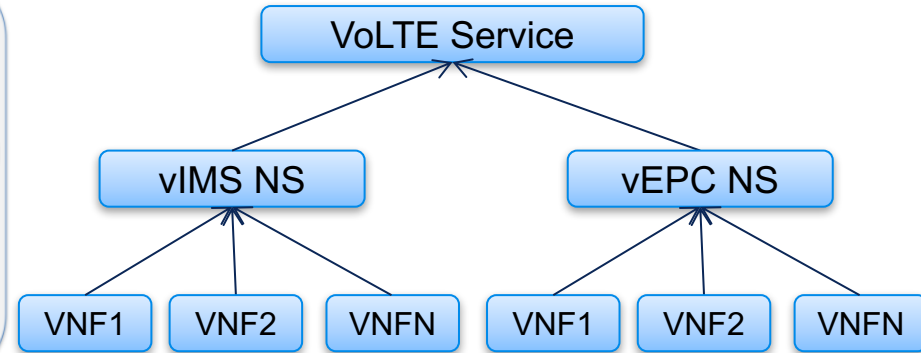
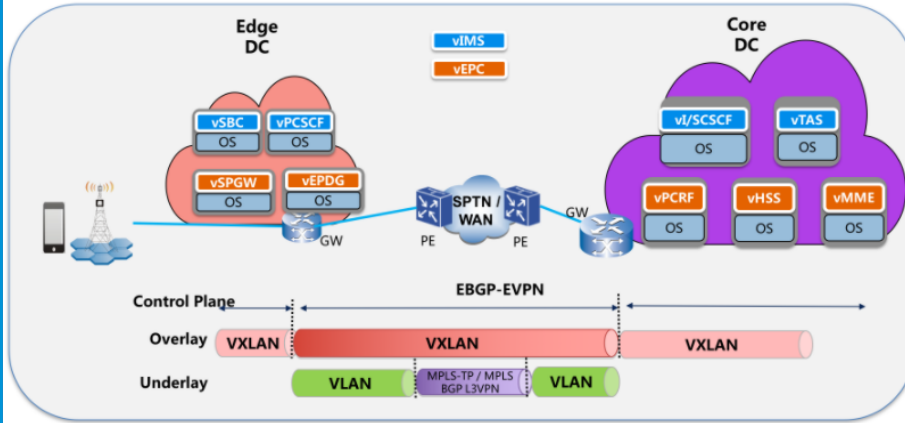


ONAP SDC VoLTE Model Support

Huabing Zhao



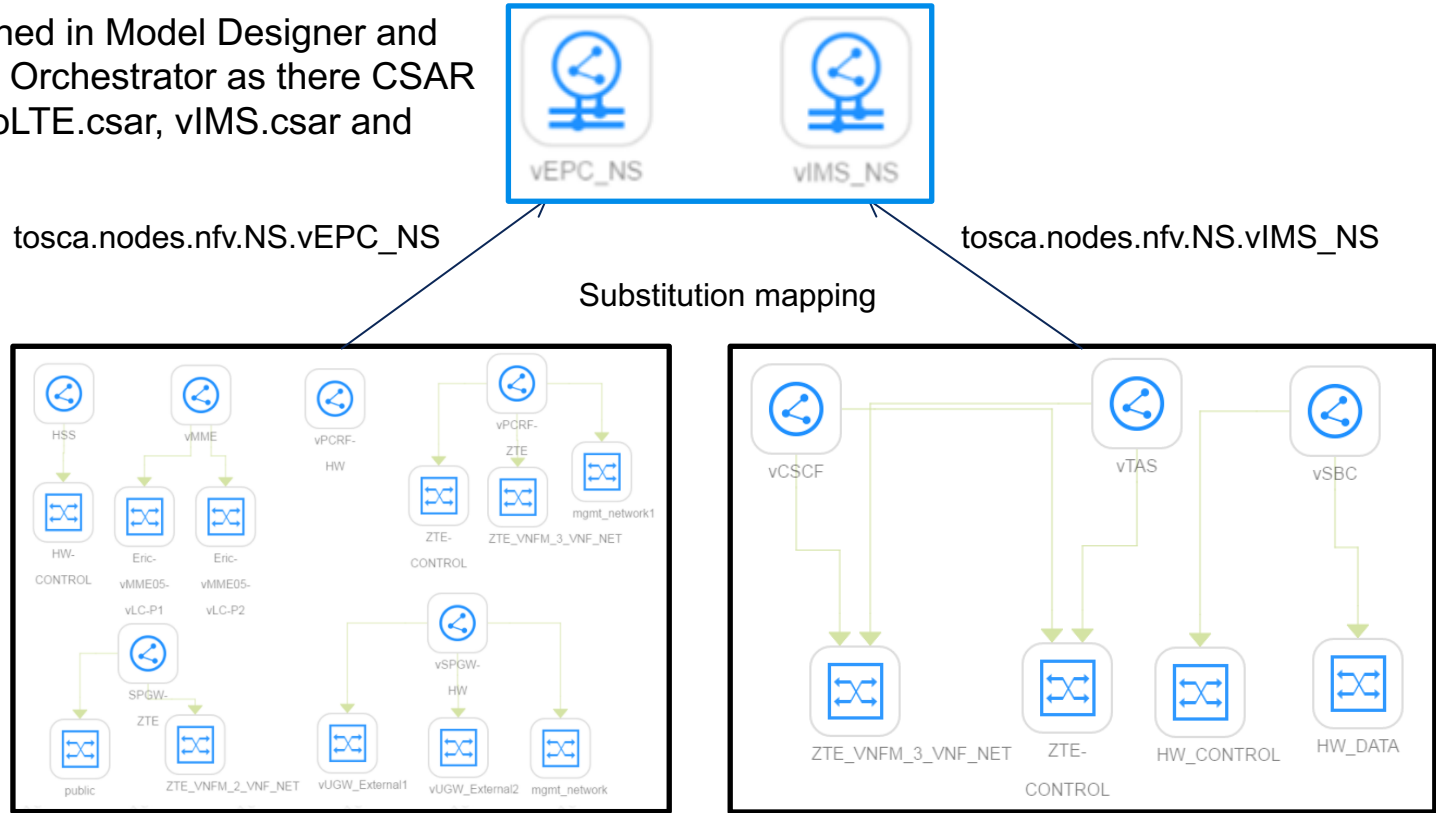
VoLTE Service Model



layering modeling: VNF->NS->Service
 Using TOSCA NFV as Model language
 Cross two Data Centers: edge DC and core DC

VoLTE Service Topology

This is designed in Model Designer and distributed to Orchestrator as there CSAR packages: VoLTE.csar, vIMS.csar and vEPC.csar



Substitution Definition in TOSCA

```
topology_template:
  description: Template of a database including its hosting stack.
  # omitted for brevity
  substitution_mappings:
    node_type: example.TransactionSubsystem
    capabilities:
      message_receiver: [ app, message_receiver ]
    requirements:
      database_endpoint: [ app, database ]
  node_templates:
    app:
      type: example.SomeApp
      properties:
        # properties omitted for brevity
      capabilities:
        message_receiver:
          properties:
            service_ip: { get_input: mq_service_ip }
            # other properties omitted for brevity
      requirements:
        - database:
            # details omitted for brevity
        - host: webserv
```

An optional declaration that exports the topology template as an implementation of a Node type. This also includes the mappings between the external Node Types named capabilities and requirements to existing implementations of those capabilities and requirements on Node templates declared within the topology template."

But I can't find the corresponding node template for the defined capabilities and requirements in the substitution_mappings part of the TOSCA template designed by SDC.

Substitution mapping issue in SDC

```
tosca_definitions_version: tosca_simple_yaml_1_0
# omitted here for brevity
topology_template:
  node_templates:
    d7c95393-7396-4d74-a3b0 0:
      type: org.opencomp.resource.vf.D7c9539373964d74A3b0
      metadata:
        invariantUUID: 7564e792-a8af-4f73-9910-2e3b88dfa862
        UUID: 31d208bc-9744-4060-baa8-2decca503193
        # omitted here for brevity
  groups:
    # omitted here for brevity
```

No corresponding node template for the defined capabilities and requirements in the substitution_mappings

```
substitution_mappings:
  node_type: org.opencomp.service.57431726F7e64a30Ae52
  capabilities:
    d7c9539373964d74a3b00.cinder_volume.feature:
      - cinder_volume
      - cinder_volume.feature
    d7c9539373964d74a3b00.cinder_volume.attachment:
      - cinder_volume
      - cinder_volume.attachment
  requirements:
    d7c9539373964d74a3b00.cinder_volume.dependency:
      - cinder_volume
      - cinder_volume.dependency
```

The Used TOSCA features and Identified Gaps

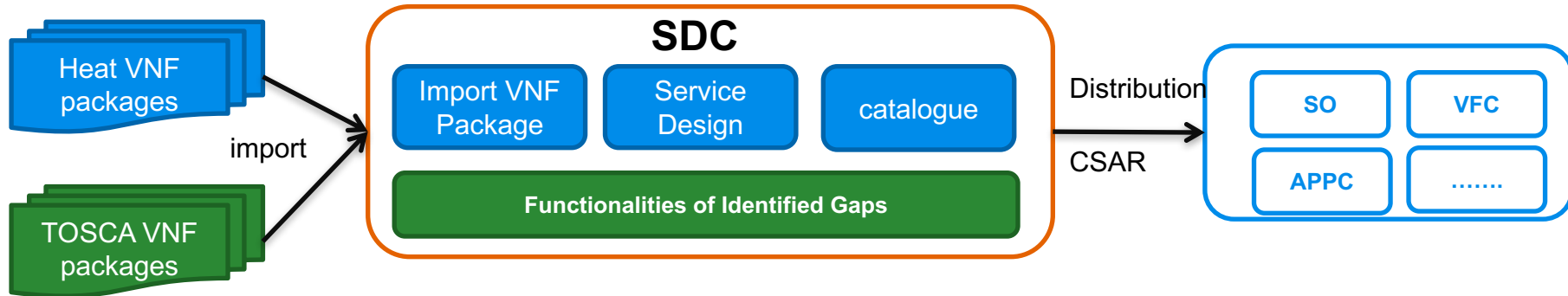
No.	Category	Feature	Identified Gap
1	substitution_mappings	capabilities mapping	No mapping between the substituted node type and Topo template
2		requirements mapping	No mapping between the substituted node type and Topo template
3	Node	import node type	Can't import node type to SDC
4		define node type	Can't define node type in SDC
5		property setting	To be verified
6		metadata setting	To be verified
7		artifact setting	To be verified
8		attribute setting	To be verified
9		requirement setting	To be verified
10		capability setting	To be verified
11	Relationship	import relationship type	Can't import relationship type to SDC
12		define relationship type	Can't define relationship type to SDC
13		property setting	To be verified
14	Group	import group type	Can't import group type to SDC
15		define group type	Can't define group type in SDC

The Used TOSCA features and Identified Gaps

No.	Category	Feature	Identified Gap
16		property setting	supported
17		metadata setting	supported
18		members setting	To be verified
23	Inputs	input setting	supported
24		input mapping	supported
25	data type	Complex Data Type	To be verified
26	NFV	NFV node type	Not support
29		Nested Service design	To be verified
30	Workflow design	Workflow design	To be verified

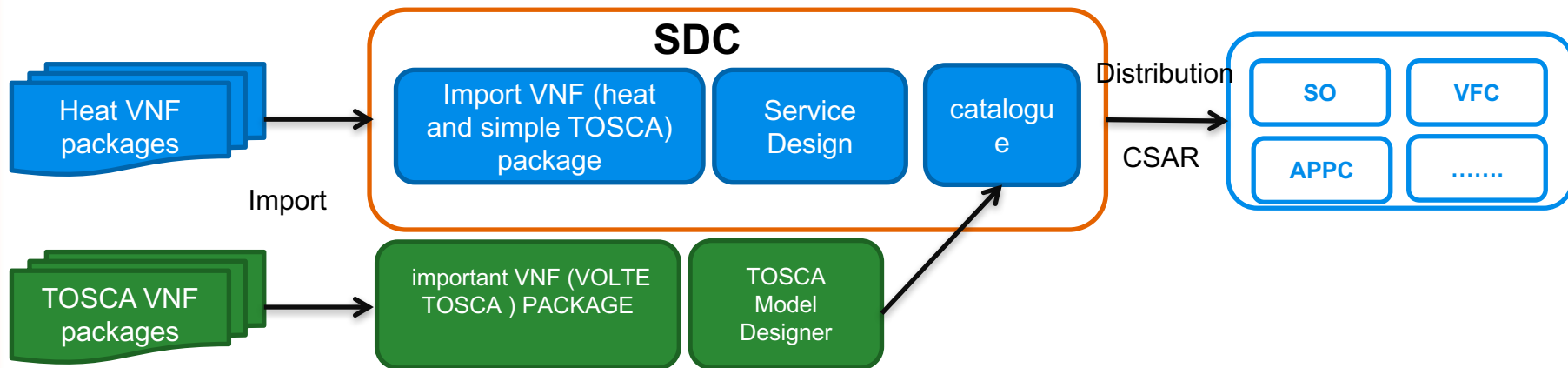
Functionalities of Identified Gaps before deadline

- Import TOSCA VNF package to SDC
- Use TOSCA VNF package to design the vIMS NS, vEPC NS and VoLTE service
- All the gaps should be Identified by the end of this week
- All the identified gaps should be add to the work plan of Amsterdam Release before functional freeze Milestone



Plan B

- Model Designer as the backup plan to avoid risk
- Model Designer design the VoLTE Service, including the vIMS NS, vEPC NS and VoLTE service
- Model Designer save the designed model to SDC catalog and distribute model to other components



Suggestion for Next Steps

- ❑ Design an example VoLTE model with SDC and export the model as CSAR (use OPEN-O VoLTE CSARs as reference) – this week
- ❑ Analyze the gaps for VoLTE model design supporting – next Monday
- ❑ Add the work items to Amsterdam Release to address all the identified gaps. -August 3.

Note:

- If there are risks in this plan, use the plan b to support VoLTE use case in Amsterdam release
- The repo for model designer and workflow designer should be created immediately so developer can start coding . If we don't need plan b, the model designer will not be released.