Syllabus

Azure Cloud Professional Training

(Fundamentals of Networking, Linux & Cloud + Microsoft Azure Administrator (AZ-104) Training + Azure Real time scenarios)

Duration: 60 - 70 hours

INTRODUCTION

This Azure Cloud Professional Training from IPSR, equips professionals or novices with the expertise in implementing, managing and monitoring an organization's Microsoft Azure environment. The course also provides knowledge and skill required to acquire Azure Administrator Certification.

This industry-oriented course is developed by both the Technical Support division & Training division of **ipsr solutions limited**. IPSR is **a public limited IT company** with 20 years of expertise in Software product development, Training services, Placement services & Digital Marketing services. During the past 2 decades, IPSR has trained candidates from **50+ countries** and helped **100000+ candidates** to build their IT career. Our IT services division is a pioneer in development of **Academic solution products**, incorporating cutting edge technologies like Artificial Intelligence, Data Analytics, Machine learning and Cloud Computing. Live industry experts from this IT Tech Support division contribute a major role in delivering this course. Our placement division is having **1500+ placement tie-up companies** and we are conducting recruitment on all days.

The Course curriculum is designed and developed by a team of expertise panel lead by following academicians and industry experts

❏ **Dr. Mendus Jacob, M.Sc., M.Phil., Ph.D., MIoD**
   ❏ M.D & C.E.O - IPSR & Valin Technologies, U.K.
   ❏ Director - MCA, Marian College, Kuttikkanam (Autonomous)
   ❏ Former Director of School of Applicable Mathematics, M.G. University.
   ❏ Academician and Entrepreneur with 30+ years' experience

❏ **Dr. Sunil Job K.A, M.Sc, M.Ed, M.Phil, Ph.D., RHCE**
   ❏ Chief of Academic Solutions - IPSR
   ❏ Former college Principal and a Specialist in Data Analytics & Machine Learning
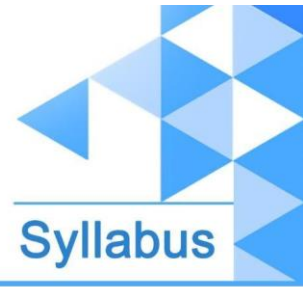
❏ Blogger and a Resource person for National conferences
❏ Academician with 25+ years' experience

❏ **Mr. Sreenivas Prasad, MTech, CISSP, JNCIA, VCP, CCSE, CCNP, MCSE**
   ❏ Academic Consultant and Corporate Trainer, Bangalore
   ❏ A highly accomplished professional with over 20+ years of hands on experience
   ❏ having served as Solution Architect, Project Manager, Technical Consultant and IT Manager with Accenture, IBM, HCL and iGATE
   ❏ Corporate Trainer for HP, Cisco, Genpact, Standard Chartered, HCL, iGATE, TCS, GMR, Oman Air, IBM, CapGemini etc. on Cloud, Cyber security, Block chain and IOT
   ❏ Acting as an Advisor for Different universities.

Course Outcome (CO)

While successfully completing this course, the learner will be able to:

● **Configure Cloud services on Azure Cloud Platform**

● **Manage Azure Management portal, Core Azure Services, Azure Identities and Governance**

● **Create and configure various Azure storage accounts. Deploy and manage Azure Compute resources (Virtual machines)**

● **Configure and manage virtual networks. Design and develop applications for Containers**

● **Design and implement Azure Load balancing, Implement Azure App services**

● **Configure Azure monitoring and log analytics. Monitor, Backup and recover Azure Resources**

● **Implement Azure Real-time Use-cases**

Units and Syllabuses

Unit I - Fundamentals of Networking & Linux

You'll learn the fundamental principles of computer networking and Linux basics to prepare you for the Azure admin

Unit II - AZ-104 - Microsoft Azure Administrator Training

Introduction to Azure
● Cloud technology overview
● Overview of Azure
● Managing Azure with the Azure portal
● Managing Azure with Windows PowerShell
● Overview of Azure Resource Manager
● Azure management services

Manage Azure identities and governance

Manage Azure Active Directory (Azure AD) objects

● create users and groups
● create administrative units
● manage user and group properties
● manage device settings
● perform bulk user updates
● manage guest accounts
● configure Azure AD join
● configure self-service password reset

Manage role-based access control (RBAC)

- create a custom role
- provide access to Azure resources by assigning roles at different scopes
- interpret access assignments

Manage subscriptions and governance

- configure Azure policies
- configure resource locks
- apply and manage tags on resources
- manage resource groups
- manage subscriptions
- manage costs
- configure management groups

Implement and manage storage

Secure storage

- configure network access to storage accounts
- create and configure storage accounts
- generate shared access signature (SAS) tokens
- manage access keys
- configure Azure AD authentication for a storage account
- configure access to Azure Files

Manage storage

- export from Azure job
- import into Azure job
- install and use Azure Storage Explorer
- copy data by using AZCopy
- implement Azure Storage replication
- configure blob object replication

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
- configure blob lifecycle management

Deploy and manage Azure compute resources

Automate deployment of virtual machines (VMs) by using Azure Resource Manager templates

- modify an Azure Resource Manager template
- configure a virtual hard disk (VHD) template
- deploy from a template
- save a deployment as an Azure Resource Manager template
- deploy virtual machine extensions

Configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- add data disks
- configure networking
- redeploy VMs
- configure high availability
- deploy and configure virtual machine scale sets

Create and configure containers

- configure sizing and scaling for Azure Container Instances
- configure container groups for Azure Container Instances
- configure storage for Azure Kubernetes Service (AKS)
- configure scaling for AKS
- configure network connections for AKS
- upgrade an AKS cluster

Create and configure Azure App Service

- create an App Service plan
- configure scaling settings in an App Service plan
- create an App Service
- secure an App Service
- configure custom domain names
- configure backup for an App Service
- configure networking settings
- configure deployment settings

Configure and manage virtual networking

Implement and manage virtual networking

- create and configure virtual networks, including peering
- configure private and public IP addresses
- configure user-defined network routes
- implement subnets
- configure endpoints on subnets
- configure private endpoints
- configure Azure DNS, including custom DNS settings and private or public DNS zones

Secure access to virtual networks

- create security rules
- associate a network security group (NSG) to a subnet or network interface
- evaluate effective security rules
- implement Azure Firewall
- implement Azure Bastion

Configure load balancing

- configure Azure Application Gateway
- configure an internal or public load balancer
- troubleshoot load balancing

Monitor and troubleshoot virtual networking

- monitor on-premises connectivity
- configure and use Azure Monitor for Networks
- use Azure 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 Azure ExpressRoute
- configure Azure Virtual WAN

Monitor and backup Azure resources

Monitor resources by using Azure Monitor

- configure and interpret metrics
- configure Azure Monitor logs
- query and analyse logs
- set up alerts and actions
- configure Application Insights

Implement backup and recovery

- create a Recovery Services vault
- create a Backup vault
- create and configure backup policy
- perform backup and restore operations by using Azure Backup
- perform site-to-site recovery by using Azure Site Recovery
- configure and review backup reports

Unit III - Azure Real time scenarios

Implementing and managing Azure networking
- Configuring Azure Virtual Network Gateway with AWS over IPsec VPN.
- Creating DNAT for Azure machine using Azure Firewall.

Implement and configure Azure DNS & Azure Standard Load Balancer
- Creating Azure DNS Zone and configuring it.
- Creating 3 Availability Sets and placing a single virtual machine in each AV-Set.
- Create Azure Standard Load Balancer and create a backend pool and assign all the 3 AVSets.
- Check the Load Balancing between the servers in different AV-Sets.

Configuring Auto Scaling with Virtual Machine Scale Sets (VMSS)

- Creating a Azure VM Image for VMSS
- Deploy VMSS with the custom image.
- Check Autoscaling of VMs

Planning and implementing Azure Storage

- Data migration using Azure storage explorer
- Manage Azure Storage permissions
- Azure Static Website deployment

Introduction to Infrastructure as a Code (IaaC)

- Understanding JSON files
- Introduction Azure Resource Manager Templates (ARM)
- Deploy basic Azure Infrastructure with Terraform
- CI/CD with Azure DevOps

Azure Functions & Logic Apps

- Understanding Azure functions.
- Creating and executing Azure Functions.
- Creating Logic Apps and executing.

Contact Us

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