

CELEBRATING
12 YEARS

Quality Thought®



Course Duration
110 Days

Total Sessions Hours
120 Hrs

ARCHITECTURE / ADMINISTRATION / DEVELOPMENT



Networking

- Networking Basics
- Virtual Network
- Subnets
- Network Security Groups
- Application Security Groups
- Routing
- Service Endpoints
- Service Endpoint Policies
- VNET Peering
- Virtual Network TAP
- Virtual Networking for Azure Services
- Container & Kubernetes networking
- VNET Replication for Business Continuity

- IP Addressing
- Public IP prefix
- IPv6 for Azure Vnet
- DDoS protection
- Cross network Connectivity
- Backend Connectivity Interoperability
- Trouble shooting
- VPN Gateway
 - Creating & Managing a VPN Gateway
 - Site to Site Connections
 - Multiple Site to Site Connections
 - VNET to VNET Connections
 - Zone Redundant Gateways
 - BGP and VPN Gateway

- AZURE Express Route
- Operating Modes
 - Portal
 - CLI
 - PowerShell
 - ARM Templates



Azure DNS

- ⇒ Overview
- ⇒ Public DNS
 - ☑ Zones & Records
 - ☑ Alias Records
 - ☑ Revers DNS
 - ☑ Disaster Recovery
- ⇒ Private DNS

Azure Load balancers & Application Gateway

- ⇒ Azure Load Balancer Overview
- ⇒ Basic Load Balancer
- ⇒ Standard Load Balancer
- ⇒ Health probes
- ⇒ High Availability ports
- ⇒ Multiple frontends
- ⇒ Outbound Connections
- ⇒ Outbound Rules
- ⇒ Load Balancer Metrics
- ⇒ Azure Application Gateway Overview
- ⇒ Application Gateway Components
- ⇒ Routing
- ⇒ SSL
- ⇒ WAF
- ⇒ Health Monitoring
- ⇒ App Service Web app & VMSS integrations
- ⇒ WebSocket Support

Azure Traffic Manager

- ⇒ Overview
- ⇒ Routing Methods
- ⇒ Traffic Manager Profiles
- ⇒ Endpoint Types
- ⇒ Traffic View
- ⇒ Disaster Recovery using Azure DNS & Traffic Manager

Azure Active Directory

- ⇒ Overview
- ⇒ What is Azure Active Directory
- ⇒ Group and Access Management
- ⇒ Group-based licensing
- ⇒ Azure AD architecture

- ⇒ Default User Permissions
- ⇒ Organization
- ⇒ Groups
- ⇒ Users
- ⇒ Authentication
 - ☑ Multifactor
 - ☑ Self Service Password Reset
- ⇒ Azure RBAC
- ⇒ Custom Roles in Azure
- ⇒ Privileged Identity Management

Azure Active Directory B2B

- ⇒ B2B guest user access
- ⇒ Compare B2B with B2C
- ⇒ B2B licensing & invitations
- ⇒ Conditional Access & User Tokens

Azure Active Directory B2C

- ⇒ What is AAD B2C
- ⇒ Application Types
- ⇒ Authentication Protocols
 - ☑ OAuth
 - ☑ OpenId
 - ☑ Tokens
- ⇒ User flow & Policy
- ⇒ App Integration

Hybrid Identity

- ⇒ What is hybrid Identity
- ⇒ Azure AD Connect
- ⇒ Password hash synchronization
- ⇒ Pass-through authentication
- ⇒ Federation
- ⇒ Single-Sign On
- ⇒ Azure AD Connect Sync

Azure Virtual Machines & Scale Sets

- ⇒ How Azure VM's Work internally
- ⇒ VM Types & Sizes
- ⇒ Virtualization technologies in azure
- ⇒ Creation & Management of VM's
- ⇒ Creating VM Images



- ⇒ High Available VM's
- ⇒ Availability Sets & Availability Zones
- ⇒ VM Scale Sets
- ⇒ VM Scale Sets with Load balancers & application gateways
- ⇒ Dedicated hosts
- ⇒ Maintenance & Updates
- ⇒ VM Extensions
- ⇒ Cloud-Init
- ⇒ Maintenance & updates
- ⇒ Accelerated Networking
- ⇒ Operating Modes
 - CLI
 - PowerShell
- ⇒ ARM Templates

Operations

Azure Batch

- ⇒ Overview
- ⇒ Creation of Batch Job
- ⇒ Execution of Batch Job

Azure Monitor

Azure Batch

- ⇒ Overview
- ⇒ Creation of Batch Job
- ⇒ Execution of Batch Job

Azure Monitor

- ⇒ Overview
- ⇒ Log Analytics
- ⇒ Log Queries
- Visualize log data
- ⇒ Alerts
 - Metric Alerts
 - Log alerts
 - Activity log alerts
 - Change analysis
- ⇒ Application Insights
- ⇒ Metrics
- ⇒ Continuous monitoring with Azure Monitor

Azure Site Recovery

- ⇒ Overview
- ⇒ Business Continuity and Disaster Recovery (BCDR)
- ⇒ Replication of Azure VMs to different Regions
- ⇒ Failover of Azure Vms
- ⇒ Disaster Recovery for Apps

Azure Backup Service

- ⇒ Overview
- ⇒ Backup Azure Vms
- ⇒ Restoring disks
- ⇒ Backup from On-prem to Azure

Azure Policy

- ⇒ Overview
- ⇒ Policy Definitions
- ⇒ Policy Effects
- ⇒ Custom Policy Definitions

Azure Blueprints

- ⇒ Overview
- ⇒ Creating blueprints
- ⇒ Stages of Blueprints
- ⇒ Lifecycle of Blue Prints
- ⇒ Protecting & Locking resources

Azure Storage

Azure Storage Accounts

- ⇒ Overview
- ⇒ Storage account types
- ⇒ Blob Storage
- ⇒ Page Blobs
- ⇒ Block Blobs
- ⇒ Table Storage
- ⇒ Queue Storage
- ⇒ File Storage
- ⇒ Data Redundancy
- ⇒ Access Tiers
- ⇒ Performance & Scaling
- ⇒ Concurrency
- ⇒ Static Websites using Storage Accounts
- ⇒ Event Handling
- ⇒ Page Blobs
- ⇒ Transferring Data using AzCopy



Azure Managed Disks

- ⇒ Overview
- ⇒ Benefits of Using Managed Disks
- ⇒ Disk Types
- ⇒ Disk SKU's
- ⇒ Temp Disk
- ⇒ Data Disk
- ⇒ OS Disk
- ⇒ Backup & Recovery of Disks

Azure StorSimple and Data Box

- ⇒ StorSimple Overview
- ⇒ StorSimple Virtual Array
- ⇒ StorSimple Data Manager
- ⇒ Azure Data Box

Azure SQL

- ⇒ Overview
- ⇒ Azure SQL Database
- ⇒ Azure SQL Manage Instance
- ⇒ Single Database
- ⇒ Elastic Pool
- ⇒ Purchasing Models
- ⇒ Service Tiers

Azure MySQL

- ⇒ Overview
- ⇒ Database & Servers
- ⇒ Resources
- ⇒ Data access & Security
- ⇒ Backup & Replications

Azure Redis Cache

- ⇒ Overview
- ⇒ Cache Tier
- ⇒ Geo-Replications
- ⇒ Import/Export Data
- ⇒ Schedule Updates

Azure Cosmos DB

- ⇒ Overview
- ⇒ Global distribution
- ⇒ Partitioning throughput
- ⇒ SQL query reference
- ⇒ Cassandra API
- ⇒ MongoDB API

ARM Templates

- ⇒ Overview
- ⇒ JSON
- ⇒ Resources
- ⇒ Parameters
- ⇒ Variables
- ⇒ Functions
- ⇒ Resources
- ⇒ Outputs
- ⇒ Template File Structure
- ⇒ Template reference
- ⇒ Template Functions
- ⇒ Linked Templates
- ⇒ Deployment Manager
- ⇒ Linked Templates
- ⇒ Deployment Manager

Azure Migrate

- ⇒ Overview
- ⇒ Migrate On-premise VMWare VMs to Azure
- ⇒ Migrate On-premise Hyper-V VMS to Azure
- ⇒ Migrate physical servers and VMs

Azure Database Migration Service

- ⇒ Overview
- ⇒ Migrate On-premise SQL Server to Azure SQL DB
- ⇒ Migrate On-Premise SQL Server to Azure SQL Managed Instance



Azure Platform as a Service

Azure App Service Web Apps

- ⇒ Overview
- ⇒ App Service Environments
- ⇒ App Service Plans
- ⇒ Virtual Network Integrations
- ⇒ Hybrid connections
- ⇒ Creating App Service Web App
 - CLI
 - Portal
 - Docker Hub

Azure Mobile Apps

- ⇒ What are Mobile Apps
- ⇒ Android Apps
- ⇒ Cordova
- ⇒ iOS

Azure Functions

- ⇒ Overview
- ⇒ Creating Functions
 - Python
 - PowerShell
 - Java
 - C#
- ⇒ Triggers and Bindings
- ⇒ Integrate
 - Storage
 - Cosmos DB
- ⇒ Scale & Hosting
- ⇒ Events & messaging

Service Fabric

- ⇒ Overview
- ⇒ Create and Manage a Cluster
- ⇒ Create a standalone cluster
- ⇒ Deploy a .NET app
- ⇒ Deploy a Java app
- ⇒ Application Scenarios

Authentication and Data Security

- ⇒ Managed Identity
- ⇒ Key Vault
- ⇒ Azure Disk Encryption

Message-based Services

- ⇒ Event Grid
- ⇒ Notification Hub
- ⇒ Event Hub
- ⇒ Service Bus
- ⇒ Azure Relay

API Gateways

- ⇒ Overview
- ⇒ API Gateway Policies

API Gateways

- ⇒ Overview
- ⇒ API Gateway Policies

Foundation Course for DevOps, AWS & AZURE

Linux

- ⇒ Overview
- ⇒ Understanding Linux Architecture
- ⇒ Shell and Kernel Overview
- ⇒ Linux Distributions
- ⇒ Using Shell
- ⇒ Exploring Filesystems
- ⇒ Working with Text Files
- ⇒ Process Management
- ⇒ Package Management
 - RPM
 - DEB
 - YUM
 - APT
 - SNAP
- ⇒ Managing User Accounts
- ⇒ Disk & Filesystem management
 - Disk Storage
 - Partitions
 - LVM
 - Mounts
- ⇒ Linux Networking
- ⇒ Service Management in Linux
 - Init
 - systemd
- ⇒ Server Configurations in Linux
 - Web Server
 - Application Server
 - Syslog
 - Database Servers
- ⇒ Troubleshooting in Linux



Shell Scripting

- ⇒ Why and What of Shell Scripting
- ⇒ Shell Terminals
- ⇒ Creation & Execution of Shell Scripts
- ⇒ Variables & Variable Scopes
- ⇒ Conditions in Shell Scripts
- ⇒ Iterating with loops
- ⇒ Functions in Shell Scripts
- ⇒ Regular Expressions
- ⇒ Command Piping with grep
- ⇒ Stream Editor
 - Understanding basics of sed
 - Sed commands
- ⇒ AWK Fundamentals

Python

- ⇒ Introduction
- oWhy Python?
- oInstalling Python
- oPython 2 vs Python 3
- ⇒ Types in Python
 - Integers & Floats
 - String Booleans
 - None Lists
 - Dictionary Other Data Types
- ⇒ Statements in Python
 - If Loops
 - Break & Continue
 - While
- ⇒ Exceptions in Python
- ⇒ Functions
- ⇒ File Management in Python
- ⇒ Yield
- ⇒ Lambda Functions
- ⇒ Object Oriented Programming with Python
 - Classes Methods
 - Constructors
 - Instance & Class Attributes
 - Inheritance & Polymorphism
- ⇒ Python Tips & Tricks
- ⇒ Strings & Collections
- ⇒ Modularity
- ⇒ Handling Exceptions

Message-based Services

- ⇒ Event Grid
- ⇒ Notification Hub
- ⇒ Event Hub
- ⇒ Service Bus
- ⇒ Azure Relay

API Gateways

- ⇒ Overview
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 - RPM DEB
 - YUM APT
 - SNAP
- ⇒ Managing User Accounts
- ⇒ Disk & Filesystem management
 - Disk Storage Partitions
 - LVM Mounts
- ⇒ Linux Networking
- ⇒ Service Management in Linux
 - Init systemd
- ⇒ Server Configurations in Linux
 - Web Server
 - Application Server
 - Syslog
 - Database Servers
- ⇒ Troubleshooting in Linux



Networking

- ⇒ Basic Networking Concepts
 - ☑ Computer Network
 - ☑ Terminology
 - ☑ Network Protocol
 - ☑ Ping & Traceroute
 - ☑ What is IP address
 - ☑ Network Categories and Components
 - ☑ Domain Naming System
- ⇒ OSI Model
 - ☑ Layers
 - ☑ Application Layer
 - ☑ Presentation Layer
 - ☑ Session Layer
 - ☑ Transport & Other lower layers
 - ☑ TCP vs OSI Model
- ⇒ Binary Compute Basics
- ⇒ Hexadecimal Compute Basics
- ⇒ IP Addressing
 - ☑ Overview & Demonstration
 - ☑ IPV4 Address Format
 - ☑ Network vs Host portion
 - ☑ Class A, B,C,D,E address
 - ☑ Classless Inter-Domain Routing (CIDR) Notation
- ⇒ IP Subnetting
- ⇒ Routing
- ⇒ Switching
- ⇒ NAT Server
- ⇒ DNS
- ⇒ DHCP Server

Windows Server

- ⇒ Setup
- ⇒ Understanding the Client Server Architecture
- ⇒ Server Manager
- ⇒ Managing Local User Accounts
- ⇒ Task Manager
- ⇒ Windows Administrative Tools
- ⇒ Active Directory
- ⇒ DHCP
- ⇒ DNS and Name Resolution
- ⇒ IIS Services and Configuration
- ⇒ Active Directory Groups & OU
- ⇒ Group Policy Management
- ⇒ Windows Server Backups Overview

PowerShell

- ⇒ Introduction to PowerShell
 - ☑ What is PowerShell
 - ☑ PowerShell Editors
 - ☑ Getting Help
 - ☑ Command Naming & Discovery
 - ☑ Parameters & Parameter Sets
 - ☑ Introduction to Providers
- ⇒ Modules & Snap-ins
 - ☑ Introducing Modules
 - ☑ PowerShell Core & the Windows Compatibility Module
 - ☑ Snap-ins
- ⇒ Objects in PowerShell
 - ☑ Pipelines
 - ☑ Members
 - ☑ Enumerating & Filtering
 - ☑ Selecting & Sorting
 - ☑ Grouping & Measuring
 - ☑ Comparing
- ⇒ Operators
 - ☑ Arithmetic Operators
 - ☑ Assignment Operators
 - ☑ Comparison Operators
 - ☑ Regular Expression based Operators
 - ☑ Binary Operators
 - ☑ Logical Operators
 - ☑ Type Operators
 - ☑ Other Operators
- ⇒ Variables, Arrays and Hashtables
- ⇒ Branching & Looping
- ⇒ Strings, Numbers & Dates
- ⇒ Files, Folders & Registry
- ⇒ Web Requests & Web Services
- ⇒ Remoting & Remote Management
- ⇒ Scripts, Functions & Filters
- ⇒ Parameters, Validation & Dynamic Parameters
- ⇒ Testing, Troubleshooting & Error Handling

PowerShell DSC

- ⇒ Introduction & Overview of PowerShell DSC
- ⇒ DSC Architecture
- ⇒ DSC Configuration Files
- ⇒ DSC Resources
- ⇒ Pushing DSC Configurations
- ⇒ DSC Cross Platform Support

Others

- ⇒ Kafka Configuration
- ⇒ Vagrant
- ⇒ Virtualization
- ⇒ Groovy Scripting

STUDENT TRANSFORMATION STAGES



OUR STUDENTS ARE PLACED IN
