

What Is Cloud Computing?

A model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction

(Source: NIST)



Service Models



IaaS

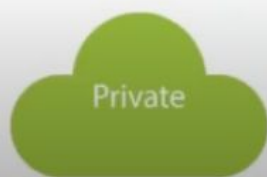


PaaS



SaaS

Deployment Models



Private



Hybrid



Community



Public

Key Dates in the History of Cloud Computing



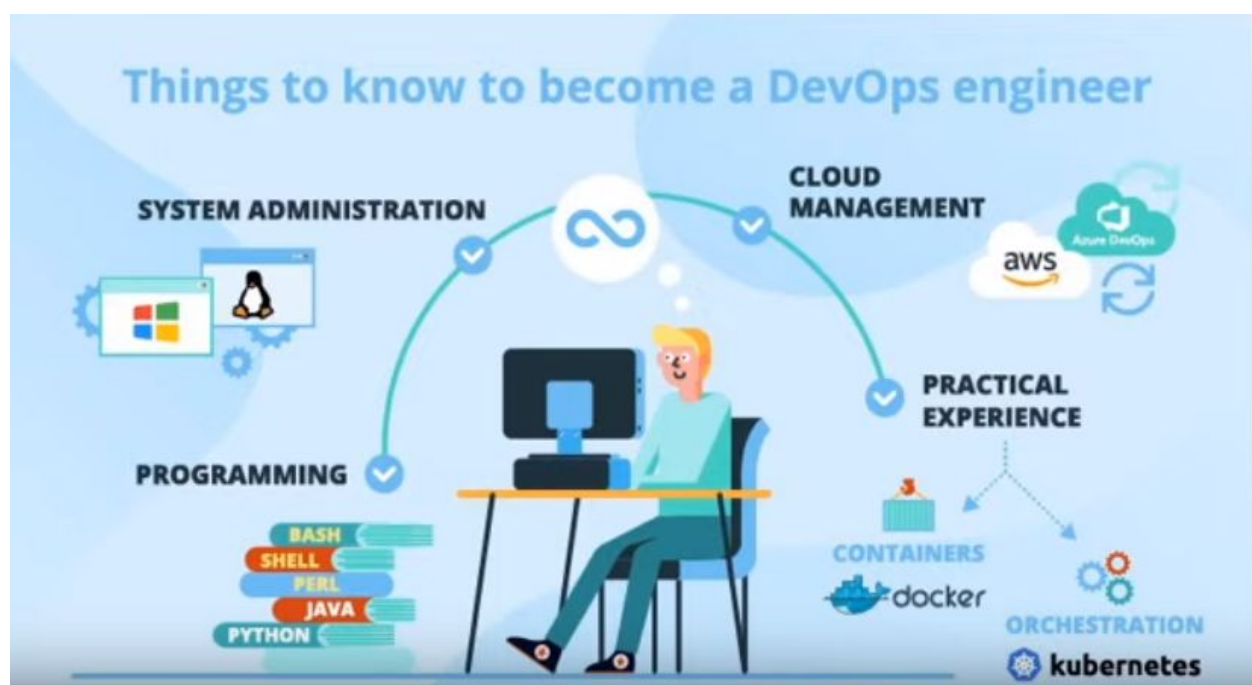
Who is better?

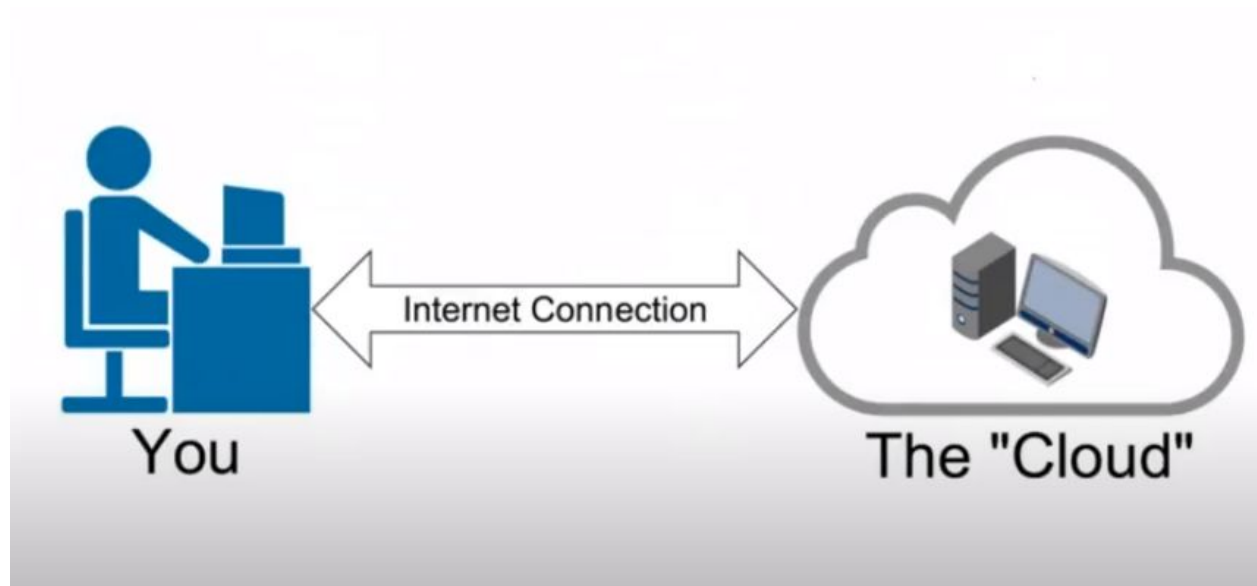
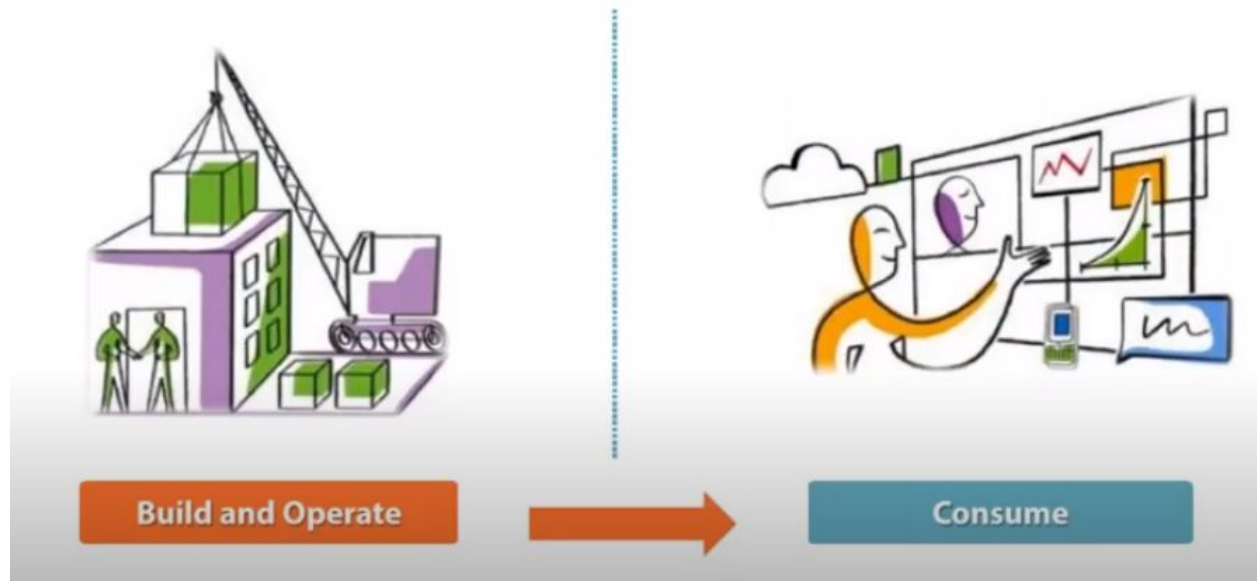
Gartner had the following takeaways:

- AWS has a diverse customer base and most use cases. AWS is also mature but requires expertise to operate and buyers need to seek out sales and architecture engagement. Customers also have trouble getting into the deep range of services.
- Microsoft integrates infrastructure and platform as a service best and has better integration. Gartner also gave Microsoft props for being more open and being a good enough option to AWS. The knocks against Microsoft Azure are documentation, support and an ongoing build out. In addition, partners lack expertise in deep integration tasks.
- Google is viewed as a good option for big data and batch computing. Gartner said Google's vision was a strength, and it understands cloud native apps well. Google also has machine learning and analytics chip. The rub is that Google doesn't have a feature set to match leaders and has trouble engaging with enterprises and midmarket companies.

Tools covered

- Git - Version Control System
- Jenkins - Continuous Integration
- Maven - Build Tool
- SonarQube - Code Analysis
- Artifactory - Artifact Repository
- Docker - Containerization
- Ansible - Deployment & Configuration management
- Kubernetes - Container Management
- Prometheus - Monitoring and Alerting







What is the "cloud"?



iCloud



DropBox

"Store your files in the cloud"



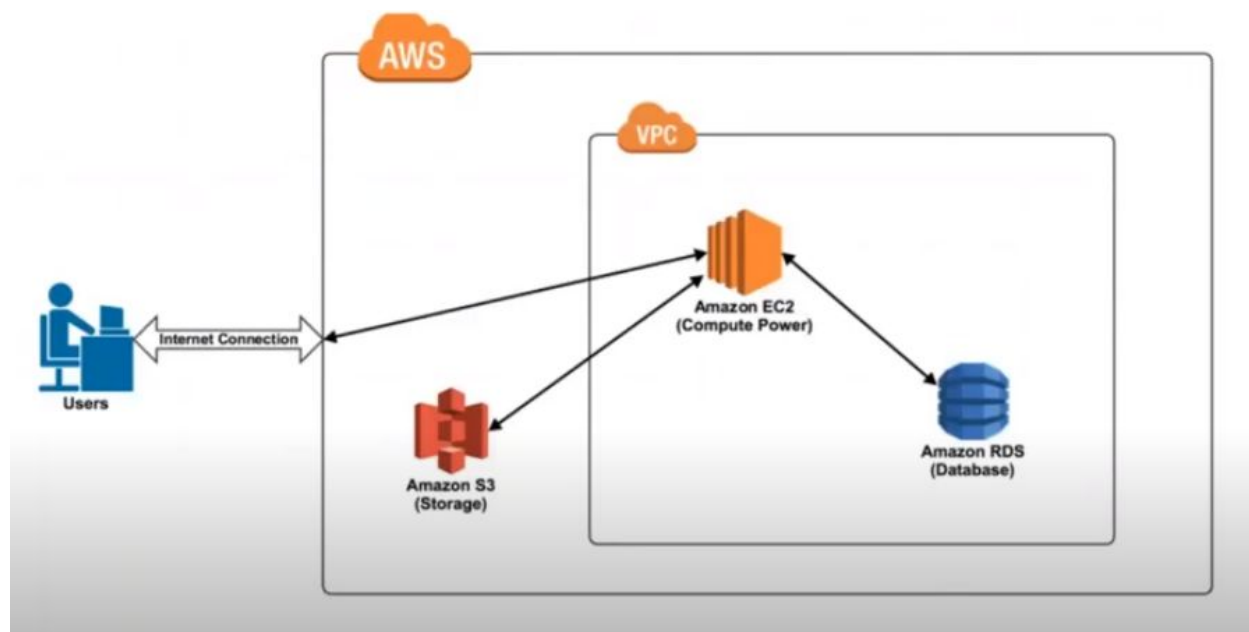
Storage

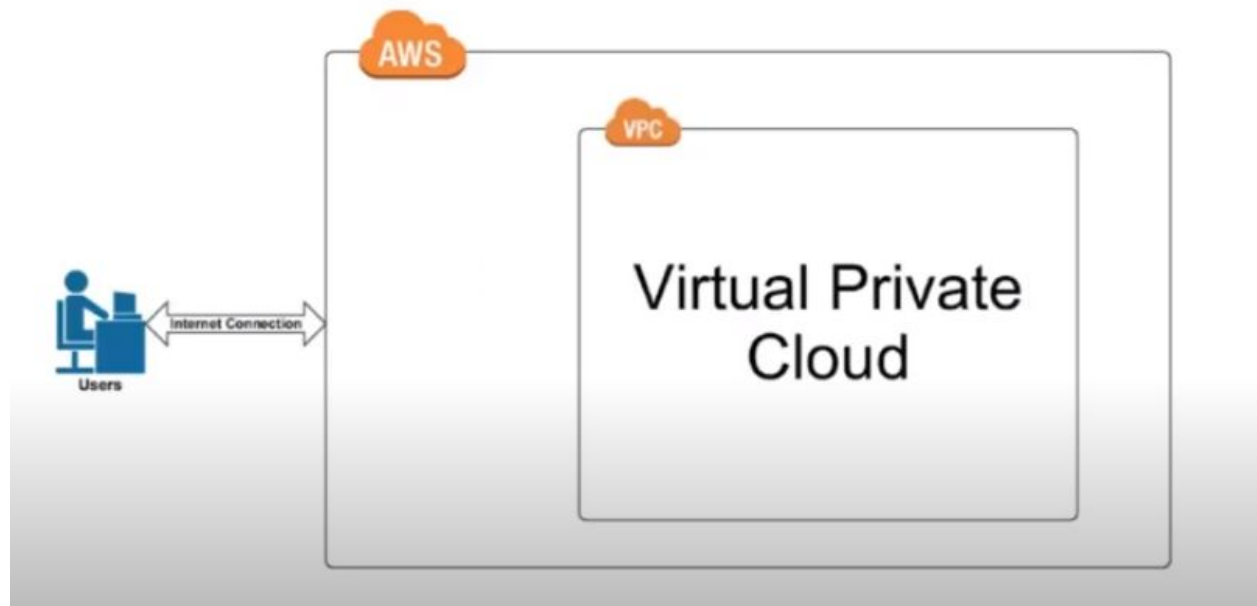
Computing
Power

Databases

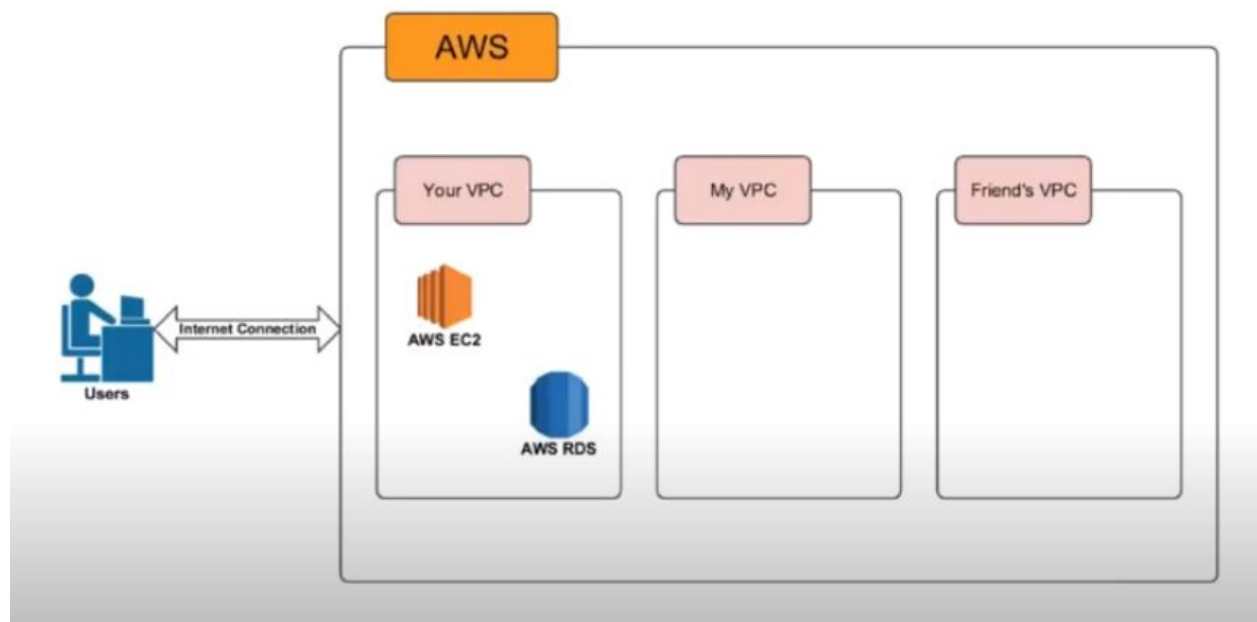


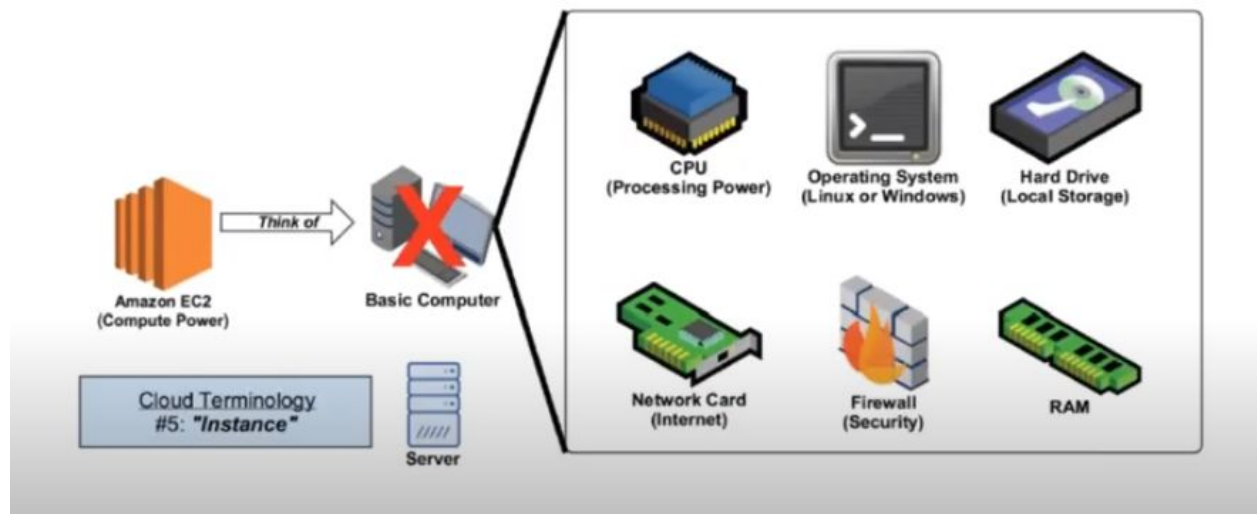
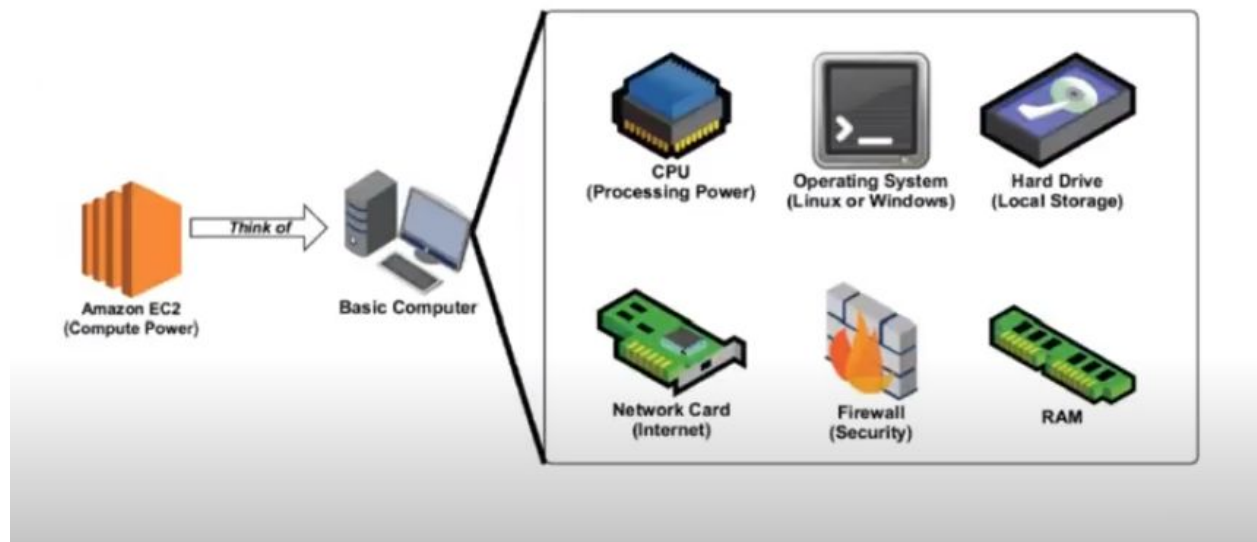
Amazon Web Services is a **Cloud** services provider
Also known as Infrastructure as a Service (IaaS)

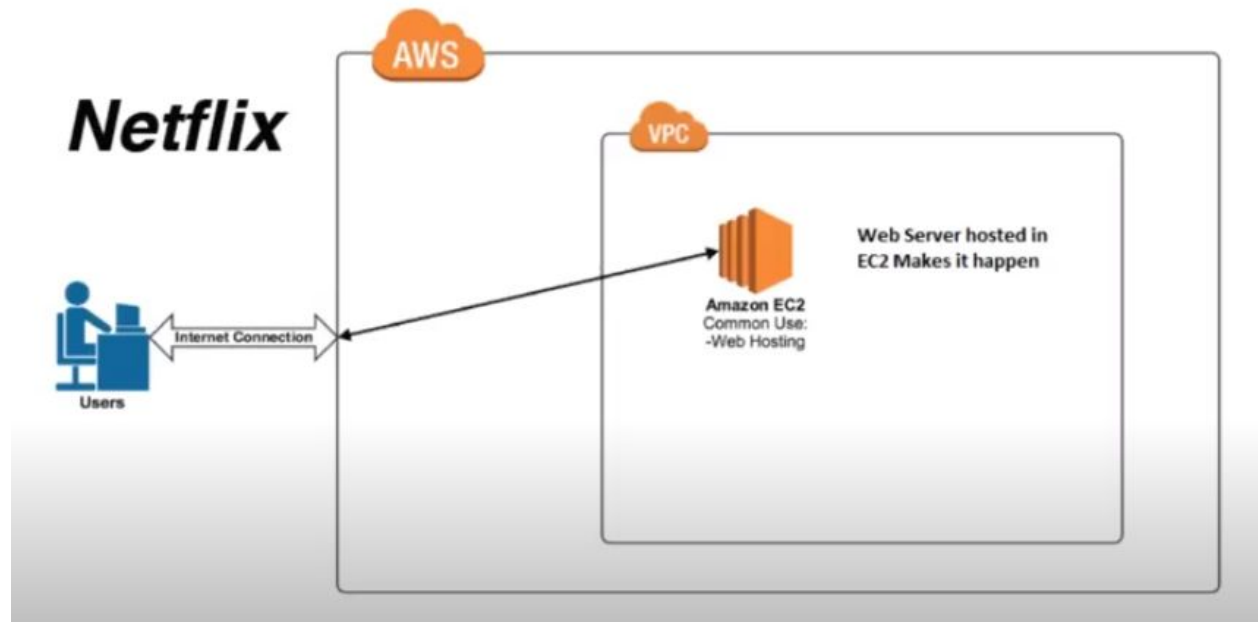




A ***Virtual Private Cloud*** is your private section of AWS, where you can place AWS resources, and allow/restrict access to them.

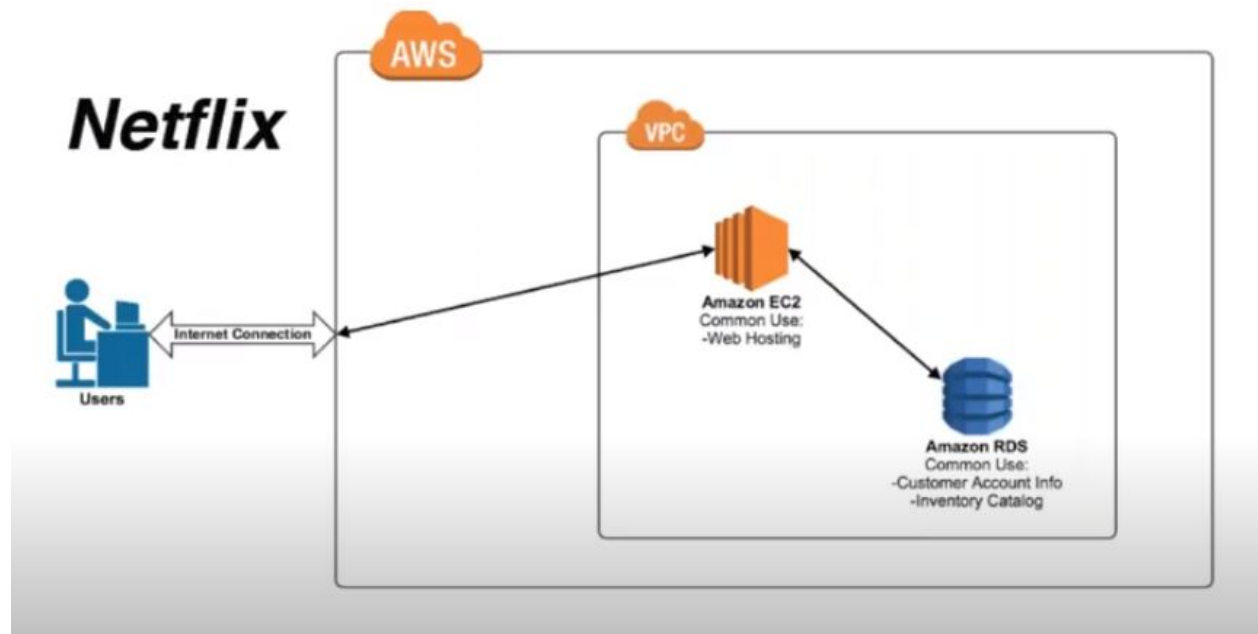




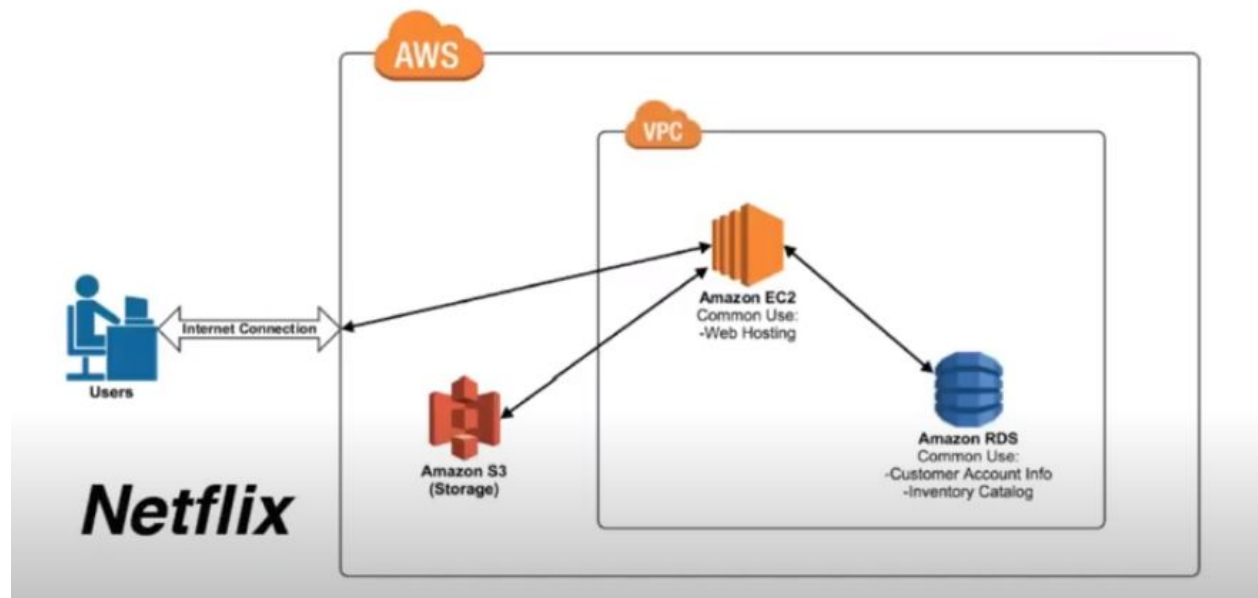


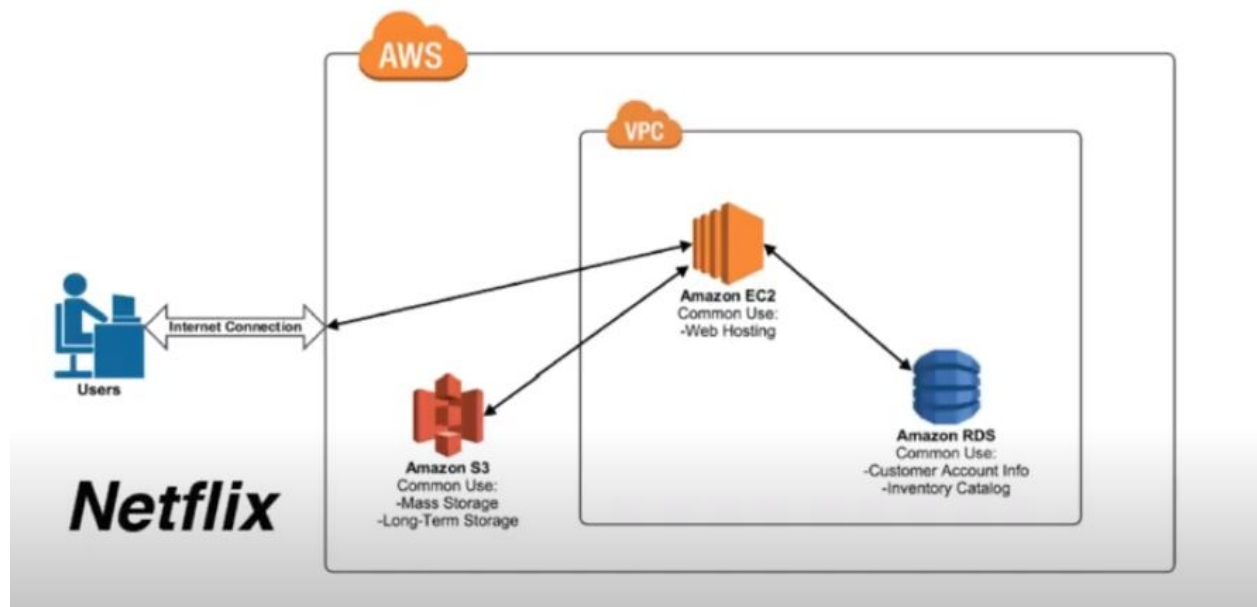
Think of **EC2** as a virtual computer that you can use for whatever you like.

Cloud Terminology
#5: **"Instance"**



RDS is AWS provisioned database service.
Commonly used for things like storing
customer account information and cataloging inventory.





why cloud?

ondemand

broad network access

resource pooling or reuse of resource

rapid elasticity(increase or decrease based on traffic)

measured services (every service in cloud measured based on usage)

for example: aws,google cloud,azure)

service model

iaas-infrastructure as service (raw physical or virtual machine,network)

paas-platform (environment for application)

saas- software (gmail,salesforce)

deployment model

private - single tenant (no other can access)

public - multiple tenant

hybrid - combination of both public and private (some infra in cloud(web,app) and some in on premises at ur company(db server))

community (government cloud)

single tenant (server for own use)

multiple (we and other can use server)

Build and operate(purchase and maintain your own server)

consume(maintain by some other like cloud)

AWS Developer:

AWS developer will be responsible for setting up, maintaining, and evolving the cloud infrastructure of web applications. AWS developers are expected to understand the core AWS services and apply best practices regarding security and scalability. Should have in-depth knowledge of ECS, S3, Lambda, Glue, Kinesis and other critical services of AWS

Work closely with AWS architect.

Writing code that optimizes performance of AWS services used by your application

Code-level application security (IAM roles, credentials, encryption, etc.)

Developing and maintaining applications written for Amazon Simple Storage Service, Amazon DynamoDB, Amazon Simple Queue Service, Amazon Simple Notification Service, Amazon Simple Workflow Service, AWS Elastic Beanstalk, and AWS CloudFormation.

General troubleshooting and debugging

Ensure DoD is met for each story.

Go-Live support during off-peak hours and user training

Perform RCA for PROD Tickets and follow up till closure with regular status update to users

Participation and contribution to Scrum ceremonies

Provide high level and detailed estimations as and when required for effort and schedule.

AWS Architect:

Hands on lead responsible for Architecture Solution design and deployment of products on AWS cloud.

Responsible for design and architecture, administration (costing and provisioning) and dev operations as team lead on Amazon Web services.

Strong architecture & design experience of Deploying Enterprise applications on AWS.

Expertise in Large scale , high performance enterprise application deployment and Solution architecting on complex heterogeneous environments on AWS.

Expertise in security solutions on AWS.

Expertise in Infra capacity sizing, costing of AWS services to drive optimized solution architecture, leading to optimal infra investment vs performance and scale.

Expertise in articulating architectural choices within various AWS services and solution methodologies.

Expertise in AWS foundation services is a must (EC2, RDS, S3, SNS)

Expertise in monitoring and performance tuning of deployed application on AWS .

Expertise in developing competencies and references through proof-of-concepts.

Expertise in leading DevOps team, mentoring, build teams to scale.

Hands on Experience with Shell or Perl scripting is must to drive automation on AWS deployments and monitoring.

Proficiency in using Chef and Puppet.

Proficiency in Linux /Redhat administration.

Proficiency in MySQL and PostgreSQL Administration with Replication & Clustering.

Strong Networking fundamental and concepts.

Proficiency in Preparing/Responding RFI, RFP and customer specific requirements.

Experience in working with AWSs own solution architects and SME would a good to have attribute.