FORTRAY

Cloud Architect

Master's Program

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Program Overview

Build your AWS, Microsoft Azure, and Google Cloud Platform expertise from the ground up with Fortray's comprehensive Cloud Architect Master's Program. This program will help you master the architectural principles and services of the top cloud platforms, enabling you to design and deploy highly scalable, fault-tolerant applications and develop skills to transform yourself into an AWS, Azure, and GCP architect.

Program Features

128 hours of self-paced learning

292 hours of instructor-led training

420 hours of in-depth Blended Learning

40+ in-demand skills & 25+ services

Real world capstone project

Exam voucher included

About Fortray

Fortray is the world's #1 online bootcamp provider that enables learners through rigorous and highly specialized training. We focus on emerging technologies and processes that are transforming the digital world, at a fraction of the cost and time as traditional approaches. Over one million professionals and 2000 corporate training organizations have harnessed our award-winning programs to achieve their career and business goals.
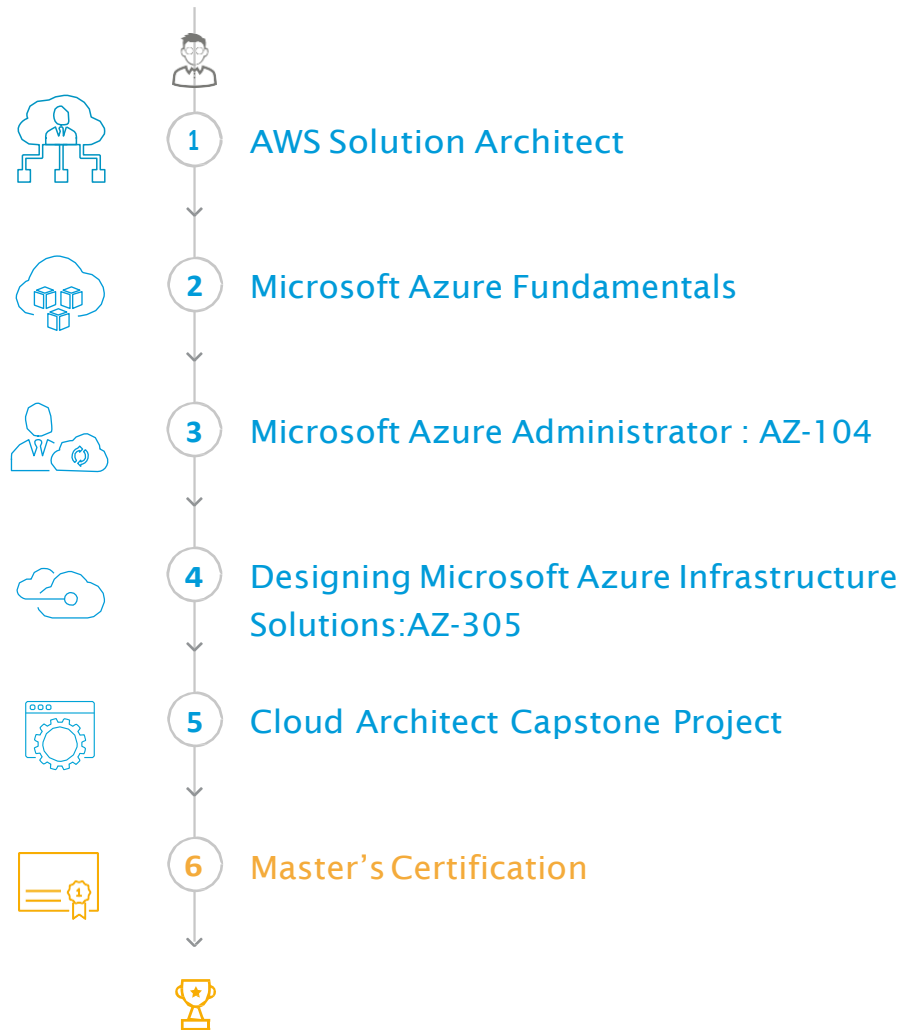
Partnerships and Certifications Alignment

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

Learning Path

1. AWS Solution Architect

2. Microsoft Azure Fundamentals

3. Microsoft Azure Administrator : AZ-104

4. Designing Microsoft Azure Infrastructure Solutions:AZ-305

5. Cloud Architect Capstone Project

6. Master's Certification

Electives

- AWS SysOps Associate
- Exposure to Cloud Applications on Google
- AWS Developer Associate
- Microsoft Certified Azure Developer Associate: AZ:204
- AWS Database Migration
- AWS Technical Essentials

At the end of this Cloud Architect Master's Program, you will be able to:

- ✅ Understand the main principles of cloud computing and how they have been implemented in Microsoft Azure and AWS

- ✅ Manage subscriptions, billing, and role-based access control regarding Azure users and groups

- ✅ Implement use cases and configuration options for Azure App Services and App Service environments

- ✅ Design an Azure app service web app by using Azure CLI, Powershell, and other tools

- ✅ Manage security and identity for Azure solutions

- ✅ Implement AWS security and testing and become an expert in AWS components such as S3, DynamoDB, Elastic Beanstalk, and CloudFormation

- ✅ Get an overview of AWS DMS, the AWS Schema Conversion tool, and the AWS Database Migration Service

- ✅ Deploy, manage, and operate scalable, highly available, and fault-tolerant systems on AWS

- ✅ Select the appropriate AWS service based on data, compute, database, or security requirements

- ✅ Set up GCP account and utilize GCP services: networking, storage, content and delivery network

- ✅ Understand Google Virtual Machines and how to work with them   Store and manage data in the cloud SQL

Target Audience

Any professional interested in hosting highly scalable, fault-tolerant applications on the AWS and Microsoft Azure platforms should take this program. However, the following roles and disciplines are ideal for this course:

- Fresh graduates who intend to take the plunge into the cloud job market
- Professionals with less than 2 years of experience who are working in either technical or non-technical job roles and wish to build successful careers in the cloud computing domain
- People working in the following roles will benefit the most from the Cloud Architect Master's Program:
  - Solutions architects Programmers
  - Cloud developers
  - Cloud software engineers
  - DevOps professionals

AWS Solutions Architect

This AWS Solutions Architect Certification training will enable you to design, plan, and scale AWS implementations utilizing over 70 cloud computing services. The course is aligned with the latest AWS exam featuring Amazon designated best practices.

Key Learning Objectives

By the end of this course, you will:

- Formulate solution plans and provide guidance on AWS architectural best practices

- Design and deploy scalable, highly available, and fault-tolerant systems on AWS

- Identify the lift and shift of an existing on-premises application to AWS

- Decipher 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 Curriculum

- Lesson 01 - Introduction

- Lesson 02 - Getting Started With AWS

- Lesson 03 - Identity and Access Management

- Lesson 04 - S3

- ✅ Lesson 05 - EC2 and EBS

- ✅ Lesson 06 - ELB and Autoscaling

- ✅ Lesson 07 - Cloudwatch

- ✅ Lesson 08 - VPC0

- ✅ Lesson 09 - Databases

- ✅ Lesson 10 - Route 53

- ✅ Lesson 11 - Additional Key Services

- ✅ Lesson 12 - SAA C03 Latest Services

Live Class Curriculum

- ✅ 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

Fortray'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.

Key Learning Objectives

After completing this course, 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 Azure Administrator :AZ-104

An Azure administrator often serves as part of a larger team dedicated to implementing an organization's cloud infrastructure.This Azure training course covers activities on the Azure platform such as implementing, managing, and monitoring identity,governance, storage, compute, and virtual networks in a cloud environment, plus provision, size,monitor, and adjust resources, when needed.

Key Learning Objectives

- ✔ Manage Azure Active Directory (Azure AD) objects

- ✔ Manage subscriptions and governance

- ✔ Secure & Manage storage

- ✔ Configure Azure files and Azure Blob Storage

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

- ✔ Create and configure containers

- ✔ Create and configure Azure App Service

- ✔ Implement and manage virtual networking

- ✔ Secure access to virtual networks

- ✔ Configure load balancing

- ✔ Monitor and troubleshoot virtual networking

- ✔ Integrate an on-premises network with an Azure virtual network

- ✔ Monitor resources by using Azure Monitor

- ✔ Implement backup and recovery

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

The Microsoft Azure Infrastructure Solutions AZ-305 online training course prepares you for a career as a certified Azure Cloud Solutions Architect. You will learn how decisions in each area a ect an overall solution,insight of subject matter expertise in designing cloud and hybrid solutions that run on Microsoft Azure, including compute, network, storage, monitoring, and security.

Key Learning Objectives

After completing this online Azure certification training course, you will be able to:

- Design a solution for logging and monitoring

- Design authentication and authorization solutions

- Design identities and access for applications

- Design a data storage solution for relational data

- Recommend a data storage solution

- Design data integration

- Design a data storage solution for non-relational data

- Design a solution for backup and disaster recovery

- Design for high availability

- Design a compute solution

- Design an application architecture

- Design network solutions

Course Curriculum

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

Cloud Capstone Project

This cloud capstone project will give you an opportunity to implement the skills you learned throughout this program. Through dedicated mentoring sessions, you will learn how to solve a real-world, industry-aligned problem. This project is the final step in the learning path and will enable you to showcase your expertise in cloud computing to prospective employers.

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. From there, you will learn how to use Cloud SQL to create and manage databases and tables. Towards the end, you will get hands-on practice with additional SQL keywords that manipulate and edit data.

Lab 2 : Multiple VPC Networks

In this lab, you will learn how to perform the following tasks:

- ✅ 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, but also requires a little more operational management compared to solutions like Google Kubernetes Engines (GKE), App Engine, or others. With Compute Engine, you have fine-grained control of aspects of the infrastructure, including the virtual machines, load balancers, and more. In this lab you will deploy a sample application, the "Fancy Store" ecommerce website, to show how a website can be deployed and scaled easily with Compute Engine.

Lab 4: Managing Deployments Using Kubernetes Engine

In this lab, you will learn how about:

- ✅ 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.

Program Projects

Project 1 : Implement the Azure IaaS

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

Project 2: Using Azure Portal to Implement Security and PaaS Service

OSS Corporation has decided to onboard an employee on the company's default Azure Active Directory and assign a Custom RBAC role under which they will be able to read the network, configure storage along with VM. Under this custom RBAC, the employee should also be given permission 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.

Project 3: Azure Function Listening to a Queue 02

The InGen Soft company decided to bring serverless functionality into their application workload using the Azure function and Storage queue. 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,which also includes Queue Binding and Deployment from visual studio.

Project 4: 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 will have to define the entire networking architecture using the ARM template. Once that's in place, you will need to create the storage account along with a virtual machine to house the application.

Project 5: Migrate SQL Server Database to MySQL Using AWS DMS

In this project, the learner will install the AWS Schema Conversion Tool and use it to verify the e ort required to migrate the SQL Server source database. Fix the issue, rerun the database assessment report, and apply Schema to target MySQL database. Program Projects

Project 6: Custom Virtual Private Cloud (VPC) Creation

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

Project 7: Load Balancer Configuration

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

Project 8: RD Gateway Configuration

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

Project 9: Deploying an Online Movie Watching Application on Cloud

You are working for an online entertainment provider. As you have knowledge of cloud computing, you are asked to deploy the company's website on the cloud.

Project 10: 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.

Project 11: Deploying a Restaurant Application to Cloud

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

Project 12: 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 and Services Covered

Amazon ECS

Amazon EC2

AWS Lambda

Amazon DynamoDB

Azure Container Service
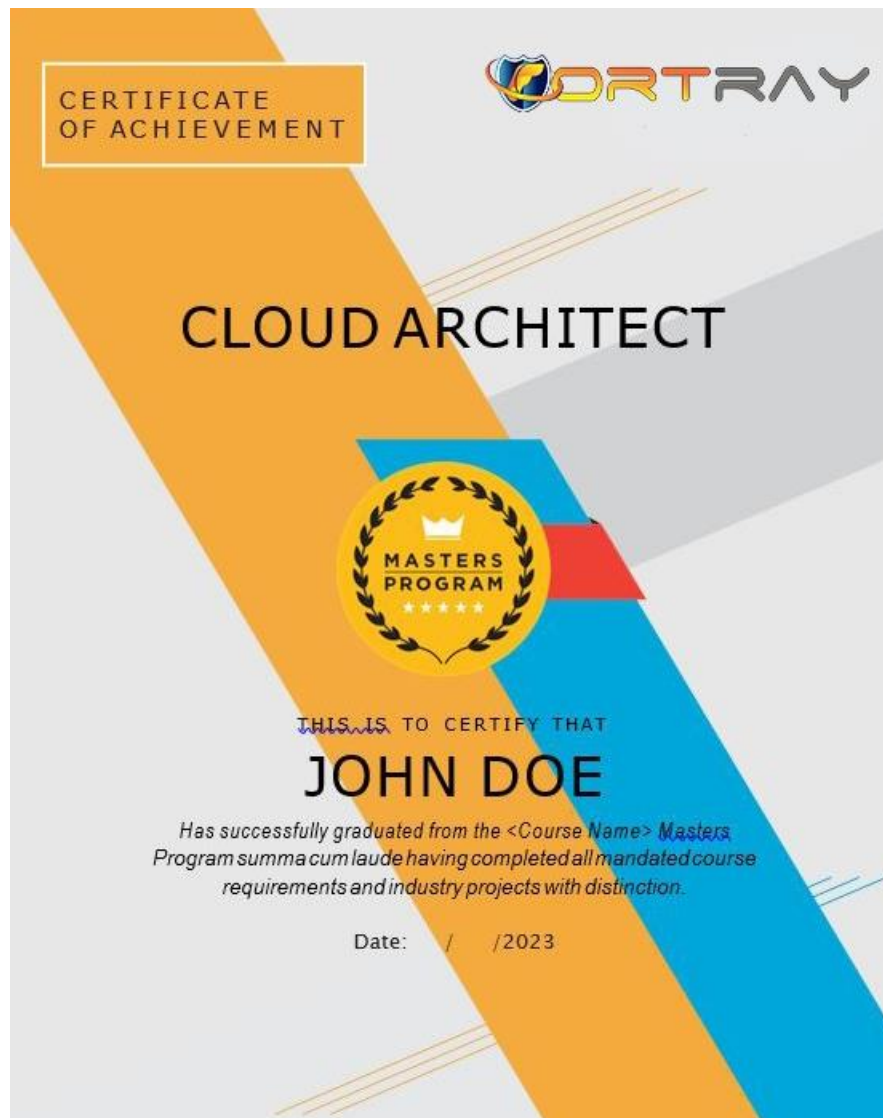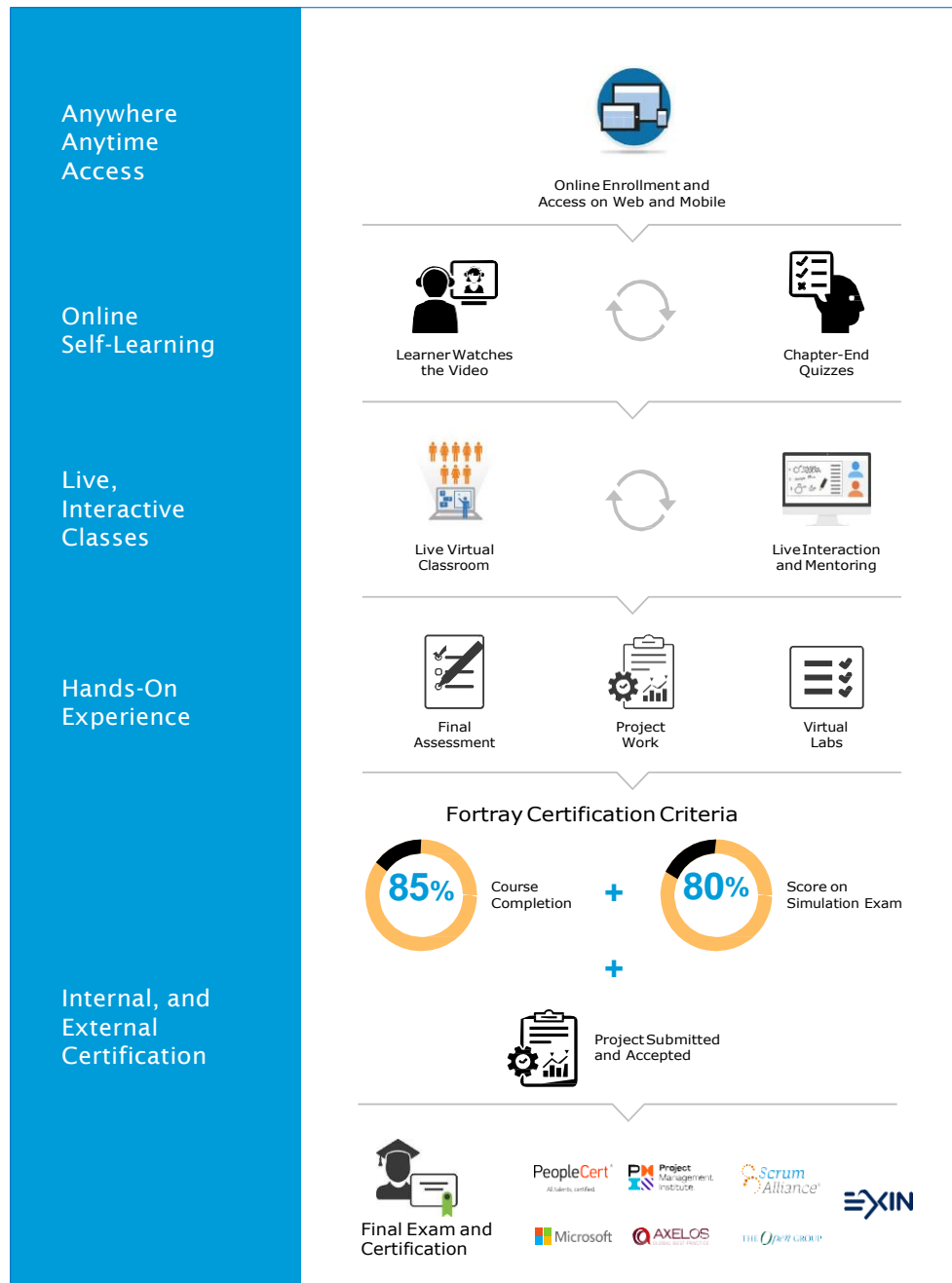
Virtual Machines

Azure Functions

Elastic Beanstalk

Upon completion of this Master's Program, you will also receive an industry-recognized Master's Certificate from Fortray.

Classroom-Level Immersion: Delivered Digitally

Anywhere Anytime Access

Online Enrollment and Access on Web and Mobile

Online Self-Learning

Learner Watches the Video

Chapter-End Quizzes

Live, Interactive Classes

Live Virtual Classroom

Live Interaction and Mentoring

Hands-On Experience

Final Assessment

Project Work

Virtual Labs

Fortray Certification Criteria

85% Course Completion **+** **80%** Score on Simulation Exam

+

Project Submitted and Accepted

Internal, and External Certification

Final Exam and Certification

PeopleCert · Project Management Institute · Scrum Alliance · EXIN · Microsoft · AXELOS · THE Open GROUP

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