

AWS Notes

AWS - Amazon Web Services was set up in 2002 and started with S3, SQS, and EC2 and now growing with 200+ services.

Featured Services

Amazon EC2

Virtual servers in the cloud

Amazon Simple Storage Service (S3)

Scalable storage in the cloud

Amazon Aurora

High performance managed relational database with full MySQL and PostgreSQL compatibility

Amazon DynamoDB

Managed NoSQL database

Amazon RDS

Managed relational database service for MySQL, PostgreSQL, Oracle, SQL Server, and MariaDB

AWS Lambda

Run code without thinking about servers

Amazon VPC

Isolated cloud resources

Amazon Lightsail

Launch and manage virtual private servers

Amazon SageMaker

Build, train, and deploy machine learning models at scale

AWS Global Infrastructure

Availability Zone - one or more data centres like a building or big server rooms. 87 Availability Zones

Region - Has At least 2 Availability Zones in it, 27 Region

All this is connected using AWS Global Infrastructure.

AWS Pricing

Pay as You Go (PAYG) - Depends on the number of resources and amount of Time.

EC2 (t2.micro) 750Hrs

EC2(42.medium) 0.02\$ pr hour

Storage, size of data used for storage. Inbound vs Outbound Data - pricing when we download something.

Pricing calculator: <https://calculator.aws/#/>

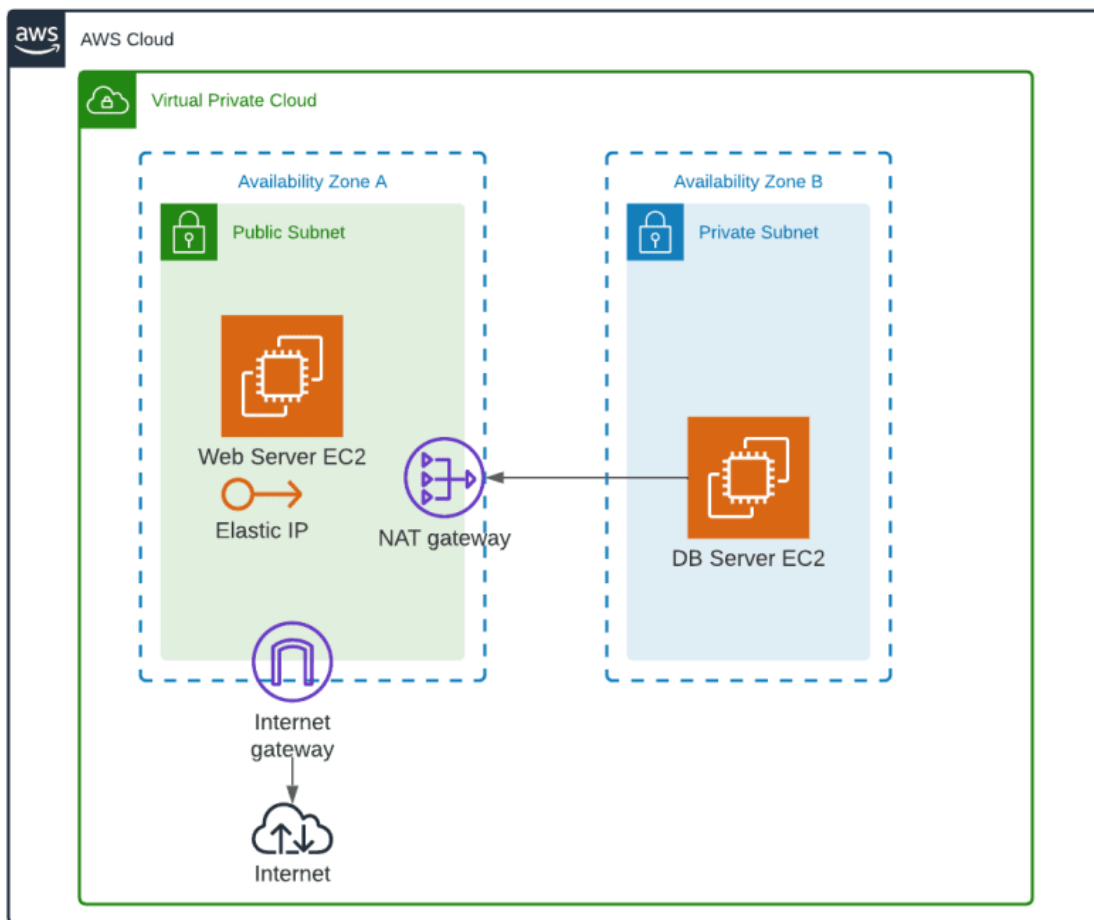
We can set up AWS Billing Alerts using AWS Cloudwatch and AWS SNS.

AWS IAM

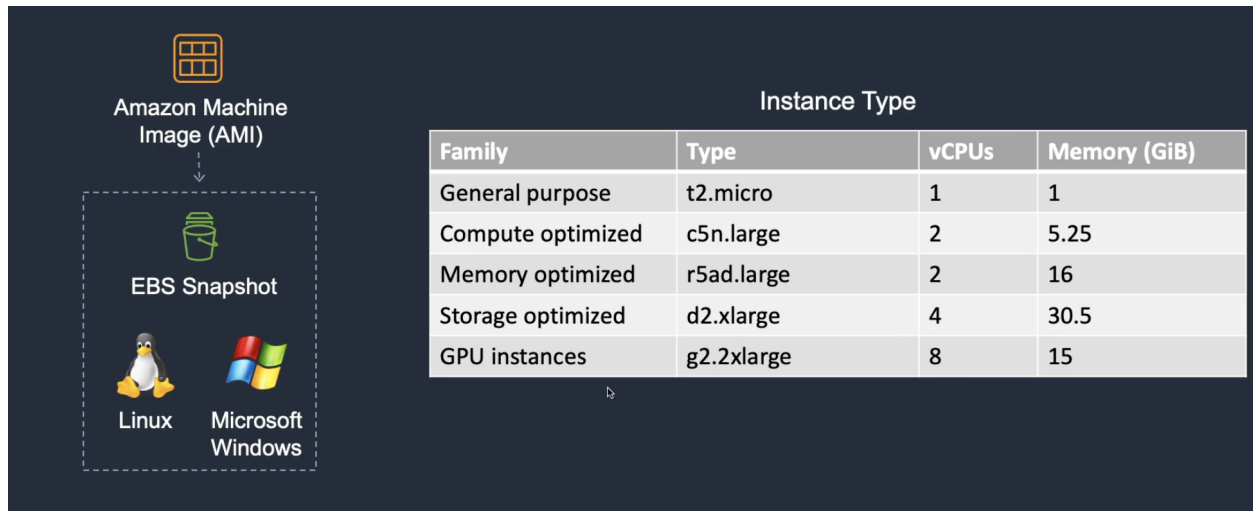
Identity Access Management gives you two types of access, Programmatic and console for Users, groups and roles by Policies.

Policies are the read, write, and access to a particular service.

AWS VPC



AWS EC2



User data to launch web server

```
#!/bin/bash
```

```
yum update -y
yum install httpd -y
systemctl start httpd
systemctl enable httpd
cd /var/www/html/
echo "New instance setup done - Your DevOps Guy" > index.html
```

Create Jenkins Template

```
#!/bin/bash
```

```
yum update -y
yum install httpd -y
systemctl start httpd
systemctl enable httpd
cd /var/www/html/
echo "New instance setup done - Your DevOps Guy" > index.html

sudo wget -O /etc/yum.repos.d/jenkins.repo \
  https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
sudo yum upgrade -y
sudo amazon-linux-extras install java-openjdk11 -y
sudo yum install jenkins -y
sudo systemctl enable jenkins
```

```
sudo systemctl start jenkins
```

AWS S3

Create buckets

Connect ec2 with s3 using aws cli and IAM Roles

AWS EC2 Autoscaling and Load balancing

Create and manage Autoscaling groups

AWS Storage Services

Block, File, Object Storage

EBS (Elastic Block Storage) :

EFS (Elastic File System)

S3