



SRE FOUNDATION

Site Reliability Engineering Foundation helps you create reliable software systems.

SITE RELIABILITY ENGINEERING FOUNDATION

As per the Site Reliability Engineering book – ‘Site Reliability Engineering is a discipline that incorporates aspects of software engineering and applies them to infrastructure and operations problems.’

The goal of Site Reliability Engineering is to create an ultra-scalable and highly reliable distributed software systems. The Principles of Site Reliability Engineering are: Operations is a Software Problem, Service Level Objectives ,Toil, Automation, Reduce Cost of Failure and Shared Ownership.

SREF requires automation. The following can be areas of automation driven by SREF:

- Infrastructure as Code/Configuration as Code
- Automated Functional and Non-Functional testing in production
- Only Versioned and Signed artifacts are deployed
- Helps in future growth planning easier
- Anti-fragility and Chaos Engineering

SREF does not stand alone. It works with DevOps and Lean, IT Service Management and Agile.

SRE Foundation (SREF)

The SRE (Site Reliability Engineering) Foundation course is an introduction to the principles and 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.

TRAINING DETAILS

Course Duration

2 Days | 16 Hours

Modes of Training

Virtual Instructor Led

Batch Type

Weekdays and Weekends

Certifying Body

DevOps Institute

COURSE OBJECTIVE

The learning objectives for the SRE Foundation course include a practical understanding of:

- 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) and their user focus
- Service Level Indicators (SLI's) and the modern monitoring landscape
- Error budgets and the associated error budget policies
- 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



WHO CAN TAKE THIS COURSE

- Anyone starting or leading a move towards increased reliability
- Anyone interested in modern IT leadership and organizational change approaches

- Business Managers
- IT Operations Managers
- Change Agents
- Consultants
- DevOps Practitioners

- IT Directors
- IT Managers
- IT Team Leaders
- Product Owners
- Scrum Masters

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

LEARNING MATERIALS

- Sixteen (16) hours of instructor-led training and exercise facilitation
- Learner Manual (excellent post-class reference) including:
 - Course slideware
 - Value Added Resources
 - Glossary
- Participation in exercises and discussions designs to apply concepts
- Case stories
- access to additional sources of information and communities.

CERTIFICATION EXAM

Successfully passing (65%) the 60 minute examination, consisting of 40 multiple choice questions, leads to the SRE (Site Reliability Engineering) Foundation certificate, The certification is governed and maintained by the DevOps Institute.

COURSE MODULES



Course Introduction

Course Goals

Course Agenda

Module 1: SRE Principles & Practices

What is Site Reliability Engineering?

SRE & DevOps: What is the Difference?

SRE Principles & Practices

Module 2: Service Level Objectives & Error Budgets

Service Level Objectives (SLO's)

Error Budgets

Error Budget Policies

Module 3: Reducing Toil

What is Toil?

Why is Toil Bad?

Doing Something About Toil

Module 4: Monitoring & Service Level

Indicators

Service Level Indicators (SLI's)

Monitoring

Observability

Module 5: SRE Tools & Automation

Automation Defined

Automation Focus

Hierarchy of Automation Types

Secure Automation

Automation Tools

Module 6: Anti-Fragility & Learning from Failure

Why Learn from Failure

Benefits of Anti - Fragility

Shifting the Organisation Balance

Module 7: Organizational Impact of SRE

Why Organizations Embrace SRE

Patterns for SRE Adoption

Sustainable Incident response

Blameless Post- Mortems

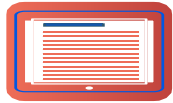
SRE & Scale

Module 8: SRE, Other Frameworks, Trends

SRE & Other Frameworks

SRE Evolution

Sample Exam



Assignments

Participation in unique exercises designed to apply concepts.



Real-life Case Studies

Real-life examples and results. Access to additional sources of information and communities.



Examinations

It can be taken in a classroom with an instructor or with an online proctor at a date and time convenient to the learner.

Format of the Examination

- Candidates must achieve a passing score to gain the SRE Foundation Certificate.
- Prerequisite: Yes
- Exam Type: 40 Multiple choice questions
- Duration: 60 minutes
- Passing Score: 65%
- Delivery: Online or invigilated in person
- Badge: SRE Foundation Certified.

Online proctored by Xellentro for individuals and paper based for corporate batches



Customizable Timings

Join our training as per your convenience.



Certification

On successful completion of the exam, you will get the certificate and electronic badge which will be provided by DevOps Institute.

DevOps Foundation

Successfully bring about DevOps transformation of your project, people and organization.

DevOps Leader

Successfully bring about DevOps transformation of your project, people and organization

DevSecOps Foundation (DSOF)SM

Learn the purpose, benefits, concepts, and vocabulary of DevSecOps including DevOps security strategies and business benefits.

Continuous Delivery Ecosystem Foundation (CDEF)SM

The CDEF certification ranks the learners to complete the Continuous Delivery Ecosystem Foundation exam effectively.

Digital Transformation with DevOps experiential simulation (DTX-i)

It is a vastly immersing, single player strategy simulation virtually that connects and educates people at a greater scale. This web-based knowledge offers vision to the technology leaders and their respective organisations about the essential modules and environment of Digital Transformation.

Continuous Testing Foundation (CTF)SM

CTF helps you learn to deploy a DevOps testing strategy & how DevOps delivery pipeline works for supporting digital transformation.

Get In Touch With us



neetas@xellentro.com/
anjalim@xellentro.com



(+91) 91481 84299
(+91) 94393 14531



www.xellentro.com



About Xellentro

Xellentro is an emerging global provider of project, program and portfolio management consulting and training services. Established in 2012, with Headquarters in Bangalore, India, Xellentro works closely with its clients in tackling their most difficult organizational development challenges. Xellentro is a specialist organization that works with its clients to identify improvement areas and uses experienced consultants to enhance their business and development processes.

While the realm of Management Consulting is vast and a number of firms provide a range of advisory services – starting from niche areas to general management domains – what differentiates us is our practitioner's approach where we don't limit ourselves only to advisory and rather prefer to stay on till envisaged benefits are realized and final outcomes are delivered. We bring in huge experience across industry verticals and geographies which make us confident enough to put our neck into the stake when it comes to achieving envisaged benefits and values.