Agenda

• Architectural Principles
• Scope & Mapping to ETSI NFV
• Release TWO Status Update
• Release THREE Goal/Themes
OSM Architectural Principles

Layering

Abstraction

Modularity

Simplicity

Architectural Principles
OSM Scope & Mapping to ETSI NFV MANO

Run-Time Scope

- Automated end-to-end Service Orchestration
- Superset of ETSI NFV MANO
- Plugin model for integrating multiple SDN controllers
- Plugin model for integrating multiple VIMs
- Integrated Generic VNFM with support for integrating Specific VNFM
- Support for Physical Network Function integration
- Greenfield and brownfield deployments

Design-Time Scope

- Network Service Definition (CRUD operations)
- Model-Driven Environment with Data Models aligned with ETSI NFV
- VNF Package Generation
- GUI

GUI & Design-Time Tools

Network Service Or orchestrator

VNF Configuration & Abstraction

Resource Or orchestrator (Includes VIM/SDN Connectors)

OpenVIM

Open Stack

VMware

AWS

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Release TWO Highlights

- ETSI NFV Plugtest
- AWS Public Cloud
- Multi-disk Support
- OpenStack v3 API
- VNF On-boarding
- VMware vCloud Director Connector Improvements
Release TWO Highlights

- Docker
- OSM Installation Size Reduction (>50%)
- Package Management
- UI composer
Release TWO Highlights

- Interoperability
- Packaging, Distribution & Installation
- Usability
- Data Modelling
- Security
- Data Plane Performance & Configuration
- Service Assurance

• VNF console
Release TWO Highlights

- VNF console
- Remote Labs (HIVE)
Release TWO Highlights

- VNF console
- Remote Labs (HIVE)
- cloud-init
- Common Logging & Exception Handling
Release TWO Highlights

- Data Model Attribute Coordination with the Industry

- Interoperability
- Packaging, Distribution & Installation
- Usability
- Data Modelling
- Security
- Data Plane Performance & Configuration
- Service Assurance

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Release TWO Highlights

- Interoperability
- Packaging, Distribution & Installation
- Usability
- Data Modelling
- Security
- Data Plane Performance & Configuration
- Service Assurance

• Unfiltered Interfaces
Release TWO Highlights

- OVS Support added to OpenVIM.
- Underlay Network Mgmt from RO.
Release TWO Highlights

- NS scaling (Experimental)
- Adding/Removing VNF (Groups) from a running NS.
Release TWO Highlights

- NS scaling (Experimental)
- Adding/Removing VNF (Groups) from a running NS.

![Scaling Group Diagram]

- VNFA
- VNF B
- VNF C
- VNF D
- VNF B'
- VNF C'
Release THREE

• Goal
  • Production Readiness

• Themes
  • Service Assurance (e.g. scaling NS/VNF, SFC, state mgmt, fault mgmt)
  • Usability (e.g. logging, metrics, installation, data centre capabilities, APIs, PNF)
  • Security (e.g. RBAC, project views, key mgmt)
  • Resiliency (e.g. scalability and recovery of OSM)
  • CI/CD (Improved Testing Framework, Installation)
Information Vs Data Models

IM --> conceptual/abstract model

| for designers and operators

+-------------------------------+

|                          |

|                          |

DM DM DM --> concrete/detailed model

| for implementors


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OSM Data Models

Aligned with ETSI NFV ISG Phase 1 Information Models

Analysis underway on ETSI NFV ISG Phase 2 Information Models

- Will work with the NFV community for clarifications, bug fixes (sightings) and feature advances.
- Possible intersect with OSM Release THREE
OSM INTERNAL DATA MODEL

OSM INTERNALS

OpenMANO VNFD

VNF resource orchestration info
(EPA resources and internal connectivity)

Juju charm

- Descriptive information
  - metadata.yaml
  - config.yaml
  - actions.yaml

- Executables
  - Hooks
  - Actions

- Additional info (icon, README)
DIRECT MAPPING FROM MODELS AT THE UI

OSM INTERNALS

OpenMANO VNFD
VNF resource orchestration info (EPA resources and internal connectivity)

Juju charm
- Descriptive information
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- Executables
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- Additional info (icon, README)

VNF package
- VNFD
- VNF Artefacts
- Additional Metadata
ARCHITECTURE SUPPORTS MULTIPLE DATA MODELS

OSM INTERNALS

VNF package

- VNFD
- VNF Artefacts
- Additional Metadata

Data Model Translator

OpenMANO VNFD

- VNF resource orchestration info (EPA resources and internal connectivity)

Juju charm

- Descriptive information
  - metadata.yaml
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