AMAZON WEB SERVICE

COURSE DURATION: 30 HOURS   FEE- 3500AED

WHAT IS AWS?

Amazon Web Services (AWS) is a secure cloud services platform, offering compute power, database storage, content delivery and other functionality to help businesses scale and grow.

AWS Knowledge

• Hands-on experience using computer, networking, storage, and database AWS services

• Professional experience architecting large-scale distributed systems

• Understanding of elasticity and scalability concepts

• Understanding of the AWS global infrastructure

• Understanding of network technologies as they relate to AWS

• A good understanding of all security features and tools that AWS provides and how they relate to traditional services

• A strong understanding of client interfaces to the AWS platform

• Hands-on experience with AWS deployment and management services

WHY AWS?

- Easy to use

- Flexible

- Cost-Effective
- Reliable

- Scalable and high-performance

- Secure.

General IT Knowledge

• Excellent understanding of typical multi-tier architectures: web servers, caching, application servers, load balancers, and storage

• Understanding of Relational Database Management System (RDBMS) and NoSQL

• Knowledge of message queuing and Enterprise Service Bus (ESB)

• Familiarity with loose coupling and stateless systems

• Understanding of different consistency models in distributed systems

• Knowledge of Content Delivery Networks (CDN)

• Hands-on experience with core LAN/WAN network technologies

• Experience with route tables, access control lists, firewalls, NAT, HTTP, DNS, IP and OSI Network

• Knowledge of RESTful Web Services, XML, JSON

• Familiarity with the software development lifecycle

• Work experience with information and application security concepts, mechanisms, and tools

• Awareness of end-user computing and collaborative technologies

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CONTENTS

Domains

1. Designing highly available, cost-efficient, fault-tolerant, scalable systems:

Identify and recognize cloud architecture considerations, such as fundamental components and effective designs.

Content may include the following:

- How to design cloud services
- Planning and design
- Monitoring and logging
- Familiarity with:
  - Best practices for AWS architecture
  - Developing to client specifications, including pricing/cost (e.g., on Demand vs. Reserved vs. Spot; RTO and RPO DR Design)
  - Architectural trade-off decisions (e.g., high availability vs. cost, Amazon Relational Database Service (RDS) vs. installing your own database on Amazon Elastic Compute Cloud (EC2))
  - Hybrid IT architectures (e.g., Direct Connect, Storage Gateway, VPC, Directory Services)

> ➢ Elasticity and scalability (e.g., Auto Scaling, SQS, ELB, CloudFront)

2. Implementation/Deployment

Identify the appropriate techniques and methods using Amazon EC2, Amazon S3, AWS Elastic Beanstalk, AWS Cloud Formation, AWS OpsWorks, Amazon Virtual Private Cloud (VPC), and AWS Identity and Access Management (IAM) to code and implement a cloud solution.

Content may include the following:

➢ Configure an Amazon Machine Image (AMI).

➢ Operate and extend service management in a hybrid IT architecture

➢ Configure services to support compliance requirements in the cloud

➢ Launch instances across the AWS global infrastructure

➢ Configure IAM policies and best practices

3. Data Security

3.1.Recognize and implement secure practices for optimum cloud deployment and maintenance.

Content may include the following:

• AWS shared responsibility model

• AWS platform compliance

• AWS security attributes (customer workloads down to physical layer)

• AWS administration and security services

• AWS Identity and Access Management (IAM)

• Amazon Virtual Private Cloud (VPC)

• AWS CloudTrail

• Ingress vs. egress filtering, and which AWS services and features fit

• "Core" Amazon EC2 and S3 security feature sets

• Incorporating common conventional security products (Firewall, VPN)

• Design patterns

• DoS mitigation

• Encryption solutions (e.g., key services)

• Complex access controls (building sophisticated security groups, ACLs, etc.)

• Amazon Cloud Watch for the security architect

• Trusted Advisor

• Cloud Watch Logs

3.2. Recognize critical disaster recovery techniques and their implementation.

Content may include the following:

- Disaster recovery

- Recovery time objective

- Recovery point objective

- Amazon Elastic Block Store

- AWS Import/Export

- AWS Storage Gateway

- Amazon Route53

• Validation of data recovery method

4. Troubleshooting

Content may include the following:

• General troubleshooting information and questions

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The table below lists the domains measured by this examination and the extent to which they are represented.

DOMAIN	PERCENT OF EXAMINATION
Designing highly available, cost efficient, fault-tolerant, scalable systems	60%
Implementation/Deployment	10%
Data Security	20%
Troubleshooting	10%
TOTAL	100%

These training courses or other equivalent methodologies

- Architecting on AWS
- In-depth knowledge or training in at least one high-level programming language
- AWS Cloud Computing Whitepapers
- Overview of Amazon Web Services
- Overview of Security Processes
- AWS Risk & Compliance Whitepaper
- Storage Options in the Cloud
- Architecting for the AWS Cloud: Best Practices

- Experience deploying hybrid systems with on-premises and AWS components
- Use of the AWS Architecture Center website

MICROSOFT AZURE

COUSRE DURATION- 30 HOURS   FEE- 3500 AED

WHAT IS MICROSOFT AZURE?

Microsoft Azure (formerly Windows Azure) is a cloud computing service created by Microsoft for building, testing, deploying, and managing applications and services through Microsoft-managed data centers. It provides software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS) and supports many different programming languages, tools and frameworks, including both Microsoft-specific and third-party software and systems.

It's the freedom to build, manage, and deploy applications on a massive, global network using your favorite tools and frameworks.

WHAT YOU NEED TO KNOW ABOUT AZURE?

We talk about Microsoft Azure all of the time. There's so many different aspects of Azure that we can never quite say everything that we need to. One of the fundamental aspects of Azure is how it can change how you manage your IT infrastructure.

Microsoft Azure provides Infrastructure as a Service. Basically, this means that you access and manage your infrastructure through the Cloud. You no longer have to make investments in buying and managing physical servers. You don't have to pay for heating, cooling or power either!

Simply, you're renting your hardware from Microsoft and then accessing it through the Internet without the expense you would have had previously with physical servers. A lot of people question the security of the Cloud. There's really no need. What you have to remember is that the hardware still exists it's just not your problem anymore.

When you have a physical server on-premises it is actually more vulnerable. It is only as secure as what you do to make it secure. Locking your doors, turning on your alarm and installing CCTV is the protection that you are giving your IT infrastructure. At Microsoft's datacentres your infrastructure will be subject to a number of different controls with heavy security measures. The Microsoft Datacenter in Ireland has 16 £1 million caterpillar generators just in case there is an issue. Chris Roche, our Managing Director, and Urfaan Azhar, our Infrastructure Manager, visited the Datacenter earlier in the year and they said that Mission Impossible would not be able to access it, it's that secure!

The issue with IT is that there is often a lot of a waste. For example, you could invest a significant amount in a Network Attached Storage Device for your Disaster Recovery option and then it may never be used. With Microsoft Azure this wouldn't happen, you would pay for what you needed when you needed it without having to make that significant investment.

Microsoft Azure is a cost-effective and secure alternative to on-premises infrastructure. If you are considering migrating your infrastructure to Microsoft Azure talk to ACUTEC today.

Storage in Microsoft Azure

One of the primary uses that we have seen organizations use Microsoft Azure for is storage. Instead of having to budget capital expenditure for hardware and then pay for heating, power and cooling you can instead use Azure for your storage solutions. You would only need to pay for what you need, removing redundancy costs. Azure can be used for your file storage or your disk storage for your virtual machines. A great way we have seen the storage solutions used in Azure is through its back up and disaster recoveryoption. Instead of having to invest in extra storage

hardware just in case something goes wrong with your server, you can restore your data in the Cloud until a new server arrives.

Web and Mobile Apps in Microsoft Azure

Microsoft Azure enables applications to be easily created, tested and deployed in the Cloud. A variety of different programming languages can be used including .NET, Python, Java and PHP. Developers have the ability to access a range of pre-built APIs making it easy to connect to Cloud services like Office 365 and Salesforce.

Data and Analytics in Microsoft Azure

When it comes to data and analytics there are lots of ways that your business can gain intelligence. With Machine Learning, you can easily build and deploy predictive analytics solutions. With Azure's analytics tools you can process data quickly and on demand without needing to worry about managing infrastructure.

Internet of Things in Microsoft Azure

The Internet of Things is growing and growing. Fridges are starting to replenish themselves and switching a light of has never been more easy. In Azure you can use the IoT hub to connect and manage millions of different devices. You will be able to access real time data and establish reliable communication between devices.

While we have decided to focus on just 4 areas of Microsoft Azure to give you a taste of what is available, there is so much more to it. There's AI and Cognitive Services, Networking, Security and Identity tools and so much more.

HOW DOES AZURE COMPARE TO OTHER CLOUD?

Azure is the only consistent hybrid cloud, has more regions than any cloud provider, delivers unparalleled developer productivity, and offers more comprehensive compliance coverage—including meeting the requirements of the General Data Protection Regulation (GDPR).

Will Azure work for my industry?

Azure provides solutions for all industries. Bring together cloud services and products tailored for your industry to help meet your specific needs and drive innovation.

Architecting Microsoft Azure Solutions

1. Design Compute Infrastructure

- Design solutions using virtual machines- Design VM deployments by leveraging availability sets, fault domains, and update domains in Azure; Design VM Scale Sets; design for compute-intensive tasks using Azure Batch; define a migration strategy from cloud services; recommend use of Azure Backup and Azure Site Recovery

2. Design Data Implementation

- Design for Azure Storage solutions-Determine when to use Azure Blob Storage, blob tiers, Azure Files, disks, and Store Simple

    A. Design for relational database storage- Determine when to use Azure SQL Database and SQL Server Stretch Database; design for scalability and features; determine when to use Azure Database for MySQL and Azure Database for PostgreSQL; design for HA/DR, design a backup and recovery strategy

3. Design Networking Implementation

    a. Design Azure virtual networks- Design solutions that use Azure networking services: design for load balancing using Azure Load Balancer and Azure Traffic Manager; define DNS, DHCP, and IP strategies; determine when to use Azure

Application Gateway; determine when to use multi-node application gateways, Traffic Manager and load balancers

b. Design external connectivity for Azure Virtual Networks- Determine when to use Azure VPN, Express Route and Virtual Network Peering architecture and design; determine when to use User Defined Routes (UDRs); determine when to use VPN gateway site-to-site failover for Express Route

4. Design Security and Identity Solutions

- Secure resources by using identity providers- Design solutions that use external or consumer identity providers such as Microsoft account, determine when to use Azure AD B2C and Azure AD B2B; design mobile apps using AAD B2C or AAD B2B

5. Design for Operations

- Design an operations automation strategy- Determine when to use Azure Automation, PowerShell, Desired State Configuration (DSC), Azure Logic Apps; define a strategy for auto-scaling; define a strategy for enabling periodic processes and tasks

Azure Developer | Developing Solutions for Microsoft Azure

Develop Azure Infrastructure as a Service compute solutions

Develop Azure Platform as a Service compute solutions

Develop for Azure storage

Implement Azure security

Implement Azure security

Connect to and consume Azure services and third-party services

Microsoft Azure Administrator

Microsoft Azure Administrator

Azure Solutions Architect | Microsoft Azure Architect Technologies

Deploying and Configuring Infrastructure

Implementing Workloads and Security

Understanding Cloud Architect Technology Solutions

Creating and Deploying Apps

Developing for the Cloud

Azure Solutions Architect | Microsoft Azure Architect Technologies

Deploying and Configuring Infrastructure

Implementing Workloads and Security

Understanding Cloud Architect Technology Solutions

Creating and Deploying Apps

Microsoft Azure Fundamentals

Microsoft Azure Solutions with Microsoft Visual Studio

Developing Microsoft Azure and Web Services

Introduction to Microsoft Azure for IT Professionals

OFFICE 365

Enabling and Managing Office 365

Course content

1. Planning and provisioning Office 365

2. Managing Office 365 users and groups

3. Configuring client connectivity to Microsoft Office 365

4. Planning and configuring directory synchronization

5. Planning and configuring Exchange Online services

6. Planning and deploying Skype for Business Online and Microsoft Teams

7. Planning and configuring SharePoint Online

8. Planning and configuring an Office 365 collaboration solution

9. Planning and configuring security and compliance in Office 365

10. Monitoring and troubleshooting Microsoft Office 365

11. Planning and configuring identify federation

HTML and Cascading Style Sheets (CSS)

Overview

HTML and CSS go hand in hand for developing flexible, attractively and user friendly websites.

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HTML (Hyper Text Markup Language) is used to show content on the page where as CSS is used for presenting the page. HTML describes the structure of a Website semantically along with presentation cues, making it a mark-up language, rather than a programming language. HTML allows images and objects to be embedded and can be used to create interactive forms.

Module 1: Web Programming Introduction

In this module, you will learn basic introduction to web development. The fundamental technology used to define the structure of a webpage.

 Web Development Introduction

Module 2: HTML-Introduction

In this module, sets the stage, getting you used to important concepts and syntax, looking at applying HTML to text, how to create hyperlinks, and how to use HTML to structure a webpage.

- History of HTML
- What you need to do to get going and make your first HTML page
- What are HTML Tags and Attributes?
- HTML Tag vs. Element
- HTML Attributes:
- How to differentiate HTML Document Versions

Module 3: HTML-Basic Formatting Tags

In this module, HTML is used to specify whether your web content should be recognized as a paragraph, list, heading, link, image, multimedia player, form, or one of many other available elements or even a new element that you define.

- HTML Basic Tags
- HTML Formatting Tags
- HTML Color Coding

Module 4: HTML-Grouping Using Div Span

In this module, The HTML <div> and <span> element is the generic container for flow content and does not inherently represent anything. Use it to group elements for purposes such as styling (using the class or id attributes), and inline level and block level separation.

- Div and Span Tags for Grouping

Module 5: HTML-Lists

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In this module, The HTML <li> element is used to represent an item in a list. It must be contained in a parent element: an ordered list (<ol>), an unordered list (<ul>), or a menu (<menu>). In menus and unordered lists, list items are usually displayed using bullet points, now we are going to check how to use html list

Unordered Lists

Ordered Lists

Definition list

Module 6: HTML-Images

In this module, the Web was just text, and it was really quite boring. Fortunately, it was not too long before the ability to embed images (and other more interesting types of content) inside web pages was added. There are other types of multimedia to consider, but it is logical to start with the humble <img> element, used to embed a simple image in a webpage. This module will help you to make use of image mapping

- Image and Image Mapping

Module 7: HTML-Hyperlink

In this module, Hyperlinks are important they are what makes the Web a web. This module shows the syntax required to make a link, and discusses link best practices.

- URL - Uniform Resource Locator
- URL Encoding

Module 8: HTML-Table

In this module, representing tabular data on a webpage in an understandable, accessible way can be a challenge. This module covers basic table markup, along with more complex features such as implementing captions and summaries.

- <table>
- <th>
- <tr>
- <td>
- <caption>
- <thead>
- <tbody>
- <tfoot>
- <colgroup>
- <col>

Module 9: HTML-Iframe

In this module, The HTML <iframe> element represents a nested browsing context, effectively embedding

another HTML page into the current page. This module will help you make use of iframe tag

- Attributes Using
- Iframe as the Target

Module 10: HTML-Form

In this module, Forms are a very important part of the Web — these provide much of the functionality you need for interacting with web sites, e.g. registering and logging in, sending feedback, buying products, and more. This module gets you started with creating the client-side parts of forms.

- <input>
- <textarea>
- <button>
- <select>
- <label>

Module 11: HTML-Headers

In this module, The HTML <head> element provides general information (metadata) about the document, including its title and links to its scripts and style sheets.

- Title
- Base
- Link
- Style s
- Script
- Meta

Module 12: HTML-Miscellaneous

In this module, The HTML <Meta> element represents metadata that cannot be represented by other HTML meta-related elements, like <base>, <link>, <script>, <style> or <title>.this module will help you learn Meta tags, xhtml and deprecated tags

- HTML Meta Tag
- XHTML
- HTML Deprecated Tags & Attributes

Module 13: CSS2-Introduction

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In this module CSS is used to style and lay out web pages — for example, to alter the font, colour, size and spacing of your content, split it into multiple columns, or add animations and other decorative features. This module gets you started on the path to css.

- Benefits of CSS
- CSS Versions History
- CSS Syntax
- External Style Sheet using <link>
- Multiple Style Sheets
- Value Lengths and Percentages

Module 14: CSS2-Syntax

In this module, the basic goal of the Cascading Stylesheet (CSS) language is to allow a browser engine to paint elements of the page with specific features, like colors, positioning, or decorations. The CSS syntax reflects this goal and its basic building blocks are

- CSS Syntax
- single Style Sheets
- Multiple Style Sheets
- Value Lengths and Percentages

Module 15: CSS2-Selectors

In this module, CSS selectors define the elements to which a set of CSS rules apply. In this module, you will find how many selectors are there how to use it

- ID Selectors
- Class Selectors
- Grouping Selectors
- Universal Selector
- Descendant / Child Selectors
- Attribute Selectors
- CSS – Pseudo Classes

Module 16: CSS2-Color Background Cursor

In this module, CSS Backgrounds and Borders is a module of CSS that lets you style elements backgrounds and borders. Backgrounds can be filled with a color or image, clipped or resized, and otherwise modified. Borders can be decorated with lines or images, and made square or rounded.

- background-image
- background-repeat
- background-position

- CSS Cursor

Module 17: CSS2-Text Fonts

In this module, CSS Fonts that defines font-related properties and how font resources are loaded. It lets you define the style of a font, such as its family, size and weight, line height, and the glyph variants to use when multiple are available for a single character

- color
- background-color
- text-decoration
- text-align
- vertical-align
- text-indent
- text-transform
- white-space
- letter-spacing
- word-spacing
- line-height
- font-family
- font-size
- font-style
- font-variant
- font-weight

Module 18: CSS2-Lists Tables

In this module, lists table that defines how to lay out table data.

- list-style-type
- list-style-position
- list-style-image
- list-style

CSS Tables

I. border

II. width & height

III. text-align

IV. vertical-align

V. padding

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VI. color

Module 19: CSS2-Box Model

In this module, CSS box model that defines the rectangular boxes—including their padding and margin—that are generated for elements and laid out according to the visual formatting model.

- Borders & Outline
- Margin & Padding
- Height and width
- CSS Dimensions

Module 20: CSS2-Display Positioning

In this module, the position CSS property specifies how an element is positioned in a document. The top, right, bottom, and left properties determine the final location of positioned elements.

- CSS Visibility
- CSS Display
- CSS Scrollbars
- CSS Positioning

1. Static Positioning

2. Fixed Positioning

3. Relative Positioning

4. Absolute Positioning

- CSS Layers with Z-Index

CSS Floats

In this module, the float CSS property specifies that an element should be placed along the left or right side of its container, allowing text and inline elements to wrap around it. The element is removed from the normal flow of the web page, though remaining a part of the flow (in contrast to absolute positioning).

- The float Property
- The clear Property
- The clearfix Hack

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