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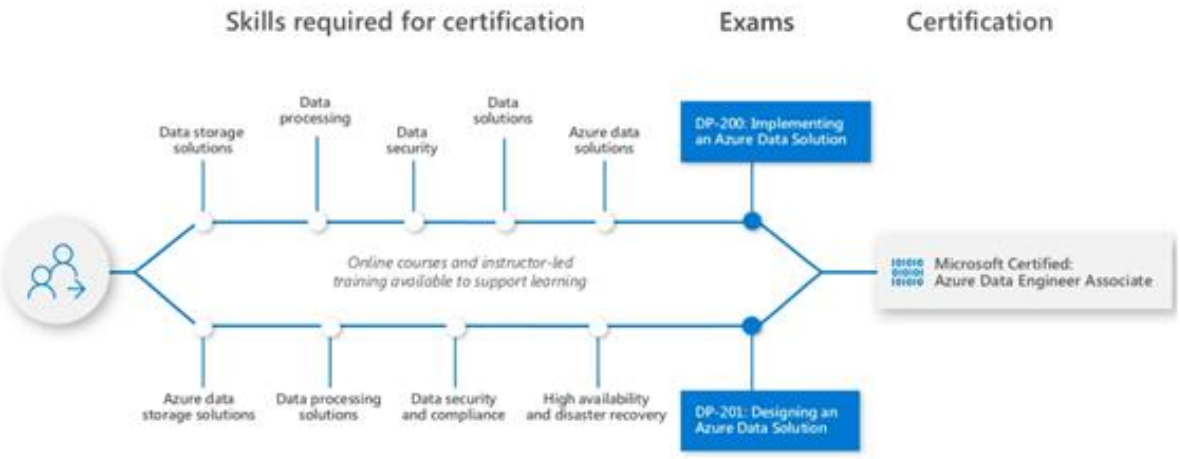
INTRODUCTION | DATABASE SOLUTIONS | DATA LAKE STORAGE | DATA FACTORY| STORAGE SOLUTIONS | SECURITY | STREAM ANALYTICS | AZURE BATCH

14 MODULE | 30 LABS | CERTFICATION ASSISTANCE

QUOTATION AND COURSE OUTLINE

IMPLEMENTING AN AZURE DATA SOLUTION

EXAM DP 200- IMPLEMENTING AN AZURE DATA SOLUTION



Course Materials

TechPledge will provide a customized set of Lecture Notes for each class scheduled along with Recorded video. You will be given a PDF file which you may make copies from, email to your participants, or make available via internal website.

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Learning Path for DP-200

Azure Solution Developer must have skills needed to design solutions that run on Azure. A Microsoft Azure Solution Developer must have expertise in compute, network, storage, Visual Studio, Database, data factory & security. At the TechPledge we provide the training which is always updated in line with the Azure Solution Developer Skills required by the industry and recommended by Microsoft. Below is the patch for training

Evolve your Implementation Skills

- *Azure architecture and service guarantees*
- *Manage services with Azure portal*
- *Security, responsibility and trust in Azure*
- *Apply and monitor infrastructure standards with Azure Policy.*
- *Control and organize Azure resources with Azure Resource Manager*

Manage Resources in Azure

- *Align requirements with cloud types and service models in Azure*
- *Control Azure services with the CLI*
- *Automate Azure tasks using scripts with PowerShell*
- *Predict costs and optimize spending for Azure*
- *Control and organize Azure resources with Azure Resource Manager*

Architect Great Solutions in Azure

- *Pillars of a great Azure architecture*
- *Design for security in Azure*
- *Design for performance and scalability in Azure*
- *Design Solutions for Different Customer Requirement*
- *Design for availability and recoverability in Azure*

Abilities Validated by the Certification

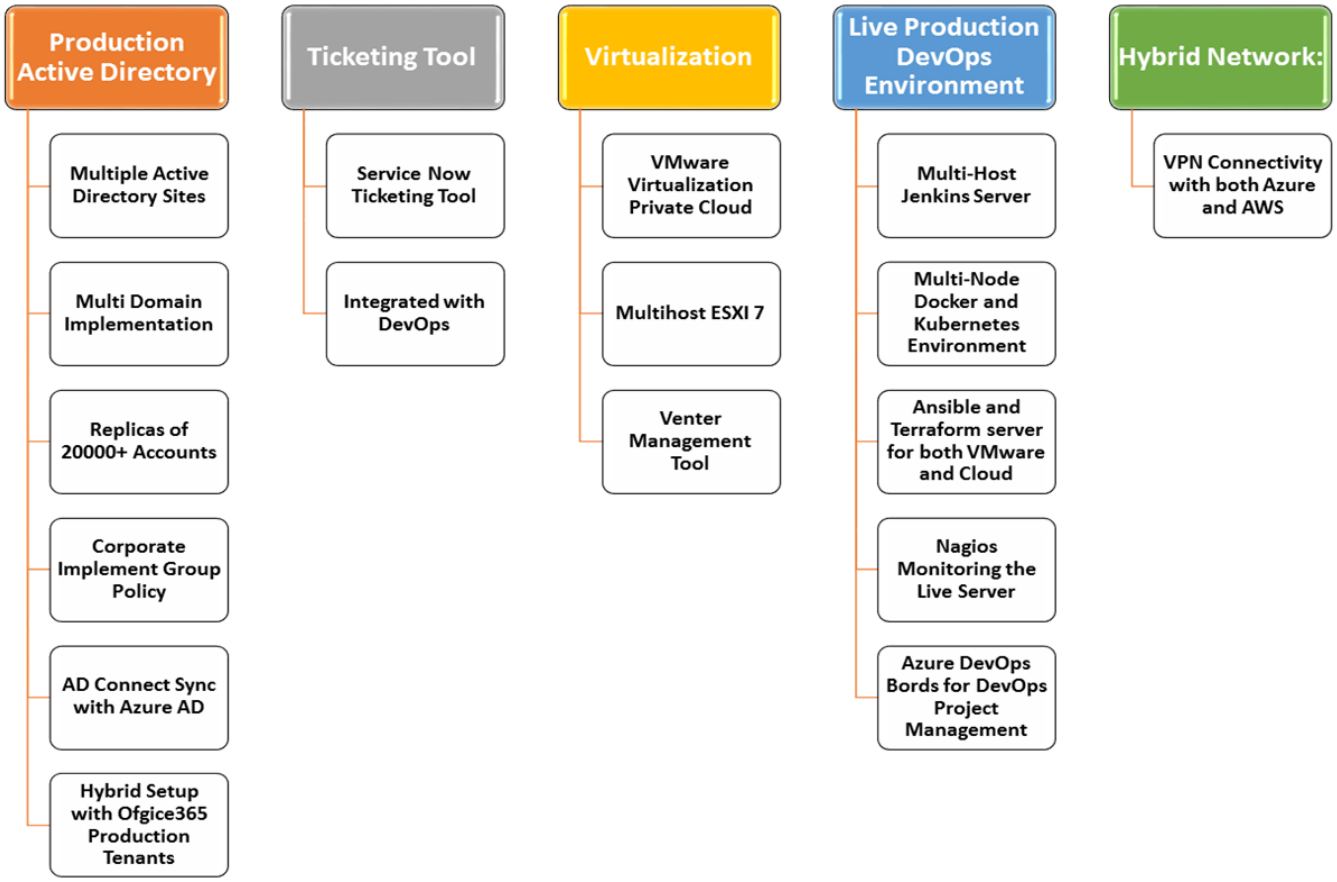
- Deploy and configure infrastructure
- Implement workloads and security
- Create and deploy apps
- Implement authentication and secure data
- Develop for the cloud and for Azure storage
- Determine workload requirements
- Design for identity and security
- Design a data platform solution
- Design a business continuity strategy
- Design for deployment, migration, and integration
- Design an infrastructure strategy

Customer Immersion – Live Production Walkthrough

6 Hours Live walkthrough the complete Infrastructure Integration and Migration Process in production environment with full setup of Infrastructure Like **AD, Microsoft SQL , Microsoft Exchange, File Server , ADFS and** DevOps Tool Like **Jenkins , Ansible , Docker , AWS Code Deploy , AWS Code Pipeline , Azure Pipeline** and **Azure ARM** and Development Environment with Maven, Visual Studio and Python.

The Complete Setups is using **100** of **PowerShell** & **Linux Script** with **237 CI/CD scripts** (**Jason, Yamal**).

Below is the High-Level Setup Outline of our Customer Immersion Production Replicas. Student will get the access of this setup at end of the course for 6 hours with AD ID and Organization Email.



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Learn while doing with our Sandbox Environment

Azure Sandbox

- Connect with Azure Portal through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

AWS Sandbox

- Connect with AWS Console through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

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Course Outline

Application Architecture Patterns in Azure

- Pattern Resources
- Performance Patterns
- Resiliency Patterns
- Scalability Patterns
- Data Patterns

Designing Highly Available, Cost-efficient, Fault-tolerant, and Scalable Systems

- Planning and Designing Cloud Services
- How to design Cloud Services
- Monitoring and Logging
- Hybrid IT architectures
- **Lab 1:** Create a sample solution design for customer with draw.io
- **Lab 2:** Create a sample cost estimate for the customer requirement with proposed components

Deploying Resources with Azure Resource Manager

- ARM Templates
- Role-Based Access Control (RBAC)
- Resource Policies
- Security
- Building Blocks
- **Lab3:** Create Resource Groups
- **Lab4:** Deploy an Virtual Machine Using ARM template
- **Lab 5:** Deploy an Webapp with ARM template from github

Building Azure IaaS-Based Server Applications

- High Availability
- Templated Infrastructure
- Domain-Connected Machines
- **Lab6:** Deploy a Resource Group using Azure Cli
- **Lab7:** Deploy a Virtual Machine using Azure Cli
- **Lab8:** Deploy a Resource Group using PowerShell
- **Lab9:** Deploy a Virtual Machine using PowerShell

Backing Azure Solutions with Azure Storage

- Azure Storage Pricing
- Azure Storage High Availability
- Azure Manage and Unmanage Disk
- Blob Storage
- Access Security in Block Storage
- Key Based Authentication for Blob Storage
- Connect and use blob storage using Java, Dot Net code

- Files Storage
- Queue Storage
- Overview of StorSimple
- **Lab10:** Create a Storage Account and Configure Blob Container.
- **Lab11:** Install Azure Storage Explorer, connect with secure string and connect the Storage
- **Lab12:** Create and Attached the additional Disk storage to Azure VM and Format it using NTFS

Implementing Relational Database Options in Azure

- Relational Database
- Understanding Database as a service
- SQL Databases, SQL Data Warehouses, and Data Lakes
- SQL Database is not SQL Server
- Advance Capabilities
- Data Warehouse Introduction
- SQL Database Hyperscale
- Elastic Pools
- Benefits of SQL database
- Scaling SQL database
- Connect SQL Database with Visual Studio
- Backup Options
- Hands-on Lab: Deploy SQL database on Azure
- NoSQL Services
- **Lab 13:**. Deploy a SQL Server Database Instance and Connect SSMS Installed on-prem
- **Lab 14:**. Deploy a SQL Server Database Instance and Connect with Visual Studio form

Implement Non-Relational Data Stores

- Introduction to NoSQL
- Azure Data Lake Introduction
- Cosmos DB Essentials
- Azure Cosmos DB
- Azure Cosmo DB Provisioning and scalability
- Azure Cosmo DB Pricing Model
- Partitioning and Horizontal Scaling in Cosmos DB
- Azure Table Storage Overview
- **Lab15:** Deploy a CosmosDB Database Instance and Create a sample customer records
- **Lab 16:** Provisioning a Gen 2 Azure Data Lake

Managing Data Security

- Azure IAM
- Azure Security Center
- Use Azure Secure score
- Use Azure Advisor
- Implement Data Masking

- Always encrypt
- Encrypt Data at Rest and in Motion
- **Lab21:** Creating a customer table for mask columns with data masking
- **Lab 22:** Create a Customer details with Credit card information and always encrypt it
- **Lab 23:** Review the Security Recommendation and design the vulnerability remediation plan

Develop Batch Processing Solutions

- Batch Processing Overview
- Apache Spark Overview
- Databricks Introduction
- PolyBase Introduction
- **Lab24:** Review the Batch processing framework
- **Lab 25:** Run a batch job using Azure Portal
- **Lab 26:** T-SQL statement Create Table as Select, with emphasis on the movement of data from Azure Blob and Data Lake to SQL Data Warehouse.

Azure Data Factory

- Flow Process of Data Factory
- Why Azure Data Factory
- Integration Runtime in Azure Data Factory
- Mapping Data Flow
- **Lab 27:** Transform data using Mapping data flows

Develop Streaming Solutions

- Introduction to Azure Stream Analytics
- Azure Stream Windowing Functions
- Using Reference Data for Lookups in Stream Analytics
- Key capabilities and benefits
- **Lab 28:** Analyse phone call data with stream analytics and visualize results in Power BI dashboard

Monitoring and Automating Azure Solutions

- Application Monitoring
- Platform Monitoring
- Network Monitoring
- Alerting
- Monitoring Stream Analytics
- **Lab29:** Use App Insight Application Dashboard to Monir the Application

Project:

Project Title: Develop Solution for Azure using Dotnet and SQL database

Project Description:

- TPCS an Renowned Company based out of USA approached TechPledge Consulting regarding development of an app which use Azure App service with Dot.Net and SQL as Backend.

Course Fee

Call for Price