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Sign up

Grafana Labs training

3 days (21 hours)

Presentation

Our Grafana Labs training course will teach you to master and understand Grafana . Deepen your knowledge and skills in large-scale data management and monitoring.

During the Grafana labs training course, we'll cover best practices for dashboard creation, optimization and performance, and integration with other services such as Prometheus and Loki.

Learn how to analyze performance with Grafana Labs and use it optimally through monitoring.

By the end of our training course, you'll have mastered data visualization and analysis, infrastructure management and monitoring.

As with all our training courses, we use the latest versions of Grafana V.11.5.

Objectives

- Master the creation of dynamic dashboards
- Configure and integrate multiple data sources
- Develop expertise in log management
- Security and access management
- Optimizing dashboard performance

Target audience

- DevOps
- Systems administrators
- Cloud engineers
- Project Managers

Prerequisites

- Knowledge of databases
- Familiarity with SQL

Oracle Exedata Training Program

Introduction to Grafana Labs

- What is Grafana Labs?
- Installing and configuring Grafana
- Presentation of compatible data
  - Prometheus
  - MySQL
  - Elasticsearch
- Dashboards
- Alerts and integrations

Customizing Grafana dashboards

- Grafana display type
  - Graphs
  - Heat maps
  - Diagrams
- Variables for dynamic dashboards
- Customizing tables
- Tables with panels and groups

Alert management

- Configure metric-based alerts
- Integration of external tools
  - Slack
  - PagerDuty
  - Email
- Creation of complex rules (conditional alert)
- Alert tracking and incident management

Integration with Prometheus

- Add Prometheus as a data source in Grafana
- PromQL queries for advanced visualization
- System monitoring with Prometheus dashboards
- Setting up extensions
- Dashboard as code

Logs with Loki

- Introduction to Loki: principles and architecture
- Configuring and integrating Loki in Grafana
- Log filtering with LogQL
- Create dashboards with metrics and logs
- Troubleshooting an application using logs

Distributed tracing with Tempo

- Tempo configuration and integration into Grafana
- Distributed tracing
- Trace analysis for debugging and optimization
- Linking traces to logs and metrics
- Diagnosing a complex performance problem

Security and Access Management

- Setting up secure authentication
  - LDAP
  - OAuth
- Access management for dashboards and sensitive data
- Secure alerts and notifications
- Permissions in Grafana

Optimization and Performance in Grafana

- Query optimization for fast dashboards
- Large-scale management of complex dashboards
- Reducing resource use
- Reduce dashboard response time

High availability with Mimir

- Imperative vs. declarative
- Grafana Mimir component
- Dashboards
- Recording rules
- Warning rules

Profiling with Pyroscope

- Continuous profiling
- Profiling type
- Flame Graph
- Profiling and tracing

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives with regard to the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.