LF NETWORKING

LFN Developer & Testing Forum

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Agenda

- Reference Architecture 1 in Moselle release

- Status of GSMA associated document NG.133

- Plans for Nile release

- What should we focus on and develop in the future?

Scope of RA1 - reminder

- Reference Architecture for Cloud Infrastructure built with OpenStack as the VIM for Telcos' workloads and only upstream OpenStack components

- Document structure

1. Introduction

2. Architecture Requirements

3. Cloud Infrastructure Architecture - OpenStack

4. Cloud Infrastructure & VIM Component Level Architecture

5. Interfaces and APIs

6. Security

7. Operations and Life Cycle Management

8. Gaps, Innovation, and Development

What's new in Moselle release

- Edge Cloud Topology
- Storage developed and aligned with Reference Model
- Guidance on automation
- Explicit mapping of requirements to sections

Edge

- Edge Cloud Topology and deployments scenarios
  - OpenStack services deployments
  - Edge sites with or without local storage
  - Image caching considerations

- Developments and alignment with RM storage model
  - ➤ Persistent storage / ephemeral storage
- Cinder, Swift, Glance service
- Choice of a storage solution per use case requirements
- Storage backends: open-source and proprietary systems supported in Cinder through plugin drivers

LCM Automation

- VIM automated deployments is highly recommended
  - ➤ Open-source installers: OpenStack TripleO, Airship v2, StarlingX for edge deployments
  - ➤ OpenStack containerised installation priviledged
- Underlying resources provisioning, interesting tools to be considered, examples : Foreman, Ansible playbooks

GSMA NG.133

- NG.133 is based on RA1
- Status and timeframe
  - ➤ Version 1, approved in Dec. 2021, officially published in Feb. 2022
  - ➤ Version 2, publication foreseen for the end of 2022
- NG.133 version 2
  - ➤ Based on RA1 Moselle release
  - ➤ Addition of Reference Conformance and reference to tests

And for Nile… Which OpenStack release?

- RA1 Moselle based on Wallaby
  - ➤ Wallaby: released 2021-04-14, extended maintenance 2022-10-14
- OpenStack releases' evolution
  - ➤ Xena: 2021-10-06, EM 2023-04-06
  - ➤ Yoga: 2022-03-30, EM 2023-09-30
  - ➤ Zed: dev, estimated 2022-10-05
- Benefits
  - ➤ New features for acceleration (enhancements on smartNIC support with Yoga), provisioning (Ironic), and monitoring…

- Acceleration
  - ➢ SR-IOV already covered
  - ➢ FPGA & GPU developments, which use cases? Industry drivers?
  - ➢ Cyborg feedbacks needed: configurations, use cases
- Storage
  - ➢ CEPH already covered
  - ➢ Interest for more backend storage solutions?

Future developments

- Something missing?
- Thoughts, ideas
- Topics of interest

Join RA1's contributors!

- [RA1 Wiki](#)
- RA1 meetings
  - Mondays @14:30 UTC
  - [RA1 Meeting Minutes](#)
- RA1 documentation
  - [Github](#)
  - Readthedocs: [RA1 Moselle](#)
- RA1 mailing list: https://lists.anuket.io/g/ra1