none"> <li>1. CLAMP choose a VNF as event source</li> <li>2. CLAMP inputs Holmes correlation rules and defines operational policy</li> </ol>	VoLTE	
8	VoLTE service instantiation	<ol style="list-style-type: none"> <li>1. VID configures VLAN id for DC-GW to PE</li> <li>2. VID configured VXLAN VNI and Import Route Target and Export Route Target</li> <li>3. SO creates underlay and overlay DCI network</li> <li>4. SO instantiates vEPC and vIMS VNFs</li> </ol>	VoLTE	
9	VoLTE closed loop	<ol style="list-style-type: none"> <li>1. The chosen VNF generate emulated events</li> <li>2. VFC pulls the events from EMS and converts the events to VES format and sends to DCAE VES collector</li> <li>3. DCAE VES collector forwards the events to Holmes by DMaaP</li> <li>4. Holmes does the event correlation and sends signature event to Policy</li> <li>5. Policy execute the operational policy which will send action message to VFC via DmaaP</li> <li>6. VFC will call S-VNFM API to execute the action</li> </ol>	VoLTE	