2022 LFN Workshop - CNF Vendor Input Focus

Topic Leader(s)

- Beth Cohen
- Gergely Csatari

Topic Description

75m, Beth Cohen

- As a follow-up to the January Workshop, several consecutive focused sessions with CNF vendors to **gain an understanding of what requirements they need from LFN projects and the community to support their workloads and applications. Need to look at the expectations from the onboarding/orchestration, ongoing supportability, and infra platform perspectives**

Topic Overview

- As a follow-up to the January Workshop, several consecutive focused sessions with CNF vendors to **gain an understanding of what requirements they need from LFN projects and the community to support their workloads and applications. Need to look at the expectations from the onboarding/orchestration, ongoing supportability, and infra platform perspectives**
  - **What are the vendors' priorities, objectives, and expected outcomes?** Improved time to market? Ability to use a reference architecture to cut development time? Something else?
  - What architectures, requirements, guidelines, and test frameworks or information are needed to achieve these objectives? Are we talking about how to give guidelines and test for them against the platform requirements, or are there specific testing regimes for applications?

Slides & Recording

GMT20220314-1...2560x1440.mp4

No Slides, just conversation.

Agenda

Awesome presentation

- Point 1
- Point 2

Minutes

Objective & Scope:

- Vendor perspective on developing CNFs
- Focus on Anuket/ONAP
- How can LFN projects make it easier for Vendors to develop applications?

Major Issue: Platform Fragmentation – three legged stool, platform providers, application providers, operators. All have requirements that need to be addressed

We would need one set of

- features
- API-s
- Descriptors
- Management of CNF-s
- PaaS features
- CNF Conformance – CNCF and Anuket are both creating Conformance programs. Should we align them? They are both under the LF umbrella. Anuket is Telco focused, CNCF has both telco and other types of conformance testing. Answer is that we DO need to align the efforts.
- Other standards – 3GPP for example. Need to be coordinated

in all platforms.

Different platform providers have different feature sets - making it harder for be standardized within the vendor

- Multiple network interfaces
- Network API is missing in Kubernetes. Some vendors have added management of networking (OpenShift),
- Low latency in compute and memory- radio side needs dictate in some cases
    - low latency need is restricted to only some elements of the RAN not all of the compute, which is a more generic term – Does OpenRAN help address this issue?
- Needs a minimum viable set of features on the infrastructure that will support the CNFs. Who decides what the common elements are?
- Vendor x and y need to have to be able to be put into workflows that will work together. (network service chains). How do the CNFs work on different platforms? They should work the same...
    - CNFs that conform to the Infrastructure specifications of RA2 should work across platforms; CNFs that utilise platform services from one or the other platform providers will be unable to
- Need a high level program review of the relationships between the various workloads and how they interact. Would want it to be easier for the workloads to interact.
- When there are many options, how do we choice a model? Or do we keep multiple options, which adds complexity to the models?
    - How can you defragment with multiple options – looking for how to simplify the choices, can simplify by making the standard more generic or support multiple options.
    - Do you only change the infrastructure features, or do the CNFs need to have
- Multiple standardized telemetry models – 3GPP, Barometer, etc. – How should it be addressed in RA2
- Need to open a dialog with the ORAN community as it is starting to work on the infrastructure aspect of the project.
- With any community, we need to understand the challenges before establishing the requirements. – Many gaps are identified in Chapter 7 of the RA2 requirements doc
- What is the telemetry needed to support the telco workloads, what other challenges and gaps exist.
- Missing features and tools – Kubernetes clusters are not easily managed, weak multi-tenancy, managing many clusters is difficult.
- Orchestration issues – Laundry list of gap in how CNFs are packaged and deployed, still struggling with Day 0,1, not ready for Day 2 – Lifecycle management is a gap in Kubernetes today. Fragmentation in the tools and APIs. Helm is inadequate for the job.
- Olivier Smith notes that Anuket Assured and other conformance programs can be helpful. Needs to be seen as the start (minimal viable function) for all the workloads.

More on RA2 in Anuket: https://cntt.readthedocs.io/en/latest/ref_arch/kubernetes/README.html

Gaps collected in Anuket RA2: https://cntt.readthedocs.io/en/latest/ref_arch/kubernetes/chapters/chapter07.html

Parking lot

- ☐ CNF Conformance – CNCF and Anuket are both creating Conformance programs. They are both under the LF umbrella. Anuket is Telco focused, CNCF has both telco and other types of conformance testing. Need to open a larger discussion to align efforts.
- ☑ Type your task here, using "@" to assign to a user and "//" to select a due date

Action Items

- ☑