



AZ-104: Microsoft Azure Administrator

About Cognixia

Cognixia- A Digital Workforce Solutions Company is dedicated to delivering exceptional trainings and certifications in digital technologies. Founded in 2014, we provide interactive, customized training courses to individuals and organizations alike, and have served more than 100,000 professionals across 37 countries worldwide.

Our team of more than 4,500 industry experts facilitate more than 400 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand self-paced online trainings cover a wide array of specialty areas, including all of the following:

- IoT
- Big Data
- Cloud Computing
- Cyber Security
- Machine Learning
- AI & Deep Learning
- Blockchain Technologies
- DevOps

Cognixia is ranked amongst the top five emerging technologies training companies by various prestigious bodies. We're also an MAPR Advantage Partner, Hortonworks Community Partner, RedHat Enterprise Partner, Microsoft Silver Learning Partner and an authorized training partner for Dell EMC, Pivotal, VMware and RSA technologies.



OUR AWARDS & AFFILIATIONS

 **Best Workplace Amongst Emerging Enterprises** Awarded By **Great Indian Workplace Awards – 2018** Mumbai, India



 **Best Training Provider of the Year** Awarded By **The Golden Globe Tiger Awards – 2018** Kuala Lumpur, Malaysia



World HRD Congress has awarded for Excellence in Training (Asia) 

  **WORLD HRD CONGRESS** Cognixia is awarded as Training Company of the Year, 2018



ISO 9001:2015 Certified Quality Management System



ISO/IEC 27001:2013 Certified Information Security Management System



Best Emerging Technology Training Organization at the Middle East Training & Development Leadership Awards 2018 

 **TOP 5 CLOUD TRAINING INSTITUTIONS INDIA 2016**  **HIGHER EDUCATION REVIEW**





 **TOP 5 Big Data TRAINING INSTITUTES 2017** 



 **TOP 10 IoT TRAINING INSTITUTES PROMISING IN INDIA 2017** 



 Top 10 IoT Training Companies for the Second consecutive year. 



 **siliconindia** BEST TRAINING PROVIDER **BIG DATA HADOOP DEVELOPER OF THE YEAR 2016** 

 Top 10 IoT Training Institutes – 2016 



  Asian Training & Leadership Award, Dubai 

 **TOP 5 Emerging Technologies 2016 TRAINING COMPANIES** 



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What is Microsoft Azure?

Microsoft Azure is a cloud computing platform for building, deploying and managing services and applications from anywhere, and at any time. With Azure, one could add cloud computing capabilities to their existing network through PaaS (Platform-as-a-Service) or IaaS (Infrastructure-as-a-Service) model to explore the IaaS architecture of Microsoft Azure, thereby optimizing the Windows server workloads and implements enterprise applications architecture on the Azure platform.

AZ-104: Microsoft Azure Administrator

Beginning 31 March 2020, Microsoft has retired the AZ-103: Microsoft Azure Administrator certification examination and replaced it with the AZ-104: Microsoft Azure Administrator certification examination.

When an individual clears this exam, they get an Achievement Badge, validating their skills as a Microsoft Azure Administrator.

Microsoft Certified Azure Administrator

The new AZ-104 Microsoft Azure Administration Associate certification examination will validate the participant's skills as an Azure administrator. Azure administrators implement, manage and monitor identity, governance, storage, compute and virtual networks in a cloud environment. They will also provision, size, monitor and adjust resources, as appropriate.

This new certification track has eliminated modules that are out of scope for most Azure professionals and has included all the relevant skills that they would need to be successful.



Who should take this course?

As on-premise data centers are becoming obsolete, cloud with its affordability and availability, is attracting more and more users. Microsoft Azure is one of the most popular cloud service providers in the market, with over two-thirds of the world's Fortune 500 companies moving their workloads to Microsoft Azure.

The course is highly recommended for individuals keen to leverage the cloud platform for enterprise success. Anyone who desires to manage Microsoft Azure will find the course immensely helpful in preparing for the Microsoft Azure Administrator certification.

Prerequisites

The prerequisites to take up this course are -

- Minimum six months of hands-on experience administering Azure
- Strong understanding of core Azure services, Azure workloads security and governance
- Experience using PowerShell, Command Line Interface, Azure portal and ARM templates

Latest trends in Microsoft Azure

Microsoft Azure is used by over 57% of Fortune 500 companies

Over 1000 new customers sign up for Azure on a daily basis. That's 365,000 companies adopting MS Azure every year.

Microsoft Azure is playing a huge role in fueling the growth of machine learning, artificial intelligence and internet of things.

Program structure and platforms

- 34 Hours of live online instructor-led training by an industry experienced instructor
- 24x7 PoC support
- Multiple assignments and labs to ensure thorough understanding
- Thorough preparation and training in line with the Microsoft guidelines

DETAILED CURRICULUM : MODULES

Module 01 – Identity

In this module, you will learn how to secure identities with Azure Active Directory and implement users and groups. This module includes:

- **Azure Active Directory**

- Azure Active Directory
- Azure AD Concepts
- AD DS vs. Azure Active Directory
- Azure Active Directory Editions
- Azure AD Join
- Multi-Factor Authentication
- Self-Service Password Reset

- **Users and Groups**

- User Accounts
- Managing User Accounts
- Bulk User Accounts
- Group Accounts
- Azure AD Connect
- Azure AD Connect Health
- Azure AD B2B and B2C

Module 02 – Governance and Compliance

In this module, you will learn about managing your subscriptions and accounts, implementing Azure policies, and role-based access control. This module includes:

- **Subscriptions and Accounts**

- Regions
- Azure Subscriptions
- Getting a Subscription

- Subscription Usage
- Cost Management
- Resource Tags
- Cost Savings

- **Azure Policy**

- Management Groups
- Azure Policy
- Implementing Azure Policy
- Policy Definitions
- Create Initiative Definitions
- Scope the Initiative Definition
- Determine Compliance

- **Role-based Access Control (RBAC)**

- Role-Based Access Control
- Role Definition
- Role Assignment
- Azure RBAC Roles vs Azure AD Administrator Roles
- RBAC Authentication
- Azure RBAC Roles

Module 03 – Azure Administration

In this module, you will learn about the tools an Azure Administrator uses to manage their infrastructure. This includes the Resource Manager, Azure Portal, Cloud Shell, Azure PowerShell, CLI, and Azure Resource Manager Templates. This module includes:

- **Resource Manager**

- Resource Manager
- Terminology

DETAILED CURRICULUM : MODULES

- o Resource Group Deployments
- o Resource Manager Locks
- o Moving Resources
- o Removing Resources and Resource Groups
- o Resource Limits
- **Azure Portal and Cloud Shell**
 - o Azure Portal
 - o Azure Mobile App
 - o Azure Cloud Shell
- **Azure PowerShell and CLI**
 - o Azure PowerShell
 - o PowerShell Cmdlets and Modules
 - o Azure CLI
- **ARM Templates**
 - o Template Advantages
 - o QuickStart Templates

Module 04 – Virtual Networking

In this module, you will learn about basic virtual networking concepts like virtual networks and subnetting, IP addressing, network security groups, Azure Firewall, and Azure DNS. This module includes:

- **Virtual Networks**
 - o Azure Networking Components
 - o Virtual Networks
 - o Subnets
 - o Implementing Virtual Networks
- **IP Addressing**
 - o IP Addressing

- o Creating IP Addresses
- o Public IP Addresses
- o Private IP Addresses
- **Network Security groups**
 - o Network Security Groups
 - o NSG Rules
 - o NSG Effective Rules
 - o Creating NSG Rules
 - o Application Security Groups
- **Azure Firewall**
 - o Azure Firewall
 - o Implementing Firewalls
 - o Firewall Rules
- **Azure DNS**
 - o Domains and Custom Domains
 - o Verifying Custom Domain Names
 - o Azure DNS Zones
 - o DNS Delegation
 - o DNS Record Sets
 - o DNS for Private Domains
 - o Private Zones Scenarios

Module 05 – Intersite Connectivity

In this module, you will learn about intersite connectivity features including VNet Peering, VPN Gateway Connections, ExpressRoute and Virtual WAN. This module includes:

- **VNet Peering**
 - o VNet Peering
 - o Gateway Transit and Connectivity

DETAILED CURRICULUM : MODULES

- Configure VNet Peering
- Service Chaining
- **VPN Gateway Connections**
 - VPN Gateways
 - High Availability Scenarios
- **ExpressRoute and Virtual WAN**
 - ExpressRoute
 - ExpressRoute Capabilities
 - Coexisting Site-to-Site and ExpressRoute
 - Intersite Connection Comparisons

Module 06 – Network Traffic Management

In this module, you will learn about network traffic strategies including network routing, Azure Load Balancer, Azure Application Gateway, and Traffic Manager. This module includes:

- **Network Routing and Endpoints**
 - System Routes
 - User Defined Routes
 - Routing Example
 - Create a Routing Table
 - Create a Custom Route
 - Associate the Route Table
 - Service Endpoints
 - Service Endpoint Services
 - Private Link

- **Azure Load Balancer**
 - Azure Load Balancer
 - Public Load Balancer
 - Internal Load Balancer
 - Load Balancer SKUs
 - Backend Pools
 - Load Balancer Rules
 - Session Persistence
 - Health Probes
- **Azure Application Gateway**
 - Application Gateway
 - Application Gateway Routing
 - Application Gateway Configuration
- **Traffic Manager**
 - Azure Traffic Manager
 - Traffic Manager Routing Methods
 - Distributing Network Traffic

Module 07 – Azure Storage

In this module, you will learn about basic storage features including storage accounts, blob storage, storage security, Azure files and File Sync, and managing storage (tooling). This module includes:

- **Storage Accounts**
 - Azure Storage
 - Azure Storage Services
 - Storage Account Kinds

DETAILED CURRICULUM : MODULES

- o Replication Strategies
- o Accessing Storage
- o Securing Storage Endpoints
- **Blob Storage**
 - o Blob Storage
 - o Blob Containers
 - o Blob Access Tiers
 - o Blob Lifecycle Management
 - o Uploading Blobs
 - o Storage Pricing
- **Storage Security**
 - o Storage Security
 - o Shared Access Signatures
 - o URI and SAS Parameters
 - o Storage Service Encryption
 - o Customer Managed Keys
 - o Storage Security Best Practices
- **Azure Files and File Sync**
 - o Files vs Blobs
 - o Managing File Shares
 - o File Share Snapshots
 - o Azure File Sync
 - o Azure File Sync Components
 - o File Sync Steps
- **Managing Storage**
 - o Storage Explorer
 - o Import and Export Service

- o Data Box
- o AzCopy
- o Data Transfer Tool Selection

Module 08 – Azure Virtual Machines

In this module, you will learn about Azure virtual machines including planning, creating, availability and extensions. This module includes:

- **Virtual Machine Planning**
 - o IaaS Cloud Services
 - o Planning Checklist
 - o Location and Pricing
 - o Virtual Machine Sizing
 - o Virtual Machine Disks
 - o Storage Options
 - o Supported Operating Systems
 - o Virtual Machine Connections
- **Creating Virtual Machines**
 - o Creating Virtual Machines in the Portal
 - o Windows Virtual Machines
 - o Windows VM Connections
 - o Linux Virtual Machines
 - o Linux VM Connections
- **Virtual Machine Availability**
 - o Maintenance and Downtime
 - o Availability Sets
 - o Update and Fault Domains
 - o Availability Zones

DETAILED CURRICULUM : MODULES

- o Scaling Concepts
- o Scale Sets
- o Implementing Scale Sets
- o Autoscale
- o Implementing Autoscale
- **Virtual Machine Extensions**
 - o Virtual Machine Extensions
 - o Custom Script Extensions
 - o Desired State Configuration

Module 09 - Serverless Computing

In this module, you will learn administer serverless computing features like Azure App Service Plans, Azure App Service, Container Services, and Azure Kubernetes Service. This module includes:

- **Azure App Service Plans**
 - o Azure App Service Plans
 - o App Service Plan Pricing Tiers
 - o App Service Plan Scaling
 - o App Service Plan Scale Out
- **Azure App Service**
 - o Azure App Service
 - o Creating an App Service
 - o Continuous Deployment
 - o Deployment Slots
 - o Creating Deployment Slots
 - o Securing an App Service
 - o Custom Domain Names
 - o Backup an App Service

- o Application Insights
- **Azure Container Instances**
 - o Containers vs. Virtual Machines
 - o Azure Container Instances
 - o Container Groups
 - o Docker
- **Azure Kubernetes Service**
 - o Azure Kubernetes Services
 - o AKS Clusters and Nodes
 - o AKS Networking
 - o AKS Storage
 - o AKS Security
 - o AKS and Azure Active Directory
 - o AKS Scaling
 - o AKS Scaling to ACI
 - o Virtual Kubelet

Module 10 – Data Protection

In this module, you will learn about backing up files and folders, and virtual machine backups. This module includes:

- **File and Folder Backups**
 - o Azure Backup
 - o Recovery Service Vault Backup Options
 - o Implementing On-Premises File and Folder Backups
 - o Microsoft Azure Recovery Services Agent
- **Virtual Machine Backups**
 - o Virtual Machine Data Protection

DETAILED CURRICULUM : MODULES

- o Workload Protection Needs
- o Virtual Machine Snapshots
- o Recovery Services Vault VM Backup Options
- o Implementing VM Backups
- o Implementing VM Restore
- o Azure Backup Server
- o Backup Component Comparison
- o Soft Delete
- o Azure Site Recovery
- o Azure to Azure Architecture

Module 11 – Monitoring

In this module, you will learn about monitoring your Azure infrastructure including Azure Monitor, alerting, and log analytics. This module includes:

• Azure Monitor

- o Azure Monitor Service
- o Key Capabilities
- o Monitoring Data Platform
- o Log Data
- o Data Types
- o Azure Advisor
- o Activity Log
- o Query the Activity Log

• Azure Alerts

- o Azure Monitor Alerts
- o Creating Alert Rules
- o Action Groups

• Log Analytics

- o Log Analytics
- o Create a Workspace
- o Connected Sources
- o Data Sources
- o Log Analytics Querying
- o Query Language Syntax

• Network Watcher

- o Network Watcher
- o Network Watcher Diagnostics
- o Diagnostics – IP Flow Verify
- o Diagnostics – Next Hop
- o Diagnostics – Effective Security Rules
- o Diagnostics – VPN Troubleshoot
- o Diagnostics – Packet Capture
- o Diagnostics – Connection Troubleshoot
- o Logs – NSG Flow Logs
- o Monitoring – Topology

Why choose Cognixia?



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Software architects

Software developers



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