Day - 1	Day - 2
Introduction to Advanced Module Authoring • Best practices for creating reusable and scalable Terraform modules • Structuring modules for multi-cloud environments **Hands-On Lab: Module Development** • Developing a reusable module for cloud resource provisioning **Infrastructure Design Principles** • Designing scalable, high-availability infrastructure using Terraform • Strategies for fault tolerance and disaster recovery **Hands-On Lab: Infrastructure Design** • Implementing an infrastructure design in a multi-cloud setup	**State Management and Remote Backends** • Best practices for managing Terraform state files • Configuring remote backends for collaboration **Hands-On Lab: State Management** • Implementing remote backends and state locking mechanisms **Integrating Terraform with CI/CD Pipelines** • Automating infrastructure deployment using CI/CD tools • Managing Terraform workflows in a DevOps environment **Security Best Practices in Terraform** • Managing sensitive data and secrets • Implementing access control and compliance **Hands-On Lab: Security and CI/CD Integration** • Securing Terraform configurations and automating deployments

Troubleshooting and Debugging Terraform Configurations
- Identifying and resolving common Terraform errors
- Debugging techniques for complex configurations

Hands-On Lab: Troubleshooting and Optimization
- Practice session on diagnosing issues and optimizing Terraform code

Performance Optimization Techniques
- Best practices for enhancing infrastructure performance
- Cost optimization strategies for cloud resources

Certification Exam Preparation
- Overview of the exam format and key topics
- Practice exams and tips for successful exam performance