

Architecting Distributed Cloud Applications

Modality: Self-Paced Learning

Duration: 16 Hours

SATV Value:

CLC:

NATU:

SUBSCRIPTION: Learn, Master

About this Course:

This intermediate-level course is designed for Cloud Developers, Architects, and Administrators striving to master the art of architecting distributed cloud applications. This course provides a comprehensive overview of maintaining scalability and high-availability in cloud applications and tackling software & hardware failures. The key concepts of Networking Communication, Versioning, Microservices, Container Applications, Configuration, Disaster Recovery, and Data Storage Services.

Professionals working with distributed cloud applications can greatly benefit from the teachings of this course. Professionals get to develop a conceptual understanding of the pros and cons of cloud technologies and learn the art of capitalizing on its core features and functionalities. This course also reviews resilient patterns and relational and non-relational databases and helps professionals in building fault-tolerant and cost-effective cloud systems. On average, a professional Cloud Architect earns \$142,141 annually.

Course Objectives:

The core objective of this course is to help professionals develop a better understanding and sound knowledge of the following key concepts:

- Distributed Cloud Application Essentials, 12-Factor Services, & Container Application
- Identifying Scenarios for Splitting Monolith Services into Microservices
- Fundamentals of Networking Communications, Availability, and Scalability
- Service Endpoint API Management and Upgrade
- Fault-Tolerant Communication and Service Codes Upgrade and Configuration
- Share Secrets Configuration with Running Service
- Storage Service Considerations and Data Storage Services
- Non-Relational & Relational Databases, Eventual Consistency & Concurrency Patterns
- Active/Active and Active/Passive Architecture and Time Objectives
- Data Restoration and Disaster Recovery

Audience:

This course is tailored for the following group of professionals and interested candidates:

- Cloud Developers and Architect
- Cloud Administrators

Prerequisites:

Professionals planning to enroll in the Architecting Distributed Cloud Applications course must comply with the following prerequisites:

- Fundamental Knowledge of Cloud Computing
- Basic Understanding of System Architecture and Design
- Familiarity with the Programming Languages such as C++ or C#

Course Outline:

Distributed Cloud Applications

- Module 1 Learning Objectives
- Distributed Cloud Applications
- Microservices
- Containers
- Labs
- Module 1 Review Questions

Networking Communication

- Module 2 Learning Objectives
- Networking Communication
- Service APIs
- Fault-Tolerant Network Communication
- Labs
- Module 2 Review Questions

Messaging Communication

- Module 3 Learning Objectives
- Messaging Communication
- Labs
- Module 3 Review Questions

Versioning, Upgrading, and Configuration

- Module 4 Learning Objectives
- Versioning Service Code
- Shutting Down and Reconfiguring Services
- Module 4 Review Questions

Leader Election

- Module 5 Learning Objectives
- Leader Election
- Module 5 Review Questions

Storage Services

- Module 6 Learning Objectives
- Introduction to Data Storage Services
- Object Storage Services
- Database Storage Services
- Data Consistency
- Versioning Data Schemas
- Backup, Restore and Disaster recovery
- Labs
- Module 6 Review Questions

Final Exam

- Graded Final Exam