ONAP
OPEN NETWORK AUTOMATION PLATFORM

Architecture F2F Meeting Planning - From Service IM perspective

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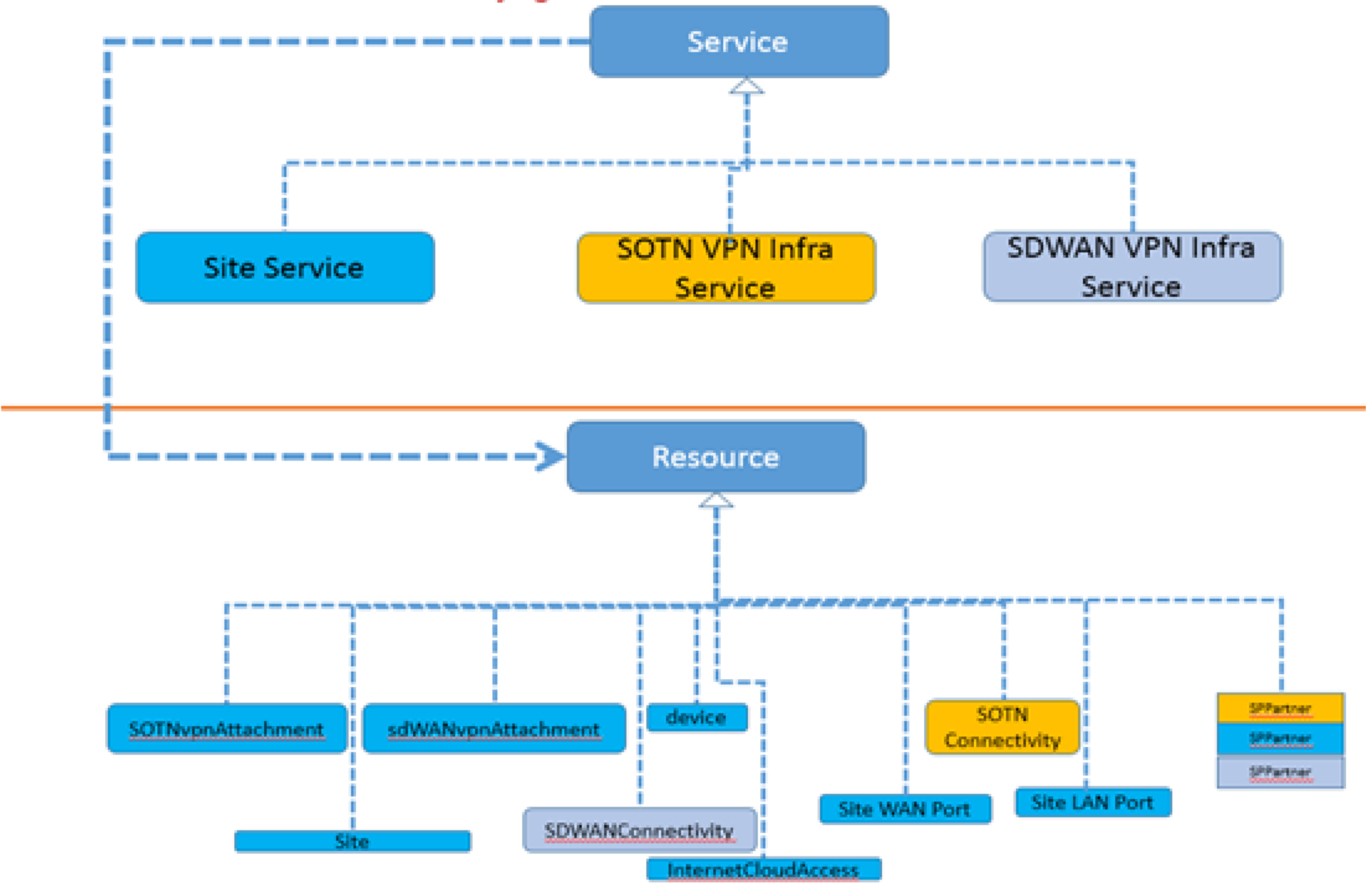
CMCC

Current situation of CCVPN service

CCVPN Model Based On ONAP Beijing Release



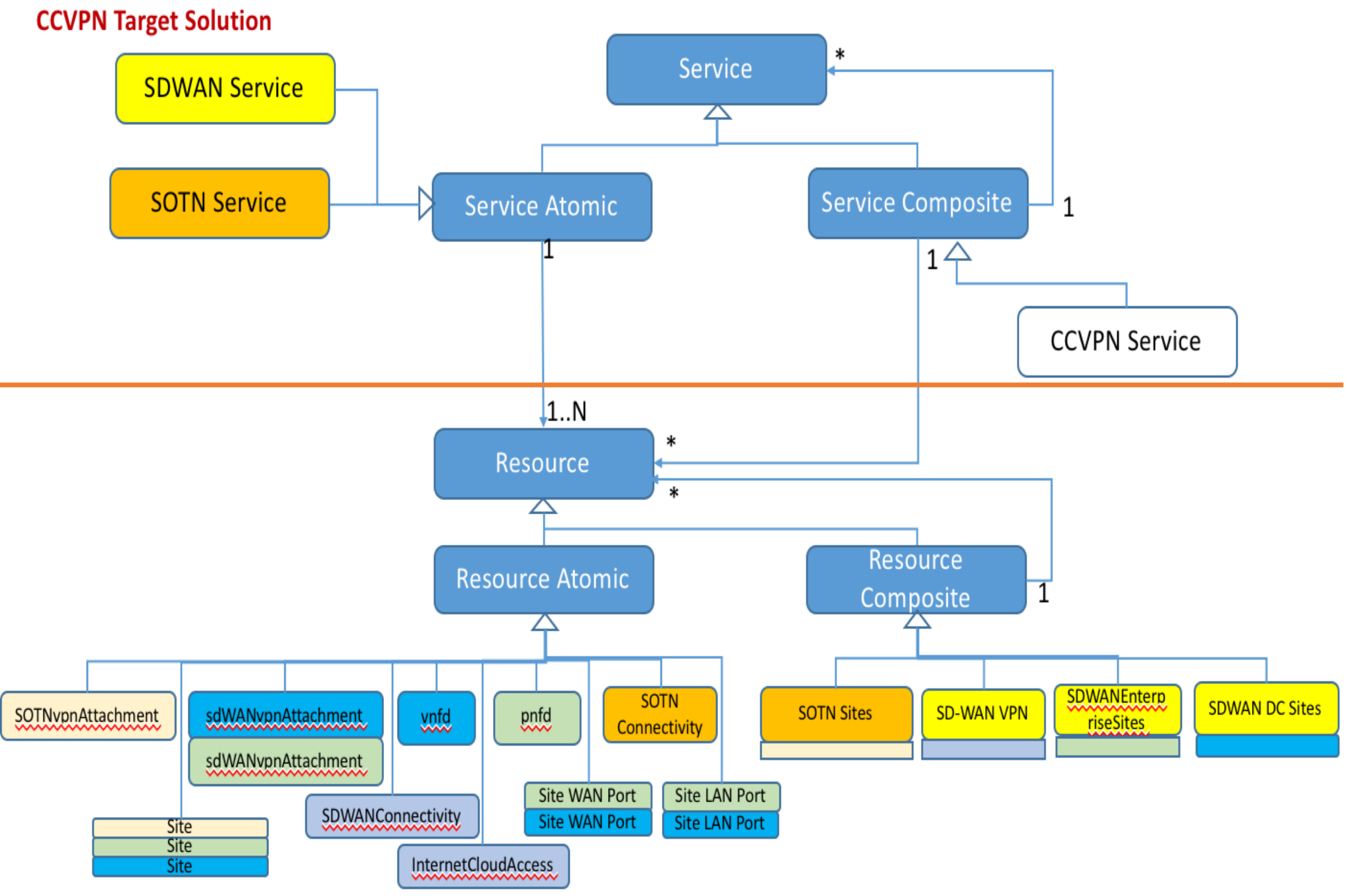
SOTN service example:
Site + STON VPN Infra + Site

SD-WAN service example:
Site + SD-WAN Infra + Site

The current ability of SDC 's service template doesn't support multiple inputs of different instances, which leads to the situation that we need to design site and VPN Infra in separate service templates

NOT IDEAL!

Target solution of CCVPN service



- In R3, Modeling Team accepts the concepts of 'Atomic' and 'Composite'.
- CCVPN is a strong evidence of composite service.
- The need of providing a real end to end service in ONAP arise the demands for designing a composite service in one service template.
- Targeted solution to CCVPN model:

CCVPN service is composed of two kinds of atomic service:

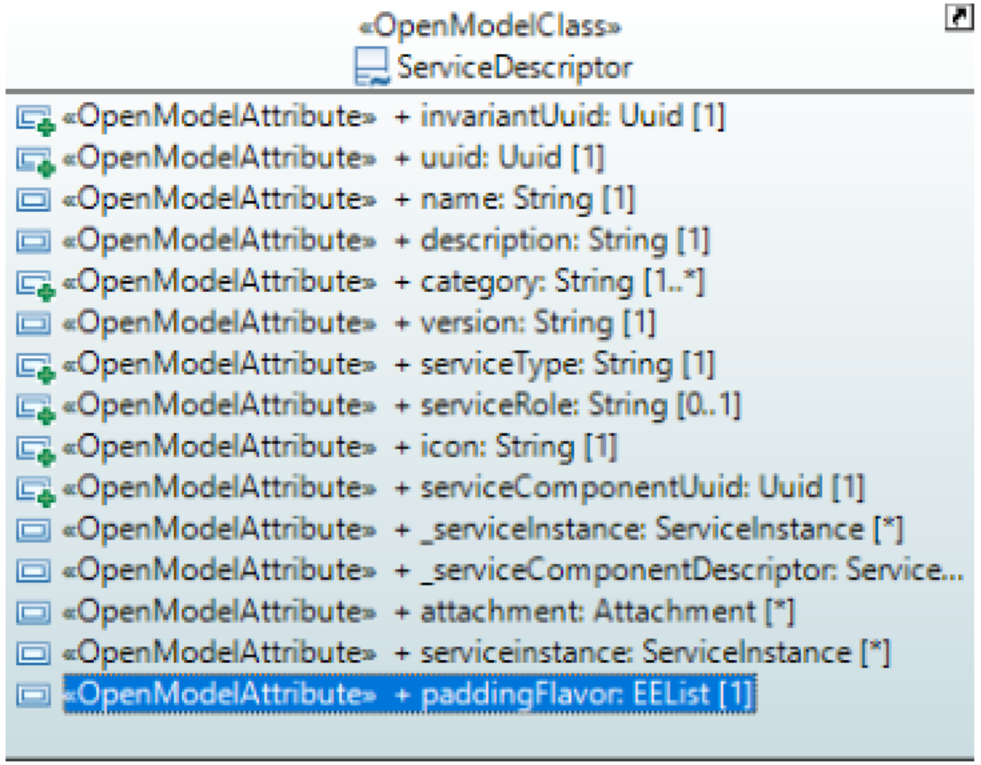
SD-WAN service and SOTN service
Atomic service consists of several composite resources, like site and VPN-infra

CCVPN service IM extension

Add an attribute ‘paddingFlavor’ in IM to represent the maximum limits of the resources during the lifecycle of a service, which corresponds to ‘max’ in node template. The type of ‘paddingFlavor’ is List.

PaddingFlavor

Resource	Maximum limit
A	
B	
C	
D	



«OpenModelClass»
ServiceDescriptor

```
«OpenModelAttribute» + invariantUuid: Uuid [1]
«OpenModelAttribute» + uuid: Uuid [1]
«OpenModelAttribute» + name: String [1]
«OpenModelAttribute» + description: String [1]
«OpenModelAttribute» + category: String [1..*]
«OpenModelAttribute» + version: String [1]
«OpenModelAttribute» + serviceType: String [1]
«OpenModelAttribute» + serviceRole: String [0..1]
«OpenModelAttribute» + icon: String [1]
«OpenModelAttribute» + serviceComponentUuid: Uuid [1]
«OpenModelAttribute» + _serviceInstance: ServiceInstance [*]
«OpenModelAttribute» + _serviceComponentDescriptor: Service...
«OpenModelAttribute» + attachment: Attachment [*]
«OpenModelAttribute» + serviceinstance: ServiceInstance [*]
«OpenModelAttribute» + paddingFlavor: EEList [1]
```

DM extension

- Abstract a service node which could describe the customer faced attributes, like the bandwidth, reliability, SLA, QoS, etc.
- SO should allow multiple inputs of resources in a service when instantiating a service or updating a service.
- Here we take TOSCA service template as an example:

```
matedata:

inputs:
  SiteInputs:
    List<SiteInput>
  VPNInputs :
    List<VPNInput>
node_tempaltes:
  Sites:
    List
    properties:
              location: getInput:SiteInputs.item.location
                     name:getInput:SiteInputs.item.name
                     vpnName:
            LinksTo: VPN
     max; min
  VPNService:
    List
    properties:
              vpnType: getInput:SiteInputs.item.type
                     name:getInput:SiteInputs.item.name
    max; min
    linkable
```

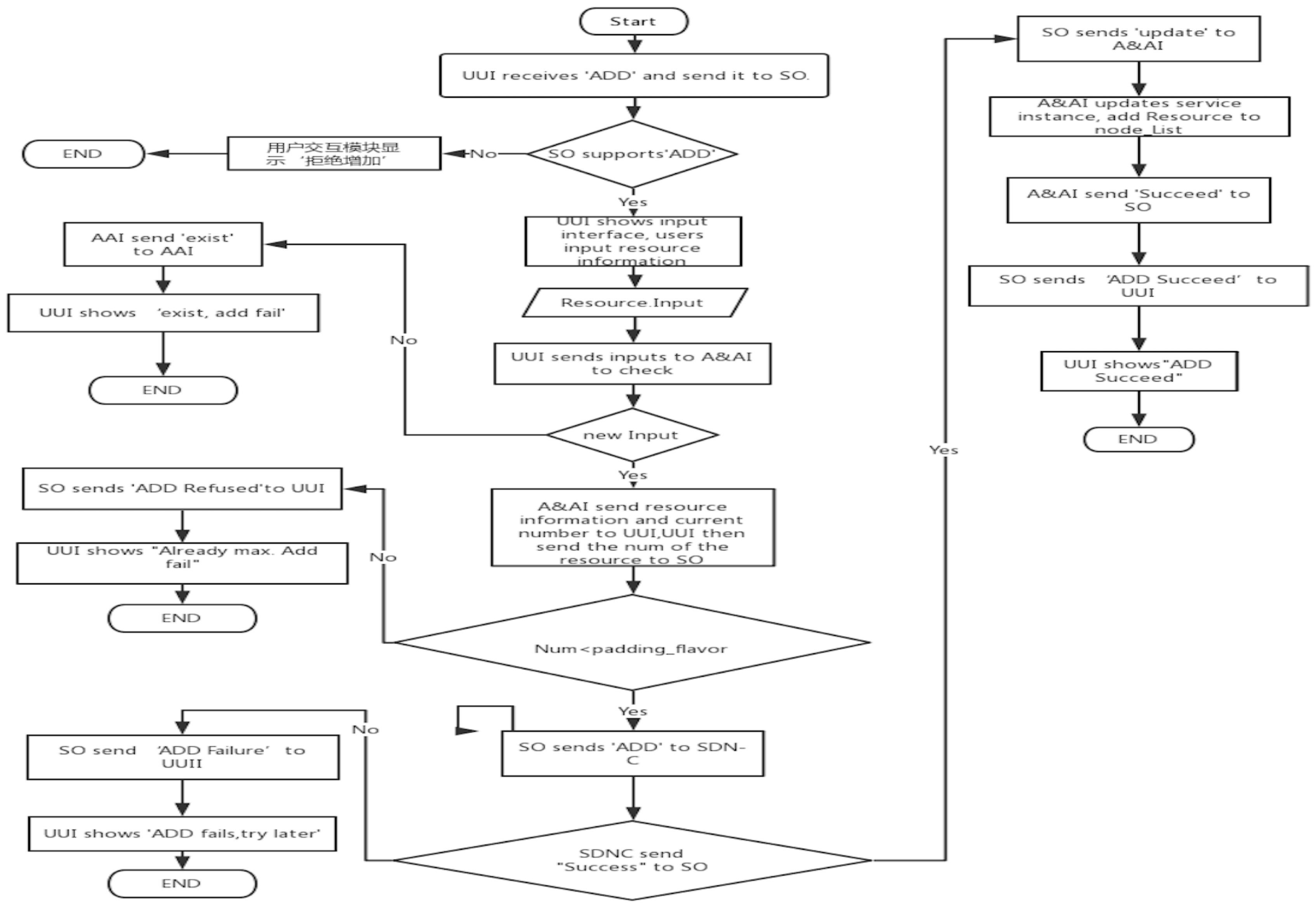
```
Create: /services/service

service :{
  UUID:"XXXX"
  InvarUUIN:"XXX"
  parameters:{
    siteInputs:[{name:"xxx", location:"xxxx"},{name:"xxx", location:"xxxx"}],
            vpnInputs:[{type:"xxxx",name:"xxxx"},{type:"xxxx",name:"xxxx"}]
  }

}

Update:  /services/service/serviceInstanceId
service :{
  UUID:"XXXX"
  InvarUUIN:"XXX"
  parameters:{
    siteInputs:[{name:"addSIteName", location:"add site location"}],
            vpnInputs:["linksToVPN"],
  }
}
```

Service Update Workflow


Start
UUI receives 'ADD' and send it to SO.
SO supports'ADD'
No
用户交互模块显示 '拒绝增加'
END
Yes
UUI shows input interface, users input resource information
Resource.Input
UUI sends inputs to A&AI to check
new Input
No
AAI send 'exist' to AAI
UUI shows 'exist, add fail'
END
Yes
A&AI send resource information and current number to UUI,UUI then send the num of the resource to SO
Num<padding_flavor
No
SO sends 'ADD Refused'to UUI
UUI shows "Already max. Add fail"
END
Yes
SO sends 'ADD' to SDN-C
SDNC send "Success" to SO
No
SO send 'ADD Failure' to UUII
UUI shows 'ADD fails,try later'
END
Yes
SO sends 'update' to A&AI
A&AI updates service instance, add Resource to node_List
A&AI send 'Succeed' to SO
SO sends 'ADD Succeed' to UUI
UUI shows"ADD Succeed"
END

Related modules:

UUI, A&AI, SDN-C, SO