MOBILEUM'S NFV JOURNEY

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Agenda

• Who Are We & What We Do

• Mobileum NFV Journey

• Participation In Plugtest & Experience With OSM

• K8s Demo Using OSM
Who Are We & What We Do

Global Leader
Mobileum is a leading provider of analytics solutions for the Telecom industry

+900
Customers

+300
Leading market solutions worldwide

+1800
Professionals

25
Offices

Roaming Intelligence
Software solutions to optimize multi-network mobility in both the roaming and domestic markets.

Fraud & Risk Intelligence
Software solutions that deliver an integrated approach to revenue assurance and fraud management.

Security Intelligence
Software solutions to ensure the highest level of telecom cybersecurity.

Business Ops Intelligence
Software solutions that support business operations processes like credit scoring, collections, incentives management.
Mobileum's NFV Journey

1. **Bare Metal**
   - *Operating System*
     - Solaris or RHEL
   - *Hardware*
     - Mobileum's Choice
   - *Software* (Manually)
     - Installation
     - Configuration
   - *Hypervisor*
     - VMware ESXi

2. **VMWare ESXi**
   - *Guest OS*
     - Solaris or RHEL
   - *Hardware*
     - Mobileum's Choice
   - *Software* (Manually)
     - Installation
     - Configuration
   - *Hypervisor*
     - VMware ESXi

3. **OpenStack**
   - *Guest OS*
     - RHEL
   - *Hardware*
     - Operator's Choice
   - *Software* (Auto)
     - Qcow2
     - Conf Externalized
   - *Hypervisor*
     - KVM
     - VIM
     - Openstack
     - Orchestration
     - HOT

4. **NFV**
   - *Guest OS*
     - RHEL
   - *Hardware*
     - Operator's Choice
   - *Software* (Qcow2)
     - Conf Externalized
   - *Hypervisor*
     - KVM
     - VMware ESXi
   - *VIM*
     - Openstack
     - VMWare VCD
   - *S/W Changes*
   - MANO
     - VNFD/NSD
   - S-VNFM
   - *Container OS*
     - RHEL/CENTOS
   - *Hardware*
     - Operator's Choice
   - *Software*
     - Container Images
     - HostVolumes
   - *Containers*
     - Manual Start/Stop
     - Docker
   - *Helm Charts*
     - NS/CNF/KNF Pkgs

5. **Kubernetes**
   - *Container OS*
     - RHEL/CENTOS
   - *Hardware*
     - Operator's Choice
   - *Software*
     - Container Images
   - *Containers*
     - Manual Start/Stop
   - *Docker*
   - *Helm Charts*
     - NS/CNF/KNF Pkgs
Plugtest Participation & OSM Experience

- Plugtest 2 (Jan 2018)
  - All VNFs were from Mobileum, including simulator
  - VIM: OpenStack, VMWare VCD

- Plugtest 3 (June 2018)
  - Inter-op testing were multiple VNFs from different vendors were used to create a NS.

- 1st Multi Vendor 4G Demo (May 2019)
  - 1st Multi Vendor OSM Demo using OSM @ Openstack Infrastructure Summit, Denver
  - This is OSM PoC #8

- Plugtest 4 (June 2019)
  - Inter-op testing with multiple VNFs.

- Plugtest 5 (June 2020)
  - Container/K8s based testing using Helm Charts
Mobileum's K8s Deployment Architecture (Evolving)
Pre-Requisites For K8s Demo Using OSM

- Working
  - Openstack Setup
  - Kubernetes Cluster
  - OSM

- Container Images

- Container Image Registry to host images

- Working, Helm Charts

- Helm Repository to host helm charts
K8s Demo Using OSM

- vlrsim
- SSTP/DRA
- NTR
- DB
- Kubernetes Cluster
- nginx
- Log’s, KPI
- iMAS

Open Source MANO

Helm
ChartMuseum
Docker
Few Thoughts

• During Instantaion its good to have refresh button.
• Helm repo – works only without credentials. In Future we might need credentials.
• Repo for helm charts is mandatory :-(
  • With VNF’s it was possible to upload just NS/VNF packages. But for containers we need to add two different packages at different places helm & NF/KNF packages.
• For Kubernetes based deployment we need a working Openstack Setup -bit annoying (there could be cases where only kubernetes cluster is available).
• For Kubernetes I wish I had option to instantiate KNF’s in order, say I want DB container to come up first before my application or signaling containers comes up.
• KNF/NS package should not exceed 15MB

Overall OSM Experince Is Awesome.!!
And its one of the best MANO's out in the Market.