Training: DevOps Institute
AIOps Foundation

PeopleCert

TRAINING GOALS:

This AIOps Foundation course aims to cover the origins of AIOps including the history behind the term, patterns that preceded it and the technology context in which it has evolved. Learners will gain an understanding of the processes of combining big data analytics, machine learning algorithms, automation, and optimization into a single platform.

This course introduces key principles and foundational concepts along with the core technologies of AIOps: big data and machine learning. The course will provide students with an understanding of how and why digital transformation, together with the evolution of machine learning, have brought about the rise of AIOps as an indispensable tool in today's IT Operational landscape.

Core technologies of machine learning and big data will be discussed, as well as the basic concepts of artificial intelligence, different types of machine learning models that can be implemented, and the relationship between AIOps and MLOps, DevOps and Site Reliability.

This foundation course will also provide the student with a solid understanding of the benefits of implementing AIOps in the organization, including common challenges and key steps in ensuring valuable and successful integration of artificial intelligence in the day to day operations of information technology solutions.

Unique and exciting exercises will be used to apply the concepts covered in the course and sample documents, templates, tools, and techniques will be provided to use after the class.

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

COURSE OBJECTIVES

At the end of the course, the following learning objectives are expected to be achieved:

- Clear understanding of the history, origins and current developments of AIOps
- Define and comprehend basic concepts and key principles within AIOps
- Understand general concepts of big data and artificial intelligence, and how they relate to AIOps
- Recognize the relationship between AIOps and MLOps
- Understand the effectiveness of AIOps deployment and possible benefits
- Understand the changes in mindset, collaboration and skills for AIOps to be applied in the organization

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- Quantify outcomes of an AIOps implementation leveraging industry standard metrics
- Understand usual challenges and opportunities of applying AIOps in the organization
- Visualize the challenges, trends and ethical considerations organizations might face while deploying an AIOps initiative

AUDIENCE

The target audience for the AIOps Foundation course are professionals including:

- Anyone focused on IT Operations
- Anyone interested in software in today's IT landscape
- AIOps Architects and Engineers
- Business Managers, Stakeholders
- Cloud Engineers
- Data Engineers and Scientists
- DevOps Engineers and Practitioners
- IT Directors
- IT Managers
- IT Security Analysts
- IT Team Leaders
- Product Owners
- Scrum Masters
- Software Engineers
- Site Reliability Engineers
- System Integrators
- AIOps Platform and Tool Providers

CONSPECT:

- Module 1: AIOps Foundation
  - History and Predecessors
  - Meaning of AIOps
  - Differences between AIOps and IT Operations Analytics
  - Core Technologies and Basic Concepts
  - Stages of an AIOps System

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- Overlapping Practices
- Module 2: AIOps in the Organization
  - Drivers and Influences
  - AIOps and DevOps
  - AIOps and Site Reliability
  - AIOps and Security
  - Data, Telemetry and Systems Complexity
  - A New Paradigm to Understand System State
- Module 3: Core Technologies: Data
  - What is Big Data?
  - The Five V's of Big Data
  - Characteristics of Big Data
  - AIOps Data Sources and Types
  - Diverse Data
- Module 4: Core Technologies: Machine Learning (ML)
  - AI and Machine Learning
  - Supervised vs Unsupervised
  - Machine Learning vs Analytics
  - Machine Learning and Training Models
  - AIOps and the Future of AI
  - AIOps vs. Analytics Similarities and Differences
- Module 5: AIOPs and Operations Metrics
  - Metrics and Operations
  - Key Metrics to Track Across Systems
  - Agreements, Objectives and Indicators
  - Incident Related Metrics
  - Quantifying Incidents (MTTD, MTBF, MTTA, MTTR)
  - Service Level Agreements
- Module 6: AIOps Use Cases and Organizational Mindset
  - Shifting from Reactive to Proactive
  - Characteristics of a Reactive Approach to Operations
  - Deterministic to Probabilistic
  - Deep Dive Into Use Cases
  - AIOps and Shifts in the Organization
  - Understanding the Past and Predicting the Future
- Module 7: Evaluating AIOps Impact

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- AIOps and Operations Metrics
- AIOps, DevOps and SRE
- Improving AI Accuracy
- AIOps System Visibility
- Tracking Impact of AIOps
- Impact to Incident Related Metrics
- AIOps and DORA Metrics

- Module 8: Implementing AIOps in the Organization
  - Avoiding Common Challenges
  - Ethics and Machine Learning
  - Paths to Implementation
  - Data Quality and Processes
  - Culture and Organizational Practices
  - Data and Regulation
  - Machine Learning Bias
  - Privacy and User Data

REQUIREMENTS:

Familiarity with IT terminology and IT related work experience are recommended.

Difficulty level



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 AIOps Foundation certificate. The certification is governed and maintained by DevOps Institute, a member of the PeopleCert Group.

TRAINER:

Authorized PeopleCert Trainer

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ADDITIONAL INFORMATION:

LEARNER MATERIALS

- Sixteen (16) hours of instructor-led training and discussion facilitation
- Participation in unique exercises designed to apply concepts
- Sample documents, templates, tools and techniques
- Sample exam
- Glossary
- Access to additional value-added resources and communities

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