


# TSC Task Force - Cloud Native

	<b>Meetings:</b>	<b>Mailing List: (<a href="#">Groups.io</a>)</b>	<b>Calendar: (<a href="#">Groups.io</a>)</b>	<b>Slack Channel</b>	<b>Recordings</b>
	Thursdays, 13:00 to 14:00 UTC <a href="#">Meeting Minutes</a>	<a href="mailto:onap-cnf-taskforce@lists.onap.org">onap-cnf-taskforce@lists.onap.org</a> <b>List URL:</b> <a href="https://lists.onap.org/g/onap-cnf-taskforce">https://lists.onap.org/g/onap-cnf-taskforce</a> <b>Sticky Post:</b> <a href="https://lists.onap.org/g/onap-cnf-taskforce/message/11">https://lists.onap.org/g/onap-cnf-taskforce/message/11</a> <b>Hashtag:</b> #cnf	<a href="https://lists.onap.org/g/onap-meetings/calendar">https://lists.onap.org/g/onap-meetings/calendar</a>	#sub-cnf	CNF-Taskforce 2022 Recordings

## [CNF 2022 meeting Minutes](#)

### [Meeting Recordings](#)

([CNF Taskforce Meeting Minutes](#) - 2021 and older)

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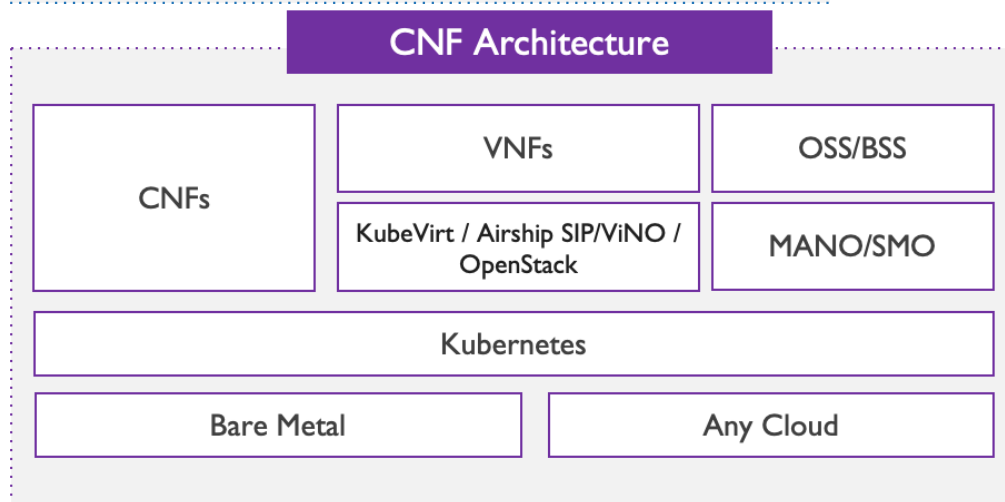
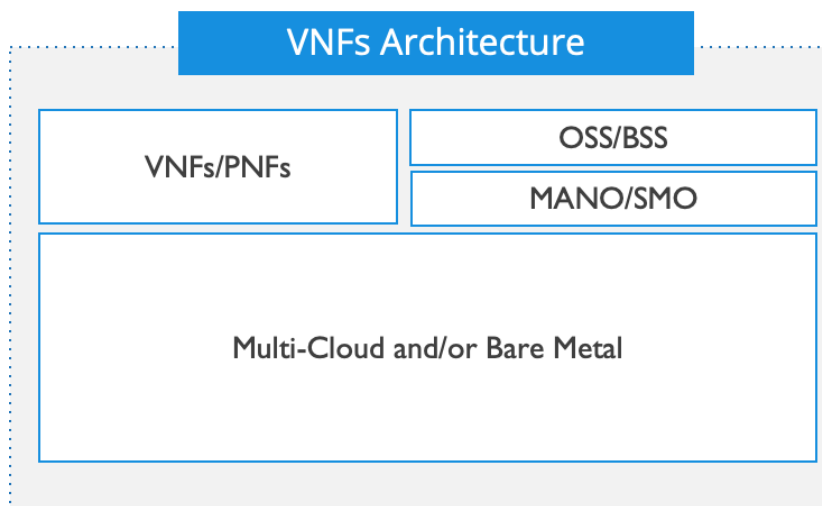
## 1. Problem statement and scope

This Taskforce focuses on two main topics

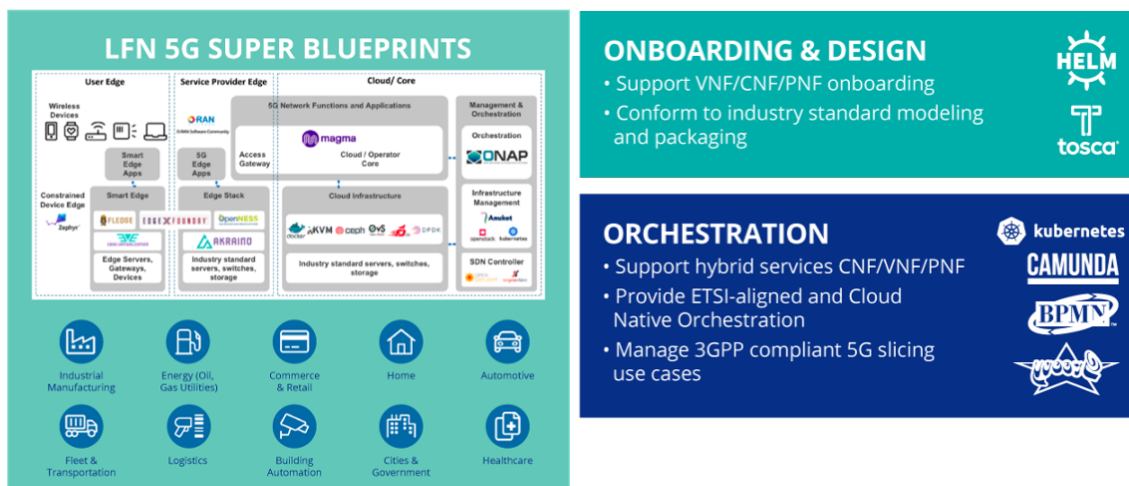
- ONAP as an orchestrator for network services consisting of cloud native network functions - CNFs (as well as VNFs and PNFs)
- ONAP's architecture evolution as a cloud native application

### 1.1 CNF Orchestration

#### 1.1.1 Evolving from VNFs to CNFs

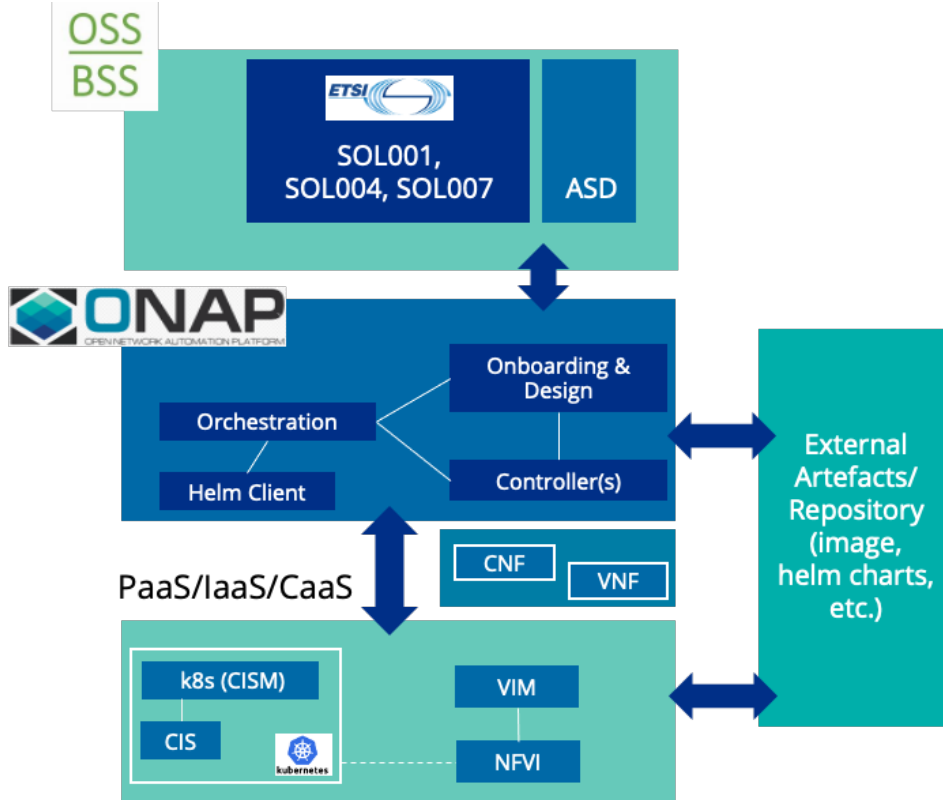


#### 1.1.2 ONAP as a CNFO

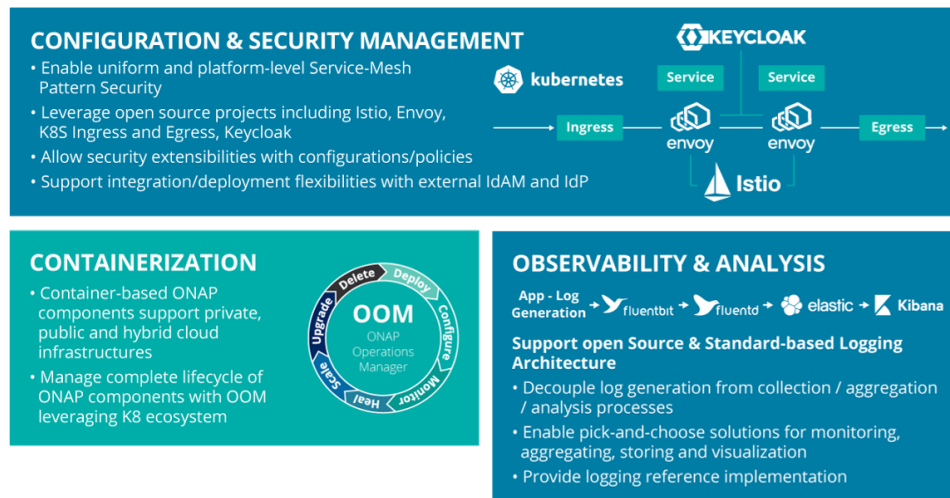


- Hybrid services CNF/VNF/PNF, leveraging open-source and standards
  - Support Greenfield and Brownfield environment
  - E.g., CNF on bare-metal, CNF on VM, VNF on VM, PNF
- Day 0/1/2 configuration
  - Not just infrastructure orchestration
  - Configuration and Update
- Standard alignment (ETSI, 3GPP) and beyond (ASD)
  - Evolve existing investment, no need to start from scratch

- Common Infrastructure for model/package onboarding, design and distribution
- Support both ETSI-Aligned and Cloud Native Orchestration
- 5G slicing use case – 3GPP compliant



## 1.2 ONAP as a Cloud Native application



### 1.2.1 Relationship with SDOs



### 1.3.1 ETSI-NFV - Alignment on packaging

[ETSI NFV SOL001 v4.2.1 based proposal](#)

### 1.3.2 O-RAN Alliance

- Application Service Descriptor (ASD) - the modelling and packaging approach for CNFs, rAPP/xApps.
- [O-RAN: ASD solution](#)

### 1.2.2 Alignment and integration with other Open Source Projects

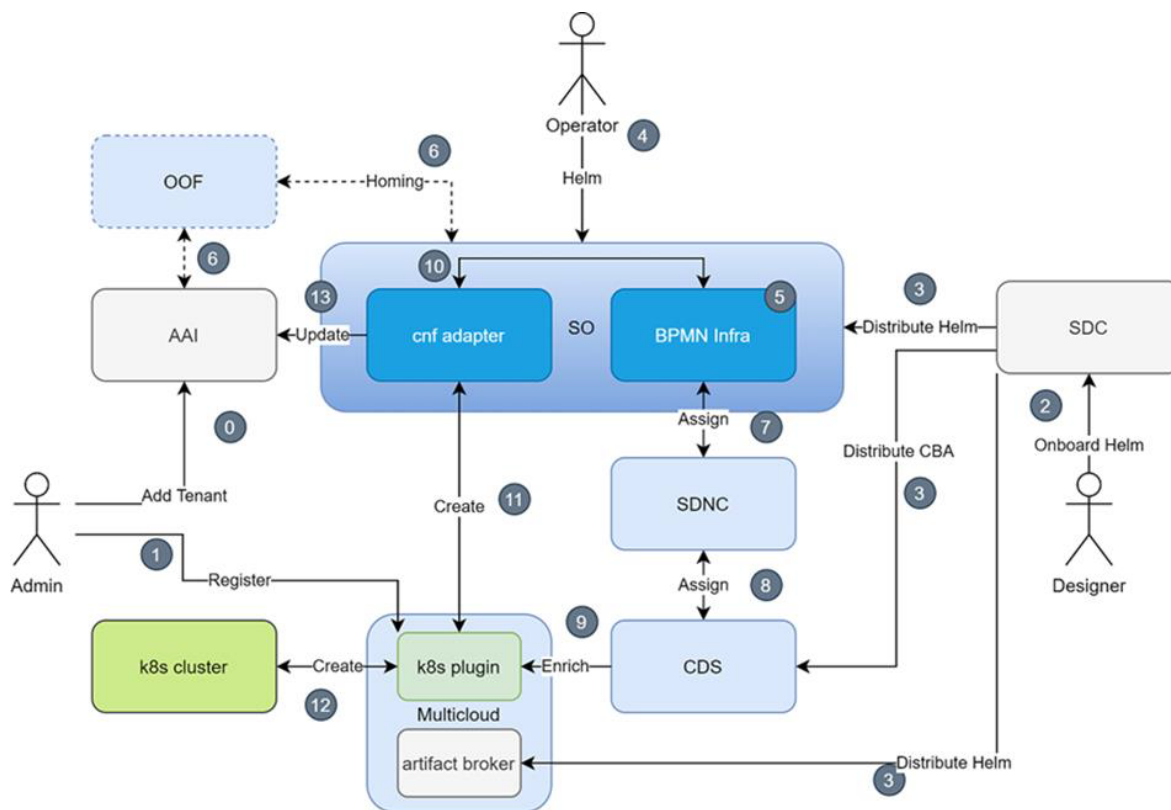
- EMCO
- CNCF - K8S
- 5G Super blueprint
- Anuket

## 2. Work accomplished and available functionality

### 2.1 Jakarta

- Formalization and approval of the ASD concept - <https://wiki.lfnetworking.org/display/LN/2022-01-12+-+ONAP%3A+Application+Service+Descriptor+%28ASD%29+for+K8s+NFs>
  - Link to the approved ASD specification - [Application Service Descriptor \(ASD\) onboarding Information Model, ver. 1.0.](#)
- CNF Orchestration scenarios - <https://wiki.lfnetworking.org/display/LN/2022-06-DD+-+ONAP%3A+CNF+Orchestration+Scenarios>
- ONAP integration with EMCO (PoC) - <https://wiki.lfnetworking.org/display/LN/2022-06-DD+-+Virtual%3A+General%3A+ONAP+EMCO+integration+and+Demo>

### 2.2 Istanbul



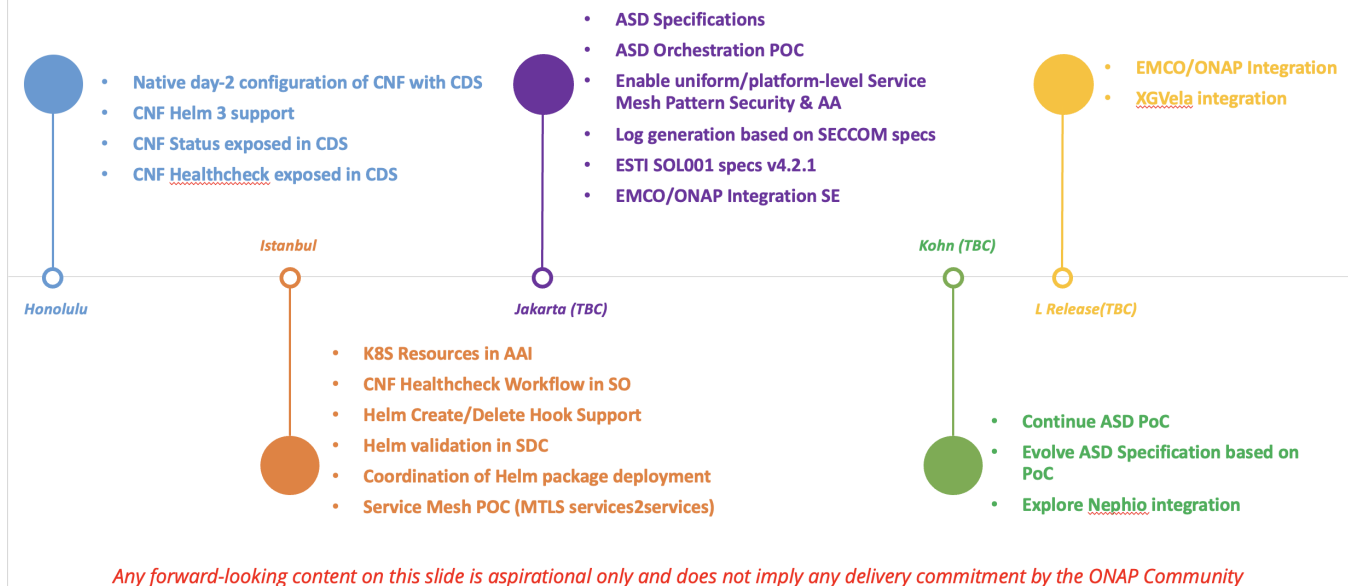
- Deployment maturation and Day2
  - Improvement of Helm Distribution (SDC/SO)
- Helm Deployment Maturity
  - Helm package validation
  - Helm 3.5
  - Helm pre-/post-installation/deletionhooks
- Simple CNF Healthcheck
- Basic AAI CNF Changes

## 2.3 Honolulu

## 3. Future roadmap

# ONAP CNF/Cloud Native – Roadmap

Work In Progress –  
No Commitment



- Nephio integration
- Support for 5G Super Blueprint & Magma CNF orchestrations requirements
- New joint onboarding package to design the NS with CNFs
- Merging the paths of the Native Helm & ETSI flows
- Enhance the CNF resource orchestration functionalities further
- Multi-cluster deployment with inter-cluster connectivity setup
- CNF Upgrade
- Coordinated CNF components deployment
- Runtime model evolution based upon the standard
- AAI persistence of the CNF resources
- Control loop enhancements for CNFs
- Cluster management and CNF observability (integration with XGVela)
- Prometheus based monitoring in DCAE

## 4. Getting started

### 4.1 Documentation

End user section

- ReadTheDocs <https://docs.onap.org/projects/onap-ccsdk-cds/en/latest/usecases/vfw-cnf-use-case.html?highlight=cnf#>
- Wiki - This space
- vFW use case - [https://docs.onap.org/projects/onap-integration/en/istanbul/docs\\_vFW\\_CNF\\_CDS.html](https://docs.onap.org/projects/onap-integration/en/istanbul/docs_vFW_CNF_CDS.html)
- Latest release notes - <https://docs.onap.org/en/latest/release/index.html>

Developer section

- documentation
- Jira items in progress for the current release

### 4.2 Demos

- Recording from June 2021 DDF
- ONAP: Orchestration of xNF Based 5G Service
- ONAP: CNF Orchestration Tutorial

## 5. FAQ

**Q:** What is the value-add of ONAP for CNF orchestration (CNFO)? What does it provide on top of K8S?

**A:**

- hybrid config and data operations can work on both K8s and PNFs

- Can manage helm charts
- Handling multi-cluster deployment on top of K8S
- ONAP works in the service level, not just the resource level
- Still need to address coordination across different clusters and SW upgrades

**Q: What can end users do with ONAP Honolulu? What operations are supported (service design? Deployment? Day-0 configuration? Day 1 /2 configuration? LCM?), and what will be supported in Istanbul?**

**A:**

- For the "native helm" path - on-boarding, Helm enrichment with CDS, meaning modifying values in Helm templates.
- Day 2 operation config-assign/config-deploy - add/modify resources after the initial deployment, which may be used for upgrade.
- CNF status checking is supported in Honolulu, will be enhanced in Istanbul.
- SO merged the "native helm" and "ETSI" paths for a more 'Plug&Play'

**Q: What is the format of CNF packaging? Is it based on Helm? Does it follow ETSI-NFV specifications?**

**A:**

- packaging - SOL04 may need a bit of work still. Descriptors are still being discussed in ETSI about containerized models. Lots of discussion but no consensus yet. [Orchestration meetings](#) on Mondays 8am Eastern
- Packaging is based on the CSAR format (for both the 'helm native' and 'ETSI' Format)
- CNF Descriptor Proposal page: <https://wiki.onap.org/x/VwsqBg>
- Magma CNF onboarding is following similar path than what we have implemented for CNF vFW

**Q: Where is the documentation for CNF on-boarding and deployment?**

**A:**

- Documentation of the vFirewall CNF use case: [https://docs.onap.org/projects/onap-integration/en/honolulu/docs\\_vFW\\_CNF\\_CDS.html](https://docs.onap.org/projects/onap-integration/en/honolulu/docs_vFW_CNF_CDS.html)
- Heat/Helm/CDS models: [vFW\\_CNF\\_CDS Model](#)
- Automation Scripts: [vFW\\_CNF\\_CDS Automation](#)

**Q: How should end users report issues**

**A:**

- You can create a JIRA ticket - <https://jira.onap.org/>
- You can post any question on the #integration-team channel in the [onaproject.slack.com](#) Slack instance
- You can also join the [CNF Task Force](#), every Thursday prior the ONAP TSC Call (1pm UTC) [calendar link](#)
- You can also write to the onap cnf mailing list - [onap-cnf-taskforce@lists.onap.org](mailto:onap-cnf-taskforce@lists.onap.org)

**Q: Are there "CNF requirements" available in ONAP, similar to the "VNF Requirements"?**

**A:**

- Helm 3 is supported in Honolulu (maintenance release). Helm hooks are not fully supported.
- CNF Descriptor Proposals: <https://wiki.onap.org/x/VwsqBg>
- Architecture Review: [\[ONAPARC-709\] \(Istanbul-R9\) - Func - CNF Orchestration – Istanbul Enhancements](#)

**Q: How could developers get involved? Where do you mostly need help? Are there open Jira tickets people can start working on?**

**A:**

- Call for developers to implement in Jakarta new features:
  - CNF Control Loop
  - Integration with XGVela
  - Merging Native Helm/ETSI flows
  - Enterprise use cases
  - etc
- Istanbul CNF Orchestrator Requirements: [blocked URLREQ-627](#) - ONAP CNF orchestration - Istanbul Enhancements DONE
- Those are the short term goals. Have a great deal more in the backlog for future released. refer to [2021-06-09 - ONAP TSC Taskforce: Cloud Native \(Roadmap\)](#)

**Q: What it is not supported today and is part of the roadmap?**

**A:**

- Control loop, DCAE, A&AI, ASD implementation, Prometheus integration with VES, and more. Refer to [2021-06-09 - ONAP TSC Taskforce: Cloud Native \(Roadmap\)](#)

**Q: What do we need to ask to CNF Vendors to be onboarded on the ONAP Platform?**

**A:**

- Vendors are welcome to test their CNFs, so we can have the solution validated with a larger set of Network Functions
- Security container logging requirement [2021-06-09 - ONAP: SECCOM activities for Istanbul release](#)  
Also original presentation to ONAP TSC- [2021-02-22\\_LoggingRequirementEvents\\_v8 \(1\).pdf](#)

**Q: What has changed in CNF packaging since Frankfurt?**

**A:**

- In Frankfurt, the Helm chart was a 'second class citizen' in SDC. In Honolulu there is native support for Helm charts. SO understands Helm type now.

**Q: Is there a plan to support NETCONF configuration, or will the solution be limited to CDS CBAs? Is there alignment with C&PS?**

**A:**

- No integration with C&PS, but it may happen at a later stage. But this is a good approach and may be discussed further in the CNF Taskforce.

**Q: Does the CNF Orchestration support only Openstack VF-Module?**

**A:**

- VF Module is the design aspect of the SDC, we represent each helm with a VFM. The current processing is per VFM for CNF as it is with the other resources

## Recent Presentation Material

[2022-01-13 - ONAP: Orchestration of xNF Based 5G Service](#)

[2022-01-12 - ONAP: ASD and Application Onboarding and LCM Orchestration](#)

[2022-01-12 - ONAP: Application Service Descriptor \(ASD\) for K8s NFs](#)

[2022-01-11 - ONAP: CNF Orchestration Tutorial](#)

[2021-10-12 ONE-Summit\\_Cloud\\_Native\\_Service\\_Orchestration\\_ONAP v0.4.pptx](#)

[2021-06-08 - ONAP TSC Taskforce: Cloud Native \(Demos\)](#)

[2021-06-09 - ONAP TSC Taskforce: Cloud Native \(Roadmap\)](#)

[2021-06-10 - ONAP TSC Task Force: Cloud Native \(Ask Us Anything\)](#)