DIGITAL INNOVATION
ACADEMY

Effective Site Reliability Engineering

This course will take you through all aspects of modern **Site Reliability Engineering.** These principles and practices of Effective SRE go from simple deployment to **Continuous Delivery & Verification with Observability based SLO Engineering and Operations Efficiency.**

With a shared passion for driving innovation and a wealth of experience, our experts are poised to show how our training program aligns perfectly with industry best practices, preparing you to adopt and implement Effective SRE in your projects.

DAY 1 Effective SRE fundamentals and practices

- Digital Highway Blueprint
- Effective SRE: Principles & Challenges
- Organisation Models for DevOps & SRE
- Containers and Microservices

- Configure KubeCTL to access the cluster
- Deploy the training application
- Explore the application
- Extend deployment with Load generation service
- Explore the infrastructure and Telemetry
- Kubernetes Navigator
- Explore APM
- Observability Setup

DAY 2 SLI - SLO & Operations Efficiency

- Monitoring from the Past to the Future
- Monitoring & Observability
- SLIs & SLOs
- Error Budget
- Operations Efficiency

- Choose the right SLIs and SLOs
- Identify the SLI / Set the SLO
- Create Dashboards for SLI/SLOs in Splunk Observability
- Create a Chart with the Remaining Error Budget per Day
- Create Detector
- Set up the SLI
- Set up a detector with a dynamic threshold

DAY 3 Digital Highway - CD - CV - Observability

- SRE & CD
- Continuous Integration and Delivery
- CD Strategies
- How to Build Pipelines
- What is Continuous Verification?
- Shifting left, right & down
- Continuous Verification in practice
- Rollbacks

- Create a Harness Project
- Define the Services in your Project
- Define a Target Environment
- Add an Infrastructure
- Create a Pipeline
- Configure Continuous Verification
- Run the Pipeline with verification
- Deploy the DemoApp
- Experiment successful and failing Continuous Verification

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Learning outcomes

Essentially you learn how to effectively apply SRE hard and soft skills in your work and architecture.

- Understand what SRE is, why it is important and learn how it can be applied in practice with the Digital Highway for Software Delivery.
- Learn how to understand the inner working of your application in production through applying SLO engineering principles and Observability.
- Learn how to continuously deliver software into production and how to embrace the shift right paradigm through Continuous Verification and Rollbacks 3.

Your profile

- Software Engineers
- DevOps Engineers
- System Engineers
- ML Architects

With knowledge in

- Software Engineering (OOP, Scripting, ad ac code,...)
- System Engineering (OS, Network, Deployment, Security, Monitoring,...)
- Advantageous: Performance Analysis, Release Engineering, APM/Infra Monitoring, Distributed/ Reliable Architect Design

Reliability Testing & Continuous Verification
Load testing, Fault injection, Health checks, and Chaos engineering for Reliability in DevOps

Effective MLOps
ML lifecycle from Training to Validation to Deployment and Monitoring through ML CI-CD pipelines

Effective SRE
Techniques, Practices and Culture Adoption and Implementation for Effective Site Reliability.

Data Engineering
Learn how to use ML techniques and algorithms to automate and optimize DevOps processes

ML & AI for DevOps
Learn how to use ML techniques and algorithms to automate and optimize DevOps processes

The Digital Innovation Academy offers **customizable, modular bootcamps—delivered online or onsite**—to fit your organization's unique needs and schedule.

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DIGITAL ARCHITECTS ZURICH