

Course Outline of AZ-400T05-A: Implementing Application Infrastructure Course

Module 1: Infrastructure and Configuration Azure Tools

Lessons

- Learning Objectives
- Infrastructure as Code and Configuration Management
- Create Azure Resources using ARM Templates
- Create Azure Resources using Azure CLI
- Create Azure Resources using Azure PowerShell
- Additional Automation Tools
- Version Control
- Lab Deploy to Azure using ARM templates
- Module Review Questions

After completing this module, students will be able to:

- Apply infrastructure and configuration as code principles
- Deploy and manage infrastructure using Microsoft automation technologies such as ARM templates, PowerShell, and Azure CLI

Module 2: Azure Deployment Models and Services

Lessons

- Learning Objectives
- Deployment Models and Options
- Azure Infrastructure-as-a-Service (IaaS) Services
- Azure Automation with DevOps
- Desired State Configuration (DSC)
- Azure Platform-as-a-Service (PaaS) services
- Azure Service Fabric
- Lab Azure Automation - IaaS or PaaS deployment
- Module Review Questions

After completing this module, students will be able to:

- Describe deployment models and services that are available with Azure

Module 3: Create and Manage Kubernetes Service Infrastructure

Lessons

- Learning Objectives
- Azure Kubernetes Service
- Lab Deploy and Scale AKS Cluster
- Module Review Questions

After completing this module, students will be able to:

- Deploy and configure a Managed Kubernetes cluster

Module 4: Third Party and Open Source Tools available with Azure

Lessons

- Learning Objectives
- Chef
- Puppet
- Ansible
- Cloud-Init
- Terraform
- Lab Provision and configure an App in Azure Using X
- Module Review Questions

After completing this module, students will be able to:

- Deploy and configure infrastructure using 3rd party tools and services with Azure, such as Chef, Puppet, Ansible, SaltStack, and Terraform

Module 5: Implement Compliance and Security in your Infrastructure

Lessons

- Security and Compliance Principles with DevOps
- Azure Security Center
- Lab Integrate a scanning extension or tool in an Azure DevOps pipeline/security center
- Module Review Questions

After completing this module, students will be able to:

- Define an infrastructure and configuration strategy and appropriate toolset for a release pipeline and application infrastructure
- Implement compliance and security in your application infrastructure

Module 6: Course Completion

Lessons

- Final Exam