**Microsoft Azure Fundamentals**

**Module 1: Microsoft Azure Fundamentals: Describe Core Azure Concepts**  
• Introduction to Azure fundamentals  
• Discuss Azure fundamental concepts  
• Describe core Azure architectural components  
  
**Module 2: Microsoft Azure Fundamentals: Describe core Azure services**  
• Explore Azure compute services  
• Explore Azure networking services  
• Explore Azure Storage services  
• Explore Azure database and analytics services  
  
**Module3: Microsoft Azure Fundamentals: Describe core solutions and management tools on Azure**  
• Choose the best Azure loT service for your application  
• Choose the best AI service for your needs  
• Choose the best Azure serverless technology for your business scenario  
• Choose the best tools to help organizations build better solutions  
• Choose the best tools for managing and configuring your Azure environment  
• Choose the best monitoring service for visibility, insight, and outage  
  
**Module 4: Microsoft Azure Fundamentals: Describe general security and network security features**  
• Protect against security threats on Azure  
• Secure network connectivity on Azure  
  
**Module 5: Microsoft Azure Fundamentals: Describe identity, governance, privacy and compliance**  
• Secure access to your applications by using Azure identity services  
• Build a cloud governance strategy on Azure  
• Examine privacy, compliance, and data protection standards on Azure  
  
**Module 6: Microsoft Azure Fundamentals: Describe Azure cost management and service level agreements**  
• Plan and manage your Azure costs  
• Choose the right Azure services by examining SLAs and service lifecycle

Once I build an application what a lazy developer want.

Easy or automated deployment.

App service. Where you just need to upload the code and the cloud service provider will manage everything

According to the requirement you can do the compliance.

Every cloud provider as per the country they provide an aggemnt to do the compliance.

But the agreement is an shared reposibility.

You need to minim enable this services.

Create a vm

Deploy your application

Cdn

Waf

Shield

Azure stack.

Where they are extending your cloud to on prem.

Same interface will be there but the resource will be used on prem

Kubernetes: it is one of complex solution for your mircoservices.

Aks eks.

After a year

People start moving on on prem solution.

They are extending the same solution to on prem.

Cost

Security

App not to be design to scale horizontally

Troubleshooting

Complexity.

Horizontal scaling with the app server.

Horizontal scaling cannot be done on database RDBMS.

Auto scaling is that the spike in load.

Containers

Serverless.

Trigger based App can be used in server less.

Goal is defined

I want to get the data from IOT devices.

1. Quantity is big
2. Processing need to be faster

Go into loop

Processing will be slow.

Idea! Every 3 years they are replacing the hardware

Older hardware-recycle.

Server farm – as per you job they run the application on those server for limited time.

30 trigger happen the process will be done by 30 vm

They charge you according to the resource define and the time it take to process your request

Azure aws they run the serverless in phsycial or virtual hardware.

GCP they use container technology to run serverless workload.

Storage is data at rest.

What are the different type of storage

1. File Storage.
2. Disk Storage: The dist which is attached to your vm

Azure storage account.

It is an Blob Storage.

Orgnaziton always have a dr site.

SLA of 99.999 %

Azure storage gives you 99.99% of redundancy.

But any file or any data you store in this azure storage will be always accessable using HTTP or HTTPS. It means I am doing API call.

They support few type of storage.

Block Blob: 190.7 TB of data but it accept only text and binary data

Append Block: but used for only append data. Frequent backup for the data. Log file

Page Blobs used only for migration. VHD

This blob storage will give you 99.999% redunadancy

You have site which goes multiple times in a day due to some update.

You can use this blob storage to host an static webside

You want to create an NFS volume which can attached with your on prem environment.

Or GLUe data factory

ETL

You get the data in the format of csv or parqueted format.

To upload the data you need a blob storage to huge and in raw format.

Integrate the data where it will be autmaticall converted into table format.

I can run an sql query and analyze the data easily.

You need to analyze the data. The process is quite bigger.

Your data need to be upload in a data warehouse the data need to be crawl and formatted in tabular format- once you format the data in table format. You can run sql query and access the data.

Glue service

S3 bucket-glue-service do the integration with s3-athenawhich will create the table and allow you to run any sql query

On premises you have a network create similar kind of network in the cloud.

Azure provide something called as vnet.

Where you create your own network in the cloud service provide and provide access to vm storage

Networking is an huge concept.

Create an architecture in azure.

First thing you need to understand the concept of networking.

It will also allow you to securely do communication between the resource.

Every resource which azure want to communicate with interne you need to create network.

You can do filtering of the network traffic

Route

Integratiin with other azure service.

1. Internet GW
2. NAT GW

You want to create a network in aws azure

1. Vnet in aws azure they are region specific inside a region
2. Vnet in gcp is spread across region.

Before you learn vnet in any cloud service provider learn what is subnetting .