




ACCELERATE YOUR CAREER
IN CLOUD ENGINEERING WITH
OUR ADVANCED

**CLOUD
ENGINEERING
PROGRAM**

ABOUT THE ADVANCED CLOUD ENGINEERING PROGRAM

Organizations need individuals with cloud skills to help transform their business. AWS Training and Certification delivered a 234% ROI, as quantified by Forrester, by upskilling your existing workforce.* Our content is created by experts at AWS and updated regularly so you can keep your cloud skills fresh.

We offer both digital and classroom training. Free digital training allows you to learn online at your own pace. Digital subscriptions unlock exclusive access to training, learning games, labs, practice exams, and more. With classroom training, you can learn best practices from an expert instructor. In addition to in-person classes, virtual training lets you take courses from anywhere. Whether you are just starting out, building on existing IT skills, or sharpening your cloud knowledge, AWS Training and Certification can help you be more effective and do more in the cloud.

 The program is carefully designed in collaboration with industry leaders to help you become a cross-platform and balanced cloud architect. Through a combination of expert lectures, demos, hands-on labs, and projects, you will build solutions the industry expects from you as an expert cloud professional.



THE FUTURE IS CLOUD



**\$ 500
BILLION**

is the estimated public
cloud spending by
2023*

*CenturyLink and Statista



81%

of companies have a
multi-cloud strategy
today*

*Gartner



83%

is the estimated growth
predicted in the cloud
infrastructure market in
2021*

*Forrester Research

IF YOU CHOOSE THIS PROGRAM, YOU WILL:

- 01** Become a cloud professional with the ability to work on platform-agnostic and cloud-based solutions for organizations.
- 02** Become proficient in AWS with an option to learn Google Cloud and Microsoft Azure
- 03** Be able to work with Containers, Microservices, DevOps, Cloud Design Patterns, and Openstack.
- 04** Get a better understanding of Cloud Financial, Adoption & Migration Patterns and learn to make trade-off decisions for your customers.
- 05** Understand Big Data and Architectural Styles to realize the value of data insights for your organization and customers.
- 06** Get access to an optional Developer Track to hone your skills (only for developers with work experience).

WHAT MAKES THE ADVANCE CLOUD ENGINEERING PROGRAM UNIQUE ?



Hands-on Labs & Projects

Solve and build more than 15 use cases through labs and projects across various cloud platforms.

Capstone Project

Specialize in cloud concepts & domains by working on a set of use cases inspired by real-life industry problems.



Lecture Notes

Apart from the videos, demos, and mentoring, you'll also, access course notes for a quick overview of concepts before your interviews.



Comprehensive Curriculum

The program covers a diverse yet relevant set of concepts and technologies that prepare you well beyond just industry certifications.



PROGRAM CURRICULUM FOUNDATIONS

Skills You Will Gain : You will learn the general concepts of cloud computing. Learn the core services accessible with Amazon AWS. Comprehend compliance, security, privacy, and trust with Amazon AWS.

You will understand the support models and also the pricing available with Microsoft.

Learn how to use monitoring and reporting options in Amazon AWS.

Learn how to explain the fundamental Amazon AWS Identity services.

AWS SPECIALIZATION

- Compute, load balancing, Autoscaling
- Storage, Replication and Life Cycle management
- AWS Organization and Identity
- Networking and Data Migration

🕒 1 Quiz

📄 1 Project

Enterprise Cloud Solutions (Self-Paced Module)

- Data Architecture and Serverless approach
- Setting up a Cloud Based Development Environment
- Data Streaming and Data Analytics on cloud
- Setting up Kinesis Data Stream
- Platform as a service - Elastic Beanstalk
- Step Functions
- Elasticsearch

Solutions Architect

- Networking
- Managed Services Overview
- Security

Application Developer

- Architecture & DevOps
- Platforms
- Data & Databases
- Web, Mobile & Gaming



AMAZON AWS

🕒 1 Quiz

📄 2 Projects

AWS Infrastructure

- Introduction to AWS & its services
- AWS Virtual Machines (Networking Components, Configuring High Availability, Scale sets, Autoscaling, etc.)
- Storage (Blob Storage, Azure Files)
- Virtual Networking (Networking Options, VNet Peering, VNet to VNet setup)
- Active Directory (Basics on Azure AD & AD connect)
- AWS Resource Manager (Building ARM template, Powershell, CLI, Cloud shell usage)

AWS Security Solutions

- Load Balancing (Azure Load Balancer, Application Gateway, WAF, Azure Traffic Manager)
- Network Security (Network Security Groups, Azure Bastion, Firewall)
- Security & Governance Solutions

AWS Solutions for Apps

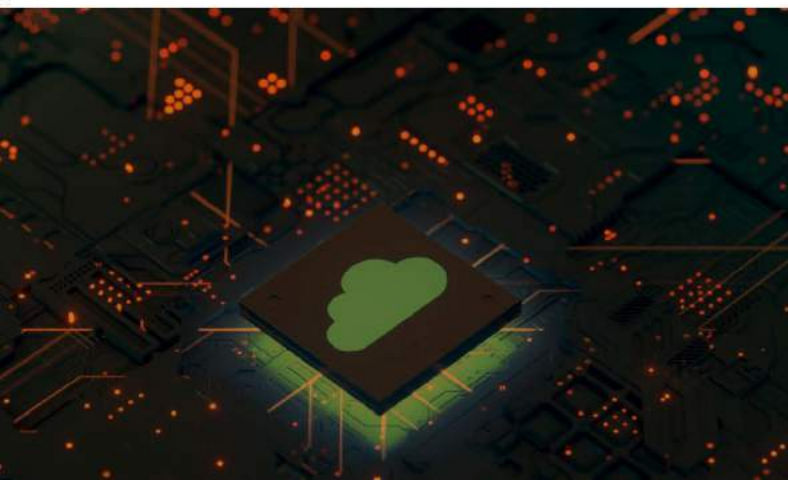
- AWS App Services (Web Apps, [AWS Lambda](#), Functions, Logic Apps)
- API Management
- Container-based Applications
- Messaging & Event-Based Services (Service Bus, Event Hub, Event Grid)
- [AWS DevOps](#)
- Monitoring (Monitoring options, Metrics, Service Health, Activity Log, Alerts, Configuring Log Analytics and Diagnostic logging, Configuring App Insights)

AWS Data Platforms

- Cosmos DB (Introduction, Working with Core SQL API, Global distribution (replicas), Throughput, Consistency, Partitioning, Connect via [AWS function/VM2](#))
- SQL Database (Database options & models)
- Data Services Intro ([AWS Data Factory](#), Synapse, Databricks, Stream Analytics)

AWS ML Services (Self-Paced Module)

- [AWS ML Services](#)
- AI Services Offered on [AWS](#)
- [AWS ML Studio](#)
- [AWS ML & Loading data](#)
- Data Manipulation
- Visualizing Categorical Data
- Visualizing Numerical Data, etc.



MICRO SERVICES

- Expectations and Characteristics
- Failures, Modelling challenges, Load balancing
- The 12-factor app
- Architecture and Design Patterns
- Anti Patterns
- Event Driven Architecture
- Security Enforcement
- Migrating a monolith

BIG DATA ANALYTICS

- Concepts of NoSQL
- NoSQL Databases (Cassandra and DynamoDB)
- Partitioner, Replication, Snitch
- Query Driven Design and Distributed Development
- Amazon EMR, Hadoop and Hive

CLOUD SECURITY AND MIGRATION

- AWS Organizations
- Security services (Trusted Advisor, Data encryption, Amazon Inspector, AWS Config, Guard Duty, Macie)
- Identity and Access Control
- Application user management (AWS Cognito, Cost Explorer)
- Cloud Migration Strategie
- Migration Maturity Index
- API based integration
- Workload Analysis

PRIVATE CLOUD

AWS Data Platforms

- OpenStack Essentials



**SAMPLE HANDS ON
PROJECTS**

01

The solution can be easily scaled up to run in your Data Center or on a Public Cloud, with its servers, storage, and other components completely managed and controlled by your IT team in accordance with the company's governance and security requirements.

Concepts: VPC, EC2, Security Group, Internet Gateway, NAT instance, LAMP stack, S3 and MYSQL.

02

In the connected world, it is imperative that the organizations are interlinked with the customers and vendors. This process has been very sluggish, manual, batch-based, and prone to failures. Such integration design has led to impaired decision-making and delays in the detection of fraudulent actions. This project created an automated, event-based real-time process using managed cloud services that do not have these limitations.

Concepts: Amazon S3, SNS, Athena and DynamoDB.

03

In the last decade, small and large enterprises have invested heavily in developing bespoke applications. Since these applications have been built and enhanced over a while, they are complex and any form of re-engineering to convert it to smaller, modular, and independently hosted services are difficult. Managed Container Services from cloud providers allow predictable and reproducible packaging of such apps. This project moved & deployed a classical web app to AWS ECS containers.

04 Building Scalable and Resilient Applications

Creating web applications that are both resilient and scalable is an essential part of any application architecture. A well-designed application should scale seamlessly as demand increases and decreases and be resilient enough to withstand the loss of one or more compute resources.

Concepts: Instance Group, Autoscaler, HTTP Load balancer, Autohealing and Google App Engine.



05 Scalable Geo-Distributed Event Registration App on Amazon Aws

The application is a multi-tenant web application that can onboard thousands of corporates and millions of end-users. The app is globally available with automatic geo-failover, as any downtime may cost revenue loss to business as end-users will not be able to register. Email notifications are sent to end-users after successful registration with relevant event information.

Concepts: AppServer Instances, AWS Active Directory, Functions and CDN.

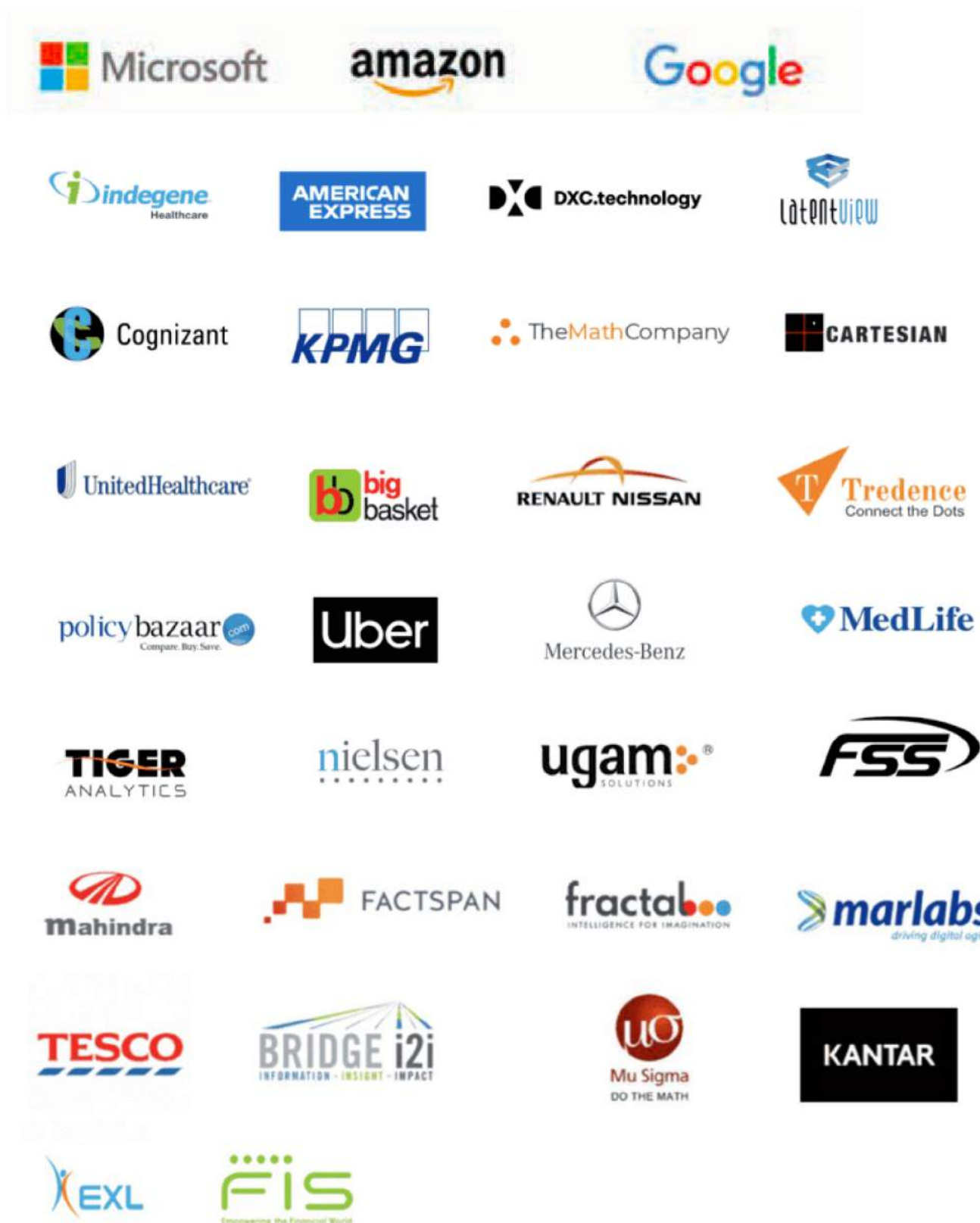
06 Build a Document Management System on Cloud

Enterprise information is primarily captured either in a structured manner or an unstructured manner. Databases have been very efficient in handling structured data and allowing the business users flexibility to access the raw data. However, when it comes to handling unstructured data storage, management will have less than the desired outcome if the system used is optimized for structured data. We created a process and a Document Management System that allows the enterprise to organize, catalogue and fetch data in an intuitive manner.

Concepts: Lambda, Elasticsearch, Containers, Python and Java Codes, S3 and DynamoDB.

LIST OF EMPLOYERS

Our learners come from a variety of top global organizations. Some of these are:



ADMISSION DETAILS

The admission process is conducted on a rolling basis and will be closed once the requisite number of candidates are enrolled in the program.

ELIGIBILITY

The candidate should have a basic knowledge and understanding of computer software

PROGRAM FEE

The course fee is Ghc 4,800



Fill an online
application form



Eligible applicants will
receive a screening call



Review of call



Announcement of
results/release of admission
offer letter

READY TO ADVANCE YOUR CAREER?

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059 804 4825



info@wacglobal.org



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