Prometheus: Praxiskurs Monitoring (XAM-PROM-1)

ID XAM-PROM-1 **Prix** sur demande **Durée** 3 jours

A qui s'adresse cette formation

The training is aimed at developers and administrators as well as architects and decision-makers with a high level of technical interest.

Pré-requis

The participants have to master the basics of Linux system administration. They need to be able to proficiently use the command line, edit files on the command line, and manage system services. In addition, the participants need basic knowledge about the system properties and services to be monitored. Basic knowledge of Docker or Podman as well as Kubernetes is required for parts of the course.

Objectifs

Participants learn how to monitor applications, services and infrastructure with Prometheus. This includes installing and configuring various exporters, service discovery and collecting metrics with Prometheus, as well as querying metrics via PromQL. In addition, the course covers creating dashboards with Grafana, defining alerting rules and configuring AlertManager, as well as an overview of Prometheus clustering, including Federation and Thanos.

Contenu

Introduction to monitoring with Prometheus

- Goals and methods of monitoring
- Architecture and components of Prometheus
- Selection of systems and properties to be monitored

Exporters

- Node exporter for monitoring individual systems
- Blackbox exporter for monitoring external systems
- Grok exporter and mtail for log file monitoring
- Push gateway for monitoring completed processes

- cAdvisor for monitoring containers
- kube-state-metrics for Kubernetes monitoring

Service discovery

- Static configuration
- File-based service discovery
- Service discovery via DNS
- Service discovery in IaaS clouds
- Service discovery in Kubernetes
- Relabeling, especially in IaaS clouds and Kubernetes

PromQL

- Metrics and labels
- Data types and their properties and functions
- Vector types and vector matching
- Recording rules and alerting rules

Alerting

- AlertManager
- Configuration of alerts
- Alert labels and alert routing
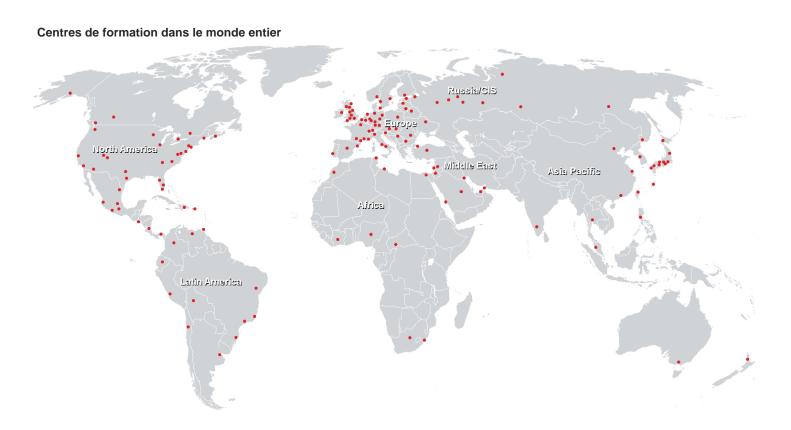
Dashboards and Grafana

- Prometheus Consoles
- Grafana

Operational aspects

- Meta monitoring
- Capacity planning
- Scaling and high availability
- Distributed Prometheus and Federation
- Hints for instrumenting custom applications
- Overview on Thanos

Best practices

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Centres de formation dans le monde entier

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