LFNETWORKING
Developer & Testing Forum

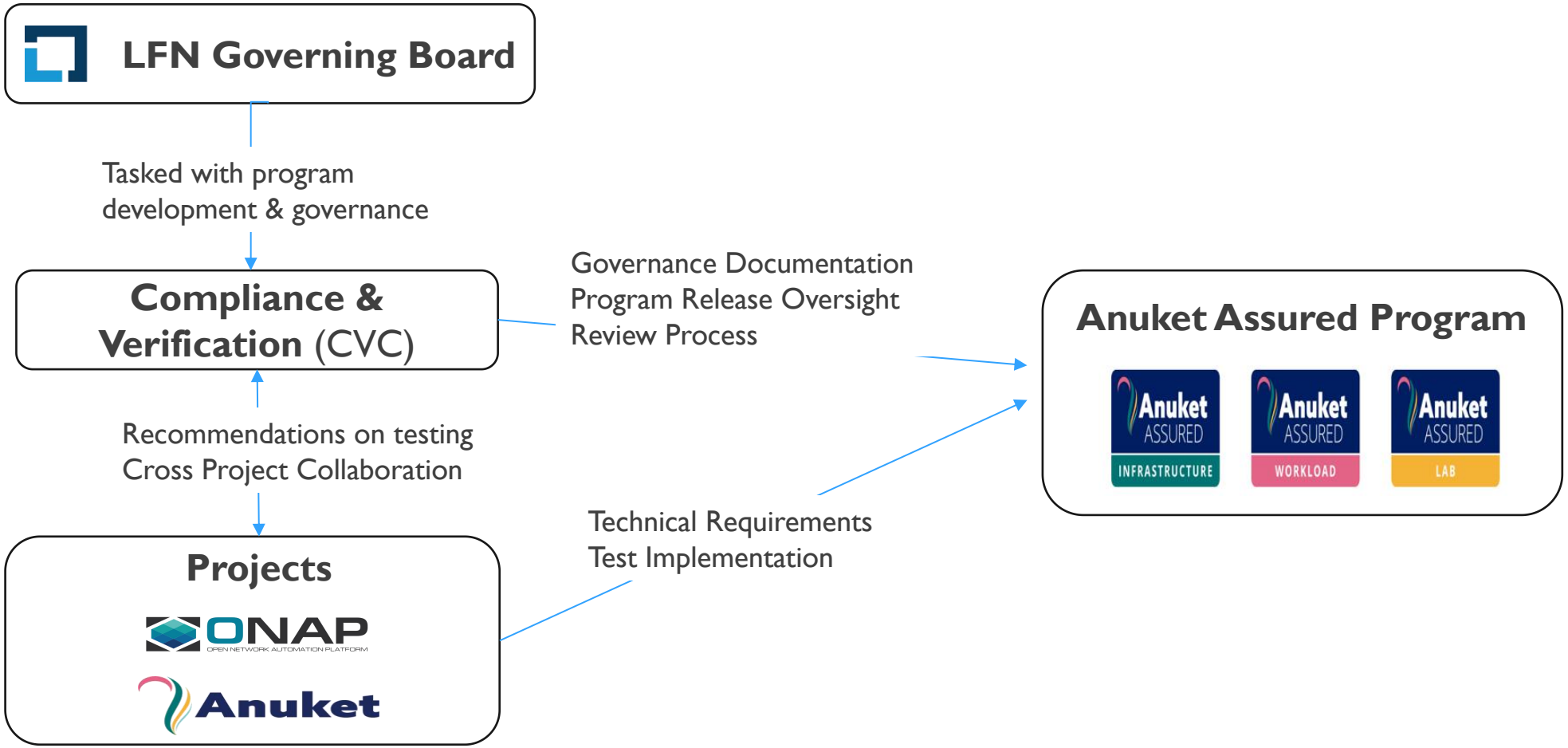
# CNF Certification Values and Status

Yan Yang
China Mobile

https://lfnetworking.org

# Anuket Assured Program

LFN NETWORKING
LFN Developer & Testing Forum



# Anuket Assured Compliance Badges

LFN Developer & Testing Forum

SUT for the AAP Infrastructure badge would be expected to meet the requirements of the Anuket Reference Architecture release 1/2 (RA1/2)

SUT for the AAP workload badge would be expected to meet the requirements of the Anuket Reference Conformance release 1/2 or ONAP VNF/CNF Requirements

SUT for the AAP lab badge would be expected to meet the testing and verification requirements of AAP

# AAP Badges Scope Evolution

LFN Developer & Testing Forum

## AAP 2022 Badges Scope

NFVI Infrastructure Badge
Cloud Native Infrastructure Badge

VNF workload Badge

Anuket

ONAP
OPEN NETWORK AUTOMATION PLATFORM

## AAP 2023 Badges Scope

NFVI Infrastructure Badge
Cloud Native Infrastructure Badge

VNF workload Badge
CNF workload Badge

Lab Badge

Anuket

Anuket ONAP
OPEN NETWORK AUTOMATION PLATFORM

CVC

AAP badges introduction: https://lfnetworking.org/verification/
AAP release doc: https://gitlab.com/lfnetworking/cvc/anuket-assured-docs/-/blob/main/releases

LFN Developer & Testing Forum

# CNF Certification

# Values for CNF Certification

LFN Developer & Testing Forum

## Key Benefits: Service Providers

Accelerate time to deployment for new network services.

Improve interoperability and software quality.

Reduce in-house testing effort and reduce costs.

Improved utilization of hardware.

## Key Benefits: Vendors

Improve time to revenue for new product offerings.

Achieve greater alignment with service provider customer requirements.

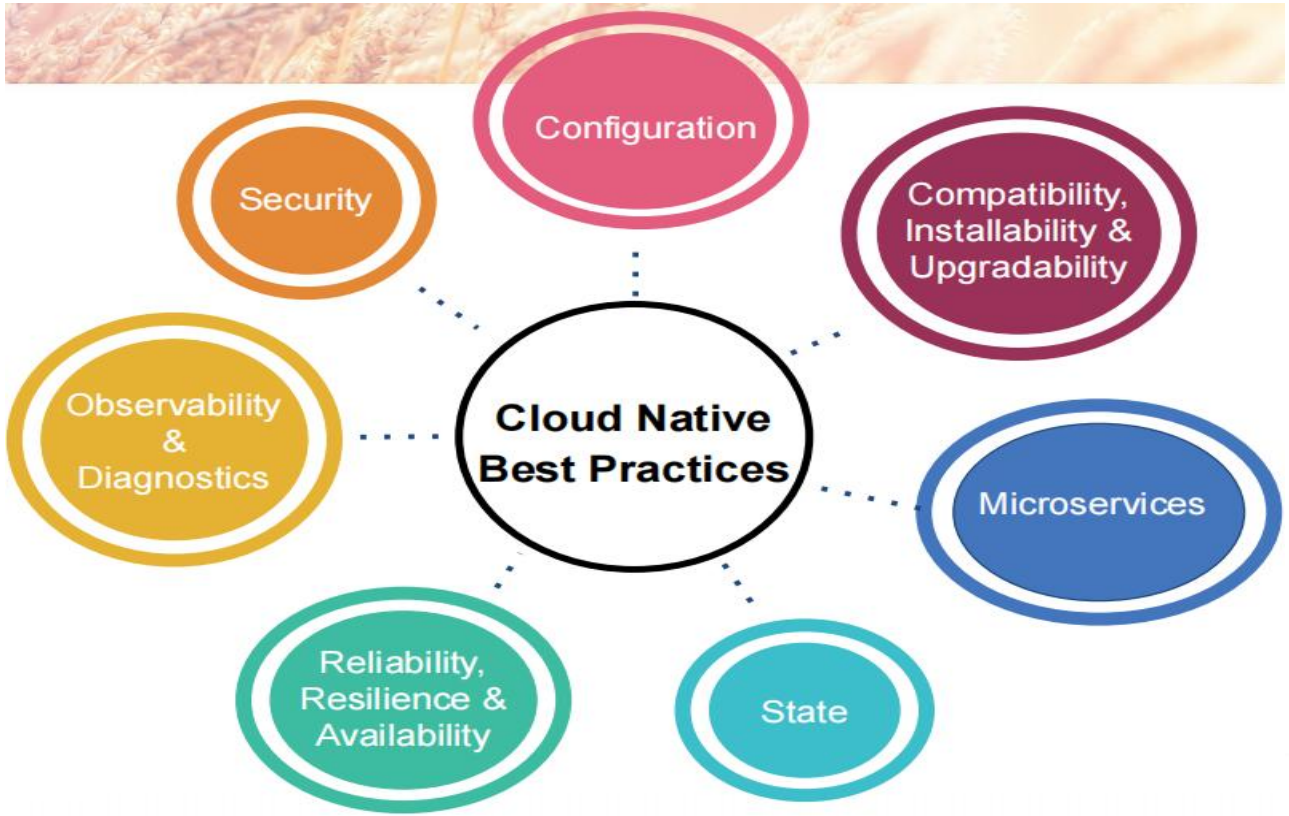
Demonstrate product quality through open ecosystem testing.

Leverage the community to reduce in-house effort.

# CNCF CNF Certifaction Program

LFN Developer & Testing Forum

The Cloud Native Network Function (CNF) Certification Program provides confidence for Communication Service Providers (CSPs) that applications provided by their vendors demonstrate cloud native best practices.



# Values for CNCF CNF Certifaction Program

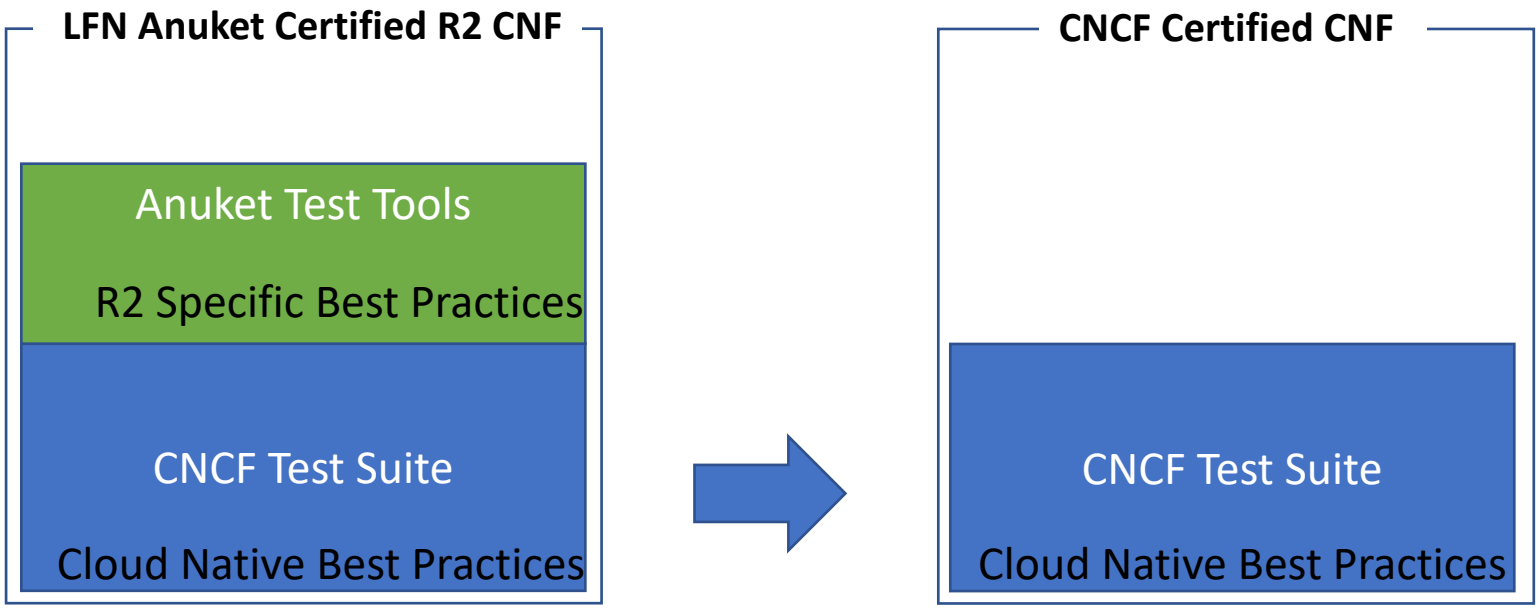
“It is important to adopt cloud native best practices as we evolve to achieve our goals for agility, automation, and optimization. The CNF Certification is a great tool with which we can measure and drive cloud native practices across our platforms and network functions.”

Tom Kivlin, principal cloud architect at Vodafone

# LFN AAP CNF Certification Program

LFN NETWORKING
LFN Developer & Testing Forum

- LFN is committed to offering the Anuket Assured Certified CNF
- In addition to aligning with CNCF test suite, more specific requirements and tests applicable to Anuket will be explored




For the Kubernetes workloads to be conformant with the Anuket RA2 , the following requirements are defined in Anuket RA2
https://github.com/anuket-project/anuket-specifications/blob/master/doc/ref_arch/kubernetes/chapters/chapter04.rst

# Test Cases Defind in Anuket RC2



CNF Test Cases and Requirements Traceability

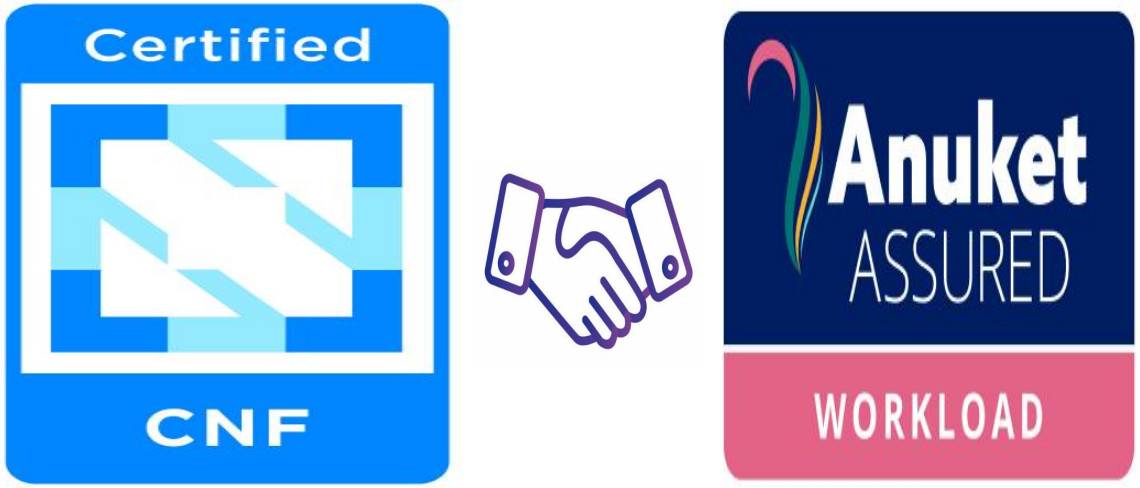
| RM/RA Ref | High-level test definition | Test name and project | Priority |
|---|---|---|---|
| ra2.app.006 | Consumption of additional, non-default connection points. Any additional non-default connection points must be requested through the use of workload annotations or resource requests and limits within the container spec passed to the Kubernetes API Server. | :ref:`int.api.01 <chapters/chapter02:Kubernetes Architecture Requirements>` | Must |
| ra2.app.007 | Workloads must not use hostPath volumes, as Pods with identical configuration (such as those created from a PodTemplate) may behave differently on different nodes due to different files on the nodes. | :ref:`kcm.gen.02 <chapters/chapter02:Kubernetes Architecture Requirements>` | Must |
| ra2.app.008 | Infrastructure dependency | Workloads **must not** rely on the availability of the master nodes for the successful execution of their functionality (i.e. loss of the master nodes may affect non-functional behaviours such as healing and scaling, but components that are already running will continue to do so without issue). | Must (Not) |
| ra2.app.009 | Device plugins | Workload descriptors must use the resources advertised by the device plugins to indicate their need for an FPGA, SR-IOV or other acceleration device. | Must |
| ra2.app.010 | Node Feature Discovery (NFD) | Workload descriptors must use the labels advertised by Node Feature Discovery to indicate which node software of hardware features they need. | Must |
| ra2.app.011 | Published helm chart: Helm charts of the CNF must be published into a helm registry and must not be used from local copies. | CNCF CNF Testsuite | Should |
| ra2.app.012 | Valid Helm chart: Helm charts of the CNF must be valid and should pass | CNCF CNF Testsuite | Should |

More cases can be found:
https://github.com/anuket-project/anuket-specifications/blob/master/doc/ref_cert/RC2/chapters/chapter04.rst#id1

# CNF Certification Collaboration



- Gap analysis for CNF test cases is currently underway
- Avoid diverging on CNF best practices




- Identifying which requirements and tests would be selected for first version of Anuket R2 CNF badge .

# Welcome to join Anuket Assured Program to put forward the CNF certification

When:
Monday, May 22, 2023
6:00am to 7:00am
(UTC-07:00) America/Los Angeles

Where:
https://zoom-lfx.platform.linuxfoundation.org/meeting/99028671010