Training: DevOps Institute
Site Reliability Engineering (SRE) Foundation

PeopleCert

TRAINING GOALS:

The SRE (Site Reliability Engineering) Foundation℠ 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.

COURSE OBJECTIVES

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
- The organizational impact that introducing SRE brings

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AUDIENCE

The target audience for the SRE Foundation 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
- Business Stakeholders
- 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

CONSPECT:

- 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

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- 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 Organizational Balance
- Module 7: Organizational Impact of SRE
  - Why Organizations Embrace SRE
  - Patterns for SRE Adoption
  - On-Call Necessities
  - Blameless Post-Mortems
  - SRE & Scale
- Module 8: SRE, Other Frameworks, The Future
  - SRE & Other Frameworks
  - The Future
- Additional Sources of Information
- Exam Preparations
  - Exam Requirements, Question Weighting, and Terminology List
  - Sample Exam Review

REQUIREMENTS:

An understanding and knowledge of common DevOps terminology and concepts and related work experience are recommended.

Difficulty level



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CERTIFICATE:

Each participant receives a confirmation of completion an accredited training.

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.

TRAINER:

Authorized PeopleCert Trainer

ADDITIONAL INFORMATION:

LEARNER MATERIALS

- Sixteen (16) hours of instructor-led training and exercise facilitation
- Learner Manual (excellent post-class reference)
- Participation in unique exercises designed to apply concepts
- Sample documents, templates, tools and techniques
- Access to additional value-added resources and communities

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