Module Checklist
Monitoring with Prometheus

By TechWorld with Nana

Video Overview

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Video Overview

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

Check your progress... 1/6

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

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

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

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