DataOps Foundation Certification

About DevOpsSchool

DevOpsSchool is a unit of "Cotocus PVT ltd" and a leading platform which helps IT organizations and professionals to learn all the emerging technologies and trend which helps them to learn and embrace all the skills, intelligence, innovation and transformation which requires to achieve the end result, quickly and efficiently. We provide over 40 specialized programs on DevOps, Cloud, Containers, Security, AI, ML and on Big data that are focused on industry requirement and each curriculum is developed and delivered by leading experts in each domain and aligned with the industry standards.

About Course

The DataOps Foundation Certification is an industry-recognized credential that provides professionals with the knowledge and skills required to implement and manage DataOps practices within organizations. DataOps is a modern approach to managing and automating data workflows, akin to DevOps for data engineering. It focuses on enhancing the speed, quality, and efficiency of data processes across the organization by integrating data management, data development, and data operations into a unified, collaborative framework.

The DataOps Foundation Certification is designed to help professionals understand the core principles of DataOps, including agile development practices, automation of data pipelines, data quality management, and continuous integration/continuous delivery (CI/CD) for data. The certification ensures that individuals are equipped to apply best practices in data operations to improve collaboration across data teams, streamline data workflows, and ensure that high-quality data is delivered rapidly to decision-makers.

In essence, the DataOps Foundation Certification empowers data professionals to enhance data quality, accelerate data delivery, and optimize the management of data systems and processes across the data lifecycle...

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Duration	5 days
Mode	Online (Instructor-led, live & Interactive)
Projects (Real time scenario based)	1

FEATURES	DEVOPSSCHOOL	OTHERS
Faculty Profile Check	✔	✖
Lifetime Technical Support	✔	✖
Lifetime LMS access	✔	✖
Top 25 Tools	✔	✖
Interviews Kit	✔	✖
Training Notes	✔	✖
Step by Step Web Based Tutorials	✔	✖
Training Slides	✔	✖
Training + Additional Videos	✔	✖

Training

DevOps As part of this course, you would be strong in DevOps technology. You would learn Linux, Python, DevOps, Docker, Jira, Git, SonarQube, Maven, Ansible, Jenkins, Kubernetes, Datadog, Splunk, NewRelic, Terraform and various other stacks related to this methodology.

Projects

As part of this initiative, trainer would help you to execute one real time scenario based project, doing it end to end and step by step to visualize a real agile work environment in any organization.

Interview

As part of this, you would give complete DataOps Foundation Certification interview preparations Kit. This interview kit will help you organize your application and interview with eas

AGENDA : DATAOPS FOUNDATION CERTIFICATION

Day 1 - Introduction to DataOps and Data Management Fundamentals

Introduction to DataOps

- What is DataOps and why is it important?
- The role of DataOps in modern data management
- DataOps vs. traditional data management approaches (e.g., Data Warehousing, Data Lakes)

DataOps Lifecycle and Principles

- Understanding the DataOps lifecycle: Data Preparation, Integration, Analysis, and Deployment
- Key principles of DataOps: Agility, Automation, Collaboration, and Continuous Improvement
- The role of data pipelines in DataOps.

Data Management Fundamentals

- Data governance and data quality in the context of DataOps
- Data architecture overview: Data sources, Data storage, Data processing
- Tools and technologies in DataOps: Data pipelines, Version control, CI/CD for data.

Hands-On Activity

- Set up a simple data pipeline using an open-source DataOps tool (e.g., Apache NiFi, Airflow, or dbt).

Day 2 - Data Integration, Automation, and Collaboration

Data Integration Techniques

- Integrating various data sources in DataOps: Structured, Unstructured, and Semi-structured data
- Data connectors, APIs, and batch vs. stream processing
- Real-time data integration and challenges.

Automation in DataOps

- The role of automation in the DataOps lifecycle
- Automation of data pipelines using tools like Airflow, Jenkins, or Azure Data Factory
- Automated testing and validation for data quality.

Collaboration Across Teams

- The importance of collaboration between data engineers, data scientists, and business teams in DataOps
- CI/CD for data: Implementing continuous integration and continuous delivery in data workflows
- Best practices for version control and data lineage.

Hands-On Activity

- Create an automated data pipeline with data validation and testing using Airflow or Jenkins.

Day- 3 Data Quality, Monitoring, and Performance Optimization

Ensuring Data Quality

- Data quality metrics and best practices
- Data validation and transformation techniques in DataOps
- Tools for monitoring and improving data quality (e.g., Great Expectations, Deequ).

Monitoring and Observability in DataOps

- The importance of monitoring data pipelines and performance
- Data pipeline monitoring tools and metrics (e.g., Prometheus, Grafana)
- Log management and error handling for data pipelines.

Performance Optimization

- Performance bottlenecks in data pipelines and how to identify them
- Optimizing data storage, processing, and retrieval
- Best practices for scaling data pipelines to handle large volumes of dat.

Hands-On Activity

- Set up monitoring for a data pipeline and track performance using a monitoring tool (e.g., Prometheus, Grafana).

Day – 4 Security, Compliance, and Advanced DataOps Concepts

Data Security in DataOps

- Securing data in transit and at rest
- Role-based access control (RBAC) and data encryption in DataOps
- Security tools and practices for data pipelines.

Data Compliance and Governance

- Data governance best practices and tools for managing data policies
- Managing data privacy and compliance in regulated industries (e.g., GDPR, HIPAA)
- Data lineage, audit trails, and compliance reporting in DataOps.

Advanced DataOps Concepts

- Implementing machine learning (ML) workflows in DataOps pipelines
- Using DataOps for real-time analytics and data science workflows
- DataOps for cloud-native data architectures.

Hands-On Activity

- Implement role-based access control (RBAC) and encryption for a data pipeline

Days – 5 DataOps Best Practices, Tools, and Certification Preparation

DataOps Best Practices

- Best practices for managing data pipelines, collaboration, and automation
- Implementing continuous improvement in DataOps processes
- Common pitfalls and how to avoid them in DataOps projects.

DataOps Tools and Technologies

- Overview of popular DataOps tools: Airflow, dbt, Jenkins, Kubernetes, and others
- Evaluating tools for your DataOps ecosystem based on use cases
- Integration of various tools in a DataOps pipeline.

Certification Exam Preparation

- Review of key topics for the DataOps Foundation Certification exam
- Study tips and exam preparation strategies
- Practice questions and mock exam.

Final Hands-On Activity

- Complete a final project: Implement a complete end-to-end DataOps pipeline incorporating the learned concepts and tools.

Thank you!

Connect with us for more info

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