



# **Prometheus with Grafana**

## About DevOpsSchool

DevOpsSchool is a unit of "Cotocus PVT Itd" and a leading platform which helps IT organizations and professionals to learn all the emerging technologies and trend which helps them to learn and embrace all the skills, intelligence, innovation and transformation which requires to achieve the end result, quickly and efficiently. We provide over 40 specialized programs on DevOps, Cloud, Containers, Security, AI, ML and on Big data that are focused on industry requirement and each curriculum is developed and delivered by leading experts in each domain and aligned with the industry standards.

# About Course

Prometheus is a popular open source monitoring and alerting tool with focus on reliability and simplicity. The software was developed because of the need to monitor various microservices that might be running in your system. Prometheus is written in the Go language, and it ships with easily divided binaries that one can use to get it running as quickly as possible.

Grafana is an open source platform for data visualization, monitoring and analysis. Many company uses this tool, which is integrated with Graylog, to monitor the technical condition of software systems that we use internally or build for our customers.

DevOpsSchool put every steps forward to instruct participants from basic to Advance level course of Prometheus. We have well experienced trainers and Instructors who holds recognition in IT industry. Our mentors provide support to candidates while learning and through training.



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Duration	20 Hours	
Mode	Online (Instructor-led, live & Interactive)	
Projects (Real time scenario based)	1	



FEATURES	DEVOPSSCHOOL	OTHERS
Faculty Profile Check	~	×
Lifetime Technical Support	✓	×
Lifetime LMS access	✓	×
Top 25 Tools	✓	×
Interviews Kit	~	×
Training Notes	~	×
Step by Step Web Based Tutorials	~	×
Training Slides	~	×
Training + Additional Videos	~	×



# AGENDA OF THE PROMETHEUS WITH GRAFANA

# **Introduction - Prometheus**

- Introduction to Prometheus
- Prometheus installation
- Grafana with Prometheus Installation

#### Monitoring

- Introduction to Monitoring
- Client Libraries
- Pushing Metrics
- Querying
- Service Discovery
- Exporters

# Alerting

- Introduction to Alerting
- Setting up Alerts

#### Internals

- Prometheus Storage
- Prometheus Security
- TLS & Authentication on Prometheus Server
- Mutual TLS for Prometheus Targets

# **Getting Started - NestJS**

- Introduction to NestJS
- Installing the NestJS CLI (command-line interface)
- What's inside a NestJS Application
- What we'll be building in this course
- Beginning your NestJS Journey



#### **Use Cases**

- Monitoring a web application
- Calculating Apdex score
- Cloudwatch Exporter
- Grafana Provisioning
- Consul Integration with Prometheus
- EC2 Auto Discovery

#### **Introduction - Grafana**

- Introduction and Overview
- What is Grafana?
- Why do we need it?
- Advantage and Disadvantage of Grafana
- Grafana Comparing with other tools
- How Grafana works!
- Grafana Architecture

#### Installation

- Requirements
- Install on Debian/Ubuntu
- Install on RPM-based Linux
- Install on Windows
- Install on macOS
- Run Grafana Docker image
- Upgrade Grafana

# Getting Started with Grafana

- With Grafana
- With Grafana and Prometheus
- With Grafana and MS SQL Server
- Time Series
- Time Series Dimensions
- Histograms and Heatmaps
- Glossary

# Data sources in Grafana

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- PostgreSQL
- Prometheus
- Add data source
- AWS CloudWatch
- Cloud Monitoring
- Azure Monitor
- Elasticsearch
- Graphite
- InfluxDB
- Jaeger
- Loki
- Tempo
- Microsoft SQL Server
- MySQL
- OpenTSDB
- TestData
- Zipkin

## **Panels in Grafana**

- Add a Panel
- Panel Editor
- Calculations list
- Queries
- Thresholds
- Transformations
- Share query results
- Inspect a panel
- Field options and overrides
- Visualizations

# Dashboards & Explore in Grafana

- Annotations
- Dashboard Folders
- Playlist
- Search
- Keyboard shortcuts
- Time range controls
- Reporting
- Dashboard Version History
- Share dashboard
- Share panel
- Export and import
- JSON model
- Scripted dashboards

#### Alerts in Grafana

- Alert notifications
- Create alerts
- Pause alert rule
- View alerts
- Troubleshoot alerts

#### Authentication in Grafana

- Overview
- Grafana Authentication
- Auth Proxy
- LDAP Authentication
- Enhanced LDAP Integration
- OAuth authentication
- Google OAuth2 Authentication
- Azure AD OAuth2 authentication
- GitHub OAuth2 Authentication
- GitLab OAuth2 Authentication
- Okta OAuth2 authentication
- SAML Authentication
- Team Sync





#### Administration in Grafana

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#### Linking

- Linking overview
- Dashboard links
- Panel links
- URL variables
- Data links

#### **Templates and variables**

- Variable syntax
- Variables types
- Variable examples
- Enter variable Selection Options
- Enter Value tags
- Advanced variable format Options
- Multi-value variables
- Filter variables with regex
- Repeat panels or rows

#### Manage users

- Add or remove a user
- Enable or disable a user
- Add or remove a user from a team
- Create or remove a team



#### Manage users

- Organization roles
- Dashboard and Folder Permissions
- Datasource Permissions

## Grafana Enterprise

- License Expiration
- Data source permissions
- Enhanced LDAP Integration
- Enterprise configuration
- Reporting
- SAML Authentication
- Team sync
- Auditing
- Usage-insights
- Vault
- White-labeling
- Export dashboard as PDF

# **Plugins**

- Install plugins
- Plugin signatures



# Thank you!

# Connect with us for more info

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