OSM demo: new features in Release FIVE
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Demo description

Apache Bench stress test

DataCenter Gateway PNF

VYOS

Customer terminal

172.21.7.200

Hybrid Network Service Instantiation (PNF + VNF)

Web Server

Load Balancer

10.0.0.100

VNF/VDU metrics monitoring and auto-scaling (Web server instances)

Apache Bench stress test

Day-1/2 NF Operation simplification through Ansible playbooks (NAT Rules)
Physical Network Functions
PDU usage and configuration
PNFD/HNFD vs PDU

PNFD/HNFD
...
pdu
- **type**
  - interfaces
    - name
    - mgmt
- name
config
...

PDU
  name
  **type**
  vim_accounts
  shared
  interfaces
  - ip-address
  mgmt
  name
  - ip-address
  ...

Deployment
Day-1/2 Operations Simplifications
Proxy Charm Generators
Proxy Charms powerful “VNF Layer” allows us to send any command to a VNF through SSH, but sometimes the process of building and packaging it can become complex.

Generators will dramatically simplify the process by providing an automated proxy charm generator for:

- Ansible Playbooks (ready)
- HTTP Requests
- ETSI NFV SOL002 Requests
- Generic Python Scripts

...ready to drag and drop into your VNF package!
Monitoring & Auto-Scaling
Adapting VNF capacity to customer demands
### Monitoring & Auto-Scaling

#### POL, MON & LCM Interaction

1. **NBI** client includes thresholds and SCALING actions at VNF descriptor.

2. **POL** module creates alarms through **MON**.

3. **MON** module configures the alarm locally and starts its evaluation process (by default every 30 seconds).

4. When a metric threshold is crossed, **MON** puts a notification in the **KAFKA BUS**.

5. SCALING actions are triggered based on the received notification.

6. **LCM** module receives the scaling request and proceeds with instantiation.

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Conclusions!
1. OSM is able to manage physical functions as part of Hybrid Network Services in order to cover more real-world scenarios.

2. OSM is greatly simplifying the VNF Management process, so operations can be automated well beyond than simple instantiation.

3. VNF Metrics monitoring (from infrastructure and VNFs) will keep allowing for more closed-loop operations, being auto-scaling the first use case.