LF NETWORKING

LFN Developer & Testing Forum

How Cloud Native is Your CNF? Let's Check!

W. Watson & Denver Williams, Vulk Coop

Slides Available

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https://wiki.lfnetworking.org/pages/viewpage.action?pageId=80282057

About the CNF Certification Program

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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.

> *"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***

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Configuration
Security
Compatibility, Installability & Upgradability
Observability & Diagnostics
Cloud Native Best Practices
Microservices
Reliability, Resilience & Availability
State

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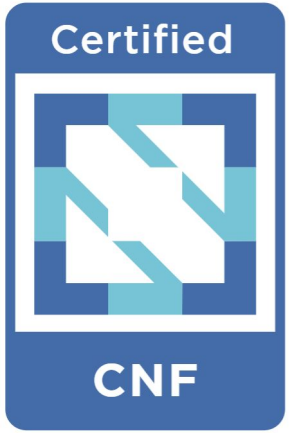
How to Earn “Certified CNF” Status



- Start on cncf.io/cnf
- Meet eligibility criteria
  - Terms & Conditions
  - Participation form
  - Technical requirements
- Run certification tests
  - CNF Certification instructions
- Submit results
  - Create a pull request
- Promote
  - Landing page and landscape
  - Certified CNF mark

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CNF Certification FAQ

- **Is CNF Certification per company or per product?**
  - Per product (no limit)
  - Ore participation form per product

- **What is the cost of certification?**
  - No charge for CNCF members
  - No charge for non-profit organizations
  - Same fee as joining CNCF for other commercial organizations

faq.md

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CNF Certification powered by CNF Test Suite

Steps to run the testsuite

1. Download the testsuite on GitHub from cncf/cnf-testsuite
2. `$ cnf-testsuite setup`
3. Create a configuration file
4. Install CNF: `$ cnf-testsuite cnf_setup`
5. Run the tests: `$ cnf-testsuite cert`

👉 **Quick install command & usage**

Setup the testsuite


```
$ ./cnf-testsuite setup
Successfully created directories for cnf-testsuite
Global helm found. Version: v3.8.2
No Local helm version found
Global kubectl found. Version: 1.20
Global kubectl client is more than 1 minor version ahead/behind server version
No Local kubectl version found
Global git found. Version: 2.17.1
No Local git version found
All prerequisites found.
cnf-testsuite namespace already exists on the Kubernetes cluster
Setup complete
$
```

Create a CNF Configuration File


```
---
release_name: hello-coredns
helm_repository:
  name: stable
  repo_url: https://cncf.gitlab.io/stable
helm_chart: stable/coredns
```

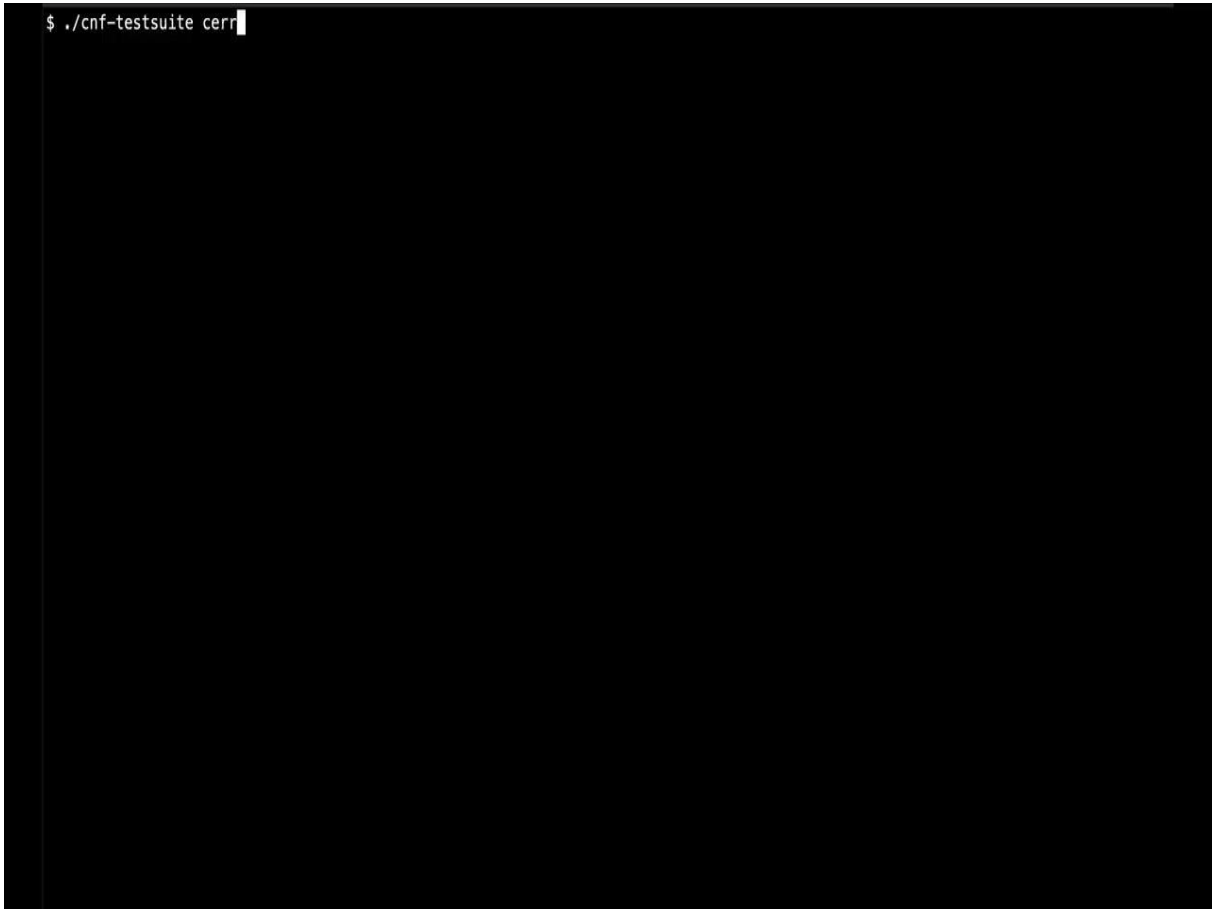
👉 Other configuration options

Install the CNF


```
cnf-testsuite cnf_setup cnf-config=./cnf-testsuite.yml
```

```
$ ./cnf-testsuite cnf_setup cnf-config=./cnf-testsuite.yml
Successfully created directories for cnf-testsuite
cnf-testsuite namespace already exists on the Kubernetes cluster
cnf setup online mode
Successfully setup hello-coredns
cnf setup online mode complete
$
```

Running the cert command



Test summary


```
Microservice Tests
✓ PASSED: Image size is good 🐜 ⚖️👀
✓ PASSED: CNF had a reasonable startup time 🚀
✓ 🏆 PASSED: Only one process type used 🐜 ⚖️👀
✓ ✨PASSED: Some containers exposed as a service 🐜 ⚖️👀
⏭️ SKIPPED: [shared_database] No MariaDB containers were found
Microservice results: 4 of 5 tests passed

Reliability, Resilience, and Availability Tests
✓ ✨PASSED: pod_network_latency chaos test passed 🗡️💀♻️
✓ ✨PASSED: pod_network_corruption chaos test passed 🗡️💀♻️
✓ PASSED: disk_fill chaos test passed 🗡️💀♻️
✓ PASSED: pod_delete chaos test passed 🗡️💀♻️
✓ PASSED: pod_memory_hog chaos test passed 🗡️💀♻️
✓ ✨PASSED: pod_io_stress chaos test passed 🗡️💀♻️
⏭️  ✨SKIPPED: pod_dns_error docker runtime not found 🗡️💀♻️
✓ ✨PASSED: pod_network_duplication chaos test passed 🗡️💀♻️
✓ 🏆 PASSED: Helm liveness probe found ⎈👄
✓ 🏆 PASSED: Helm readiness probe found ⎈👄
Reliability, resilience, and availability results: 9 of 9 tests passed

RESULTS SUMMARY
  - 36 of 43 total tests passed
  - 12 of 14 essential tests passed
Results have been saved to results/cnf-testsuite-results-20221020-085042-512.yml
$
```

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Let's Work Together

Cloud Native Telco Meeting Places

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CNF Certification GitHub

- github.com/cncf/cnf-certification

CNF Working Group Meeting

- Mondays at 8:00am PT
- github.com/cncf/cnf-wg

CNF Test Suite Office Hours

- Tuesdays at 7:15am PT
- github.com/cncf/cnf-testsuite

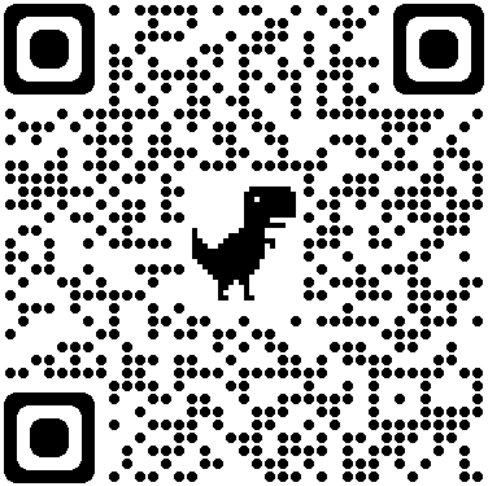
slack.cncf.io

- #cnf-wg
- #cnf-certification

@cnfcert

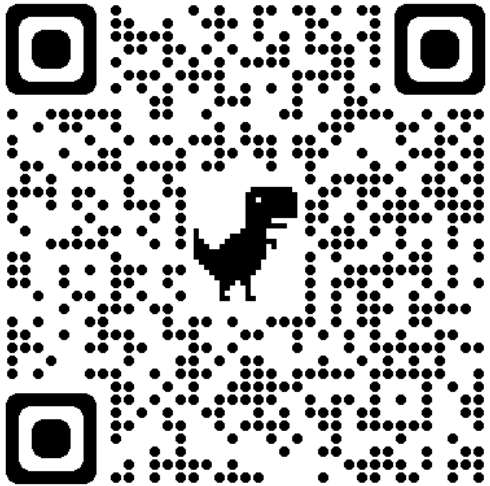
cnfcertification@cncf.io

Schedule a Demo or Working Session



https://calendly.com/cnfcertification

Visit cncf.io/cnf to get started



https://www.cncf.io/cnf

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