

Hands On “Build a App with OpenShift

Optional subheading

Presenter's Name
Title

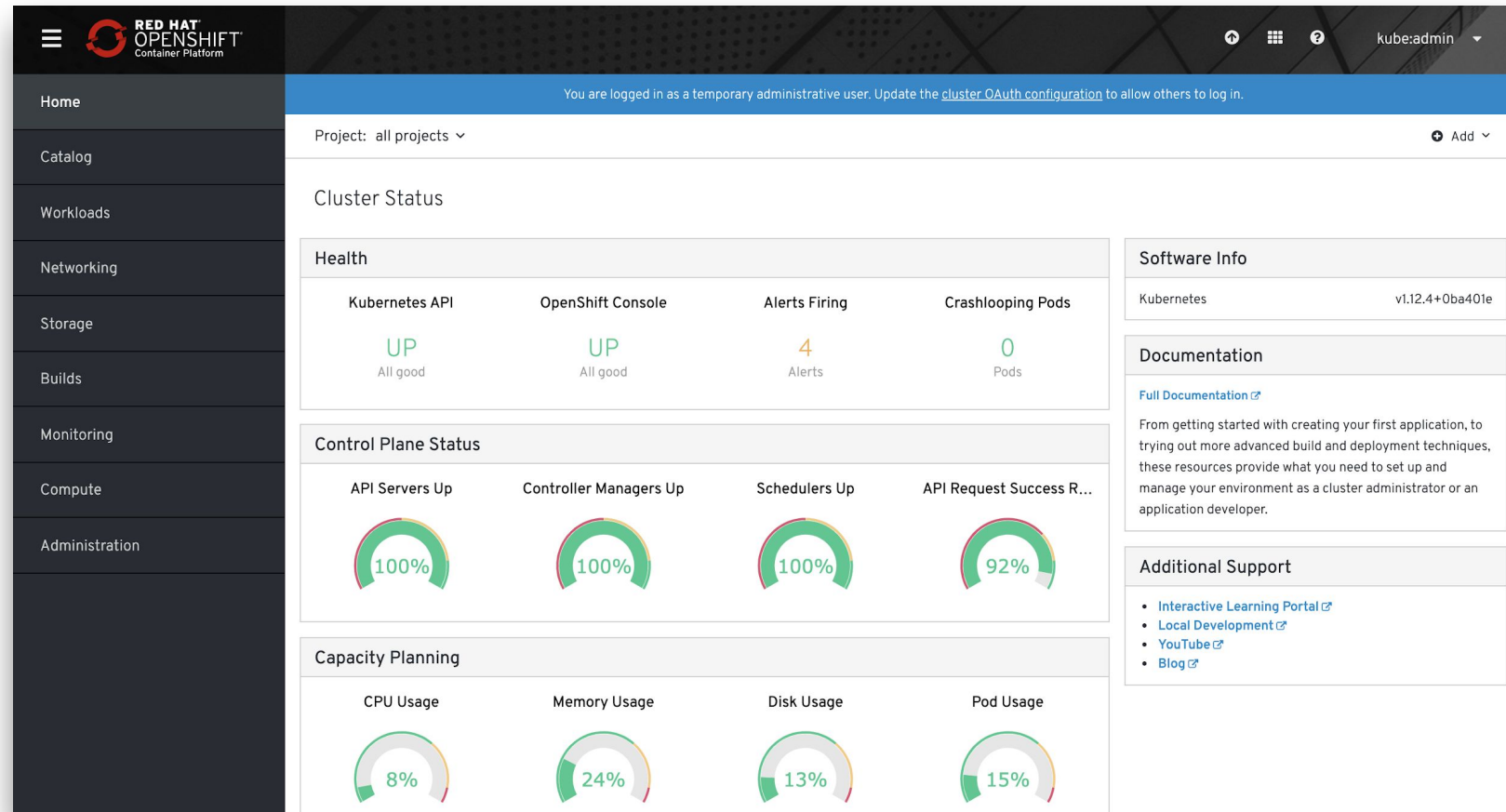
Presenter's Name
Title

Introduction in HandsOn Environment


OpenShift 4 / LAB 1

Introduction to the new web console

- Navigate the interface
- New usermanagement
- Cluster Settings



New User Management

RED HAT
OPENSIFT
Container Platform

Home

Catalog

Workloads

Networking




Storage

Builds

Monitoring

Compute

Administration



kube:admin

You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.

OverviewYAML

OAuth Overview

NAME
cluster

LABELS
No labels

ANNOTATIONS
[0 Annotations](#)

ACCESS TOKEN MAX AGE
24h 0m 0s

CREATED AT
May 28, 4:38 pm

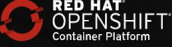
Identity Providers

Identity providers determine how users log into the cluster.

Add

No Identity Providers Found

Cluster Settings



Home

Catalog

Workloads

Networking

Storage

Builds

Monitoring

Compute

Administration

Cluster Settings

Namespaces

Service Accounts

Roles

Role Bindings

Resource Quotas

Limit Ranges

Custom Resource Definitions

You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.

Cluster Settings

OverviewGlobal ConfigurationCluster Operators

Edit the following resources to manage the configuration of your cluster.

CONFIGURATION RESOURCE

Authentication

Edit YAML

ClusterVersion

Edit YAML

Console

Edit YAML

DNS

Edit YAML

Image

Edit YAML

Infrastructure

Edit YAML

Ingress

Edit YAML

Network


Edit YAML

OAuth

Edit YAML

<https://console-openshift-console.apps.cluster-c846.sandbox135.opentlc.com/settings/cluster/globalconfig>

Compute Overview



Home

Catalog

Workloads

Networking

Storage

Builds

Monitoring

Compute

Nodes

Machines

Machine Sets

Machine Configs




Machine Config Pools

Administration

Cluster Settings

Namespaces

Service Accounts



kube:admin



















You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.

Nodes

CompactExpand

Filter Nodes by name...

6 Ready0 Not ReadySelect All Filters6 Items

Node Name ↑	Status	Machine	Node Addresses
 ip-10-0-133-101.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-master-0	Internal IP: 10.0.133.101
 ip-10-0-140-161.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-worker-eu-west-1a-jqww8	Internal IP: 10.0.140.161
 ip-10-0-156-38.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-worker-eu-west-1b-tn8p4	Internal IP: 10.0.156.38
 ip-10-0-159-115.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-master-1	Internal IP: 10.0.159.115
 ip-10-0-167-141.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-master-2	Internal IP: 10.0.167.141
 ip-10-0-171-68.eu-west-1.compute.internal	 Ready	 cluster-c846-zrm6x-worker-eu-west-1c-n8mn2	Internal IP: 10.0.171.68

Lab: „Manage OpenShift with operators”

OpenShift 4 / LAB 2



















Click to add subtitle

- Create a project
- Manage storage
- Manage networking
- Add features from operator hub
- Monitoring
- Logging

You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.

Projects

[Create Project](#)

NAME ↑	STATUS	REQUESTER	LABELS
 default	 Active	No requester	No labels
 istio-operator	 Active	No requester	No labels
 istio-system	 Active	No requester	istio.openshift.com/ig...=ig...
 istio-tutorial	 Active	No requester	No labels
 kube-public	 Active	No requester	No labels
 kube-system	 Active	No requester	No labels
 labguide	 Active	No requester	No labels
 openshift	 Active	No requester	No labels
 openshift-apiserver	 Active	No requester	openshift.io/run-level=1

<https://console-openshift-console.apps.cluster-c846.sandbox135.opentlc.com/#>

Create a project

Create a project

Log in to your OCP Console, open the Home Tab and click on Projects

Click on the create „Projects Button“

Name your Project according to your User Number /testX

Click on „Browse Catalog“

Choose whatever environment you want and push the „Create Application“ Button

Use the prepared Sample Repository by clicking on Try Sample

Checkmark the „Create route“ box

Press the „create“ button

The screenshot shows the Red Hat OpenShift Container Platform console interface. The left sidebar contains a navigation menu with items: Home, Projects, Status, Search, Events, Catalog, Workloads, Networking, Storage, Builds, Monitoring, and Compute. The main content area is titled 'Projects' and features a 'Create Project' button. Below this is a table listing existing projects. The table has columns for NAME, STATUS, REQUESTER, and LABELS. The projects listed are: default, istio-operator, istio-system, istio-tutorial, kube-public, kube-system, labguide, openshift, and openshift-apiserver. The istio-system project has a label 'istio.openshift.com/ig... =ig...'. The openshift-apiserver project has a label 'openshift.io/run-level=1'. A blue banner at the top of the main content area states: 'You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.'

NAME ↑	STATUS	REQUESTER	LABELS
PR default	Active	No requester	No labels
PR istio-operator	Active	No requester	No labels
PR istio-system	Active	No requester	istio.openshift.com/ig... =ig...
PR istio-tutorial	Active	No requester	No labels
PR kube-public	Active	No requester	No labels
PR kube-system	Active	No requester	No labels
PR labguide	Active	No requester	No labels
PR openshift	Active	No requester	No labels
PR openshift-apiserver	Active	No requester	openshift.io/run-level=1

Manage Storage

Manage Storage

Click on „Projects“ under the „Home Tab“

Search for your App (e.g. test1) and click on it

click on the „Actions“ Button right

Choose „add storage“

Create a new claim

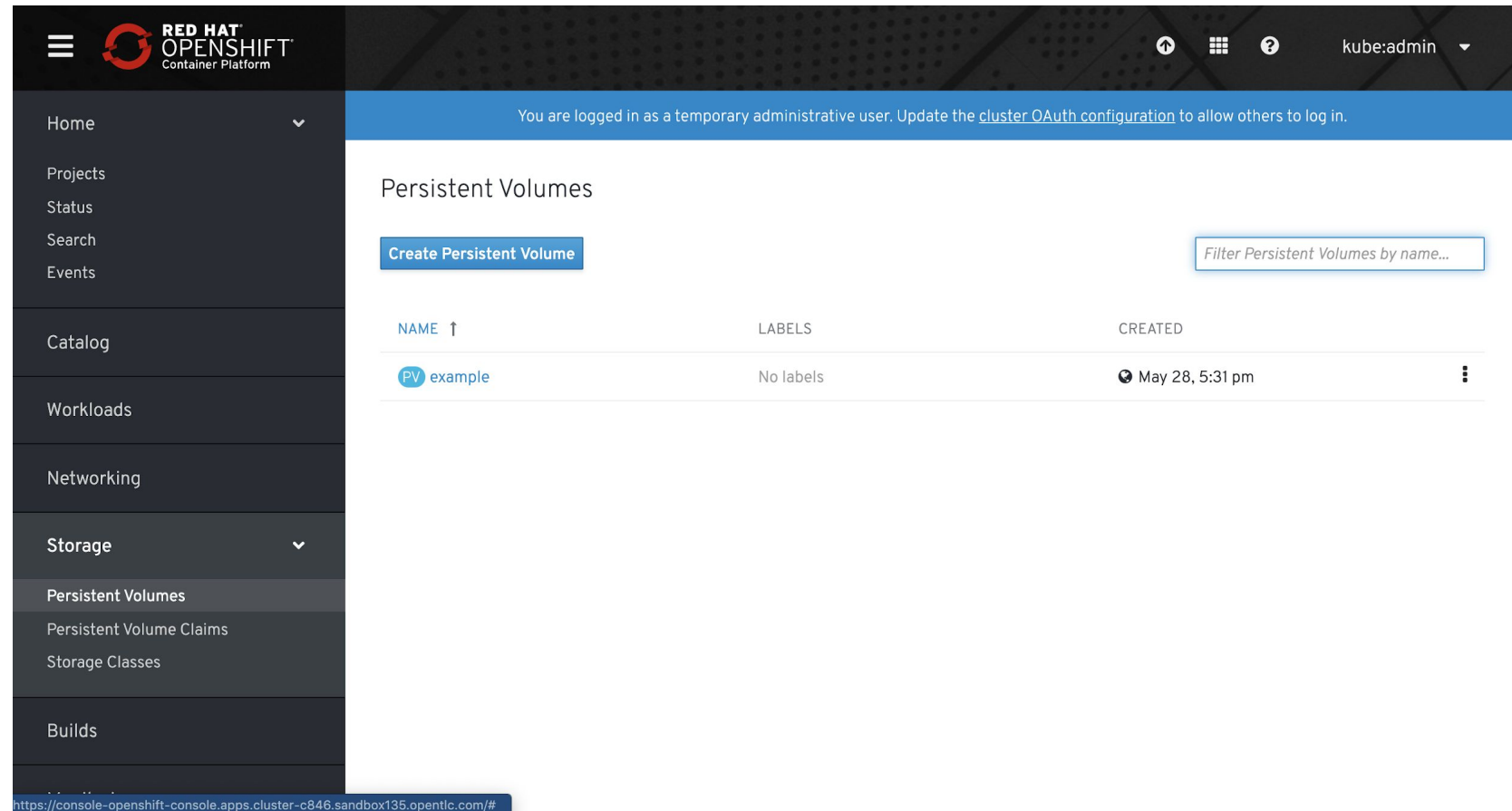
Look at Storage class -> gp2

Name the Claim with „testX“

Single user access

Storage size

Type „/files“ into Mount Path



The screenshot shows the Red Hat OpenShift console interface. The left sidebar contains a navigation menu with options: Home, Projects, Status, Search, Events, Catalog, Workloads, Networking, Storage (expanded), Persistent Volumes, Persistent Volume Claims, Storage Classes, and Builds. The main content area is titled 'Persistent Volumes' and includes a 'Create Persistent Volume' button and a search bar labeled 'Filter Persistent Volumes by name...'. Below this is a table with columns 'NAME', 'LABELS', and 'CREATED'. The table contains one entry: 'PV example' with 'No labels' and a creation time of 'May 28, 5:31 pm'. The URL at the bottom of the console is 'https://console-openshift-console.apps.cluster-c846.sandbox135.opentlc.com/#'.

NAME	LABELS	CREATED
PV example	No labels	May 28, 5:31 pm

Manage Networking

Open the „Networking tab“

Click on Routes

Find the Route for our App

Click on Network policies

Create Network Policy

Discover the Samples on the

RED HAT
OPENSIFT
Container Platform

You are logged in as a temporary administrative user. Update the [cluster OAuth configuration](#) to allow others to log in.

Create Network Policy

Create by manually entering YAML or JSON definitions, or by dragging and dropping a file into the editor.

```
1 apiVersion: networking.k8s.io/v1
2 kind: NetworkPolicy
3 metadata:
4   name: example
5   namespace: default
6 spec:
7   podSelector:
8     matchLabels:
9       role: db
10  ingress:
11    - from:
12      - namespaceSelector:
13          matchLabels:
14            project: myproject
15      - podSelector:
16          matchLabels:
17            role: somerole
18    ports:
19      - protocol: TCP
20        port: 6379
21
```

Network Policy Samples

1. LIMIT access to the current namespace

namespace: target-ns other namespace

Deny traffic from other namespaces while allowing all traffic from the namespaces the Pod is living in.

Create Cancel Download

Try it Download YAML

Add features

Open the Catalog Tab
Click on Operator Hub
Discover the content

Search for the Mongo DB
Operator

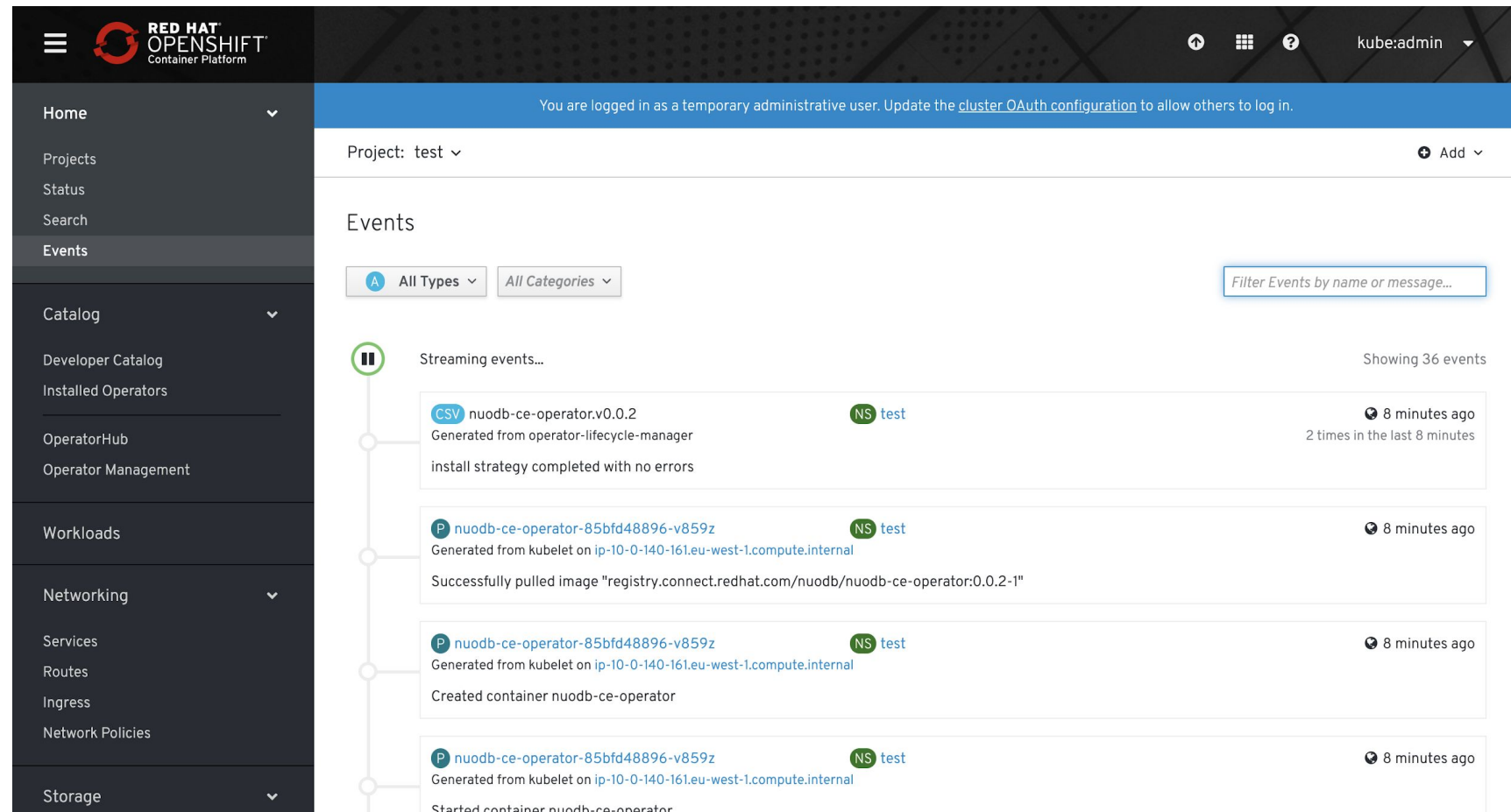
Click on it

And install it to your
project

The screenshot shows the Red Hat OpenShift Container Platform OperatorHub interface. The left sidebar contains a navigation menu with the following items: Events, Catalog (selected), Developer Catalog, Installed Operators, OperatorHub, Operator Management, Workloads, Networking, Services, Routes, Ingress, Network Policies, Storage, Persistent Volumes, and Persistent Volume Claims. The main content area displays the OperatorHub page, which includes a header with the Red Hat OpenShift logo and a navigation bar. Below the header, there is a blue banner indicating the user is logged in as a temporary administrative user. The main content area shows the OperatorHub page with a search bar and a list of operators. The operators are categorized by type, with 'All Items' selected. The list of operators includes AMQ Streams, Anchore Engine Operator, and AppDynamics ClusterAgent. The AMQ Streams operator is highlighted, showing its details: 'AMQ Streams provided by Red Hat, Inc.' and 'Red Hat AMQ Streams is a massively scalable, distributed, and high performance data streami...'. The Anchore Engine Operator is also visible, showing its details: 'Anchore Engine Operator provided by Anchore Inc.' and 'Anchore Engine - container image scanning service for policy-based security, best-practice and compliance'. The AppDynamics ClusterAgent is also visible, showing its details: 'AppDynamics ClusterAgent provided by AppDynamics LLC' and 'End to end monitoring of applications on Kubernetes and OpenShift clusters with AppDynamics.' The URL at the bottom of the browser window is 'https://console-openshift-console.apps.cluster-c846.sandbox135.opentlc.com/operatorhub'.

Logging

Open the Monitoring tab
and have a look at the
Alerts



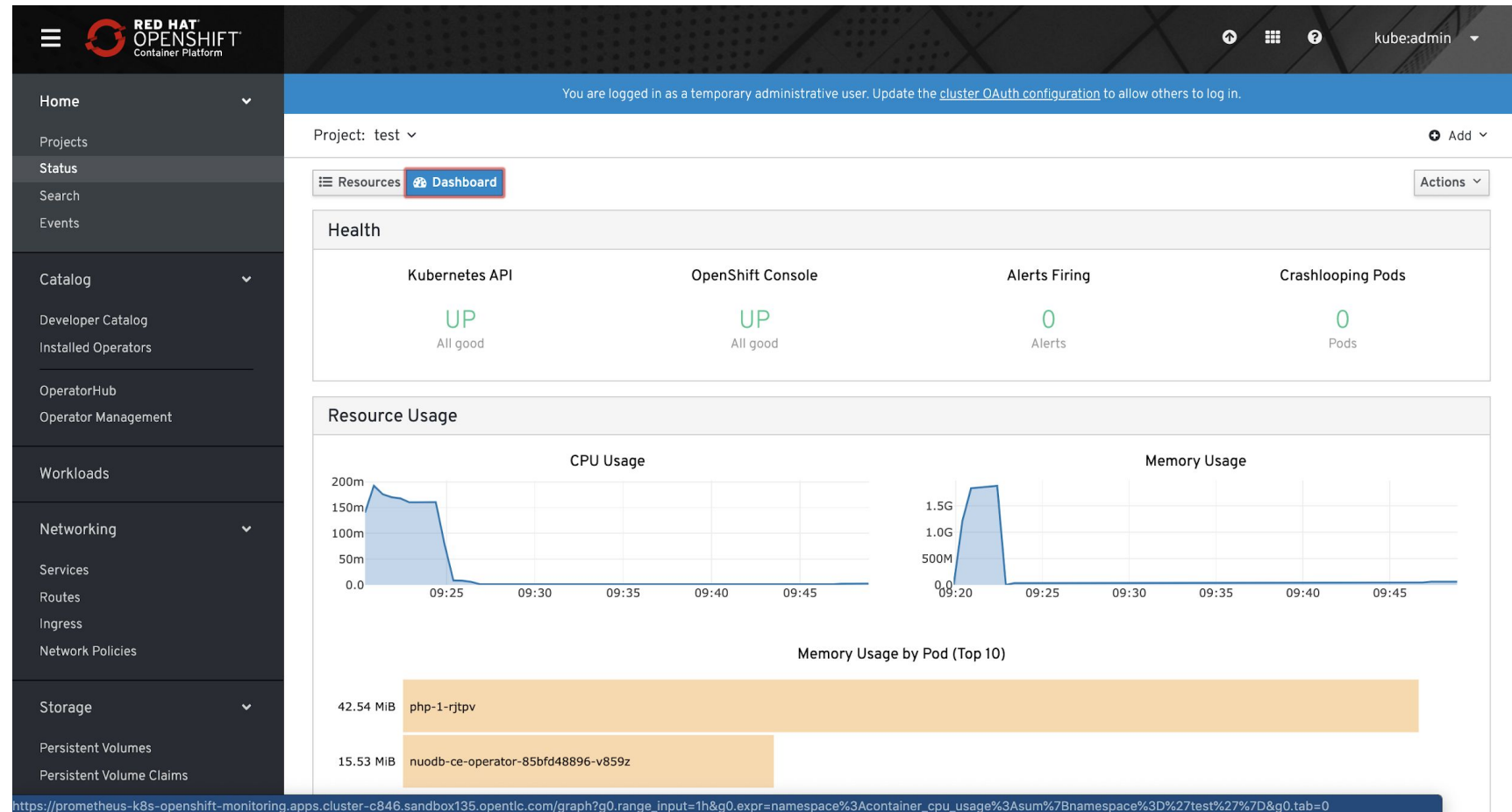
The screenshot displays the Red Hat OpenShift Container Platform interface. The left sidebar contains navigation links: Home, Projects, Status, Search, Events (selected), Catalog, Developer Catalog, Installed Operators, OperatorHub, Operator Management, Workloads, Networking, Services, Routes, Ingress, Network Policies, and Storage. The main content area shows the 'Events' page for the 'test' project. It includes a status bar indicating a temporary administrative user, a project dropdown, and filters for 'All Types' and 'All Categories'. A search bar is available for filtering events by name or message. The events list shows four entries, all generated 8 minutes ago, related to the 'nuodb-ce-operator' installation and container management.

Event Type	Source	Message	Namespace	Time
CSV	nuodb-ce-operator.v0.0.2	Generated from operator-lifecycle-manager install strategy completed with no errors	test	8 minutes ago
P	nuodb-ce-operator-85bfd48896-v859z	Generated from kubelet on ip-10-0-140-161.eu-west-1.compute.internal Successfully pulled image "registry.connect.redhat.com/nuodb/nuodb-ce-operator:0.0.2-1"	test	8 minutes ago
P	nuodb-ce-operator-85bfd48896-v859z	Generated from kubelet on ip-10-0-140-161.eu-west-1.compute.internal Created container nuodb-ce-operator	test	8 minutes ago
P	nuodb-ce-operator-85bfd48896-v859z	Generated from kubelet on ip-10-0-140-161.eu-west-1.compute.internal Started container nuodb-ce-operator	test	8 minutes ago

Monitoring 1/2

Open the Monitoring tab
and have a look at the
Alerts

Click on the „metric“
and log in to graphana
with „ OpenShift“ and
discover the option there



Monitoring 2/2

Grafana

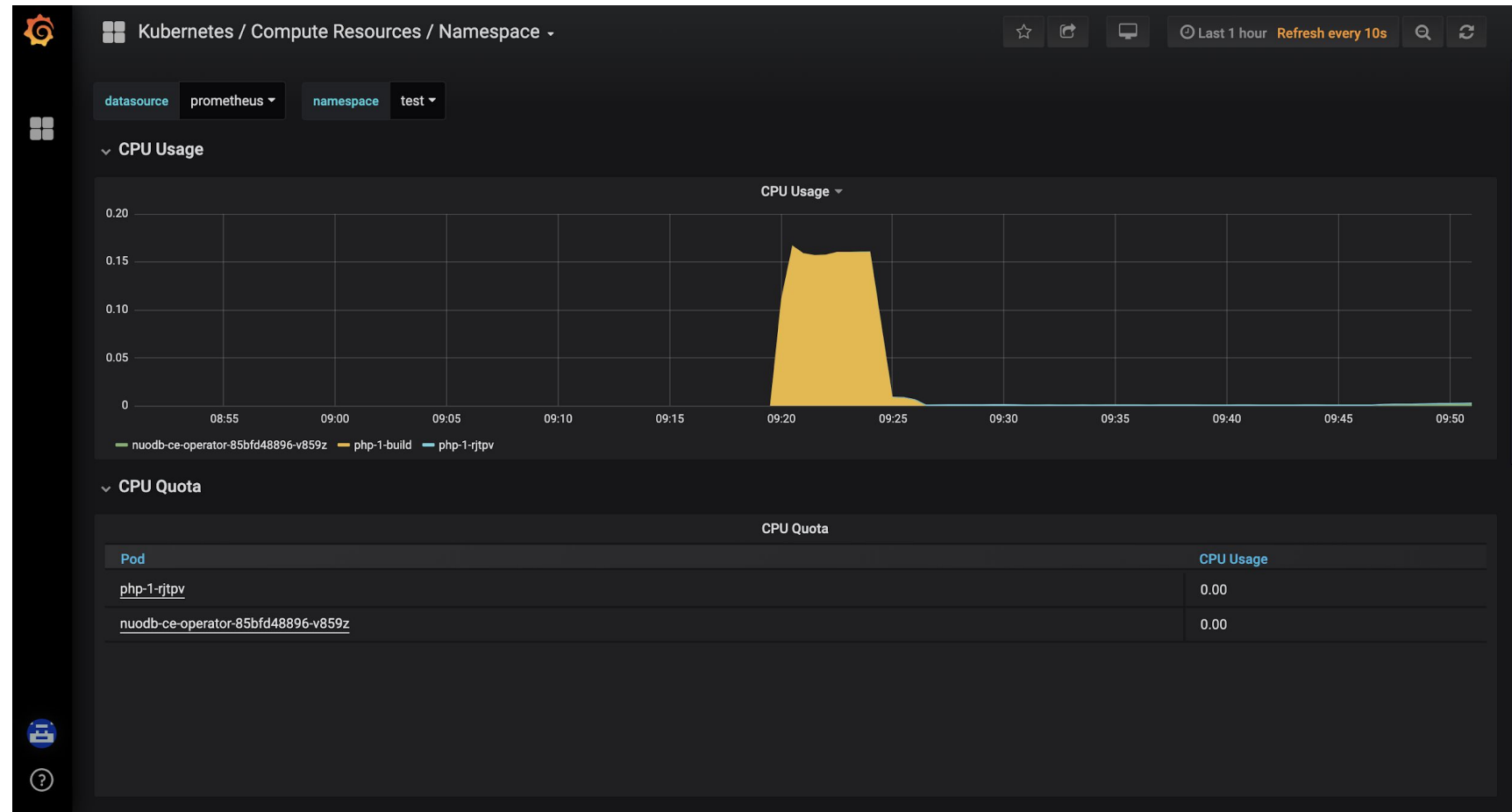
Finally open
„Dashboards“

Accept the insecure
connection

Log in with OpenShift
again

Allow selected
permissions

And explore the cluster
with Grafana



Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.



linkedin.com/company/red-hat



youtube.com/user/RedHatVideos



facebook.com/redhatinc



twitter.com/RedHat