



# Cloud Architect

Master's Program



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# About the Program

This Cloud Architect Program is an all-encompassing course to equip you with the skills and knowledge required to design, implement, and manage cloud solutions and excel as a cloud architect. It provides comprehensive training on AWS, Microsoft Azure, and the Google Cloud Platform (GCP), preparing you for key industry certifications and practical cloud solution implementations.

Reinforce your learning through practical exercises and experiments in a simulated cloud environment with this program, covering live classes, and peer-to-peer collaboration, hands-on labs, an exam voucher for any one Microsoft Azure course, and training on essential AWS and Azure tools. With the capstone project, apply your acquired knowledge and skills to a real-world scenario. Design and implement a cloud solution using AWS or Azure to address specific business challenges. You will gain practical experience in cloud architecture design, security, cost management, identity management, data storage, network configuration etc, preparing you for advanced roles in cloud computing.

Upon completing the program, you will gain access to Simplilearn's Job Assistance services, including personal career mentoring, expert resume writing and interview preparation.



# Key Features of the Program



Lifetime access to self-paced videos & class recordings



Access to MS Azure exam voucher for any one Azure course\*



A course completion badge/certificate on the MS Learn portal



Get access to Official AWS Authorized Content



Official Microsoft course completion transcript, validating your successful program completion



Access to 40+ In-Demand Skills & 25+ Services



Practice hands-on with tools like AWS Lambda, Azure Container Services, AWS IAM, Amazon Inspector, Azure Block Bob & many more



Course content aligned to the AWS SAA-C03 exam



Access to Simplilearn's Job Assistance services (India Only)

\*The exam vouchers are only available in the following countries - India, US, Canada, Bahrain, Brunei Darussalam, Denmark, Fiji, French Polynesia, Greenland, Guam, Iceland, Kuwait, New Caledonia, Norway, Oman, Qatar, Saudi Arabia, South Georgia, Sweden, UAE, and Singapore

# Partnerships and Certifications Alignment

This Cloud Architect Master's Program is aligned with the curriculum of Amazon Web Services and Microsoft Azure. We are the registered training provider for this program.



## About Simplilearn

Founded in 2010 and based in Plano, Texas and Bangalore, India, Simplilearn, a Blackstone portfolio company, is the world's leading digital skills provider, enabling learners across the globe. Simplilearn offers access to world-class work-ready training to individuals and businesses worldwide. Simplilearn offers 1,500+ live online classes each month across 150+ countries, impacting over 8 million learners globally. The programs are designed and delivered with world-renowned universities, top corporations, and leading industry bodies via live online classes featuring top industry practitioners, sought-after trainers, and global leaders. From college students and early career professionals to managers, executives, small businesses, and big corporations, Simplilearn's role-based, skill-focused, industry-recognized, and globally relevant training programs are ideal upskilling solutions for diverse career or business goals.

# Eligibility Criteria

For admission into this program, candidates:

- ✔ Should be at least 18 years old and have a high school diploma or equivalent
- ✔ Must have a basic idea of Azure administration, Azure development, or DevOps preferred but not mandatory
- ✔ Are not required to have prior professional experience

## Talk to an Admissions Counselor

Our team of dedicated admissions counselors is prepared to address your questions or concerns about the Cloud Computing Bootcamp.

Our team is available to:

- ✔ Answer your questions about the application process.
- ✔ Discuss your financing options.
- ✔ Provide insight into the curriculum, program outcomes and more.

**INQUIRE NOW**

Contact Us | 1-800-212-7688

# Cloud Computing Industry Trends



**90% Businesses**

Are already on the cloud

*Source: Radix*



**\$ 1.55 trillion**

Estimated market size by 2030

*Source: Allied Market Research*



**\$130K**

The average annual salary of a  
cloud computing professional in the U.S

*Source: Glassdoor*

# Cloud Computing Career Outlook

Due to the high demand for cloud computing professionals, salaries in this field often reflect the market reality. Factors such as the company's size, geographical location, and industry can significantly influence compensation levels. Taking these variables into consideration, we have compiled an estimate of what you can expect to earn in the following roles:

## IT Enterprise Architect

**Job Role** - An IT enterprise architect oversees an organization's IT networks and services while providing maintenance and upgrades when required.



Average Salary Range -  
\$131,128 – \$162,498

## Cloud Architect

**Job Role** - A cloud architect is responsible for an organization's cloud computing systems. They work with cloud technology to develop cloud adoption plans, determine cloud application design, and create systems for managing, monitoring, and maintaining the cloud system.



Average Salary Range -  
\$127,000 - \$158,000

## Solutions Architect

**Job Role** - A cloud solutions architect designs and implements cloud computing solutions, including designing the cloud infrastructure, cloud application architecture and cloud security architecture.



Average Salary Range -  
\$165,000 - \$193,000

## Technical Architect

**Job Role** - A cloud technical architect designs the components of an organization's cloud computing architecture. These components include front-end and back-end platforms, cloud service delivery and networking.



Average Salary Range -  
\$129,000 - \$158,000

## Cloud Engineer

**Job Role** - A cloud engineer is an IT professional responsible for any technological duties associated with cloud computing, including design, planning, management, maintenance, and support.



Average Salary Range -  
\$125,000 - \$147,000

## Cloud System Administrator

**Job Role** - A cloud system administrator manages and maintains cloud infrastructure, ensuring availability, performance, security, and efficient operation.



Average Salary Range -  
\$68,000 - \$84,000

## Cloud Security Engineer

**Job Role** - A cloud security engineer is responsible for implementing and maintaining security measures to protect cloud-based systems and data from unauthorized access, vulnerabilities, and threats.



Average Salary Range -  
\$90,000 - \$114,000

## Cloud Developer

**Job Role** - Cloud developers build and deploy cloud-based apps using AWS, Azure, or Google Cloud. They ensure scalability, reliability, and cost-effectiveness, collaborating with teams to meet modern business needs. Expertise in programming languages, microservices, and containers is essential for this role.



Average Salary Range -  
\$125,000 - \$147,000

# Program Outcomes

By the end of this program, you will be able to:

- ✔ Understand the main principles of cloud computing and how they have been implemented in Microsoft Azure and AWS
- ✔ Implement use cases and configuration options for Azure App Services and App Service environments
- ✔ Engage with AWS DMS, the AWS Schema Conversion tool, and the AWS Database Migration Service
- ✔ Select the appropriate AWS service based on data, compute, database, or security requirements
- ✔ Understand Google Virtual Machines and how to work with them Store and manage data in the cloud SQL
- ✔ Manage security and identity for Azure solutions
- ✔ Manage subscriptions, billing, and role-based access control regarding Azure users and groups
- ✔ Design an Azure app service web app by using Azure CLI, Powershell, and other tools
- ✔ Implement AWS security and testing and become an expert in AWS components such as S3, DynamoDB, Elastic Beanstalk, and CloudFormation
- ✔ Deploy, manage, and operate scalable, highly available, and fault-tolerant systems on AWS
- ✔ Set up GCP account and utilize GCP services: networking, storage, content and delivery network

# Who Should Enroll in This Bootcamp?

This program is designed to train professionals who will be responsible for cloud computing in their respective organizations and is recommended for individuals pursuing positions including, but not limited to:

## Cloud Solutions Architect



## Cloud Security Architect



## Cloud Developer



## Cloud Consultant



## Application Security Analyst



## Cloud Administrator



## Technical Cloud Architect



## Cloud Practitioner



## Solutions Architect



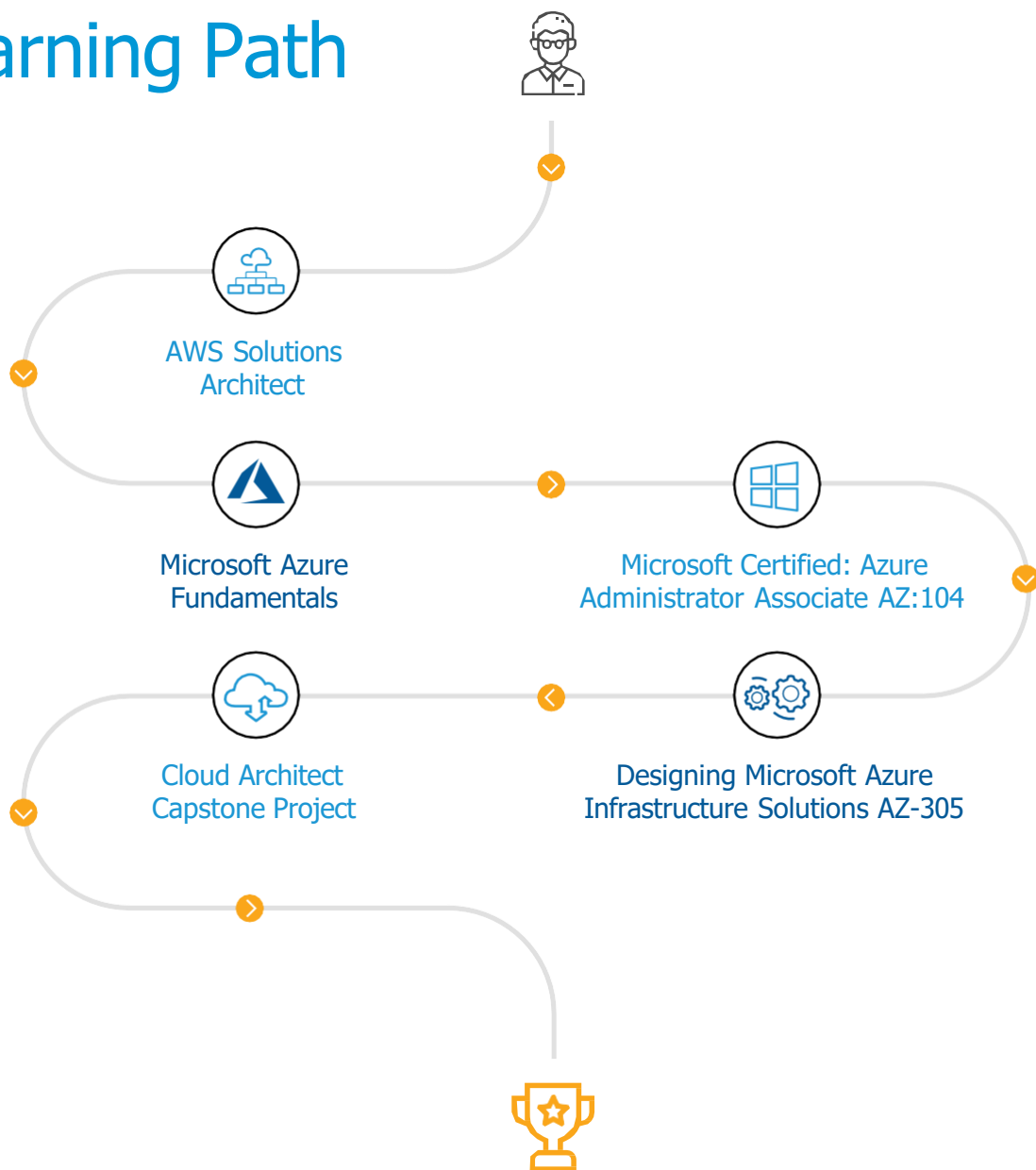
## Cloud Infrastructure Engineer



## Cloud Engineer



# Learning Path



## Electives:

- ✓ Step 1 - Mastering AWS Services: Official AWS Content
- ✓ Step 2 - Exposure to Cloud Applications on Google Cloud
- ✓ Step 3 - AWS SysOps Associate
- ✓ Step 4 - AWS Developer Associate
- ✓ Step 5 - Microsoft Certified Azure Developer Associate: AZ:204
- ✓ Step 6 - AWS Database Migration
- ✓ Step 7 - AWS Cloud Technical Essentials

## AWS Solutions Architect

The AWS Solutions Architect certification training empowers you to design, plan, and scale AWS implementations with 70+ cloud computing services. Aligned with the latest AWS exam, this course incorporates Amazon's recommended best practices for a comprehensive cloud computing learning experience.

### Learning Outcomes

By the end of this AWS training, you will be able to:

- ✓ Develop solutions and leverage AWS architectural best practices
- ✓ Design and deploy scalable, highly available, and fault-tolerant systems on AWS
- ✓ Migrate an existing on-premises application to AWS
- ✓ Identify the ingress and egress of data to and from AWS
- ✓ Select the appropriate AWS service based on data, compute, database, or security requirements
- ✓ Estimate AWS costs and identify cost control mechanisms

### Course Curriculum - Self Paced Learning

- |  |                                       |
|--|---------------------------------------|
| ✓ Lesson 01 - Introduction                   | ✓ Lesson 07 - Cloudwatch              |
| ✓ Lesson 02 - Getting Started With AWS       | ✓ Lesson 08 - VPC0                    |
| ✓ Lesson 03 - Identity and Access Management | ✓ Lesson 09 - Databases               |
| ✓ Lesson 04 - S3                             | ✓ Lesson 10 - Route 53                |
| ✓ Lesson 05 - EC2 and EBS                    | ✓ Lesson 11 - Additional Key Services |
| ✓ Lesson 06 - ELB and Auto Scaling           | ✓ Lesson 12 - SAA C03 Latest Services |

## Course Curriculum - Live Class Learning

- ✓ Lesson 01 - Course Introduction
- ✓ Lesson 02 - AWS Overview
- ✓ Lesson 03 - Amazon Elastic Compute Cloud
- ✓ Lesson 04 - Amazon Storage Services
- ✓ Lesson 05 - Amazon Virtual Private Cloud
- ✓ Lesson 06 - Databases on AWS
- ✓ Lesson 07 - Amazon Route 53
- ✓ Lesson 08 - IAM and Security on AWS
- ✓ Lesson 09 - Application and Serverless Services in AWS
- ✓ Lesson 10 - Secure and Highly Available Architecture



## Microsoft Azure Fundamentals

Simplilearn's Microsoft Azure Fundamentals Training Course will familiarize you with the main principles of cloud computing and how they have been implemented in Microsoft Azure. This course will get you up to speed on Azure services, security, privacy, compliance, trust, pricing, and support.

### Learning Outcomes

By the end of this AWS training, you will be able to:

- ✓ Describe cloud computing, Azure, and Azure subscriptions
- ✓ Describe and create Azure web apps
- ✓ Create and configure VMs in Microsoft Azure
- ✓ Describe Azure storage
- ✓ Describe and deploy databases in Azure
- ✓ Describe Azure AD

### Course Curriculum

- ✓ Module 01 - Cloud Concepts
- ✓ Module 02 - Core Azure Services
- ✓ Module 03 - Security, Privacy, Compliance, and Trust
- ✓ Module 04 - Azure Pricing and Support

## Microsoft Certified: Azure Administrator Associate AZ:104

This course covers various aspects of Azure management, including subscription management, identity management, security, infrastructure administration, virtual networking configuration, connecting Azure with on-premises sites, network traffic management, storage solutions implementation, virtual machine creation and scaling, web app and container deployment, data backup and sharing, and solution monitoring.

### Learning Outcomes

By the end of this Azure training, you will be able to:

- ✓ Manage Azure Active Directory (Azure AD) objects
- ✓ Manage subscriptions and governance
- ✓ Configure Azure files and Azure Blob Storage
- ✓ Create and configure containers
- ✓ Implement and manage virtual networking
- ✓ Configure load balancing
- ✓ Integrate an on-premises network with an Azure virtual network
- ✓ Implement backup and recovery
- ✓ Secure and manage storage
- ✓ Automate the deployment of virtual machines (VMs) with Azure Resource Manager templates
- ✓ Create and configure Azure App Services
- ✓ Secure access to virtual networks
- ✓ Monitor and troubleshoot virtual networking
- ✓ Monitor resources with Azure Monitor

### Course Curriculum

- ✓ Lesson 01: Manage Azure identities and governance
- ✓ Lesson 02: Implement & Manage Storage
- ✓ Lesson 03: Deploy and Manage Azure Compute Resources
- ✓ Lesson 04: Configure and manage virtual networking
- ✓ Lesson 05: Monitor and Backup Azure Resources

## Designing Microsoft Azure Infrastructure Solutions AZ-305

Become an expert Azure Solutions Architect through our Microsoft Azure certification training, ensuring success on the AZ-305 exam. Gain expertise in workload assessment, identity and security design, data platform architecture, continuity planning, migration strategies, and API integration. Elevate your Azure skills and advance your career.

### Learning Outcomes

By the end of this Azure training, you will be able to:

- ✓ Design a logging and monitoring solution
- ✓ Create and implement authentication and authorization solutions
- ✓ Configure identities and set permissions to access applications
- ✓ Implement, manage and secure storage with shared access keys, Azure Cloud Backup and Azure File Sync
- ✓ Design a data storage solution for relational and non-relational data
- ✓ Recommend a data storage solution
- ✓ Implement data integration
- ✓ Create a solution for backup and disaster recovery
- ✓ Design infrastructure to enable high availability
- ✓ Configure and deploy a compute solution
- ✓ Develop and implement an application architecture
- ✓ Design network solutions

### Course Curriculum

- ✓ Lesson 01 - Course Introduction
- ✓ Lesson 02 - Design a Governance Solution
- ✓ Lesson 03 - Design authentication solutions
- ✓ Lesson 04 - Design Authorization
- ✓ Lesson 05 - Design a Solution for Logging and Monitoring
- ✓ Lesson 06 - Design for High Availability
- ✓ Lesson 07 - Design a Solution for Backup and Recovery
- ✓ Lesson 08 - Design a Solution for Non-Relational Data
- ✓ Lesson 09 - Design a Solution for Relational Data
- ✓ Lesson 10 - Design Data Integration
- ✓ Lesson 11 - Design a Compute Solution
- ✓ Lesson 12 - Design an Application Architecture
- ✓ Lesson 13 - Design a Network Solution
- ✓ Lesson 14 - Design Migrations
- ✓ Lesson 15 - Design for Cost Optimization

## Cloud Architect Capstone Project

This cloud computing capstone project will give you an opportunity to implement the skills learned throughout your training. Dedicated mentoring sessions will teach you how to solve real-world, industry-aligned problems. The project is the final step in the learning path and will enable you to showcase your expertise in cloud computing to future employers.

### Learning Outcomes

By the end of this Azure training, you will be able to:

- ✓ Showcase the skills you learned in the program
- ✓ Obtain a capstone evaluation from industry experts
- ✓ Exhibit problem-solving capabilities through your results from the capstone projects



# Electives:



## Mastering AWS Services: Official AWS Content

Attend this course at your own pace to dive deep into the basics of AWS. This optional course will help you establish a strong foundation in AWS and AWS Cloud, which will serve as a benchmark for your upcoming courses.

In the rapidly evolving realm of cloud computing:

- Proficiency in Amazon Web Services (AWS) is paramount.
- Our Mastering AWS Services course offers meticulously curated AWS Authorized Content.
- This content is designed to empower individuals and organizations on their cloud journey.
- The course covers foundational essentials to advanced topics.
- It caters to novices seeking fundamental concepts and experienced professionals aiming to deepen their expertise.
- Our pointers encompass a wide spectrum of AWS services and concepts.
- Trust in the accuracy, relevance, and reliability of our AWS Authorized Content to acquire in-demand skills and certifications with confidence.
- AWS Fundamentals & Services Overview: Covering a comprehensive range of AWS fundamentals, including cloud computing essentials, networking basics, security, compute services (such as Lambda and EC2), database management with RDS, and cost management.
- Advanced AWS Topics & Services: Delving into more specialized areas like cloud adoption frameworks, identity and access management (IAM), API Gateway, networking configurations, serverless development, database migration, and automation with CloudFormation.

**24+**

Hours of self-learning content



Get access to Official AWS Authorized Content

**28**

Topics and AWS services covered

**6**

Across 6 key AWS learning tracks



## Exposure to Cloud Applications on Google Cloud

Google Cloud labs—powered by Qwiklabs—provide access to real cloud environments, helping you learn cloud platforms and skills. These are stand-alone, self-paced labs that don't require you to watch any video courses and focus on teaching a skill over requiring you to complete a task.

### Course Curriculum

#### Lab 1: Introduction to SQL for BigQuery and Cloud SQL

This lab is divided into two parts: in the first half, you will learn fundamental SQL querying keywords, which you will run in the BigQuery console on a public dataset that contains information on London bike shares. In the second half, you will learn how to export subsets of the London bikeshare dataset into CSV files, which you will then upload to Cloud SQL.

#### Lab 2: Multiple VPC Networks

In this lab, you will learn how to:

- Create custom-mode VPC networks with firewall rules
- Create VM instances using Compute Engine
- Explore the connectivity for VM instances across VPC networks
- Create a VM instance with multiple network interfaces

#### Lab 3: Hosting a Web App on Google Cloud Using Compute Engine

There are many ways to deploy websites within Google Cloud, with each solution offering different features, capabilities, and levels of control. Compute Engine offers a deep level of control over the infrastructure used to run a website. Still, it requires more operational management than solutions like Google Kubernetes Engines (GKE), App Engine, etc. With Compute Engine, you have fine-grained control of aspects of the infrastructure, including virtual machines, load balancers, and more.

#### Lab 4: Managing Deployments Using Kubernetes Engine

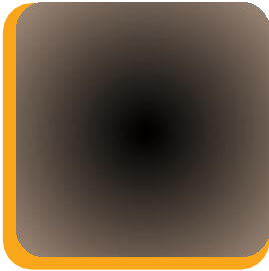
In this lab, you will learn :

- About the basics concepts and constructs of the Google Cloud networking
- How default and user-created networks are configured
- How to measure performance & latency characteristics
- Basic security configurations of Access, Firewall, and Routing



### AWS SysOps Associate

Get hands-on exposure to the highly scalable Amazon Web Services (AWS) cloud platform with the AWS SysOps Associate certification training program. This course will help you attain valuable technical expertise in deploying, managing, and operating fault-tolerant systems on AWS.



### AWS Developer Associate

Enhance your proficiency with the Amazon Web Services (AWS) cloud platform to develop and deploy robust cloud applications with an AWS Developer Associate Certification. This course helps you implement cloud security best practices and understand what it takes to become an AWS Developer Associate.



### Microsoft Certified Azure Developer Associate: AZ:204

This Azure Developer Certification training aligns with the latest (2020) edition of the Azure Developer Certified Associate exam AZ-204. AZ-204 is the updated version of the existing Microsoft Azure Developer Associate exam: AZ-203. This exam verifies your ability to select, develop, and implement Azure cloud technology solutions.



### AWS Database Migration

Learn how easily and securely you can move databases onto the cloud, how the AWS Schema Conversion tool works and how the AWS Database Migration service supports both homogeneous and heterogeneous migrations.



### AWS Cloud Technical Essentials

This AWS Technical Essentials Certification Training course will introduce you to the fundamentals of the Amazon Web Services (AWS) cloud platform and ensure that you are fully proficient in identifying AWS terminologies, concepts, benefits, and deployment options to meet your business requirements.

# Industry Projects

## Implement the Azure IaaS

The OSS Corporation is evaluating Azure as a deployment platform. To do this, they must create virtual networks in the aforementioned region, create test virtual machines in both virtual networks, establish connectivity between both networks via VNet peering, and ensure connectivity is properly established.

## Using Azure Portal to Implement Security and PaaS Service

The OSS Corporation has decided to onboard an employee on the company's default Azure Active Directory and assign a Custom RBAC role to read the network configure storage along with VM. Under this custom RBAC, the employee should also be permitted to start and restart the VM. Your task is to onboard the employee under Default Azure AD, create the Custom RBAC for the role of computer operator, and provision and implement the Azure Web App.

## Azure Function Listening to a Queue 02

The InGen Soft company decided to use the Azure function and storage queue to bring serverless functionality into their application workload. As a developer, log in to the Azure Portal and create Resource Group, Storage Account, and Input Queue services. Create an Azure function using Visual Studio, including Queue Binding and Deployment from Visual Studio.

## Automating Workloads with ARM Templates

The Rand Enterprises Corporation wants to test an ARM template to bring infrastructure as code into practice. As part of the operations team, you must define the entire networking architecture using the ARM template. Once that's in place, you must create the storage account and a virtual machine to house the application.

## Migrate SQL Server Database to MySQL Using AWS DMS

In this project, you will install the AWS Schema Conversion Tool and use it to verify the effort required to migrate the SQL Server source database. Then, you must fix the issue, rerun the database assessment report, and apply Schema to target the MySQL database.

## Custom Virtual Private Cloud (VPC) Creation

Create a custom VPC with public and private subnets in two availability zones and launch instances into each subnet.

## Load Balancer Configuration

Launch two web servers and configure a load balancer and auto-scaling.

## RD Gateway Configuration

Configure an RD Gateway on a VPC with a public and private subnet.

## Deploying an Online Movie-Watching Application on the Cloud

You work for an online entertainment provider. As you know about cloud computing, you are asked to deploy the company's website on the cloud.

## Deploying an Online Doctor's Clinic Application on Cloud

You work for a healthcare company. As a cloud architect, you are asked to deploy the LiveDocApp website on the cloud.

## Deploying a Restaurant Application to the Cloud

As a cloud architect, you are asked to deploy the restaurant application to the cloud.

## Deploying Cart Management Application to Cloud

You work for an ecommerce company. As a cloud architect, you are asked to deploy the Cart Management Application on the cloud.



# Tools Covered



Azure Policy



Azure Blueprints



Azure Key Vault



Azure Workbooks



Azure Monitor



Azure Front Door



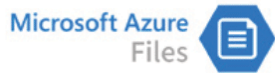
Azure Traffic Manager



Azure Site Recovery



Azure Blob Storage



Azure Files



Azure SQL DB



Azure Cosmos DB



Azure Stream Analytics



Azure Virtual Machines



Azure App Service



Azure Kubernetes Service (AKS)

Azure Kubernetes Service



Azure Resource Manager (ARM)



Azure Load Balancer



Azure Migrate



Amazon EC2

Amazon EC2 (Elastic Compute Cloud)



Amazon S3

Amazon S3 (Simple Storage Service)



Amazon RDS

Amazon RDS (Relational Database Service)



AWS IAM

AWS IAM (Identity and Access Management)



AWS Lambda

AWS Lambda



Amazon VPC (Virtual Private Cloud)



AWS CloudWatch

Amazon CloudWatch



Amazon Route 53

Amazon Route 53 (Domain Name System)



AWS CloudFormation

AWS CloudFormation



Amazon DynamoDB

AWS DynamoDB



AWS Trusted Advisor

AWS Trusted Advisor



Amazon CloudFront



amazon SNS

Amazon SNS (Simple Notification Service)



amazon SQS

Amazon SQS (Simple Queue Service)



Amazon ELB

AWS Elastic Load Balancer



CodePipeline

AWS CodePipeline



AWS CodeBuild

AWS CodeBuild



AWS CodeDeploy

AWS CodeDeploy



Amazon ElastiCache



amazon REDSHIFT

Amazon Redshift



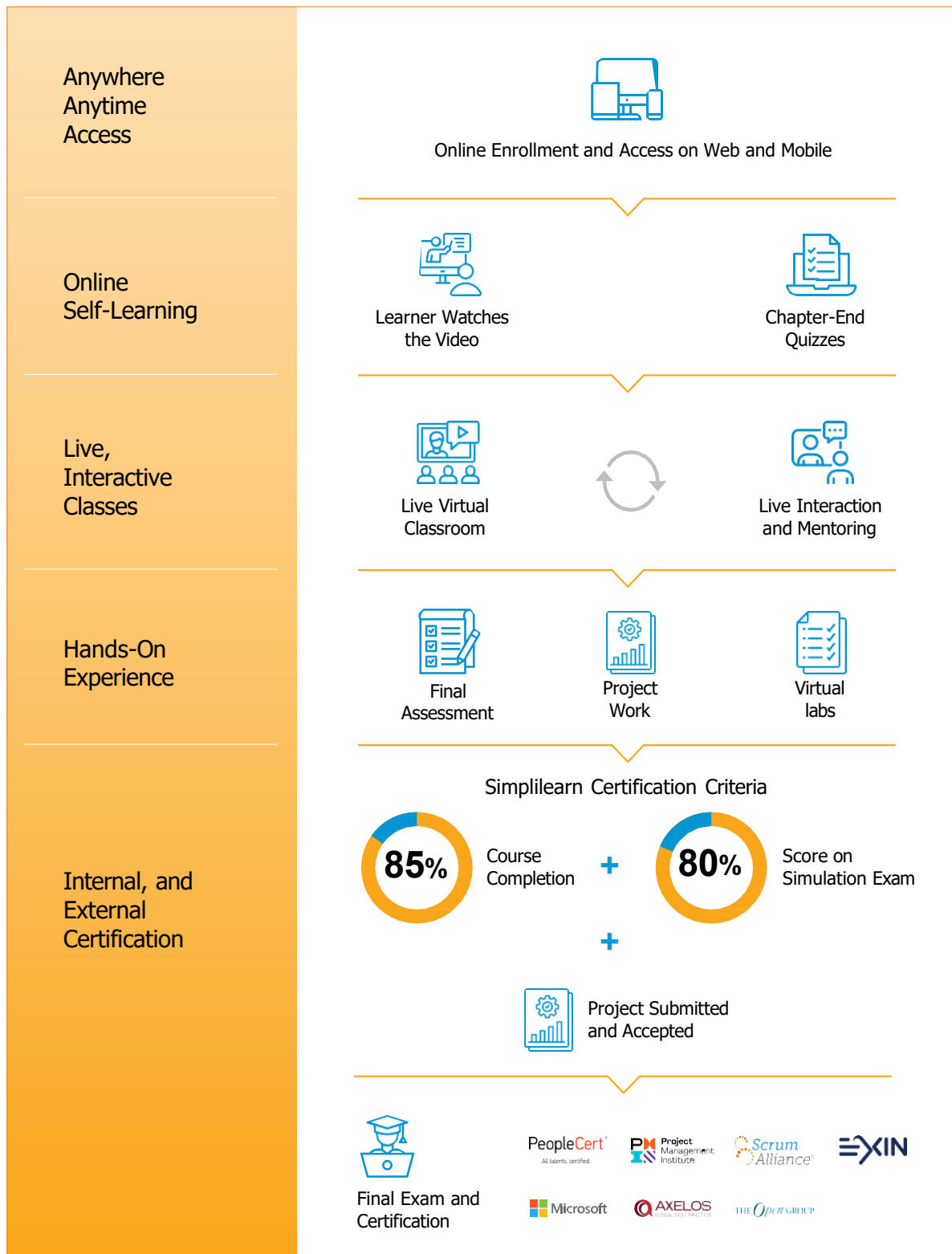
AWS Cognito

AWS Cognito

# Certificate



# Classroom-Level Immersion: Delivered Digitally



# Customer Reviews



## Sreekumar Changat

I am currently enrolled in the Azure Architect Master's Program from Simplilearn. The organization provides an excellent platform with a hands-on approach through its learning platform. This includes self-learning videos, live classroom lectures, lots of practical assignments, and tests. Thank you, Simplilearn team!

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## Prabhangshu Kashyap Sarma

Simplilearn's learning platform is the best place to learn with tutorial videos, live classes, and live projects that you can easily understand the subject matter. They also have excellent customer service.

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## Vikram Rahul Padamatintit

The materials and content are very relevant and in line with the certification exam. The standard of questions in the sample quizzes is equal to that of the certification. Thank you Simplilearn for providing such quality content and helping me to become a master in this particular course.

# Corporate Training

Top clients we work with:



Features of Corporate Training:



Tailored learning solutions



Flexible pricing options



Enterprise-grade learning management system (LMS)



Enterprise dashboards for individuals and teams



24X7 learner assistance and support



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