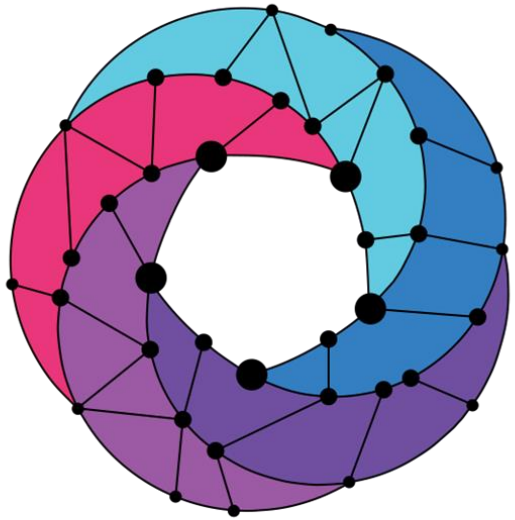


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OSM#10 Hackfest
OSM System Features

Guillermo Calviño (Canonical)
Vijay Nag (TATA ELXSI)

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OSM features beyond NS orchestration

- High Availability
- Identity Management
- System Quotas
- System Monitoring

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OSM in HA

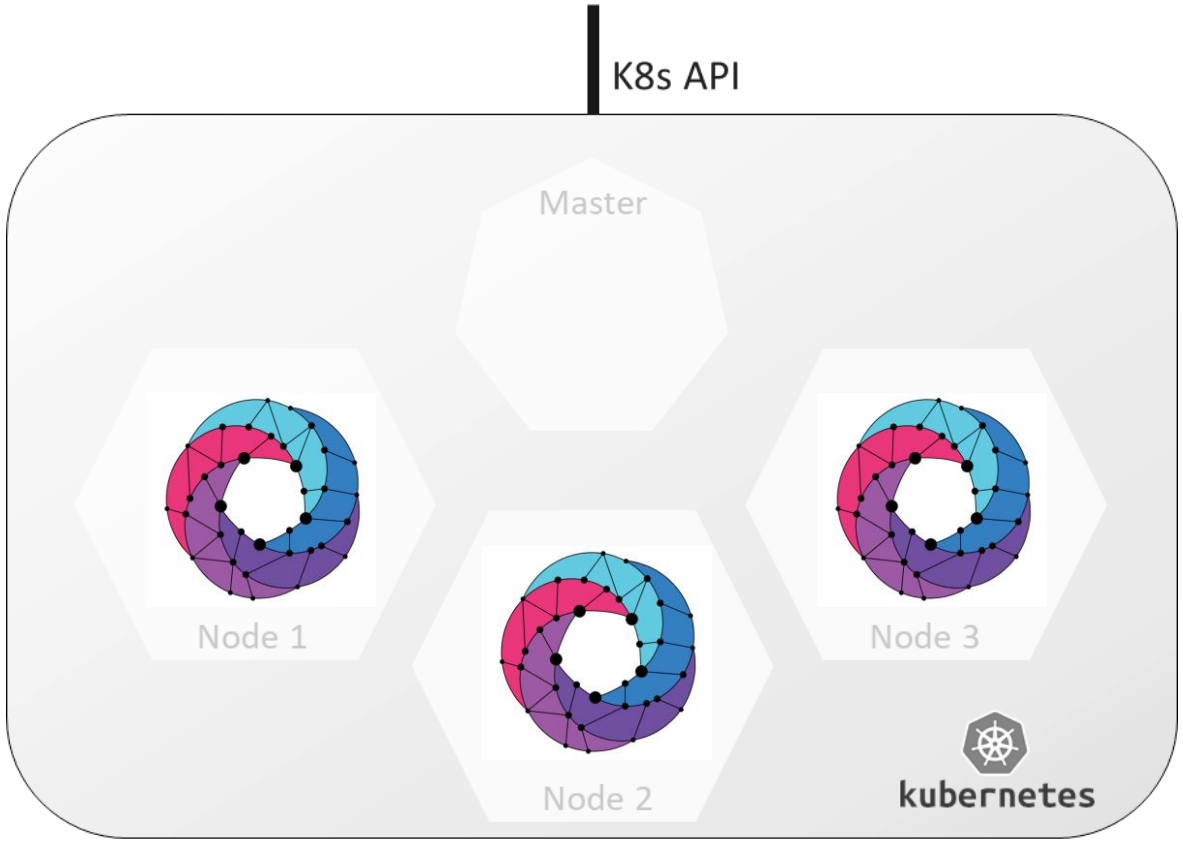




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OSM in High Availability

- High availability ⇒ Increase uptime
  - Use of Kubernetes
  - Use of redundancy



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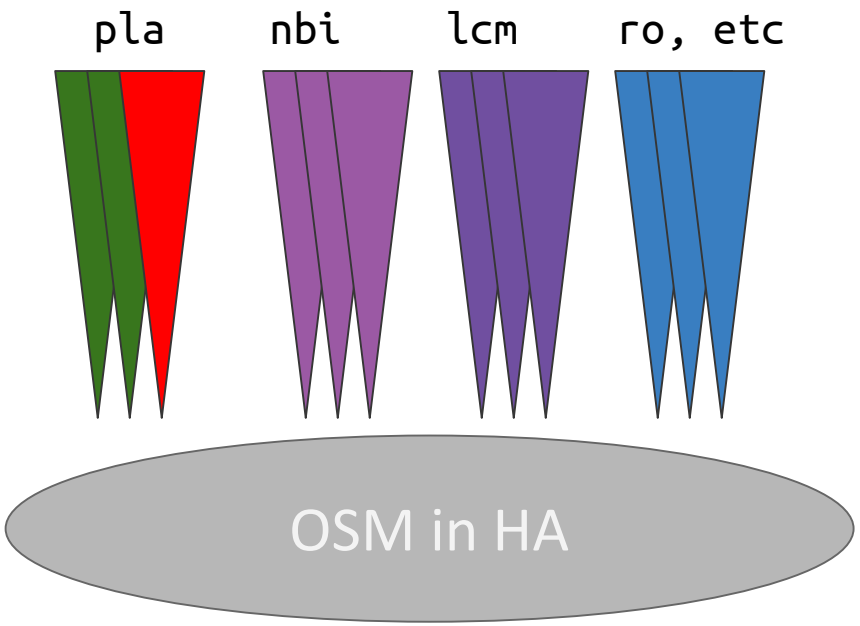
HA built into the upstream Charmed installer

```
$ ./install_osm.sh --charmed --ha
                   --lxd
                   --lxd-cred
                   --vca
                   --k8s
```

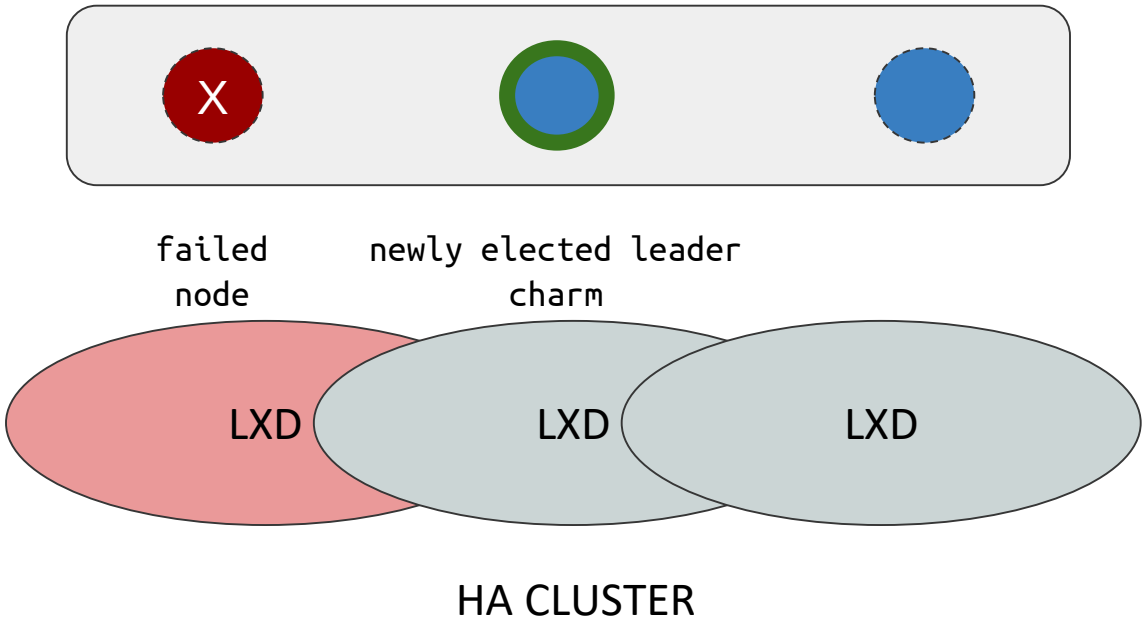
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OSM in High Availability: Demo

OSM POD failure



HA Proxy Charms



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Identity Management & System Quotas





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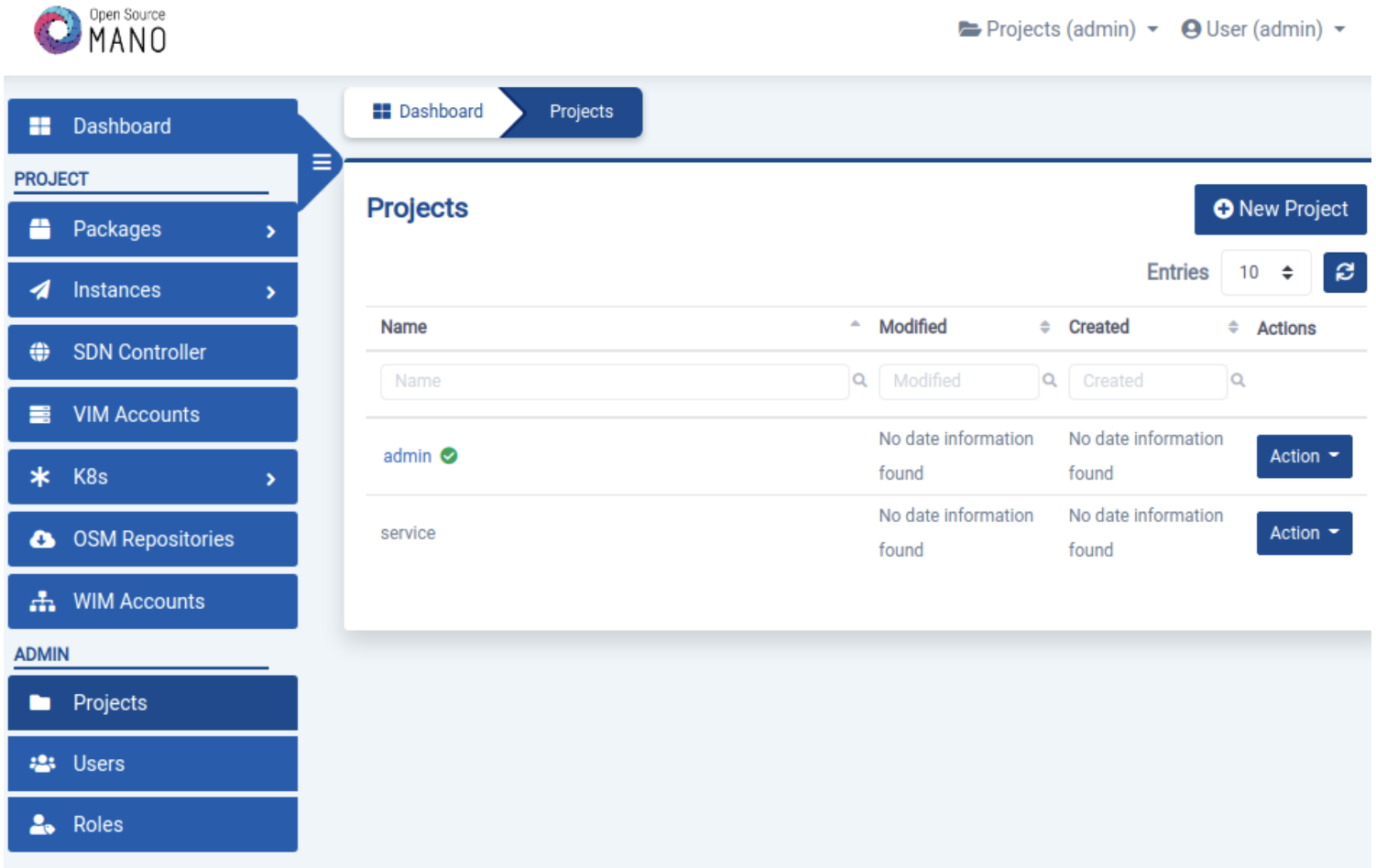
Identity Management

Gives appropriate access to resources to the right people

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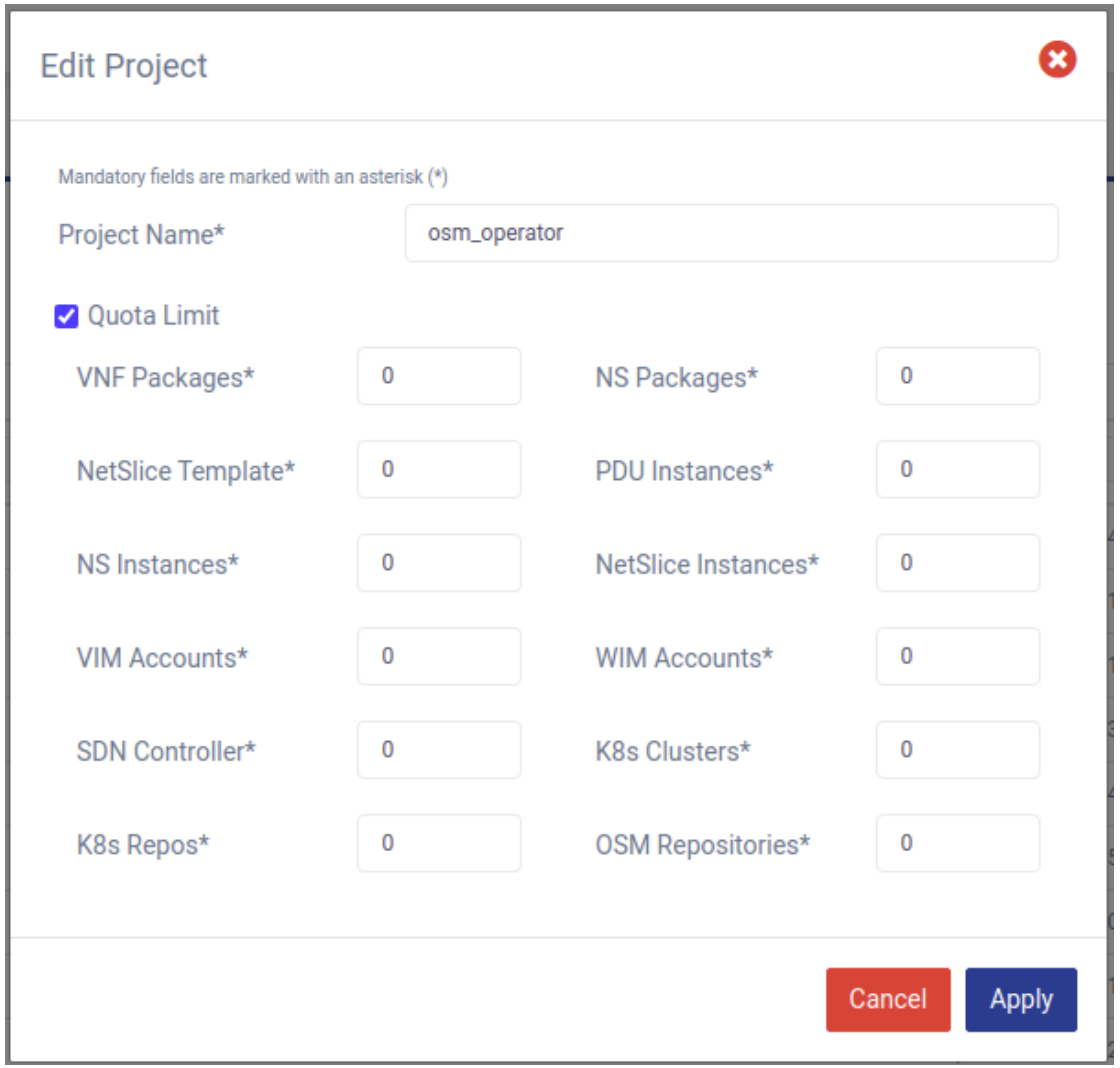
Identity Management

- Roles
  - Permissions
- Projects
  - Organizational units
- Users
  - Associated to different projects with different roles



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System Quotas



Limit the resources that can be allocated in a project

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Hands-on: OSM System Monitoring





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Installation of K8s system monitoring

- Follow the Installation steps

  https://osm.etsi.org/docs/user-guide/01-quickstart.html#installing-osm

- Download and run the installation script

```
wget https://osm-download.etsi.org/ftp/osm-8.0-eight/install_osm.sh
chmod +x install_osm.sh
./install_osm.sh -c k8s --k8s_monitor 2>&1 | tee osm_install_log.txt
```

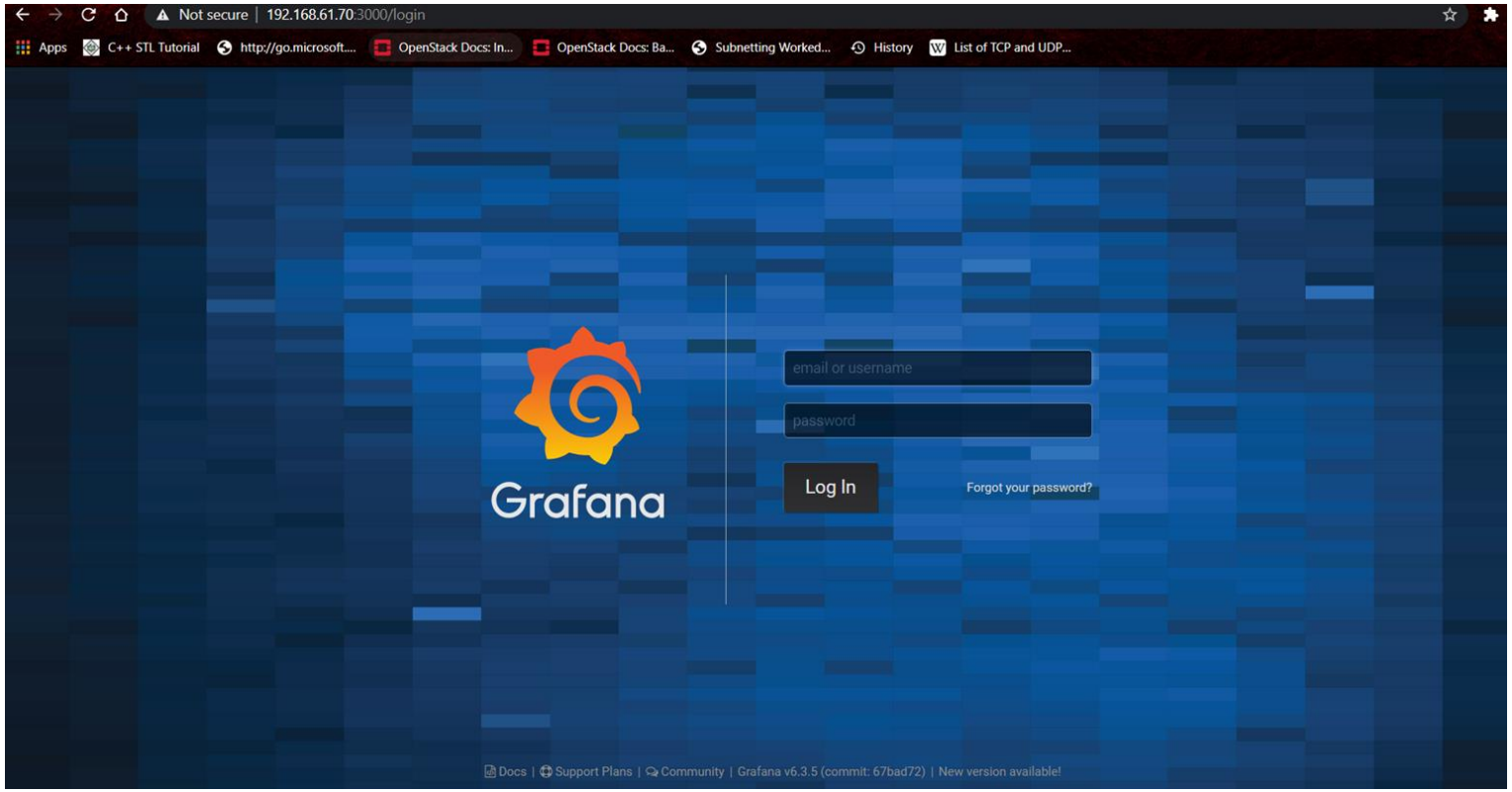
- Verify the installation

```
kubectl get all -n osm
Kubectl get all –n monitoring
```

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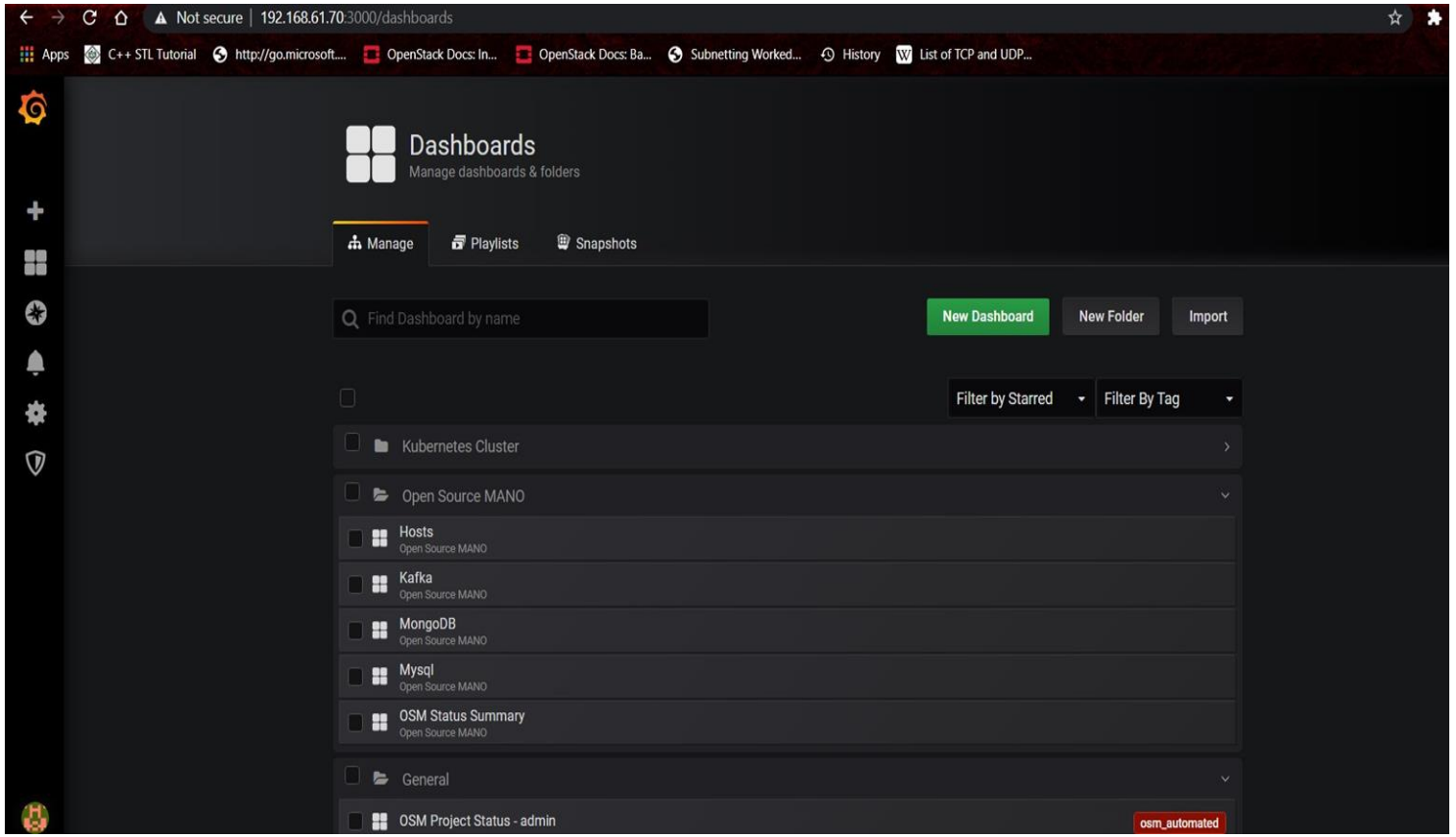
Verifying installation

- http://<osm_host_port>:3000
- Default username/password – **admin/admin**



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Grafana Dashboard Page

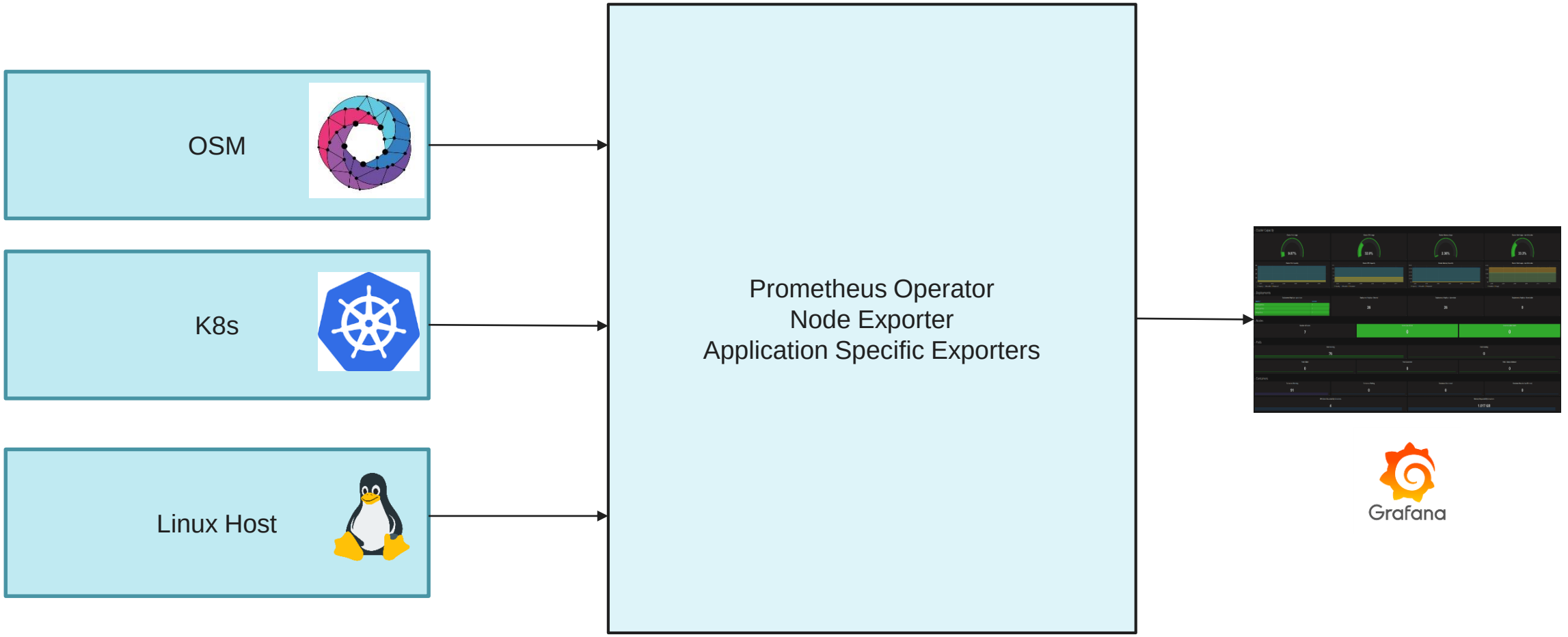


Dashboards are organized into **3 folders**

1. **Kubernetes Cluster** -> K8s Metrics
2. **Opensource MANO** -> Hosts, Kafka, MySQL, MongoDB and OSM pod metrics
3. **General (Default)** -> OSM automated Dashboards

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Monitoring Components



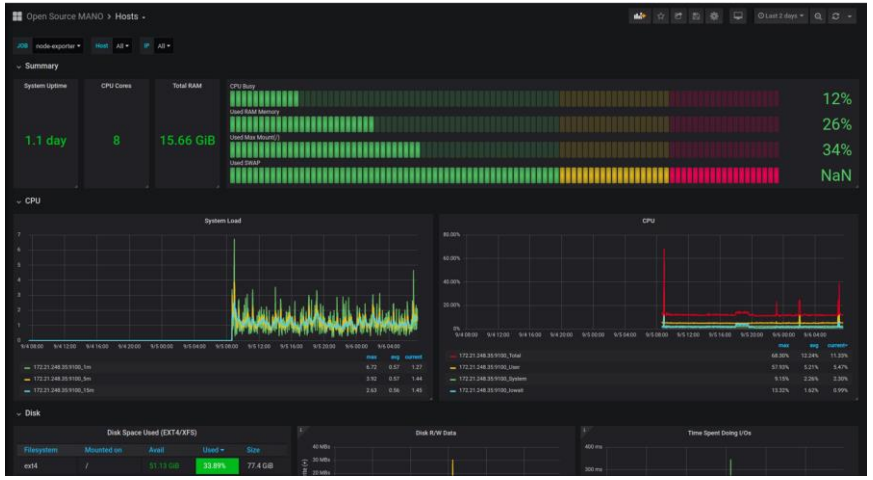
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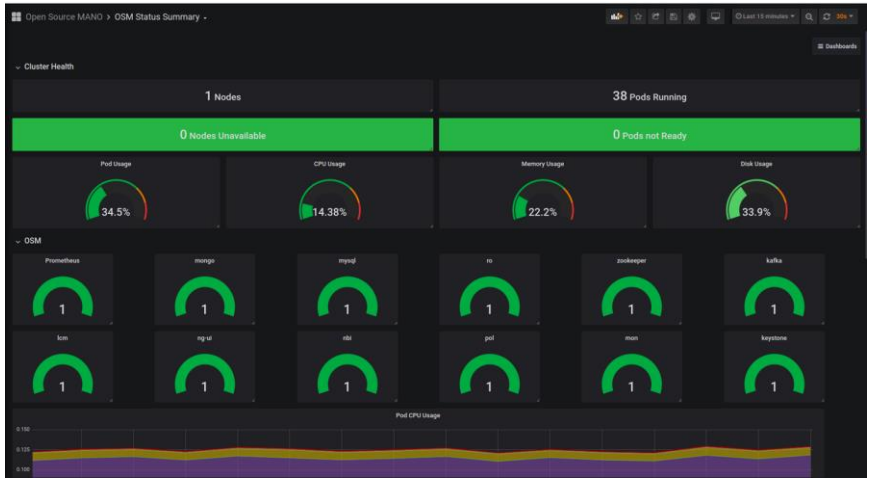
Monitoring Components contd..

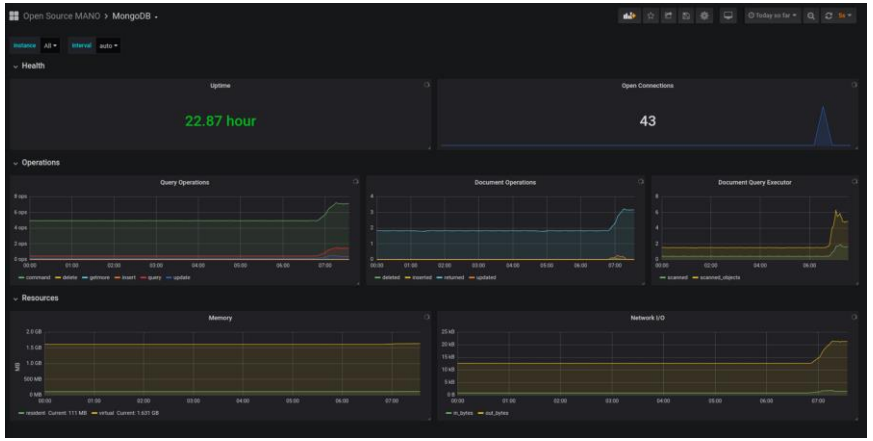
- Monitoring option works only with k8s deployment of OSM
- Monitoring is achieved using Prometheus operator, Node Exporter, Kafka, MongoDB and MySQL (App specific Exporters) to collect metrics and Grafana for data visualization
- Prometheus Operator and exporters are deployed using helm charts in the monitoring namespace

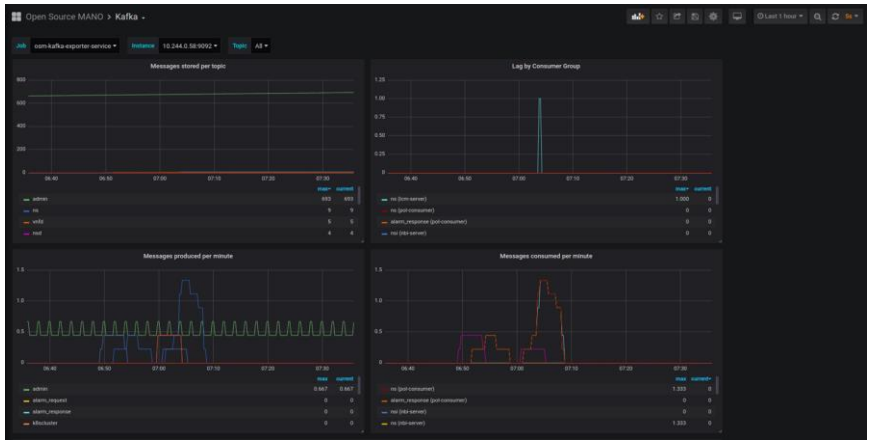
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Comprehensive OSM monitoring



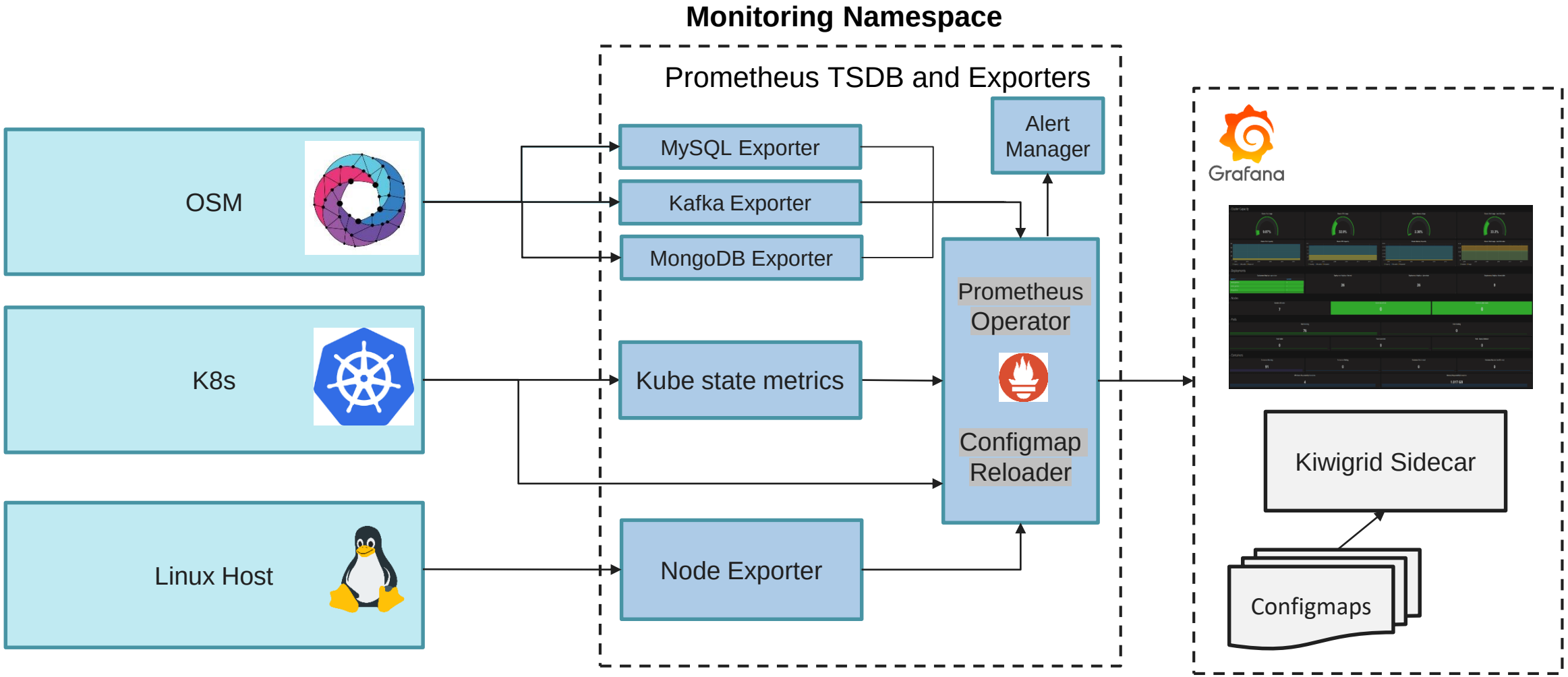






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Deep Dive into Monitoring Components

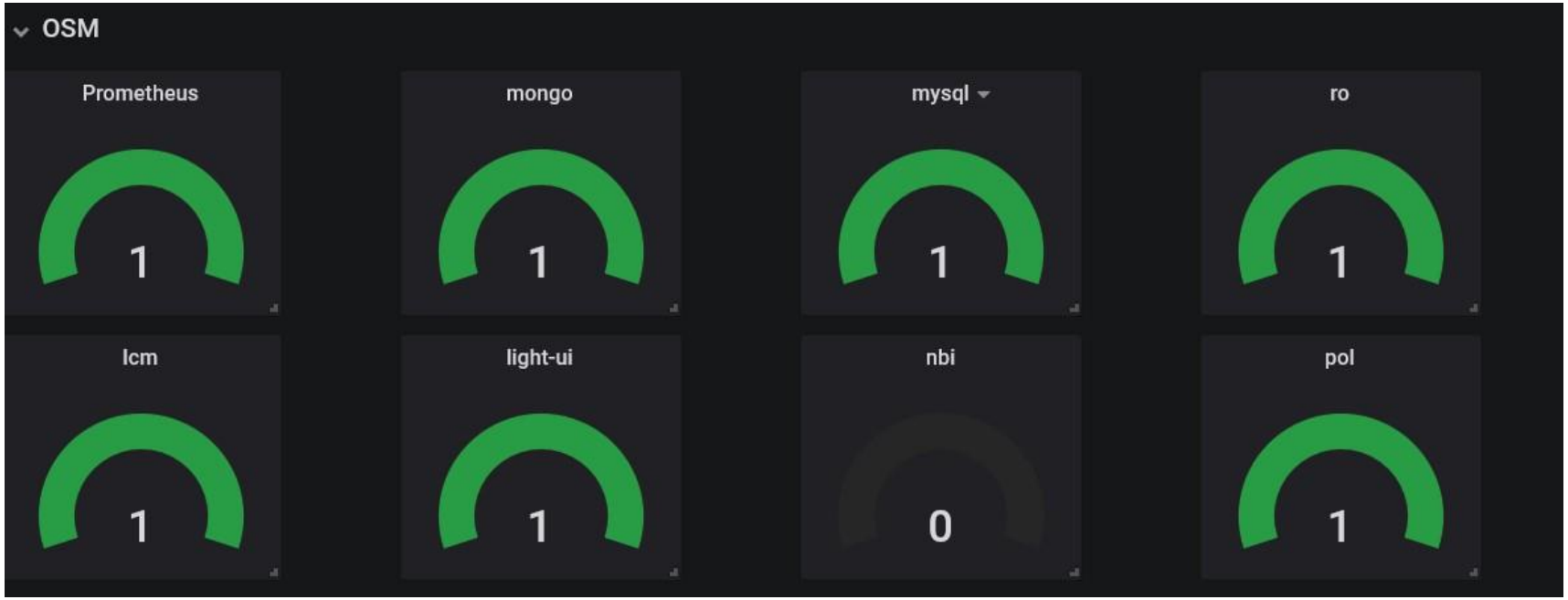


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Let’s play a little

Scale nbi deployment to zero replicas

```
kubectl scale -n osm deployment/nbi --replicas=0
```

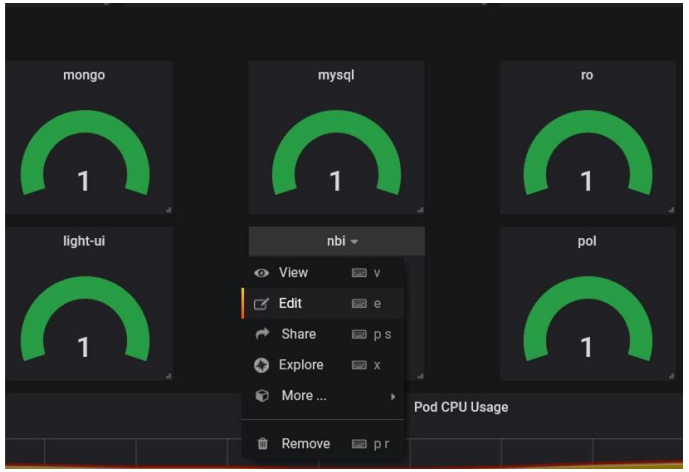


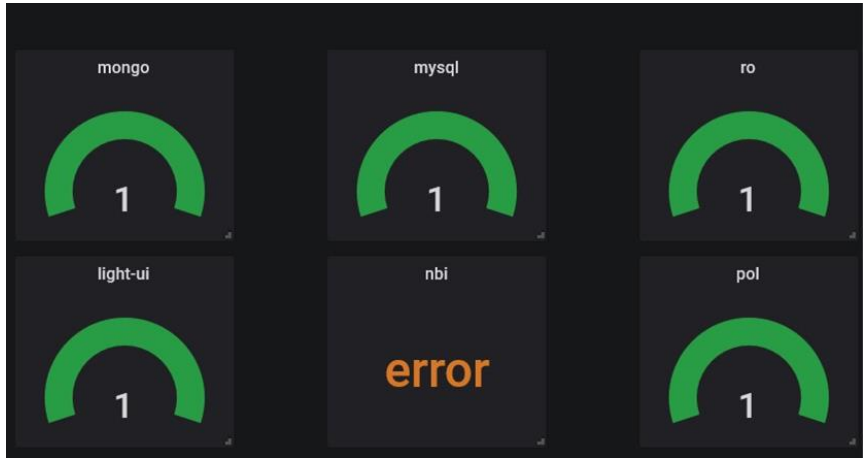
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Modify Dashboards

Go to Edit -> Visualisation

- Coloring: Activate “value”
- Gauge: Deactivate “show”
- Value Mappings: Set value mappings
- null -> error
- 0 -> error
- 1 -> ok





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Make dashboard changes persistent

- Get the summary dashboard configmap definition to your computer

```
scp ubuntu@<ip-addr>:/home/ubuntu/devops/installers/k8s/summary-dashboard.yaml .
```

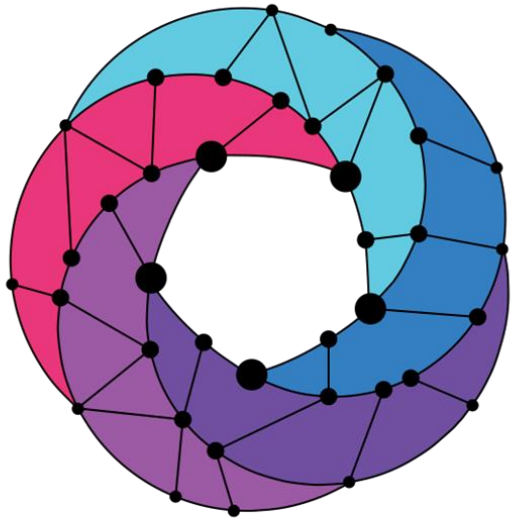
- In grafana, “export” “json”, and copy in the data contents of the .yaml file defining the configmap
- Upload the modified file

-

```
scp summary-dashboard.yaml ubuntu@<ip-addr>:/home/ubuntu/devops/installers/k8s
```

```
kubectl –n monitoring apply –f summary-dashboard.yaml
```

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Find us at:

osm.etsi.org
osm.etsi.org/docs
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