# OSM#11 HACKFEST NETNUMBER CNF

May 31st – June 4th, 2021

# OBJECTIVES FOR THE OSM#11 HACKFEST

- Validate the CNFM capabilities of the ETSI OpenSource MANO (OSM NINE)
- Create the onboarding artifacts (NS and VNF packages) for the NetNumber CNF
- Onboard the CNF and execute basic LCM tasks (instantiation, upgrade, termination)
- Set up and verify the VNF Configuration API (ETSI GS NFV-SOL 002)

**Result:**

- All objectives met but the setup of the VNF Configuration API (ETSI GS NFV-SOL 002)
- In addition, the OSM NBI (ETSI GS NFV-SOL 005) was successfully verified (offline system)

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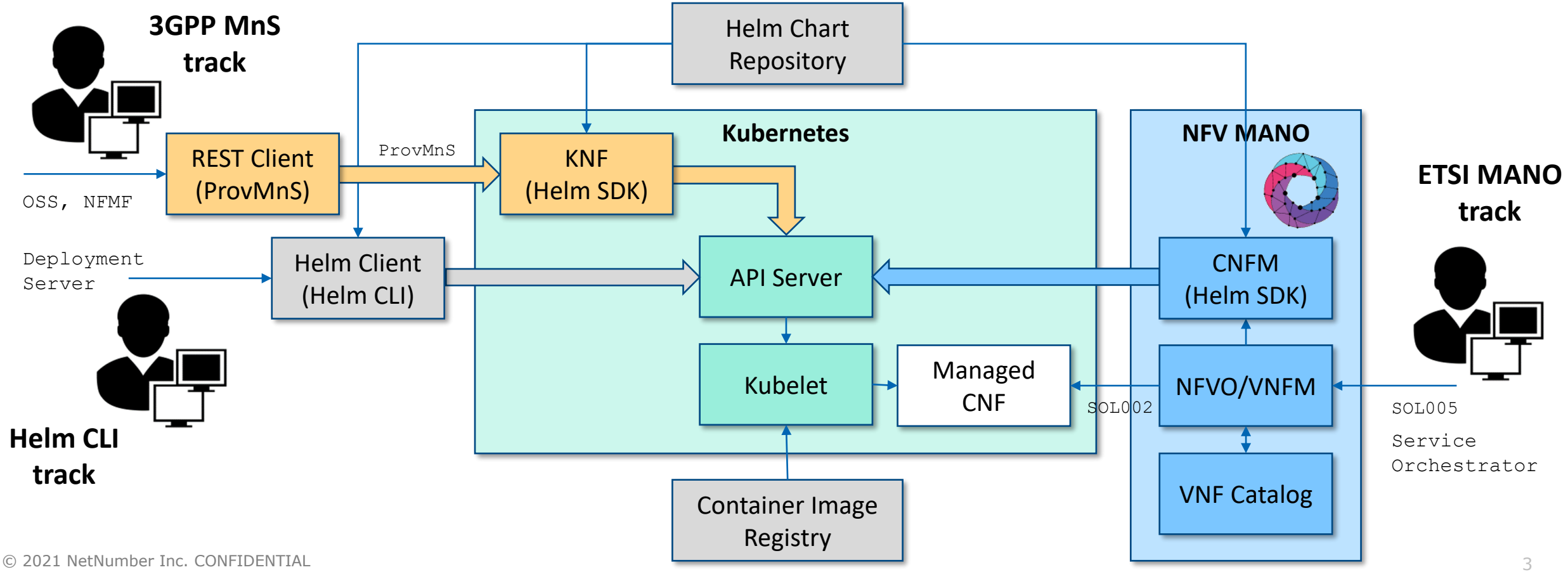
# CNF MANAGEMENT OPTIONS

CNFs (containerized workload) is managed by Helm that is the de-facto standard packaging framework for Kubernetes. The lifecycle of a CNF instance (release) is managed by the Helm Client that can be operated from the CLI or can be part of NFV-MANO (AKA CNFM) or can be deployed as a specialized CNF (AKA KNF).

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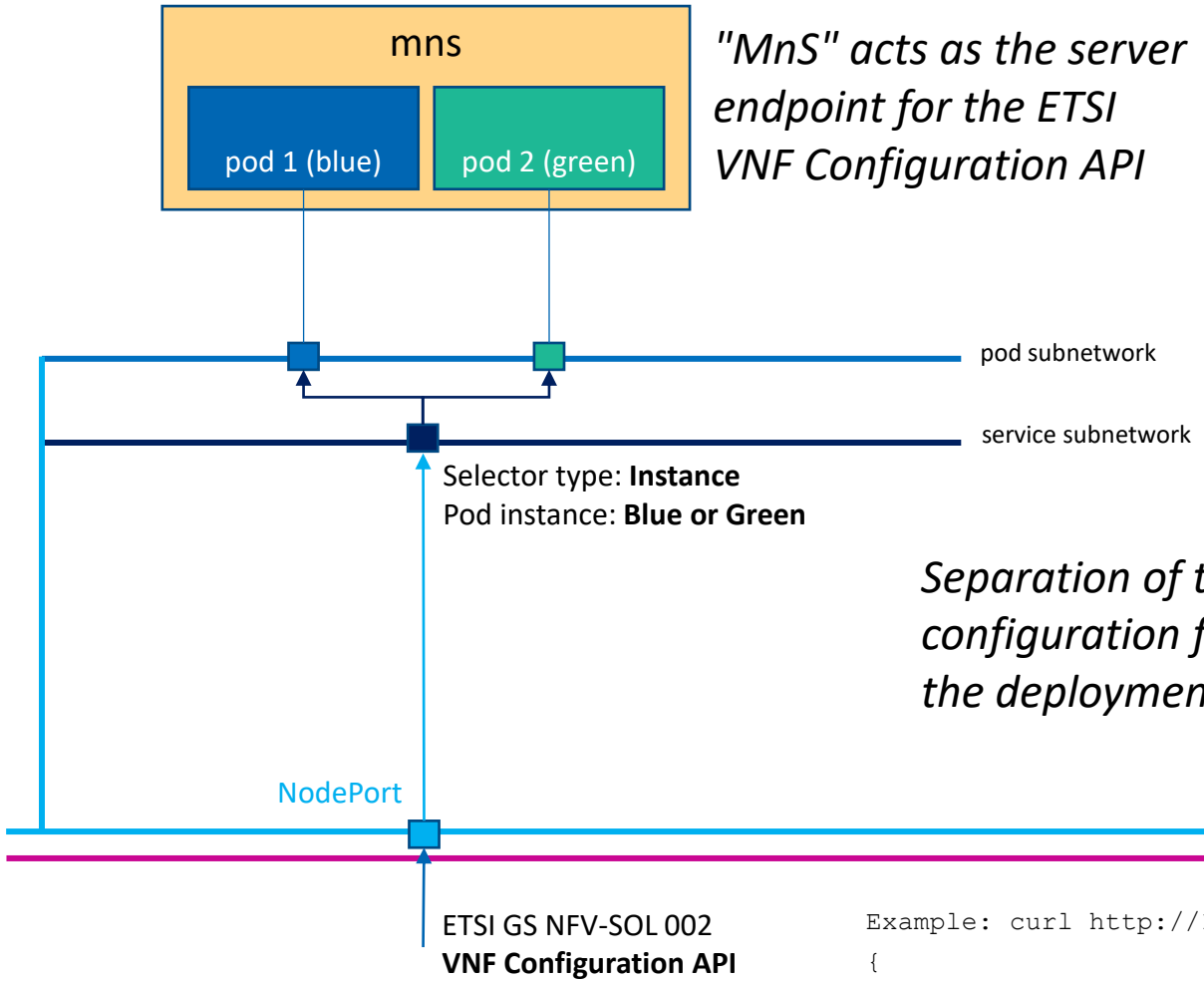
# NETNUMBER CNF (ETSI VNF CONFIG SERVER)



*Separation of the configuration from the deployment*

```
Example: curl http://10.20.2.54:31370/vnfconfig/v1/api_versions --header 'Version: 1.2.0'
{
 "uriPrefix":"/vnfconfig/v1",
 "apiVersions":[{"version":"1.2.0","isDeprecated":false}]
}
```

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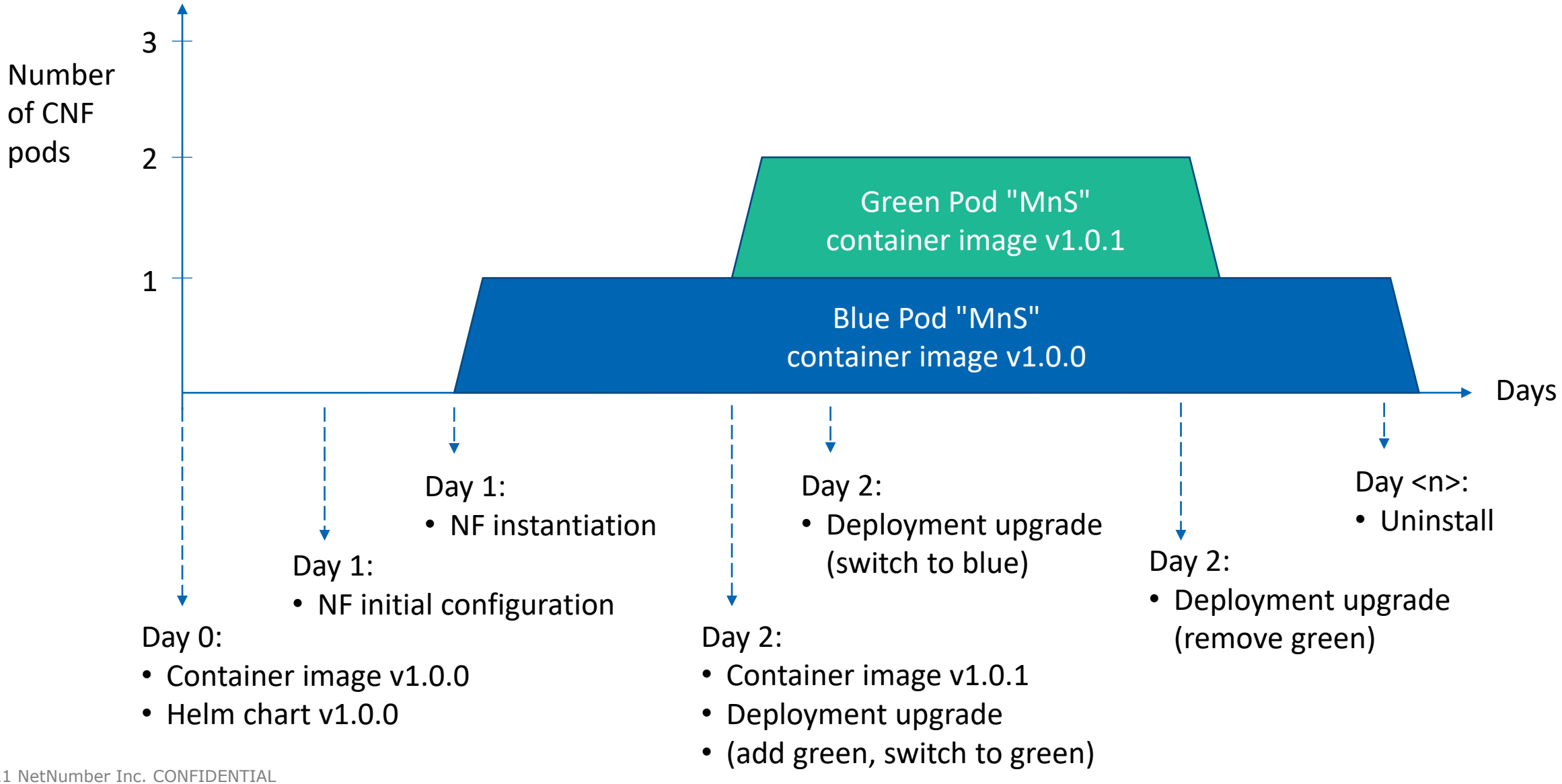
# LCM and CM DEMO : DEPLOYMENT NF2

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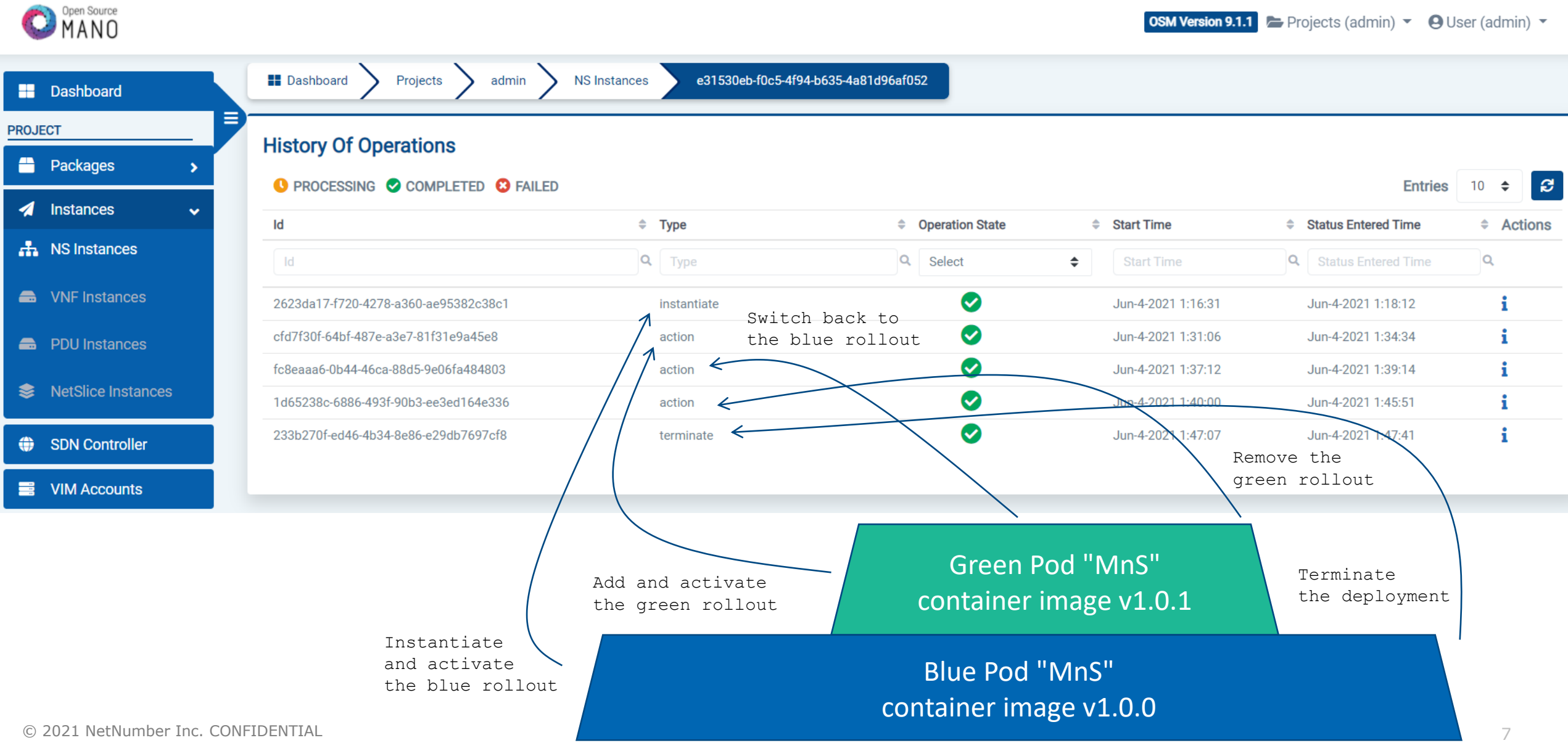
# OSM GUI (NetNumber lab)

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# Findings

- **Great event! Great support from the instructors! Big THANK YOU!**
- OSM capabilities ok. Useful add-ons (e.g. setting the Helm release name) slotted for OSM TEN.
  - Closer alignment with ETSI GS NFV-SOL 004 and 007 recommended (package structure and security)
  - *ETSI GS NFV-SOL 002 VNF Configuration and Indicator APIs still to be researched by NetNumber*
- Helm-chart based LCM needs additional work. Examples:
  - Custom execution environments to be exposed, configured and invoked from the GUI
  - Helm values templating to be supported in conjunction with the configurable attributes
- Rainy day scenarios may need further work.
  - Errors in the artifacts or params make the NS instance fail, but the termination also fails when the KDU was not created ("Terminating KDU 'nti-nf': kdu_instance chartmuseum-osm-nf-0043872352 not found"). “Force delete” of the NS instance is (often) needed till the setup is right.
  - "Something went wrong. Please try again." message not really helpful (expired session, connectivity issue, timeout?)

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