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Observability Foundation℠

VERSION 1

Global Best Practice

For organizations and professionals who want to turn actionable insights into resilience with observability!

Course Description

PeopleCert

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Observability Foundation℠ course description

Overview

Microservices and cloud-native architectures have been adopted by many organizations to increase speed and agility, but as complexity grows, systems become increasingly challenging to observe. When issues occur, these issues are often difficult to triage and identify the root causes. This course introduces a range of practices to advance resilience and explains how to architect end-to-end observability for cloud-native applications. The course covers the advantages of building full-stack metrics, events, logs, and distributed tracing, augmented by AI, along with the impact of DevSecOps on observability and how AIOps enhances observability capabilities. This course also explains how network and security observability play a key role in building reliability and covers key aspects of security operations and automated responses.

The course aims to equip participants with the practices, methods, and tools needed to engage people across the organization in observability, using real-life scenarios and case studies. Upon completion of the course, participants will have tangible takeaways to effectively leverage solutions such as MELT models that fit their organizational context, build distributed tracing and resiliency by design, and enhance these capabilities with AI.

The course was developed by leveraging key experts in the fields of telemetry, up-to-date sources of knowledge, and by engaging with thought leaders in the observability space, as well as working with organizations that have advanced modern observability to extract real-life best practices.

This course prepares learners to successfully complete the Observability Foundation certification exam.

Course objectives

The **learning objectives** for the Observability Foundation℠ course include a practical **understanding** of:

- How to successfully implement a flourishing observability culture in your organization.
- The underlying principles of observability and an understanding why monitoring on its own will not provide the required results in microservices based containerized environments.
- The underlying principles of observability and why monitoring alone does not provide the required results in microservices-based, containerized environments.
- The three pillars of observability.
- How adopting OpenTelemetry standards helps achieve innovation and enables seamless distributed tracing.
- The observability maturity model and methods for measuring practical observability.
- How implementing full-stack observability and distributed tracing, together with AI, enables a modern DevSecOps culture and solutions.
- How to leverage observability using AI to move from reactive to proactive and predictive incident management, and how to use DataOps to build a clean data lineage of observable data.
- How to implement network- and container-level observability, and why security is a first-class citizen in building an observability culture.
- The concept of time-based topology and its value in observability for distributed environments.
- The data paradox, and how to address data issues using a systematic approach (DataOps) to build a clean observability pipeline.
- How to incorporate DevSecOps wisdom into observability practices.
- Observability practices for DevSecOps and SRE.

Audience

The target audience for the Observability Foundation℠ course are professionals including:

- Anyone focused on large-scale service scalability and 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
- Security leaders and practitioners
- Product Owners
- Scrum Masters
- Software Engineers
- Site Reliability Engineering leaders and practitioners
- System Integrators
- Tool Providers

Official Training Materials (OTM) | Learner

- Learner Workbook (excellent post-class reference)
- Quick Reference Guide (QRG)
- Sample documents, templates, tools, and techniques
- Access to additional value-added resources and communities
- Glossary of terms

Prerequisites

It is highly recommended that learners attend the SRE Foundation course with an accredited DEVOPS INSTITUTE® Education Partner and earn the SRE Foundation certi ication prior to attending the Observability Foundation course and exam. An understanding and knowledge of common SRE terminology, concepts, principles and related work experience are recommended.

Certification exam

Successfully passing (65%) the 60-minute examination, consisting of 40 multiple-choice questions, leads to the Observability Foundation certificate. The certification is governed and maintained by DEVOPS INSTITUTE®.

Course outline

- **Introduction**
- **Module 1: Exploring observability**
  - What is observability?
  - Why is observability important?
  - Why is traditional monitoring not enough?
  - Observability Maturity Model
- **Module 2: Pillars of observability**
  - Telemetry
  - Three pillars of observability
    - Logs
    - Metrics
    - Traces
- **Module 3: Open-source landscape**
  - What is observability made of?
  - OpenTelemetry
  - The rest of the open-source ecosystem
- **Module 4: Service maps and topology**
  - Service maps
  - Topology
  - Time travel topology
  - Escalation graphs
- **Module 5: DataOps helps get observability right**
  - Observability and the data paradox
  - Why observability needs DataOps
  - Data ownership and governance
  - Data privacy and observability
- **Module 6: Building observability with AIOps**
  - Enterprises platforms and AIOps
  - AI/ML use cases
- **Module 7: Security and networking with observability**
  - Observing security
  - Container security
  - Network observability
  - Visibility and integration
- **Module 8: Observability practices for DevOps and SRE**
  - Observability indicators
  - Dashboards and visualization
  - Chaos engineering

Notes

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