What We cover From Basic To Advanced

MCSA – Windows Server

Azure – Complete Azure – Fundamentals | Implementation | Design

Devops – Complete Devops

VMWARE – VCP 6.5 /6.7/7.0 – With complete Physical LAB Setup

Office -365

Power Shell Scripting

What we Cover basics

DATA CENTRE MANAGEMENT **SAN** **MICROSOFT CLUSTER**

AWS **GCP** **LINUX** **ITIL** **SERVICENOW TICKETING TOOL**

CLOUD MIGRATION TECHNIQUES, ETC. **AD** **NETWORKING**

Job Oriented Scenarios

- 400 + Cloud, Windows Admin, Cloud Administrator, System administrator and Devops Engineer Responsibilities Practically Explained.

- Gain Knowledge of 5+ Year Experienced Server | Cloud | Virtualization | Devops Engineer. 400+ Hours of content

- Job Guaranteed Master Program – IT IMS – Windows - MCSA | Cloud | Devops | VMWARE | Office 365 |Power shell
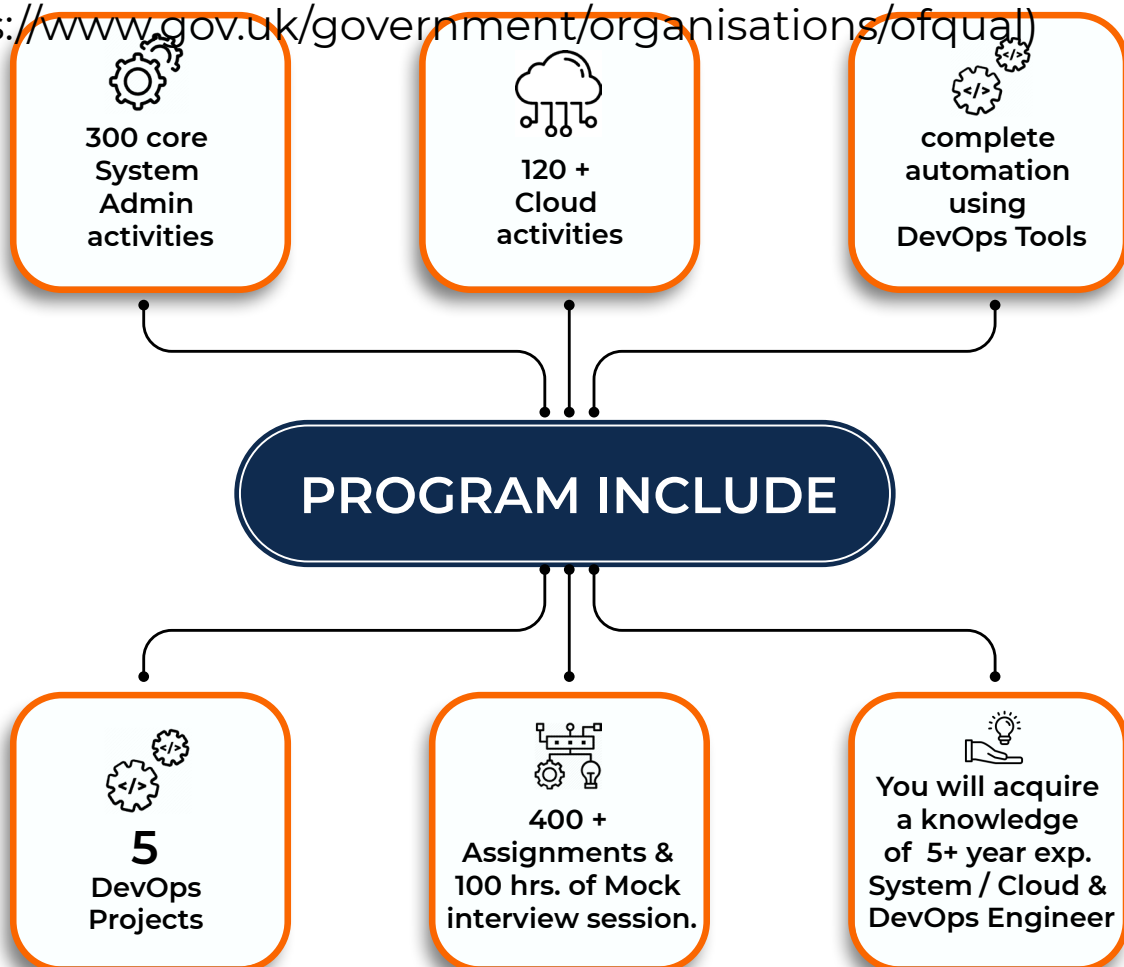
Duration

1 YEAR

6 Months Learning

6 Months Projects,
Assessments, POC,
Job Oriented Scenarios

Major achievements of this program is that, This program is integrated with International PG Diploma Certificate Program IT – IMS Cloud and Devops – Awarded by OTHM – UK, Ofqual Approved UK Qualification provider (https://www.gov.uk/government/organisations/ofqual)

300 core System Admin activities

120 + Cloud activities

complete automation using DevOps Tools

PROGRAM INCLUDE

5 DevOps Projects

400 + Assignments & 100 hrs. of Mock interview session.

You will acquire a knowledge of 5+ year exp. System / Cloud & DevOps Engineer

This program is good for freshers and up to 3 – 4 years of industry

You will receive 3 certificates after successful completion.

1. RCITP after 6 months

2. Internship Certificate explaining Projects undergone

3. International PG Diploma certificate in IT – IMS Cloud and Devops -OTHM UK After 1 year of successful completion of the course . You have to undergo multiple assignments to achieve the International PG Diploma. After successful completion of assignment, you have to appear for 12 assessments, on topics covered during the course. After fulfilling all the above criteria, International PG Diploma certificate in IT – IMS Cloud and Devops is awarded directly by OTHM

SALARY

Avg. salary of a System / Cloud / Devops Engineer is goes up to 15 Lakhs per annum

- 18000+ Students Empowered till now
- Online/Classroom/Self-Paced
- 6 months Intensive Training followed by 6 Month Assessments & Assignments
- Four Certification and Career Gap
- Documentation .
- Start Date – Every Month One Batch
- (Per Batch maximum 10 Students)
- 450+ Hiring Partners
- Certified from OTHM–UK Recognized by ofqual.gov.uk
- Minimum 5 Interview Call and until you get Job
- What you get After the Training – Gain Knowledge of At least 5+ Year ExperiencedProfessional
- Designed for Freshers to Working Professionals
- 360 Degree Career Support

- One-on-One with Industry Mentors
- Dedicated Student Mentor
- 0 % Interest free EMI – No Interest on EMI taken.
- Project Driven industry mentorship in IT IMS , Cloud and Devops
- Dedicated career support,
- Learn 30 + IMS tools .
- 300 core System Admin activities
- 120 + Cloud activities
- complete automation using DevOps Tools .
- 400 + Assignments
- 50 hours of Mock interview session
- Dedicated Trainers with ample of Industry Experience
- Project based IT Training and Certification programs .
- You Gain Knowledge of 5+ Year Experienced System Administrator
- Industry standard   Projects And Assignments with Mentor Support
- Lab Access and Practical Guidance
- Job Opportunities - System Administrator, Linux Cloud Engineer, Devops Engineer, Cloud Administrator,
- Our students placed in various packages in MNC's Ranging from 5 Lakhs to 25 Lakhs .
- Experience Level from freshers   to 18+ Year experienced candidates

Those who do not like Programming

- Engineers, Freshers, Domain Experts, Software & IT Professionals, Those who having career gap & not interested in Programming.

    - Engineering/Management Graduate or Post-graduate Fresher Students who want to make their career in IT Infrastructure Management Field. Those who hate programming .

- Engineers who want to Become System Admin, Technical Architect, System Engineer , Cloud Engineer, Devops Engineer

- System Admins who are interested in Data Centre Setup and Migration and Troubleshooting

- Cloud Admins who would like to become Cloud Infra Architect .

- MBA Graduates or business professionals who are looking to move to a heavily quantitative role.

- Engineering Graduate/Professionals who want to be in IT Infrastructure Management Administrator field

- Working Professional or Fresh Graduate who have mostly worked in Operating system, Virtualization, Cloud Technology etc

- Professionals who've worked mostly with Linux, Cloud, Windows, Virtualization, Automation etc

Minimum Eligibility

Any Bachelor's degree. Completed or not completed. No coding experience required. If you have any Educational Gap or any other career gap, **You can do this program to boost up your career**. The qualifications provided by UK Regulatory board is equal to Level **7 Masters Degree in UK.**

How You Benefit From This Program

- Post Graduate Diploma without quitting your job

- Cutting-edge curriculum designed by industry experts

- Career transition with 30 to 100% salary hike

1.Who Should do this course?

Freshers, Any Graduate, 2 to 4 Years Experienced up skilling enthusiasts. 3 rd Year Graduates who are going to attend campus Interviews. These courses designed in a way to be suitable for all branches of Engineering and all type of graduates – Science & non-science Graduates. Option to customise the subject according to the interest of candidate is also available

2.How many Interview Calls You will provide?

Unlimited Interview calls until you get placed. We have 450+ MNC partners, through which we place most of our candidates.

3.Do I get Refund, if I am not interested to continued?

Yes. you should inform the Administrator and send email to masters@radicaltechnologies.co.in to cancel your admission within 7 days of theenrolment. Once we allocate the trainer and further proceedings , we will not be able to refund.

4.How I will get Industry knowledge?

All our programs are developed by Industry person, who is having 10+ years real working knowledge. Under their mentorship, you will be able to gain at least 5+ year experience

5.Is this is 100% Job Guarantee program? And how is the Salary Structure?

Yes , it's a 100% JOB Guaranteed program . Minimum salary Package of 5 Lakhs per annum for the right candidate .

6.Is there any limitation on number of Interview calls providing?

No, You will get calls until you get placed

7.How many people got placed as part of this program

We have placement record of over 6000+

100% JOB GUARANTEED
MASTER PROGRAM!

GO DOWN FOR COMPLETE CURRICULUM...

Radical Technologies
Project Based IT Training & Certification Centre

ANY
BACHELORATE
CAN DO!

MCSA – WINDOWS SERVER

Identity with Windows Server 2016 | Exam 70-742

You'll learn the skills to deploy and configure Active Directory Domain Services (ADDS), implement Group Policy, perform backup and restore and monitor Active Directory-related issues with Windows Server 2016. You will use the knowledge & skills developed to bring the benefits of in-built

- Identity features in Windows Server 2016 to your business.
- Module 1: Installing and configuring domain controllers
- Module 2: Managing objects in AD DS
- Module 3: Advanced AD DS infrastructure management
- Module 4: Implementing and administering AD DS sites and replication
- Module 5: Implementing Group Policy
- Module 6: Managing user settings with Group Policy
- Module 7: Securing Active Directory Domain Services
- Module 8: Deploying and managing AD CS
- Module 9: Deploying and managing certificates
- Module 10: Implementing and administering AD FS
- Module 12: Implementing AD DS synchronization with Microsoft Azure AD (If possible)
- Module 13: Monitoring, managing, and recovering AD DS

Installation, Storage and Compute with Windows Server 2016 | Exam 70-740

You will learn how to install Windows Server 2016 – including Hyper-V and Virtual Machines. We will also cover how to migrate from your existing server platform to Windows Server 2016. In

addition to this, you will develop your knowledge of disaster recovery technologies and be capable of planning, creating and managing a failover cluster.

Module 1: Installing, upgrading, & migrating servers & workloads
• Module 2: Configuring local storage
• Module 3: Implementing enterprise storage solutions
• Module 4: Implementing Storage Spaces and Data Deduplication
• Module 5: Installing and configuring Hyper-V & virtual machines
• Module 6: Deploying & managing Windows & Hyper-V containers
• Module 7: Overview of high availability and disaster recovery
• Module 8: Implementing failover clustering
• Module 9: Implementing failover clustering with Windows Server 2016 Hyper-V
• Module 10: Implementing Network Load Balancing
• Module 11: Creating and managing deployment images
• Module 12: Managing, monitoring, and maintaining virtual machine installations

Networking with Windows Server 2016 | Exam 70-741

Networking with Windows Server 2016 course you'll develop the fundamental skills you need to develop and manage your Windows Server environment. This will help you to bring the in-built networking benefits of Windows Server 2016 to your business, fast. You'll learn how implement Networking with Windows Server 2016, developing competences core areas including remote access, IP fundamentals and VPNs.

• Module 1: Planning & implementing an IPv4 network
• Module 2: Implementing DHCP
• Module 3: Implementing IPv6
• Module 4: Implementing DNS
• Module 5: Implementing & managing IPAM (If possible)

- Module 6: Remote access in Windows Server 2016
- Module 7: Implementing DirectAccess (If possible)
- Module 8: Implementing VPNs
- Module 9: Implementing networking for branch offices
- Module 10: Configuring advanced networking features
- Module 11: Implementing Software Defined Networking

Get Up to
15 Lakhs Per Annum

Radical Technologies
Project Based IT Training & Certification Centre

EXAM AZ-303: MICROSOFT AZURE ARCHITECT

IMPLEMENT AND MONITOR AN AZURE INFRASTRUCTURE (50-55%)

Implement cloud infrastructure monitoring

- monitor security
- monitor performance
- configure diagnostic settings on resources
- create a performance baseline for resources
- monitor for unused resources
- monitor performance capacity
- visualize diagnostics data using Azure Monitor
- monitor health and availability o monitor networking
- monitor service health
- monitor cost
- monitor spend
- report on spend
- configure advanced logging
- implement & configure Azure Monitor insights, including App Insights, Networks, Containers
- configure a Log Analytics workspace
- configure logging for workloads
- initiate automated responses by using Action Groups
- configure and manage advanced alerts
- collect alerts and metrics across multiple subscriptions
- view Alerts in Azure Monitor logs
- NOT: create Log Analytics query

Implement storage accounts

- select storage account options based on a use case
- configure Azure Files and blob storage
- configure network access to the storage account
- implement Shared Access Signatures and access policies
- implement Azure AD authentication for storage
- manage access keys
- implement Azure storage replication

- implement Azure storage account failover

Implement VMs for Windows and Linux

- configure High Availability
- configure storage for VMs
- select virtual machine size
- implement Azure Dedicated Hosts
- deploy and configure scale sets
- configure Azure Disk Encryption

Automate deployment and configuration of resources

- save a deployment as an Azure Resource Manager template
- modify Azure Resource Manager template
- evaluate location of new resources
- configure a virtual disk template
- deploy from a template
- manage a template library
- create and execute an automation runbook

Implement virtual networking

- implement VNet to VNet connectionsx
- implement VNet peering

Implement Azure Active Directory

- add custom domains
- configure Azure AD Identity Protection
- implement self-service password reset
- implement Conditional Access including MFA
- configure user accounts for MFA
- configure fraud alerts
- configure bypass options
- configure Trusted IPs
- configure verification methods
- implement and manage guest accounts
- manage multiple directories

Implement and manage hybrid identities

- install and configure Azure AD Connect
- identity synchronization options

- configure and manage password sync and password writeback
- configure single sign-on
- use Azure AD Connect Health

IMPLEMENT MANAGEMENT AND SECURITY SOLUTIONS (25-30%)

Manage workloads in Azure

- migrate workloads using Azure Migrate
- assess infrastructure
- select a migration method
- prepare the on-premises for migration
- recommend target infrastructure
- implement Azure Backup for VMs
- implement disaster recovery
- implement Azure Update Management

Implement load balancing and network security

- implement Azure Load Balancer
- implement an application gateway
- implement a Web Application Firewall
- implement Azure Firewall

- implement the Azure Front Door Service
- implement Azure Traffic Manager
- implement Network Security Groups and Application Security Groups
- implement Bastion

Implement and manage Azure governance solutions

- create and manage hierarchical structure that contains management groups, subscriptions and resource groups
- assign RBAC roles
- create a custom RBAC role
- configure access to Azure resources by assigning roles
- configure management access to Azure
- interpret effective permissions
- set up and perform an access review
- implement and configure an Azure Policy
- implement and configure an Azure Blueprint
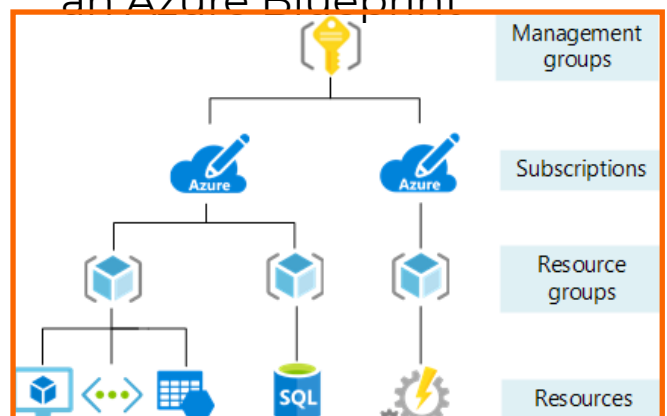
Manage security for applications

- implement and configure KeyVault
- implement and configure Azure AD Managed Identities
- register and manage applications in Azure AD

IMPLEMENT SOLUTIONS FOR APPS (10-15%)

Implement an application infrastructure

- create and configure Azure App Service
- create an App Service Web App for Containers
- create and configure an App Service plan
- configure an App Service
- configure networking for an App Service
- create and manage deployment slots
- implement Logic Apps
- implement Azure Functions

Implement container-based applications

- create a container image
- configure Azure Kubernetes Service
- publish and automate

image deployment to the Azure Container Registry
- publish a solution on an Azure Container Instance
- NOT: Service Fabric

IMPLEMENT AND MANAGE DATA PLATFORMS (10-15%)

Implement NoSQL databases

- configure storage account tables
- select appropriate CosmosDB APIs
- set up replicas in CosmosDB

Implement Azure SQL databases

- configure Azure SQL database settings
- implement Azure SQL Database managed instances
- configure HA for an Azure SQL database
- publish an Azure SQL database

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MANAGE AZURE IDENTITIES AND GOVERNANCE (15-20%)

Manage Azure AD objects

- create users and groups
- manage user and group properties
- manage device settings
- perform bulk user updates
- manage guest accounts
- configure Azure AD Join
- configure self-service password reset
- NOT: Azure AD Connect; PIM

Manage role-based access control (RBAC)

- create a custom role
- provide access to Azure resources by assigning roles
- subscriptions
- resource groups
- resources (VM, disk, etc.)
- interpret access assignments
- manage multiple directories

Manage subscriptions and governance

- configure Azure policies
- configure resource locks
- apply tags
- create and manage resource groups o move resources
- remove RGs
- manage subscriptions
- configure Cost Management
- configure management groups

IMPLEMENT AND MANAGE STORAGE (10-15%)
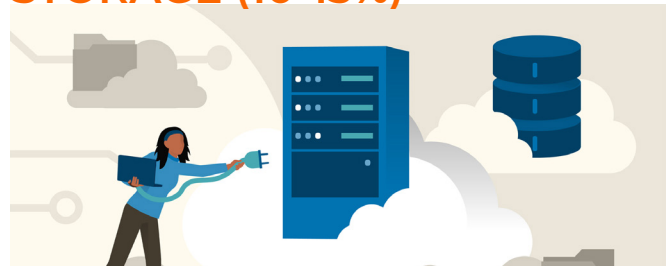
Manage storage accounts

- configure network access to storage accounts
- create and configure storage accounts
- generate shared access signature
- manage access keys
- implement Azure storage replication
- configure Azure AD Authentication for a storage account

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Manage data in Azure Storage

- export from Azure job
- import into Azure job
- install and use Azure Storage Explorer
- copy data by using AZCopy

Configure Azure files and Azure blob storage

- create an Azure file share
- create and configure Azure File Sync service
- configure Azure blob storage
- configure storage tiers for Azure blobs
- Deploy and manage Azure

COMPUTE RESOURCES (25-30%)

Configure VMs for high availability and scalability

- configure high availability
- deploy and configure scale sets

Automate deployment and

configuration of VMs

- modify Azure Resource Manager (ARM) template
- configure VHD template
- deploy from template
- save a deployment as an
- automate configuration management by using custom script extensions

Create and configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- configure networking
- redeploy VMs

Create and configure containers

- create and configure Azure Kubernetes Service (AKS)
- create and configure Azure Container Instances (ACI)
- NOT: selecting an container solution architecture or product; container registry settings

Create and configure Web Apps

- create and configure App Service
- create and configure App Service Plans

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- NOT: Azure Functions; Logic

CONFIGURE AND MANAGE VIRTUAL NETWORKING (30-35%)

Implement and manage virtual networking

- create and configure VNET peering
- configure private and public IP addresses, network routes, network interface, subnets, and virtual network

Configure name resolution

- configure Azure DNS
- configure custom DNS settings
- configure a private or public DNS zone

Secure access to virtual networks

- create security rules
- associate an NSG to a subnet or network interface

- evaluate effective security rules
- deploy and configure Azure Firewall
- deploy and configure Azure Bastion Service
- NOT: Implement Application Security Groups; DDoS

Configure load balancing

- configure Application Gateway
- configure an internal load balancer
- configure load balancing rules
- configure a public load balancer
- troubleshoot load balancing
- NOT: Traffic Manager and FrontDoor and PrivateLink

### Monitor and troubleshoot virtual networking

- monitor on-premises connectivity
- use Network Performance Monitor
- use Network Watcher
- troubleshoot external networking
- troubleshoot virtual network connectivity
- Integrate an on-premises
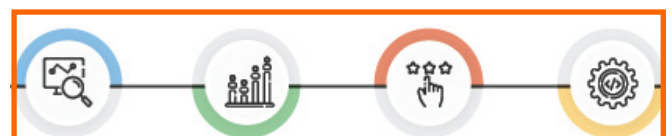
network with an Azure
virtual network

- create and configure Azure VPN Gateway
- create and configure VPNs
- configure ExpressRoute
- configure Azure Virtual WAN

MONITOR AND BACK UP AZURE RESOURCES (10-15%)

RESOURCE GROUP
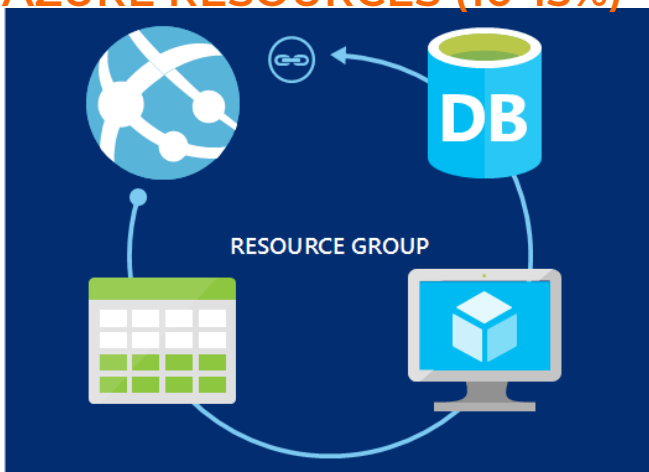
Monitor resources by using
Azure Monitor

- configure and interpret metrics
- analyze metrics across subscriptions
- configure Log Analytics
- implement a Log Analytics

workspace
- configure diagnostic settings
- query and analyze logs
- create a query
- save a query to the dashboard
- interpret graphs
- set up alerts and actions
- create and test alerts
- create action groups
- view alerts in Azure Monitor
- analyze alerts across subscriptions
- configure Application Insights
- NOT: Network monitoring

Implement backup and
recovery

- configure and review backup reports
- perform backup and restore create a Recovery Services Vault
- use soft delete to recover Azure VMs
- create and configure backup policy
- perform site-to-site recovery by using Azure Site Recovery

Microsoft Azure

- NOT: SQL or HANA

DESCRIBE CLOUD CONCEPTS (15-20%)

- Describe the benefits and considerations of using cloud services
- describe terms such as High Availability, Scalability, Elasticity, Agility, Fault Tolerance, and Disaster Recovery
- describe the principles of economies of scale
- describe the differences between Capital Expenditure (CapEx) and Operational
- Expenditure (OpEx)
- describe the consumption-based model
- Describe the differences between Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS)
- describe Infrastructure-as-a-Service (IaaS),
- describe Platform-as-a-Service (PaaS)
- describe Software-as-a-Service (SaaS)
- compare and contrast the three different service types
- Describe the differences between Public, Private and Hybrid cloud models
- describe Public cloud
- describe Private cloud
- describe Hybrid cloud
- compare and contrast the three different cloud models

DESCRIBE CORE AZURE SERVICES (30-35%)

- Describe the core Azure architectural components
- describe Regions
- describe Availability Zones
- describe Resource Groups
- describe Azure Resource Manager
- describe the benefits and usage of core Azure architectural components
- Describe some of the core

products available in Azure
- describe products available for Compute such as Virtual Machines, Virtual Machine Scale Sets, App Services, Azure Container Instances (ACI) and Azure Kubernetes Service (AKS)
- describe products available for Networking such as Virtual Network, Load Balancer, VPN Gateway, Application Gateway and Content Delivery Network
- describe products available for Storage such as Blob Storage, Disk Storage, File Storage, and Archive Storage
- describe products available for Databases such as Cosmos DB, Azure SQL Database, Azure Database for MySQL, Azure Database for PostgreSQL, Azure Database Migration service
- describe the Azure Marketplace and its usage scenarios
- Describe some of the solutions available on Azure
- describe Internet of Things (IoT) and products that are available for IoT on Azure such as IoT Hub and IoT Central
- describe Big Data and Analytics and products that are available for Big

Data and Analytics such as Azure Synapse Analytics, HDInsight, and Azure Databricks
- describe Artificial Intelligence (AI) and products that are available for AI such as Azure Machine Learning Service and Studio
- describe Serverless computing and Azure products that are available for serverless computing such as Azure Functions, Logic Apps, and Event Grid
- describe DevOps solutions available on Azure such as Azure DevOps and Azure DevTest
- Labs
- describe the benefits and outcomes of using Azure solutions
- Describe Azure management tools

DESCRIBE SECURITY, PRIVACY, COMPLIANCE, AND TRUST (25-30%)

- describe Azure tools such as Azure Portal, Azure PowerShell, Azure CLI and Cloud Shell
- describe Azure Advisor
- Describe securing network connectivity in Azure
- describe Network Security Groups (NSG)
- describe Application Security Groups (ASG)
- describe User Defined Rules (UDR)
- describe Azure Firewall
- Describe Azure DDoS Protection
- choose an appropriate Azure security solution
- Describe core Azure Identity services
- Describe security tools and features of Azure
- Describe Azure governance methodologies
- Describe monitoring and reporting options in Azure
- Describe privacy, compliance and data protection standards in Azure
- describe the difference between authentication and authorization
- describe Azure Active Directory
- describe Azure Multi-Factor Authentication
- describe Azure Security Center
- describe Azure Security Center usage scenarios
- describe Key Vault
- describe Azure Information Protection (AIP)
- describe Azure Advanced Threat Protection (ATP)
- describe policies and initiatives with Azure Policy
- describe Role-Based Access Control (RBAC)
- describe Locks
- describe Azure Advisor security assistance
- describe Azure Blueprints
- describe Azure Monitor
- describe Azure Service Health
- describe the use cases and benefits of Azure Monitor and Azure Service Health
- describe industry compliance terms such as GDPR, ISO and NIST
- describe the Microsoft Privacy Statement
- describe the Trust center
- describe the Service Trust Portal
- describe Compliance Manager
- determine if Azure is compliant for a business need
- describe Azure Government cloud services
- describe Azure China cloud services

DESCRIBE AZURE PRICING, SERVICE LEVEL AGREEMENTS, AND LIFECYCLES (20- 25%)

- Describe Azure subscriptions
- describe an Azure Subscription
- describe the uses and options with Azure subscriptions such access control and offer
- types
- describe subscription management using Management groups
- Describe planning and management of costs
- describe options for purchasing Azure products and services
- describe options around Azure Free account
- describe the factors affecting costs such as resource types, services, locations, ingress

- and egress traffic
- describe Zones for billing purposes
- describe the Pricing calculator
- describe the Total Cost of Ownership (TCO) calculator
- describe best practices for minimizing Azure costs such as performing cost analysis,
- creating spending limits and quotas, using tags to identify cost owners, using Azure
- reservations and using Azure Advisor recommendations
- describe Azure Cost Management
- Describe Azure Service Level Agreements (SLAs)
- Describe service lifecycle in Azure
- describe a Service Level Agreement (SLA)
- describe Composite SLAs
- describe how to determine an appropriate SLA for an application
- describe Public and Private Preview features
- describe the term General Availability (GA)
- describe how to monitor feature updates and product changes

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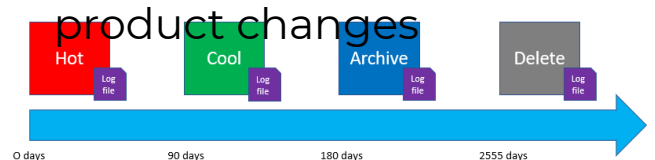
DEVOPS
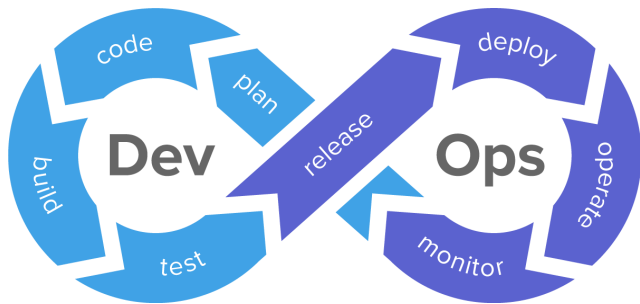
- Introduction to the definition, value, history, building blocks.
- Introduction to how Agile software development process applies to DevOps
- The importance of integrating source control in DevOps
- How automation is applied to DevOps

DevOps Concepts

- Application Servers (referring WAS) and Deployment
- Web Servers
- Cloud Computing
- Virtualization
- Containerization
- Monitoring, Alerting and Trending
- Configuration Management

- Test and Build System

How to choose the right DevOps tools

- Plan
- Build
- Continuous integration
- Deploy
- Operate
- Continuous feedback

Devops Course Content

- Linux Basics
- a.Working knowledge of Linux
- b.How to navigate through major Linux distributions?
- c.System configurations and graphical interface of Linux
- d.Basic command line operations
- e.Common applications of Linux

AWS Basics

- a.What is Cloud?
- b.What is AWS?
- c.Why Cloud is required for DevOps?
- d.How to provision Server-EC2?
- e.How to install DevOps

24

Terraform

HashiCorp Terraform enables you to safely and predictably create, change, and improve infrastructure. It is an open source tool that codifies APIs into declarative configuration files that can be shared amongst team members, treated as code, edited, reviewed, and versioned.

Introduction to Terraform, Scripting, Configuration Management, Integration with Azure

Hands-on Exercise – Script for server provisioning, Cluster management

Git(Source Control)
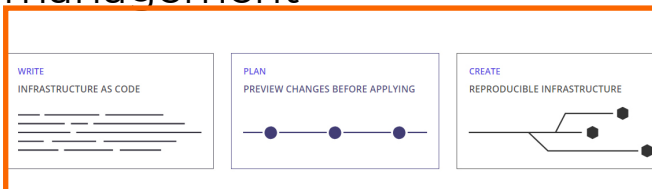
Git is a free, open source distributed version control system tool designed to handle everything from small to very large projects with speed and efficiency. It was created by Linus Torvalds in 2005 to develop Linux Kernel. Git has the functionality, performance, security and flexibility that most teams and individual developers need. Concepts of Version Control Systems, Git as SCM, Git Command Line, Git setup with CI tool Jenkins, Trunk based approach for
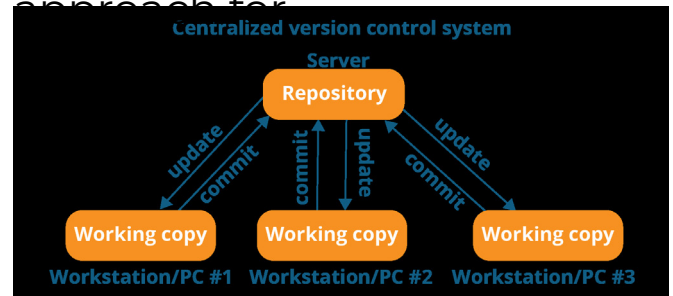
Hands-on Exercise – Create a git project, Checkout a branch, Create a file and add to git, Edit file, Commit the code, Set up Jenkins and integrate with Git

Maven

Maven is a build automation tool used primarily for Java projects. Maven addresses two aspects of building software: first, it describes how software is built, and second, it describes its dependencies.

Apache

Ansible is the simplest way to automate apps and IT infrastructure. Application Deployment Configuration Management + Continuous Delivery.

- I.Inventory. The "inventory" is a configuration file where you define the host information.
- II.Playbooks. In most cases – especially in enterprise environments – you should use Ansible playbooks.
- III.Plays. Playbooks contain plays. ...
- IV.Tasks. ...
- V.Roles. ...
- VI.Handlers. ...
- VII.Templates. ...
- VIII.Variables.

Introduction to Ansible,Configuration,Writing Ansible Playbooks, Ansible based Configuration Management,Different Roles and Command Line usage.

Hands-on Exercise – Write Ansible playbook, Assign different roles in configuration

tool

Puppet is an open source systems management tool for centralizing and automating configuration management. Configuration management is the detailed recording and updating of information that describes an enterprise's hardware and software. A look under the hood. Puppet Enterprise is built on the world's most proven and widely adopted configuration management platform. ...

- a.Puppet Language. ...
- b.Puppet Server. ...
- c.PuppetDB. ...
- d.Facter. ...
- e.Hiera

Jenkins

Automating Build and Test

Continuous Integration and Continuous Delivery. As an extensible automation server, Jenkins can be used as a simple CI server or turned into the continuous delivery hub for any project.

- a.Pipeline
- b.Easy Installation
- c.Easy Upgrades
- d.Scriptability
- e.View Filters
- f.Amazon EC2
- g.HTML Publisher
- h.Throttle Builds
- i.Join
- j.Green Balls

Automating Builds with Maven and Ant, Building Delivery Pipeline in Jenkins (CI/CD), Test Automation, Security, Notification System in Jenkins

Hands-on Exercise – Create a Maven Project, Edit pom.xml file to install a version of junit, Set up build delivery pipeline, Set up notification alerts in Jenkins, Configure test plan in Jenkins

Docker

Docker is a tool designed to make it easier to create, deploy, and run applications by using containers.
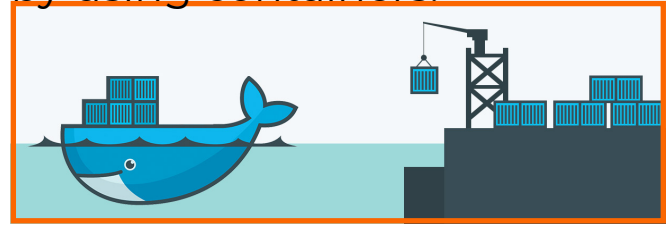
Containers allow a developer to package up an application with all of the parts it needs, such as libraries and other dependencies, and ship it all out as one package. In a way, Docker is a bit like a virtual machine. But unlike a virtual machine, rather than creating a whole virtual operating system, Docker allows applications to use the same Linux kernel as the system that they're running on and only requires applications be shipped with things not already running on the host computer. This gives a significant performance boost and reduces the size of the application.

Docker Container Management

What are Containers, Difference between VM and Container, Docker Fundamentals, Creating & Running Docker Images, Image Distribution, Creating

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Docker Registry, Compose Scripts, Remote Docker Image

Hands-on Exercise – Configure a Docker, Create an image in Docker and run it

Docker Commands and Best Practices.

Networking concepts in Docker, Using Docker Volume and Creation of a Dockerfile, a text file to contain the commands to create an image

Hands-on Exercise – Create a dockerfile with the commands to create an image, Create the image

open source orchestrator, donated to the community by Google, who has been using it internally for many years. It has become the de facto standard for container scheduling, and can scale up to the biggest deployments or down to a cluster of Raspberry Pi boards.
Introduction to Kubernetes, the cluster architecture of Kubernetes, creating a Kubernetes cluster, what is YAML, creating YAML with Kubernetes deployment, Kubernetes service, dashboard installation, Kubernetes rolling updates, using an app with the dashboard.

Containerization with Kubernetes

Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.
Kubernetes (aka k8s) is an

Plan, track, and manage your agile and software development projects in Jira. Customize your workflow, collaborate, and release great software.

a.Process
b.Versions

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Nagios

Performance and Automated Monitoring

Nagios provides enterprise-class Open Source IT monitoring, network monitoring, server and applications monitoring
a.Monitoring
b.Response
c.Maintenance

Introduction of Nagios, Nagios Setup, Commands, Objects, notifications, Configure Nagios to monitor webserver, Load Balancer (HAProxy, NginX), + Project 1 & project 2

Hands-on Exercise – Perform Nagios and Netdata monitoring, Monitor the performance with Grafana,

Setup Syslog and verify the logs are getting generated, Configure HAProxy server

Continuous Integration (CI)

Frequent merge of code to a shared repository after which automated builds and tests are run using Jenkins

Hands-on Exercise – Commit code and check if Jenkins runs the build scripts and tests the code using automation script

Agile Process & Other Tools

- Devops insync with Agile

- PagerDuty Alerting tool

- Jira Project Management Tool

- Slack – Continuous

communication tool
Basic Concepts of virtualization to complete the VMware course

Introduction to vSphere & the Software Defined Data Center

- Describe how vSphere fits into the software defined data center and the cloud infrastructure
- Explain how vSphere interacts with CPUs, memory, networks, and storage
- Use vSphere Client to access and manage your vCenter Server system and ESXi host
- Compare virtual machine hardware version 14 to other versions
- Identify the virtual network adapters, and describe the enhanced VMXNET3
- Compare the types of virtual

disk provisioning
- Install and configure ESXi host settings
- Identify the advantages of ESXi Quick Boot

## vCenter Server with Windows 2016 R2

- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Use vSphere Client to manage the vCenter Server inventory
- Add data center, organizational objects, and hosts to vCenter Server
- Create custom inventory tags
- Describe the rules for applying permissions
- Create a custom role in vCenter Server

Configuring and Managing Virtual Storage

- Identify storage protocols and storage device types
- Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage

- Create and manage VMware vSphere® VMFS and NFS data stores
- Explain how multi pathing works with iSCSI, NFS, and Fibre Channel storage
- Identify the advantages of VMware vSAN™

Creating Virtual Machines

- Create, provision, and remove a virtual machine
- Explain the importance of VMware Tools™
- Describe how to import a virtual appliance OVF template

Virtual Machine Management
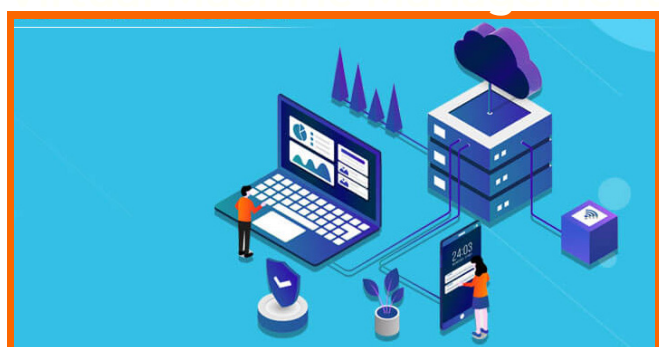
- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Create an instant clone of a virtual machine
- Identify the types of content libraries and how to deploy and use them
- Add a hot-pluggable device

- Dynamically increase the size of a virtual disk
- Use customization specification files to customize a new virtual machine
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots

vSphere Update Manager

- Describe the architecture, components, and capabilities of vSphere Update Manager
- Use vSphere Update Manager to manage the patching of ESXi, virtual machines, and vApps
- Examine the features and functions of vSphere Update Manager EAM integration
- Integrate vSphere Update Manager with vSphere DRS

vSphere HA, vSphere Fault Tolerance, and Protecting Data

- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Use vSphere HA advanced parameters

- Enforce infrastructural or intra-app dependencies during failover
- Describe vSphere HA heartbeat networks and datastore heartbeats
- Examine the features and functions of vSphere Fault Tolerance
- Enable vSphere Fault Tolerance on virtual machines

- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster
- View information about a vSphere DRS cluster
- Configure virtual machine affinity, DRS groups, and VM-host affinity rules
- Remove a host from a vSphere DRS cluster
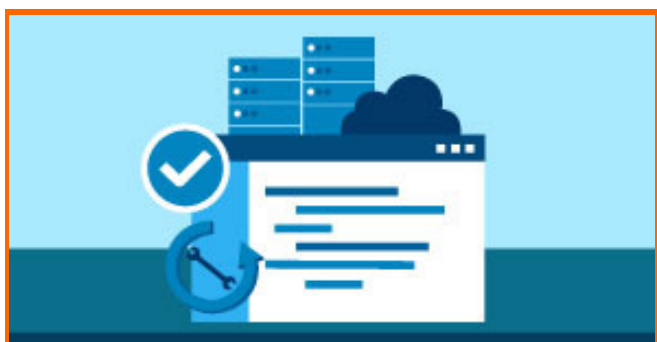
- Review troubleshooting tools

- Find important log files
- Use vSphere Syslog Collector
- ESXi core dump collector
- Create and use alarms to report certain conditions or events
- ESXi command line
- ESXi / VM performance monitoring
- Virtual Center server advance options
- RV Tool deployment
- ESXi and VC license management

Resource Management and Monitoring

- Discuss CPU and memory concepts in a virtualized environment
- Describe what over commitment of a resource means
- Configure and manage resource pools

Virtual Center Server Interface

- Configure and Access

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vCenter Server Appliance with multiple Deployment Scenarios.
- Virtual Center Server link Mode
- Create a vCenter Server Appliance backup schedule
- Restore vCenter Server Appliance from a backup
- Monitor vCenter Server Appliance

VMware VSphere Migration

6.5 / 6.7/ 7.0
Difference between 6.5 / 6.7/

Discussion on CV and

Physical Hardware

- CISCO UCS hardware demonstration.
- How to work with physical

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Project Based IT Training & Certification Centre

hardware
Planning & Provisioning
Microsoft Office 365

Overview of Office 365 Provisioning an Office 365 tenant Planning a pilot deployment Lab: Provisioning Office 365

Managing Microsoft Office
365 Users & Groups

Managing user accounts and licenses Managing passwords and authentication Managing security groups in Office 365 Managing Office 365 users and groups with Windows PowerShell Configuring administrative access Lab: Managing Office 365 users and passwords Lab: Managing Office 365 groups and administration

Configuring Client
Connectivity To Microsoft
Office 365

Planning for Office 365 clients Planning connectivity for Office 365 clients Configuring connectivity for Office 365 clients Lab: Configuring client

connectivity to Office 365
Planning & Configuring
Directory Synchronization

Planning and preparing for directory synchronization Implementing directory synchronization by using Azure AD Connect Managing Office 365 identities with directory synchronization Lab: Planning and configuring directory synchronization

Planning & Deploying Office
365 ProPlus

Overview of Office 365 ProPlus Planning and managing user-driven Office 365 ProPlus deployments Planning and managing centralized deployments of Office 365 ProPlus Office telemetry and reporting Lab: Deploying Office 365 ProPlus

Planning & Managing
Exchange Online Recipients

Overview of Exchange Online Managing Exchange Online recipients Planning and configuring Exchange Online permissions Lab: Managing Exchange Online recipients and permissions

Planning & Configuring Microsoft Exchange Online

Planning and configuring email flow in Office 365 Planning and configuring email protection in Office 365 Planning and configuring client access policies Migrating to Exchange Online Lab: Configuring message transport in Exchange Online Lab: Configuring email protection and client policies
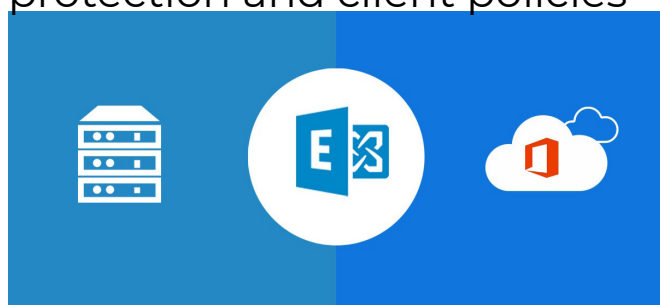
Planning & Deploying Skype

Planning and configuring Skype for Business Online service settings Configuring Skype for Business Online

users and client connectivity Planning voice integration with Skype for Business Online Lab: Deploying Skype for Business Online

Planning & Configuring

Configuring SharePoint Online services Planning and configuring SharePoint site collections Planning and configuring external user sharing Lab: Configuring SharePoint Online

Planning & Configuring A Office 365 Collaboration

Planning and managing Yammer Enterprise Planning and configuring OneDrive for Business Configuring Office 365 groups Lab: Planning and configuring an Office 365 collaboration solution

Planning & Configuring Rights Management &

Overview of the compliance features in Office 365 Planning and configuring Azure Rights Management in Office 365 Managing the compliance features in Office 365 Lab: Configuring Rights Management and compliance

Monitoring & Troubleshooting Microsoft Office 365

Troubleshooting Office 365

Monitoring Office 365 service health Lab: Monitoring and troubleshooting Office 365

Planning & Configuring Identity Federation

Understanding identity federation Planning an AD FS deployment Deploy AD FS for identity federation with Office 365 Planning and implementing hybrid solutions Lab: Planning & configuring identity

POWER SHELL

Need of WMI in Powershell
Querying Data with WMI/CIM
Making Changes with WMI/CIM

Powershell Modules and Manifests

Adding additional functionality in shell
Exploring new CMDLETS
Dynamic/Manual Module loading
Creating your own module

Preparing for scripting

Types Of Variable
Using Variables
Scope of Variables
Scripting Security
Working with Alternate Credentials

Moving From a Command to a Script to a Module

Moving From Command to Script
Moving From Script to Function to Module
Implementing Basic Error Handling
Using Basic Scripting Constructs
Further Exploration in Scripting

Administering Remote Computers
What is PowerShell Remoting?
Prerequisites for Remoting
Using Basic Remoting 1:1 and 1: Many
Creating interactive Remote session
Creating Persistent Session
Using Remoting for Delegated Administration

Loops Supported in Powershell
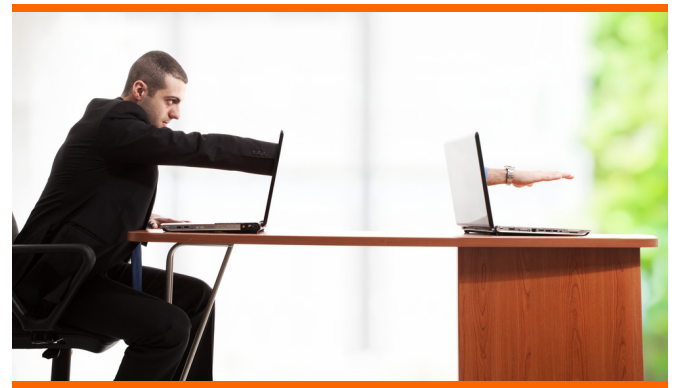
Else and nested If..Else
Foreach
For
Switch
While Loop

Using Advanced PowerShell Techniques and Profiles

Understanding Powershell Function
Purpose Of Functions
Creating Powershell Functions
Adding Help information in functions

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Using Parameters in script
Adding advanced parameters.
Creating Profile Scripts
Optional

Introduction to Active
Directory Module

Querying AD objects(User Accounts, Groups, Computer Accounts),

Creating New Objects(User Accounts, Groups, Computer Accounts),
Identifying the Properties of AD Objects
Adding additional properties
Deploying AD through Automation (Parent,Child)

Introduction to Azure, Azure RM Module

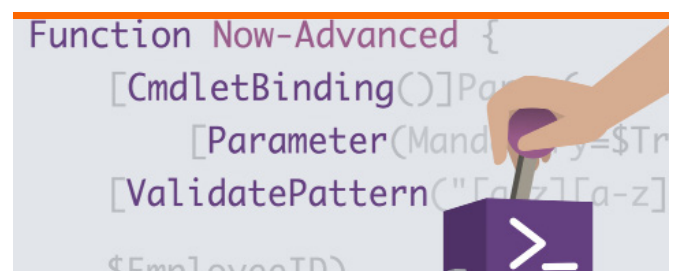# POWERSHELL SCRIPTING ADVANCED

Core Concepts of Powershell

- Powershell Help System
- Concept of Pipeline
- Powershell PSProvider
- Formatting System
- Windows management Instrumentation
- Filtering and Comparison
- Arrays and Hashtable
- Powershell Scripting

Scripting Overview

- Get Started with Scripting Overview
- Understanding the Use of Scope
- Use the If Construct to make decisions
- Use Do/While/Until to repeat the commands
- Use foreach to enumerate objects

- Use for Construct to repeat the commands
- Find help for other scripting construct

Powershell Advanced Function


```
Function Now-Advanced {
    [CmdletBinding()]Param (
        [Parameter(Mandatory=$Tr
        [ValidatePattern("[a-z][a-z]
        $EmployeeID)
```

- Use Powershell Advanced Functions
- Specify functions capabilities
- Specify usage for a functions
- Create a function skeleton
- Declare parameters in a function
- Test the functions

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- Add verbose output to a function
- Implement logging in function
- Test completed functions

More capabilities for advanced function

- Discover other advanced functions
- Add debugging features to a function
- Validate user input to a function
- Add support for –confirm and –whatif

Handle Errors

- Handling Errors
- Add error handling to a function

Debugging

- Debugging any errors
- Deal with typos and syntax errors
- Deal with mis-constructed constructs
- Add trace code to debug logic errors
- Debug wit psbreakpoints

Format Custom Views

- Format Custom Views
- Use default views as a starting point
- Add a type to custom output object
- Create and use the xml view file

Scripts and Manifest Modules

- Use scripts and manifest modules
- Turn script in to a script module
- Create module manifest for multiple modules
- Add a module-level setting variable

Writing Help

- Write Help
- Create Comment based help in module

Introduction to Desired state configuration

- Understanding Desired State Configuration
- Creating and deploying a DSC configuration
- Understanding Pull and Push Deployment

Practical Implementation with Active Directory, Azure

- Automating Active directory
- Automating Azure IAAS with Powershell

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Approved Centre

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Country   : India

Centre number   : DC2010456

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Approval date   : 21 April 2021
Issued date   : 21 April 2021

Patricia Land
Head of Operations
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United Kingdom

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