

**INTRODUCTION | DATABASE SOLUTIONS | NETWORK |  
APP SOLUTIONS | STORAGE SOLUTIONS | SECURITY |  
COST MANAGEMENT | MONITORING**

**14 MODULE | 19 LABS | CERTIFICATION ASSISTANCE**

## QUOTATION AND COURSE OUTLINE

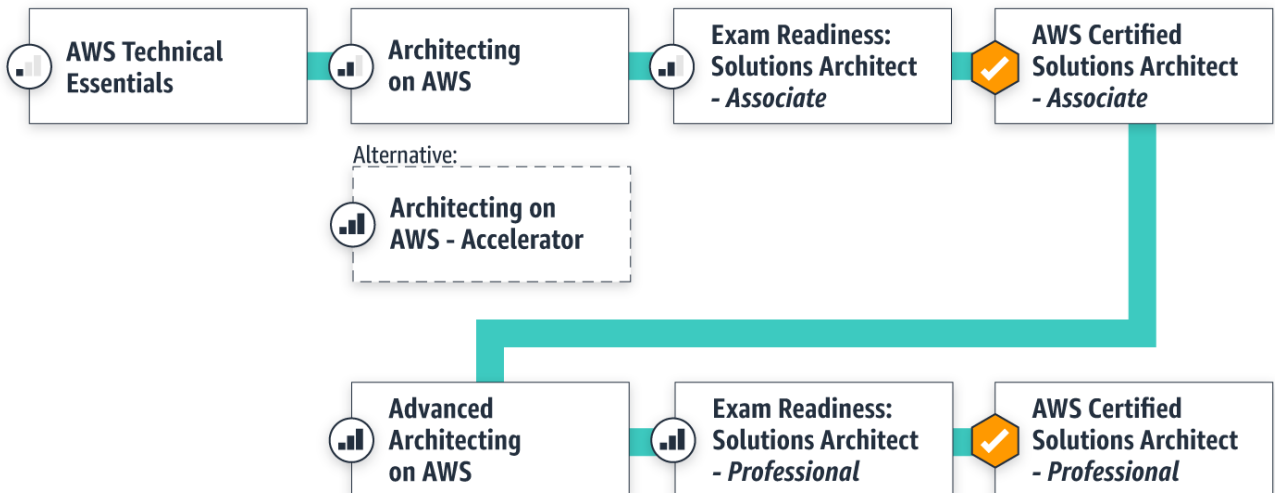
### AWS SOLUTION ARCHITECT- PROFESSIONAL COURSE

#### EXAM SAP-C01 AWS CERTIFIED SOLUTION ARCHITECT PROF



#### Architect Learning Path

= certification    = intermediate  
 = foundational    = advanced



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## Course Materials

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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 Solutions Architect

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AWS Solution Architect must have skills needed to design solutions that run on AWS. An Amazon AWS Solution Architect must have expertise in Designing the complete solutions using AWS components like compute, network, storage, Database, AWS Cli , security Costing . At the TechPledge we provide the training which is always updated in line with the AWS Solution Architect Skills required by the industry and recommended by Amazon. Below is the patch for training

### Evolve your Implementation Skills

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

### Manage Resources in AWS

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- *Align requirements with cloud types and service models in AWS*
- *Control AWS services with the CLI*
- *Automate AWS tasks*
- *Predict costs and optimize spending for AWS*
- *Control and organize AWS resources with Resource Tag*

### Architect Great Solutions in AWS

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- *Pillars of a great AWS architecture*
- *Design for security in AWS*
- *Design for performance and scalability in AWS*
- *Design Migration Solutions for on-prem workloads*
- *Design for availability and recoverability in AWS*

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## Abilities Validated by the Certification

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- Design and deploy dynamically scalable, highly available, fault-tolerant, and reliable applications on AWS
- Select appropriate AWS services to design and deploy an application based on given requirements
- Migrate complex, multi-tier applications on AWS
- Design and deploy enterprise-wide scalable operations on AWS
- Implement cost-control strategies
- Design the Migration Strategies

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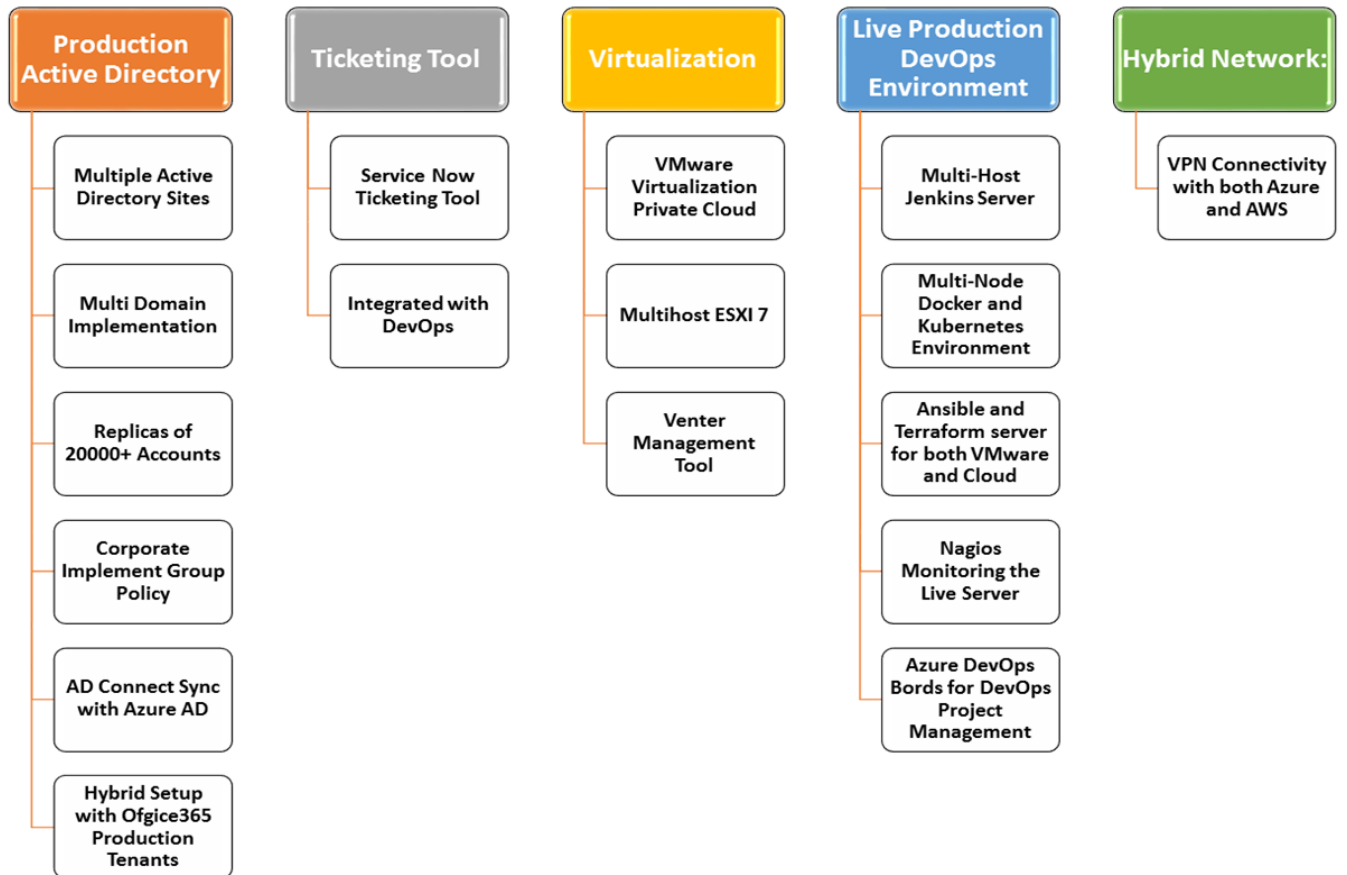
## Customer Immersion – Live Production Walkthrough

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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 , AWS Code Deploy and AWS CLI** 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

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### 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

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## Course Outline

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### Introduction to AWS and Solution Architect

- Solution Architect Organization
- Overview of Architect Tool – Draw.io , Cost Calculator, SWS case studies, AWS Architect Center
- AWS Overview
- History and Evolution of AWS
- AWS Regions
- Overview of AWS Services

### 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:** Create a sample solution design for customer with draw.io
- **Lab:** Create a sample cost estimate for the customer requirement with proposed components

### Identity and Access Management (IAM)

- Introduction to Identity and Access Management (IAM)
- Creating users and Groups
- Creating Custom policies
- Giving access to users to services using custom policies
- IAM Emulator
- IAM Best Practices
- **Lab:** Design the User access workflow using Draw.io
- **Lab:** Create a User & Group and assign Roles to Access S3 Storage

### Amazon Virtual Private Cloud(VPC)

- IP Schemas and CIDR
- Amazon Virtual Private Cloud (VPC)
- Amazon VPC and Subnets
- Amazon Routing
- Internet Gateway
- Using Security Groups and Network ACLs
- Amazon VPC Best Practices and Costs
- **Lab:** Design the VPC network for a customer using Draw.io
- **Lab:** Create a VPC and Subnets and Place a server

### Elastic Compute Cloud (EC2)

- Introduction to Elastic Compute Cloud (EC2)
- Launching EC2 server

- Elastic Block Store (EBS)
- Elastic IP creation
- Amazon Machine Image (AMI)
- Snapshots creation from Volume
- Elastic Load Balancing (ELB)
- EC2 Best Practices and Costs
- **Lab:** Create a Bill of Material for customer and estimate the cost using price calculator
- **Lab :** Create a Design with Network, VM and ELB using dra.io
- **Lab:** Launch a Windows and Linux VM
- **Lab:** Create Snapshot image and Launch VM using that Image

### AWS Storage

- Introduction to Cloud Storage
- Create and Manage S3 Storage
- Use S3 Explorer to manage S3
- S3 Life cycle
- Create and Manage S3 Glacier
- Use Fast Glacier to manage Glacier Storage
- Introduction to AWS Snowball
- **Lab:** Create an S3 Bucket and access using S3 Explorer
- **Lab:** Create an S3 Glacier and access using Fast Glacier
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### AWS Cloud Front

- Introduction to CDN
- Configure S3 to host static web site
- Create Cloud Front to publish web site over CDN
- Customer domain overview
- **Lab:** Host an Image in S3, Create CDN to access it using cache copy

### Auto Scaling

- Elastic Load Balancer (ELB)
- Introduction to Auto Scaling
- Creating Launch Configuration with AMI
- Creating Auto Scaling group
- Testing the auto scaling with online load testing tool
- **Lab:** Create an Autoscaling Group and Launch VM using Autoscaling

### Cloud Formation

- Introduction to Cloud Formation
- Designing a template in Cloud Formation
- Creating Stack using designed Cloud Formation templates
- **Lab:** Create an Sample Lamp Stack Application using cloud formation

### Database Solutions on AWS

- Introduction to Relational Database Service (RDS)
- Creating RDS MySQL instance

- Connect MySql Instance with Workbench
- Introduction NoSQL
- Creating Amazon DynamoDB
- Database Best Practices and Costs
- **Lab:** Create a MySQL Instance and Access using MySQL workbench
- **Lab:** Create a DynamoDB Instance and Access using MySQL workbench

### **AWS Managed Active Directory**

- Introduction to Active Directory
- Introduction to DNS
- Configure AWS manage Active Directory
- Access Active Directory Console
- Join Machine with AWS active Directory
- Active Directory Best Practices
- **Lab:** Create an Active Directory domain and join server with that

### **AWS Monitoring & Security Services**

- Security Practices for Optimum Cloud Deployment
- AWS Responsibilities Matrix
- Introduction to Cloud Watch
- Creating alarm using Cloud Watch
- Simple Notification Service (SNS)
- Lambda Function
- **Lab:** Create a Notification workflow using Draw.io for S3
- **Lab:** Create SNS and Lambda Function for Implement the notification

### **AWS Disaster Recovery and Migration**

- Disaster recovery Scenario with AWS
- How to design HA with services
- AWS Backup
- AWS Database Migration tool overview
- AWS Server Migration Tool Overview
- **Lab:** Create a Migration Strategy using Excel
- **Lab:** Create an Backup for EC2 Volume Disk

### **AWS Cost Management**

- AWS Agreement overview
- Create Estimate of annual commitment using AWS Price Calculator
- TCO calculation for AWS vs On-Prem
- **Lab:** Create a Price Estimate and TCO for the Organization



**Project:**

**Project Title:** Migration of On-Prem server to AWS

**Project Description:**

- TPCS an Renowned Company based out of USA approached TechPledge Consulting regarding migrating one of their datacenter facilities to Amazon AWS.
- In this transformation. However, the TPCS had limited experience in migrating services from on-premise facilities into Amazon AWS, particularly at this scale. The TPCS engaged with TechPledge Consulting for both technical guidance and business support for the migration.

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**Course Fee**

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Call for Price