

Site Reliability Engineering Foundation (SREF)

Duration: 3 Days

COURSE DESCRIPTION

The SRE (Site Reliability Engineering) FoundationSM course is an introduction to the principles & practices that enable an organization to reliably and economically scale critical services. Introducing a site-reliability dimension requires organizational re-alignment, a new focus on engineering & automation, and the adoption of a range of new working paradigms.

The course highlights the evolution of SRE and its future direction, and equips participants with the practices, methods, and tools to engage people across the organization involved in reliability and stability evidenced through the use of real-life scenarios and case stories. Upon completion of the course, participants will have tangible takeaways to leverage when back in the office such as understanding, setting and tracking Service Level Objectives (SLO's).

The course was developed by leveraging key SRE sources, engaging with thought-leaders in the SRE space and working with organizations embracing SRE to extract real-life best practices and has been designed to teach the key principles & practices necessary for starting SRE adoption.

This course positions learners to successfully complete the SRE Foundation certification exam.

This course may be eligible for PMI's PDUs.

COURSE OBJECTIVES

On completion of this course, the following learning outcomes will be achieved:

- The history of SRE and its emergence at Google
- The inter-relationship of SRE with DevOps and other popular frameworks
- The underlying principles behind SRE
- Service Level Objectives (SLO's), Error budgets and the associated policies
- Service Level Indicators (SLI's) and the modern monitoring landscape
- Toil and its effect on an organization's productivity
- Some practical steps that can help to eliminate toil
- Observability as something to indicate the health of a service
- SRE tools, automation techniques and the importance of security
- Anti-fragility, our approach to failure and failure testing
- The organizational impact that introducing SRE brings

COURSE/ STUDENT MATERIALS

- SRE Principles & Practices
 - What is Site Reliability
 - Engineering?
 - SRE & DevOps: What is the
 - Difference?
 - SRE Principles & Practices

- Service Level Objectives & Error Budgets
 - Service Level Objectives (SLO's)
 - Error Budgets
 - Error Budget Policies
- Reducing Toil
 - What is Toil?
 - Why is Toil Bad?
 - Doing Something About Toil
- Monitoring & Service Level Indicators
 - Service Level Indicators (SLI's)
 - Monitoring
 - Observability
- SRE Tools & Automation
 - Automation Defined
 - Automation Focus
 - Hierarchy of Automation Types
 - Secure Automation
 - Automation Tools
- Anti-Fragility & Learning from Failure
 - Why Learn from Failure
 - Benefits of Anti-Fragility
 - Shifting the Organizational Balance
- Organizational Impact of SRE
- Why Organizations Embrace SRE
 - Patterns for SRE Adoption
 - On-Call Necessities
 - Blameless Post-Mortems
 - SRE & Scale
- SRE, Other Frameworks, Trends
 - SRE & Other Frameworks
 - The Future.

WHO SHOULD ATTEND

The target audience for this course are professionals including:

- Anyone starting or leading a move towards increased reliability
- Anyone interested in modern IT leadership and organizational change approaches
- Business Managers and Stakeholders
- Change Agents and Consultants
- DevOps Practitioners
- IT Directors, Managers and Team Leaders
- Product Owners and Scrum Masters

- Software and Site Reliability Engineers
- System Integrators
- Tool Providers.

CERTIFICATION & EXAM

Participants who successfully complete the course and pass the examination will be recognized as certified with Site Reliability Engineering Foundation (SREF) issued and governed by DevOps Institute. Delegates who do not attain a passing score for the examination would be awarded a course attendance certificate only.

Examination Format

- 40 Multiple Choice
- 1 mark per correct answer
- 26 marks required to pass (out of 40 available) – 65%
- Sixty minutes duration
- Web-based open-book exams.

PREREQUISITES

There are no prerequisites to attending the Site Reliability Engineering course or sitting the certification examination. Familiarity with DevOps definitions and principles are advantageous.