# AWS 3 Tier Architecture Setup

1. Create IAM User – Admin Access
2. Login with IAM user
3. Create VPC-- 10.0.0.0/16
4. Create Subnets

* Public Subnet -1 – 10.0.1.0/24
* Public Subnet -2 – 10.0.2.0/24
* Application Subnet -1 – 10.0.3.0/24
* Application Subnet -2 – 10.0.4.0/24
* Database Subnet -3 – 10.0.5.0/24

1. Create Route Tables

* Public RT – Associate Public Subnet 1 & 2
* Add a route from Internet – 0.0.0.0/0 -- IGW
* Private RT – Associate Application Subnet 1,2 &3

1. Create Internet Gateway – Attach to VPC
2. Create NAT Gateway via Public subnet -2
3. Add new route in Private RT 0.0.0.0/0 – NAT
4. Create VPC Endpoint for S3 & Select Application Subnets
5. Create Security Groups

* Public SG – SSH
* Application SG – HTTP & SSH
* ELB SG – HTTP

1. Create 1 EC2 in Public Subnet 1 – **Jump Server**
2. Create 2 EC2 instance each in Application Subnets 1 & 2 – **App Server 1 & App Server 2**
3. Commands to Run here

* Sudo su
* Yum install httpd -y
* Systemctl start httpd
* Systemctl enable httpd

1. Create S3 Bucket and upload web application
2. Create a EC2 Role for S3 with full access
3. Deploy the application in both **App Server 1 & 2 in cd /var/www/html**
4. **Aws s3 cp <URL> . --- Unzip webapp.zip**
5. Create an **AMI** With **App Server**
6. Create Target groups with **App Server 1 & 2**
7. Create Application Load Balancer with Public Subnets 1 & 2
8. Create Auto Scaling Group with AMI
9. Create a Database and Establish a connection from Public Server to MySQL
10. Create SNS
11. Create CloudWatch Dashboards & Alarms
12. Create Route 53