Microsoft Azure

Azure is a cloud computing platform and an online portal that allows you to access and manage cloud services and resources provided by Microsoft. These services and resources include storing your data and transforming it, depending on your requirements. To get access to these resources and services, all you need to have is an active internet connection and the ability to connect to the Azure portal.

Things that you should know about Azure:

- It was launched on February 1, 2010, significantly later than its main competitor, AWS.
- It's free to start and follows a pay-per-use model, which means you pay only for the services you opt for.
- Interestingly, 80 percent of the Fortune 500 companies use Azure services for their cloud computing needs.
- Azure supports multiple programming languages, including Java, Node Js, and C#.
- Another benefit of Azure is the number of data centers it has around the world. There are 42 Azure data centers spread around the globe, which is the highest number of data centers for any cloud platform. Also, Azure is planning to get 12 more data centers, which will increase the number of data centers to 54, shortly.

Azure Services

Azure provides more than 200 services, are divided into 18 categories. These categories include computing, networking, storage, IoT, migration, mobile, analytics, containers, artificial intelligence, and other machine learning, integration, management tools, developer tools, security, databases, DevOps, media identity, and web services. Let's take a look at some of the major Azure services by category:

Compute Services

- ***Virtual Machine***

  This service enables you to create a virtual machine in Windows, Linux or any other configuration in seconds.

- ***Cloud Service***

  This service lets you create scalable applications within the cloud. Once the application is deployed, everything, including provisioning, load balancing, and health monitoring, is taken care of by Azure.

- ***Service Fabric***

  With service fabric, the process of developing a microservice is immensely simplified. Microservice is an application that contains other bundled smaller applications.

- ***Functions***

  With functions, you can create applications in any programming language. The best part about this service is that you need not worry about hardware requirements while developing applications because Azure takes care of that. All you need to do is provide the code.

Networking

- ***Azure CDN***

  Azure CDN (Content Delivery Network) is for delivering content to users. It uses a high bandwidth, and content can be transferred to any person around the globe. The CDN service uses a network of servers placed strategically around the globe so that the users can access the data as soon as possible.

- ***Express Route***

  This service lets you connect your on-premise network to the Microsoft cloud or any other services that you want, through a private connection. So, the only communications that will happen here will be between the enterprise network and the service that you want.

- ***Virtual network***

  The virtual network allows you to have any of the Azure services communicate with one another privately and securely.

- ***Azure DNS***

  This service allows you to host your DNS domains or system domains on Azure.

Storage

- ***Disk Storage***

  This service allows you to choose from either HDD (Hard Disk Drive) or SSD (Solid State Drive) as your storage option along with your virtual machine.

- ***Blob Storage***

  This service is optimized to store a massive amount of unstructured data, including text and even binary data.

- ***File Storage***

  This is a managed file storage service that can be accessed via industry SMB (server message block) protocol.

- ***Queue Storage***

  With queue storage, you can provide stable message queuing for a large workload. This service can be accessed from anywhere in this world.

Why Use Azure?

Now that you know more about Azure and the services it provides, you might be interested in exploring the various uses of Azure.

- Application development: You can create any web application in Azure.
- Testing: After developing an application successfully on the platform, you can test it.
- Application hosting: Once the testing is done, Azure can help you host the application.
- Create virtual machines: You can create virtual machines in any configuration you want with the help of Azure.

- Integrate and sync features: Azure lets you integrate and sync virtual devices and directories.
- Collect and store metrics: Azure lets you collect and store metrics, which can help you find what works.
- Virtual hard drives: These are extensions of the virtual machines; they provide a huge amount of data storage.