

Prometheus and Kubernetes

Table of Contents

Training Overview

- Introduction
- Prerequisites

Prometheus and Kubernetes Overview

- Historical Relationship
- Monitoring Architecture

Prometheus Operator Introduction

- Prometheus Operator Motivation
- Operator Architecture

Installing the Prometheus Operator

- Downloading kube-prometheus
- Deploying the Operator
- Verifying the Deployment

A Look Under the Hood

- From Custom Resource to Statefulset
- Discovering and Relabeling Targets

Monitoring Service Endpoints

- Overview
- Deploying the Demo Service
- Monitoring the Demo Service

Monitoring Container Metrics

- Collecting Container Metrics
- Using Container Metrics

Monitoring Resource States

- Overview
- Using Resource State Metrics

Monitoring Cluster Components

- Overview
- Kubernetes API Server Metrics
- Kubelet Metrics

Alerting

- Overview
- Configuring Rules
- Deploying and Using Alertmanager
- Configuring Alertmanager

Operational Concerns

- Debugging the Operator
- Persistence
- Running In or Outside a Cluster
- Horizontal Pod Autoscaler Integration