

ONAP VNF Paths

Eric Debeau

ArchMod meeting

v2

April, 2nd 2019

ONAP: a platform to deploy on-demand network services

- Platform to enable various service providers to deploy network services
 - To face diversity of existing deployments
- Different ways to deploy a VNF
 - 4 different paths used in Casablanca
 - More possibilities in Dublin/El Alto
- Impact on Design-Time
 - VNF package
 - Design-Time

Casablanca status: 4 paths used

High-Level view for deployment

vFW, vDNS, vCPE

SO
alacarte



VIM

vFW CDS

SO
Macro



VIM

CDS

vCPE (TOSCA)

SO

VFC/NFVO

VFC/GVFNM

MultiVIM

VIM

VOLTE

SO
alacarte

VFC/NFVO

S-VNFM

VIM

Dublin status: more paths

High-Level view for deployment

vFW, vDNS, vCPE

vFW CDS

vCPE (TOSCA)

CC-VPN

SO-SOL003

SO-SOL005*



Run-Time phase implies Design-Time choices

- No independence between the Run-Time and Design-Time
- Some “hard-coded” choice in Design-Time
- Consistency to be ensured between 3rd VNFM, 3rd NFVO
 - VNFD
 - Service definition
 - ESR
 - SDC catalog and 3rd VNFM/NFVO catalog

Run-Time choices impacts on Design-Time

vFW, vDNS, vCPE

vFW CDS

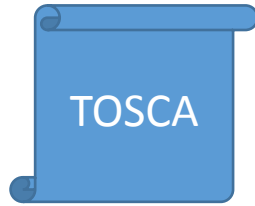
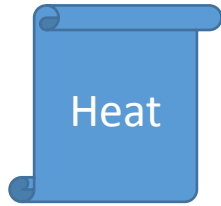
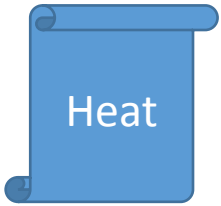
vCPE (TOSCA)

CC-VPN

SO-SOL003

SO-SOL005*

VNF Descriptor



vnfm_info: gvnfm

vnfm_info

vnfm_info

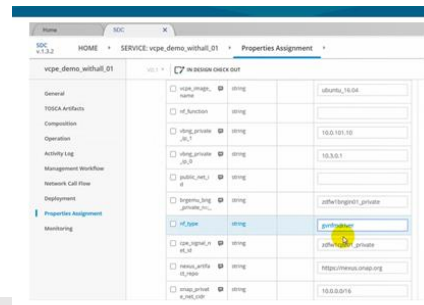
vnfm_info

Service modeling

Alacarte

Macro

nf_type: gvnfmdriver



nf_type

nf_type

nf_type

Proposed recos for discussion

- VNF On-boarding should be agnostic
 - A single package for various paths => On-going work
 - No more hard-coded value in the VNFD => VNFRQTS
- Service definition
 - All execution path options should only be valued during the Run-Time and no more in Design-Timev(ie alacarte parameter) => SDC/SO, VNFSDK/VPP, MultiVIM impact ?
- Artifacts/Catalog distribution
 - Should be automatically distributed towards 3rd VNFM/NFVO => UUI/SO impact ?

Sources

- https://docs.onap.org/en/casablanca/submodules/integration.git/docs/docs_usecases.html
- <https://wiki.onap.org/display/DW/vFW+CDS+Casablanca>
- https://docs.onap.org/en/casablanca/submodules/integration.git/docs/docs_vCPE%20with%20Tosca%20VNF.html
 - **Design Time:** When design Network service in SDC, should assign “gvnfmdriver” as the value of nf_type in Properties Assignment. so that VF-C can know will use gvnfm to manage VNF life cycle.
- <https://wiki.onap.org/pages/viewpage.action?pageId=58229021>
 - SVNFM selection based on configuration values that are configured during VNF onboarding and VNFM registration. Two methods are considered: Correlation between VNF NF Type and VNFM Type (Nokia method)
 - Utilizing VNFD vnf_info:type, VNFM registration values: VNFM type, Cloud region, vendor

THANK YOU;-)

Special thanks to Seshu for feedbacks