

The diagram illustrates the architecture of Facebook's infrastructure on AWS. It shows the flow of traffic from users (Web Browser and Mobile) through DNS and a Content Delivery Network (Cache) into a VPC. Inside the VPC, traffic goes through a Load Balancer to multiple VMs (Web Servers and App Servers). The App Servers interact with a DB Cache, which in turn connects to a Relational Database (DB) and a NoSQL Database. The VMs also interact with a Message Queue, Email, and SMS services. User clicks and actions are processed by a Click Stream Analysis service, which feeds into a Data Warehouse. The Data Warehouse is connected to a Spark/Hadoop service, which then feeds into a Business Intelligence service. An ETL (Extract, Transform, Load) service also feeds into the Data Warehouse. The diagram is labeled 'fb.com on AWS'.

In The Architecture we can replace DNS to aws route 53.

Azure DNS is a hosting service for DNS domains, providing name resolution using Microsoft Azure infrastructure. By hosting your domains in Azure, you can manage your DNS records using the same credentials, APIs, tools, and billing as your other Azure services.

Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service. It is designed to give developers and businesses an extremely reliable and cost-effective way to route end users to Internet applications by translating names like `www.example.com` into the numeric IP addresses like `192.0.2.1` that computers use to connect to each other. Amazon Route 53 is fully compliant with IPv6 as well.

We can replace Azure VM to aws EC2.

Azure Virtual Machines (VM) is one of several types of on-demand, scalable computing resources that Azure offers. An Azure VM gives the flexibility of virtualization without having to buy and maintain the physical hardware that runs it.

AWS EC2:

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction. It provides you with complete control of your computing resources and lets you run on Amazon's proven computing environment.

iii.

We can replace storage to aws s3

Azure Storage:

The Azure Storage platform is Microsoft's cloud storage solution for modern data storage scenarios. Core storage services offer a massively scalable object store for data objects, disk storage for Azure virtual machines (VMs), a file system service for the cloud, a messaging store for reliable messaging, and a NoSQL store.

Aws s3:

Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. This means customers of all sizes and industries can use it to store and protect any amount of data for a range of use cases, such as data lakes, websites, mobile applications, backup and restore, archive, enterprise applications, IoT devices, and big data analytics.

iv.

Content Delivery Network to Amazon CloudFront

Azure Content Delivery Network:

Azure Content Delivery Network (CDN) is CDN service provided by Azure Cloud Platform that enables in storing and accessing data on different content servers and locations – used by online or cloud services. Azure CDN helps in providing better bandwidth and quick delivery of data by placing content delivery or storage servers near to users.

Amazon CloudFront:

Amazon CloudFront is a content delivery service that works in conjunction with other Amazon Web Services (AWS) to provide developers with a simple way to distribute content to end users. This service is useful for companies with a need for higher response times and large file content that want to distribute these files to a sizeable number of users. Once content is put in an origin server, like an Amazon Simple Storage Service bucket or an Elastic Compute Cloud instance, it's pushed out to multiple CloudFront servers as content is requested.

v.

Azure SQL Database to aws RDS

Azure SQL Database:

Azure SQL Database is a cloud-computing database service (Database as a Service), that is offered by Microsoft Azure Platform which helps to host and use a relational SQL database in the cloud without requiring any hardware or software installation.

AWS RDS:

Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need.