



# Module Checklist Monitoring with Prometheus

By Techworld with Nana

# Video Overview



- ★ Introduction to Monitoring with Prometheus
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- ★ Collect & Expose Metrics with Prometheus Client Library (Monitor own App - Part 1)
- ★ Scrape Own Application Metrics & Configure Own Grafana Dashboard (Monitor own App - Part 2)



# Video Overview

Git Repos used in the module	
Prometheus Configuration Files	<a href="https://gitlab.com/devops-bootcamp3/prometheus-monitoring">https://gitlab.com/devops-bootcamp3/prometheus-monitoring</a>
Nodejs Application	<a href="https://gitlab.com/devops-bootcamp3/nodejs-app-monitoring">https://gitlab.com/devops-bootcamp3/nodejs-app-monitoring</a>

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## Introduction to Monitoring with Prometheus

- ☐ Watched video

### Useful Links:

- Official Exporters List: <https://prometheus.io/docs/instrumenting/exporters/>
- Client Libraries: <https://prometheus.io/docs/instrumenting/clientlibs/>

## Install Prometheus Stack in Kubernetes

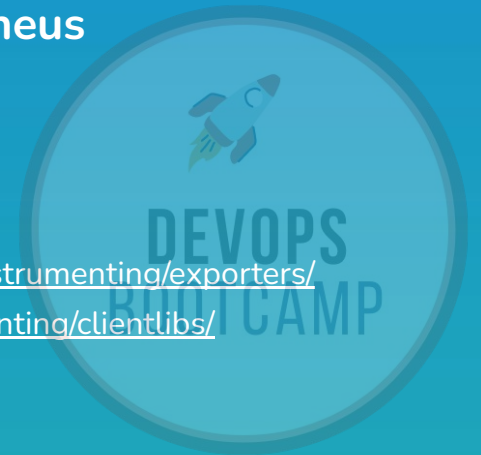
- ☐ Watched video
- ☐ **Demo executed:**
  - ☐ Create EKS cluster using eksctl
  - ☐ Deploy Microservices Application
  - ☐ Explore deployed Prometheus Stack

### Useful Links:

- Microservices App Git Repo: <https://github.com/nanuchi/microservices-demo>
- Configuration Files for Microservices App:  
<https://gitlab.com/nanuchi/online-shop-microservices-deployment>
- Prometheus Helm Chart:  
<https://github.com/prometheus-community/helm-charts>

## Data Visualization with Prometheus UI

- ☐ Watched video
- ☐ **Demo executed**
  - ☐ Access Prometheus UI and explore endpoints



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## Introduction to Grafana

- ☒ Watched video
- ☒ Demo executed
  - ☒ Access Grafana
  - ☒ Test CPU Spike

### Useful Links:

- Official Doc of Grafana Dashboards:  
<https://grafana.com/docs/grafana/latest/dashboards/>



## Alert Rules in Prometheus

- ☒ Watched video

### Useful Links:

- Alerting Overview: <https://prometheus.io/docs/alerting/latest/overview/>

## Create own Alert Rules - Part 1

- ☒ Watched video
- ☒ Demo executed - Create Alerting Rule Configuration

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## Create own Alert Rules - Part 2

- ☐ Watched video
- ☒ **Demo executed**
  - ☐ Created PrometheusRule component with 1st Alert Rule
  - ☐ Wrote 2nd Alert Rule
  - ☐ Applied Alert Rules

### Useful Links:

- PrometheusRule Docs:  
[https://docs.openshift.com/container-platform/4.7/rest\\_api/monitoring\\_apis/prometheusrule-monitoring-coreos-com-v1.html](https://docs.openshift.com/container-platform/4.7/rest_api/monitoring_apis/prometheusrule-monitoring-coreos-com-v1.html)

## Create own Alert Rules - Part 3

- ☐ Watched video
- ☒ **Demo executed - Test Alert Rule**

## Introduction to Alertmanager

- ☐ Watched video

### Useful Links:

- Official Doc: <https://prometheus.io/docs/alerting/latest/alertmanager/>
- Configuration: <https://prometheus.io/docs/alerting/latest/configuration>



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## Configure Alertmanager with Email Receiver

- ☐ Watched video
- ☐ Demo executed - Configure Email Notification

### Useful Links:

- AlertmanagerConfig:  
[https://docs.openshift.com/container-platform/4.7/rest\\_api/monitoring\\_apis/alertmanagerconfig-monitoring-coreos-com-v1alpha1.html](https://docs.openshift.com/container-platform/4.7/rest_api/monitoring_apis/alertmanagerconfig-monitoring-coreos-com-v1alpha1.html)



## Trigger Alerts for Email Receiver

- ☐ Watched video
- ☐ Demo executed - Test Email Notification

## Monitor Third-Party Applications

- ☐ Watched video

### Useful Links:

- Official Docs: <https://prometheus.io/docs/instrumenting/exporters/>

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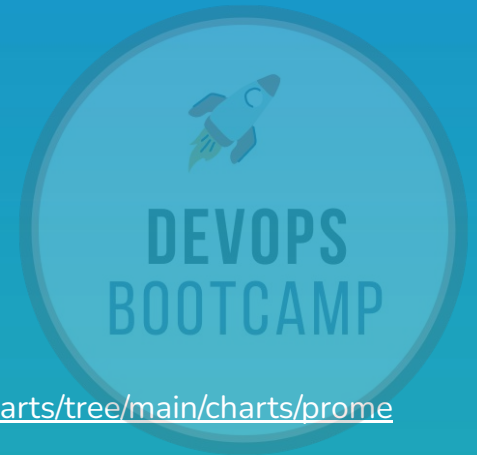


## Deploy Redis Exporter

- ☐ Watched video
- ☐ Demo executed

### Useful Links:

- Redis Exporter Helm Chart:  
<https://github.com/prometheus-community/helm-charts/tree/main/charts/prometheus-redis-exporter>



## Alert Rules & Grafana Dashboard for Redis

- ☐ Watched video
- ☐ Demo executed
  - ☐ Create Prometheus Rules for Redis
  - ☐ Apply Redis Alert Rules
  - ☐ Trigger RedisDown Alert
  - ☐ Import existing Dashboard in Grafana

### Useful Links:

- Collection of Prometheus Alert Rules:  
<https://awesome-prometheus-alerts.grep.to/>
- Grafana Dashboards: <https://grafana.com/grafana/dashboards>
- Redis Dashboard: <https://grafana.com/grafana/dashboards/763>



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## Collect & Expose Metrics with Prometheus Client Library (Monitor own App - Part 1)



- ☐ Watched video
- ☐ **Demo executed - Deploy app into K8s cluster**
  - ☐ Built Docker Image
  - ☐ Pushed to Docker Repository
  - ☐ Created Deployment & Service Configuration
  - ☐ Created Secret component - type: docker-registry
  - ☐ Deployed App into K8s cluster

### Useful Links:

- Official Client Libraries: <https://prometheus.io/docs/instrumenting/clientlibs/>
- Nodejs App Git Repo: <https://gitlab.com/devops-bootcamp3/nodejs-app-monitoring>
- Nodejs Prometheus Client:: <https://www.npmjs.com/package/prom-client>

## Scrape Own Application Metrics and Configure Own Grafana Dashboard (Monitor own App - Part 2)

- ☐ Watched video
- ☐ **Demo executed**
  - ☐ Deployed ServiceMonitor component
  - ☐ Created Grafana Dashboard

### Useful Links:

- Rate function: <https://prometheus.io/docs/prometheus/latest/querying/functions/#rate>