Service IM Offline Discussion
-Modeling Network Slice by Network Service

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Current Situation

- ONAP will have 5G use cases in the following releases but we didn't have modeling work on network slicing

- 3GPP's specification indicates that network slice could be supported by network service

- There exists a debate on whether we should model NS by service or differentiate them and model them separately.

Modeling of Network slicing (3GPP 28.541)

NetworkSlice
nSSIId
operationalState
administrativeState
serviceProfileList
sST

NetworkSliceSubnet
mFIdList
constituentNSSIIdList
operationalState
administrativeState
nsInfo
sliceProfileList
sST

ServiceProfile
serviceProfileId
sNSSAIList
pLMNIdList
perfReq
maxNumberofUEs
coverageAreaTAList
latency
uEMobilityLevel
resourceSharingLevel

SliceProfile
sliceProfileId
sNSSAIList
pLMNIdList
perfReq
maxNumberofUEs
coverageAreaTAList
latency
uEMobilityLevel
resourceSharingLevel

- A ***CustomerFacingService*** is what is bound to a Product, not a Service. In 5G network, it corresponds to ***NetwrokSlice***.

- A ***ResourceFacingService*** is not linked directly to Product; rather, it is linked to Resource. In 5G network, it corresponds to ***NetworkSliceSubnet*** and ***NetworkService***.

Modeling of Network slicing (GSMA GST)

NO.	Name
1	Maximum Supported Packet size
2	Cyclic traffic
3	Downlink Bandwidth per user
4	Uplink Bandwidth per user
5	Downlink Bandwidth per slice
6	Uplink Bandwidth per slice
7	Terminal Density
8	Reliability
9	Device velocity
10	Spectrum
11	KQI Monitoring

NO.	Name
12	Real-time Charging/Billing
13	User Management openness
14	Delay Tolerance
15	Predictive OoS
16	Synchronicity
17	Cloud support
18	Positioning support
19	Location base message delivery
20	Supported Access technologies
21	Isolation
22	Custom user plane termination
23	Support for non-IP traffic
24	Session and Service Continuity

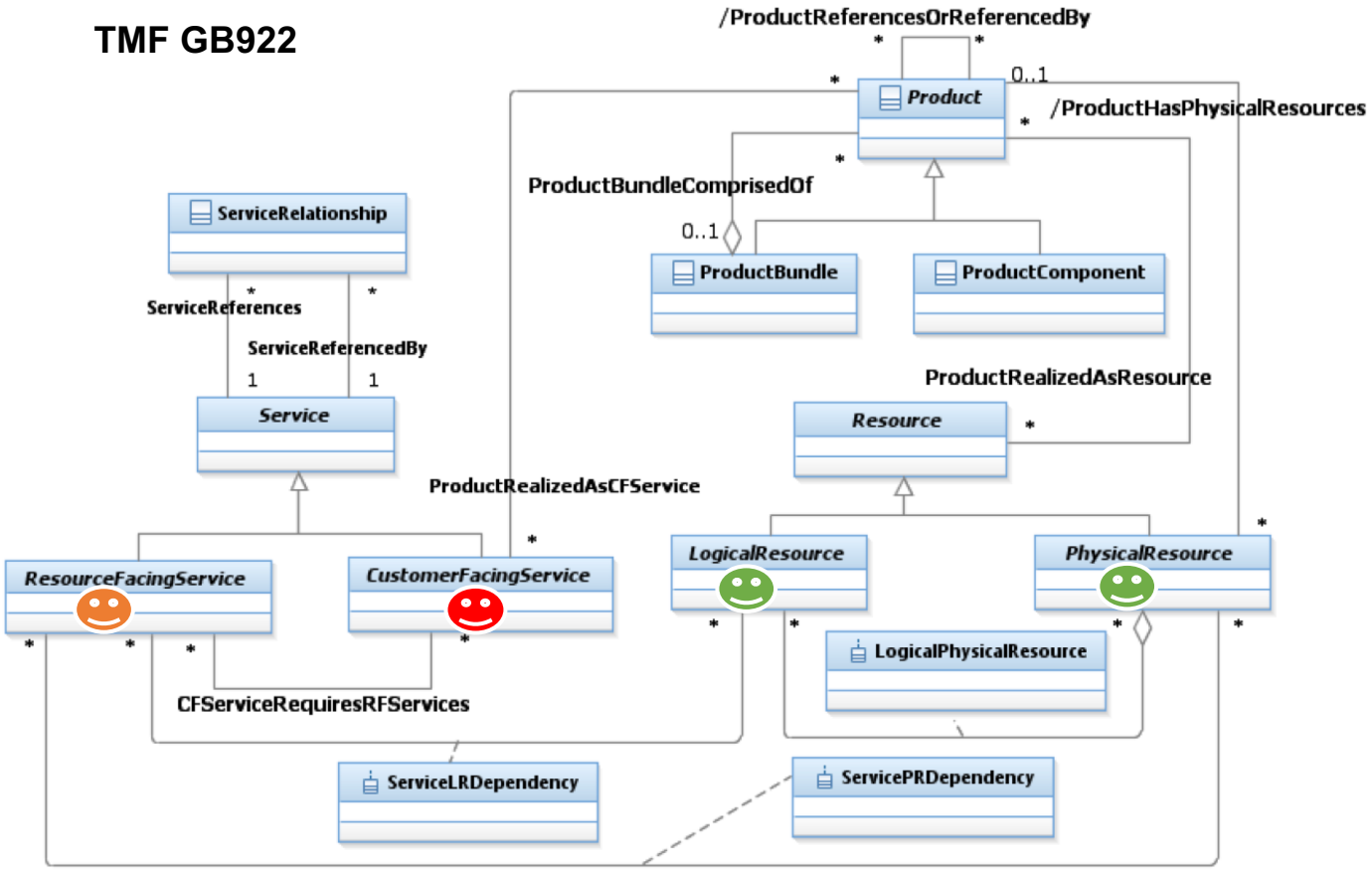
- The Generic slice template is a set of Potential slice attributes which could be used to define, once values are given to these attributes, the Network Slice characteristics.

- Some of the characteristics in network slice described in **3GPP** 28.541 **has reference in GSMA GST** such as SST.

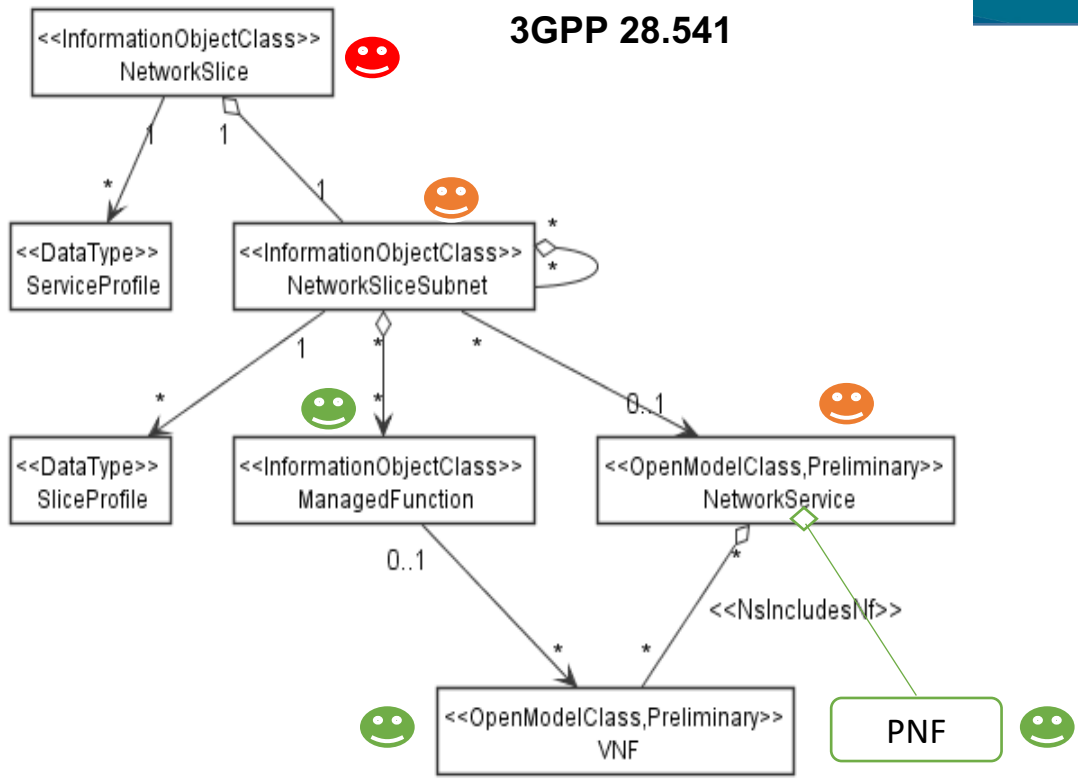
- It is expected that Standardised SST (Slice/Service Type) values (see TS 23.501 for a definition of SST) will refer to Network Slice Characteristics defined by some of the GST attributes populated with standardised values.

Modeling of Network slicing

TMF GB922



3GPP 28.541



- Network service is a resource oriented class, it has direct association with resource
- Network slice has some customer facing attributes, which corresponds to service in ONAP.
- Network service and service in ONAP has different attributes and are managed by different modules. So they should be modeled separately.

Modeling of Network Slice(4 layer)

- *Combining works in TMF SID, GSMA GST, and 3GPP SA5*
- GST<->Service Profile/Slice Profile<->Service Descriptor
- **Network Slice**<->CustomerFacingService<->**Composite Service**
- **NetworkSliceSubnet**<->ResourceFacingService<->**Atomic Service**
- **NS**<->ResourceFacingService<-> **Resource**
- ManagedFunction<->**Resource （delete）**
- **VNF / PNF**

Comparison between NS instance and Service instance

AAI	VFC
service-instance-id	ID
	NSPACKAGEID: csar包的id
service-instance-name	NAME
description	DESCRIPTION
model-invariant-id	NSDINVARIANTID
model-version-id	NSDID
	SDNCONTROLLERID
	NSLEVEL: 用于scale
	FLAVOURID： eg： 规模
	STATUS
	NSDMODEL
	SCALEPARAMS
service-type	
service-role	
selflink	
orchestration status	
service-Instance-location-id	
bandwith-total:Indicates the total bandwidth to be used for this service	
property-value:This object is used to store slices of services being offered	

AAI	VFC
environment-context	
workload-context	
vnf type:This field has been overloaded in service-specific ways and clients should expect changes to occur in the future to this field as ECOMP matures	
created-at:create time of Network Service	CREATETIME
updated-at:last update of Network Service	LASTUPTIME
persona-model-version	
widget-model-id	
widget-model-version	
vhn-portal-url:URL customers will use to access the vHN Portal	
resource-version	
input-parameters	INPUTPARAMS
	SERVICETYPE: 跟AAI的service-type不同
	GLOBALCUSTOMERID:对应的是customer的ID NS的父对象是上面的SERVICETYPE（subscription），SERVICETYPE的父对象是customer，跟AAI存的的service-type不同

Attributes of Network service and service are different, which are managed by different modules.
Service and Network Service should be modeled separately.