11-Apr-2022

AWS:

\*\*\*

Root - During the accnt creation - 1 email id

Full access

Account ID : 962828659833

=================

Main AWS Service:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1) IAM - Identity and Access Management -> User Mgmt in AWS

2) Ec2 - Elastic Compute Cloud -> Virtual Server, Volume, Backup, OS

3) S3 - Simple Storage Service -> Online Cloud Storage

4) VPC - Virtual Private Cloud -> Networking, Security, Connectivity, Private/Public

===============

IAM User Creation:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

User name: mohan | Saivivek | hari

Password: welcome@113

URL: <https://962828659833.signin.aws.amazon.com/console>

12-Apr-2022

Roles & Responsibility of AWS Cloud Engineer:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

0 - 3 Yrs Experience - L1 Team - Read Only access, Monitor all the resource

3 - 6 Yrs Experience - L2 Team - SME - Cloud Engineer - Full access to req AWS Services

If any issue - Troubleshooting

Change Activity Implementation

Script / DevOps

6 - 10 Yrs Experience- L3 Team - Cloud Architect - Design to entier Infra

Connectivity and Security during the design

Within my Cloud how resources are going to communicate

New tool/ New Implementation/ new Automation

Guide L2 team whn there is big issues

1

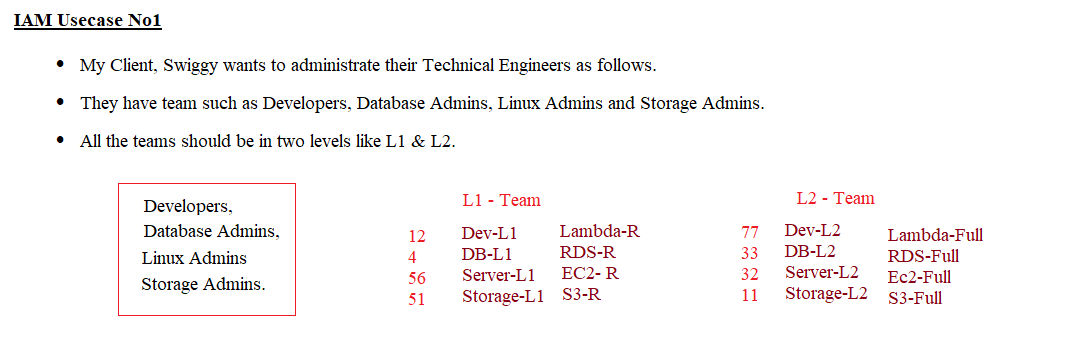
0 + Yrs Experience - L3 Team - Cloud Consultant - Client Facing,

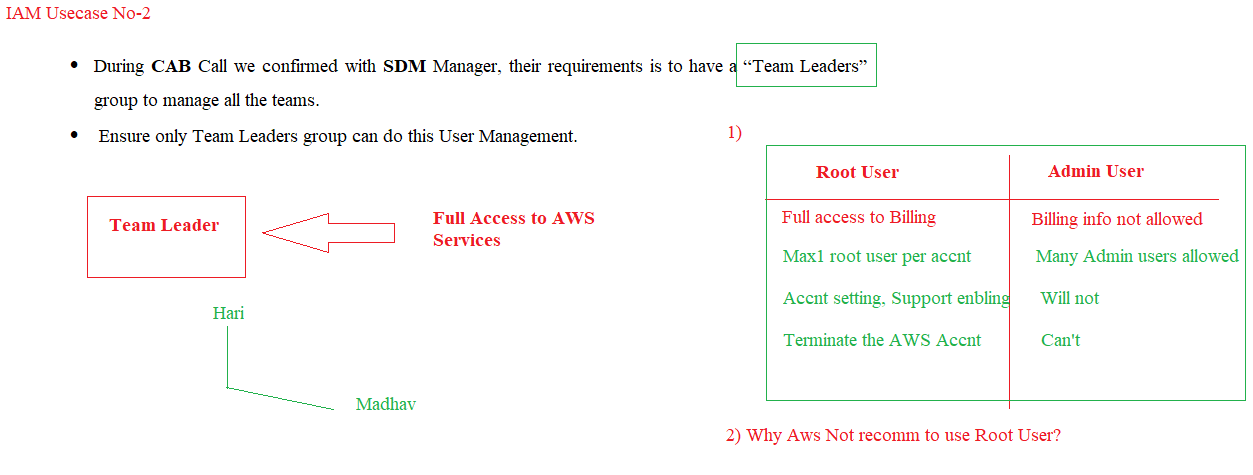
AWS, Azure, GCP & On-prem Datacenter

Hybrid Cloud Environment

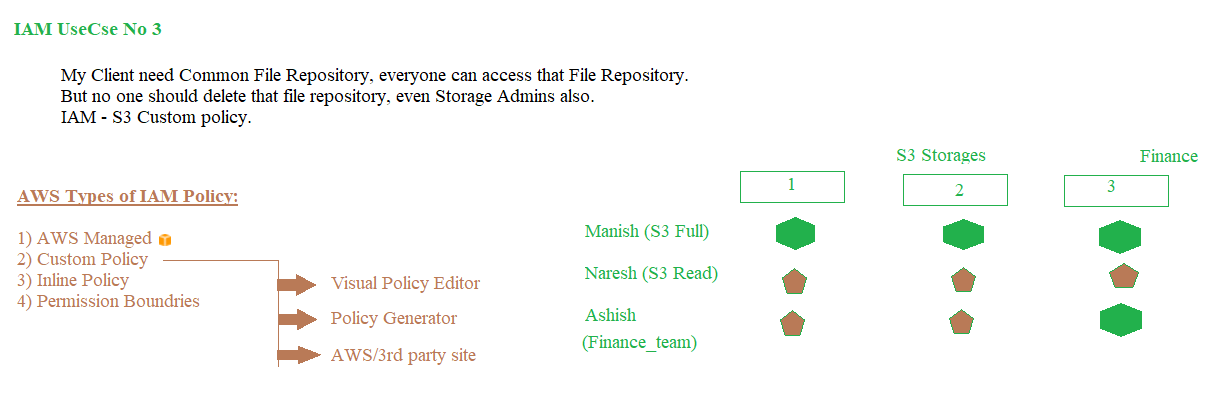
The n/w design for Multicloud Platform

Establishing the VPN connection/Direct Connect to onprem

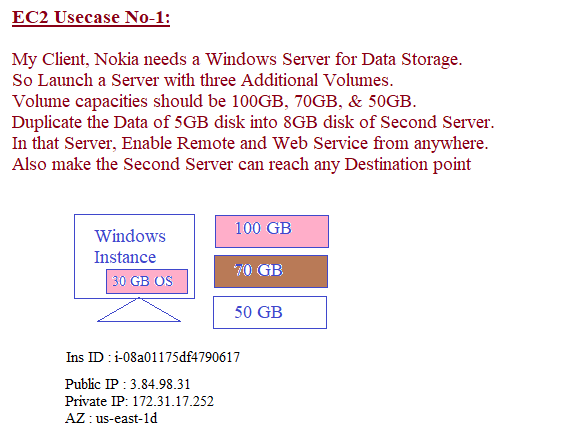


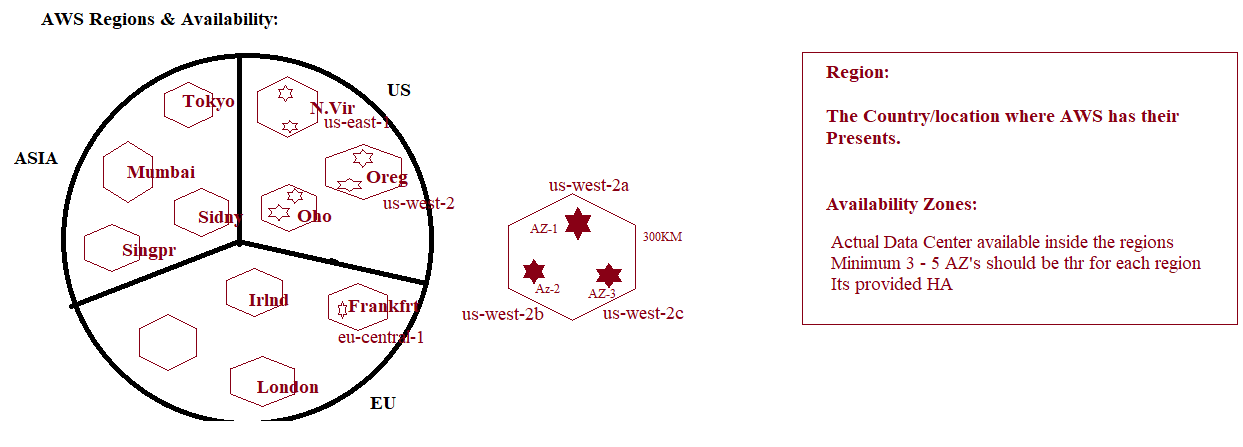


13-Apr-2022



18-Apr-2022





AWS Standard Naming Conversion:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Instance -> VM/Sever

EBS Vol -> Server Disk

Snapshot -> Backup of Server Disk

AMI -> OS

Sec group -> Software Firewall

KeyPair -> Username & Password

Instance Type -> H/W Configuration (CPU & RAM)

Ec2 Status check:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2/2 -> All Good

0/2 -> Bckend AWS Physical h/w outtage

1/2 -> EBS vol failure, N/w Interface, OS setting, blocked

0/2 or 1/2 => Stop the instance from the Console

Start the instance from the Console

VM -> One physical host to another healthy Physical Host

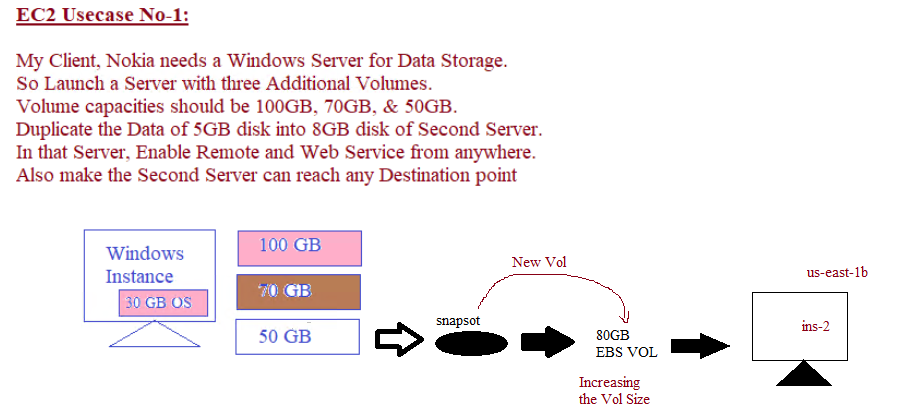
AWS Instance Credentials:

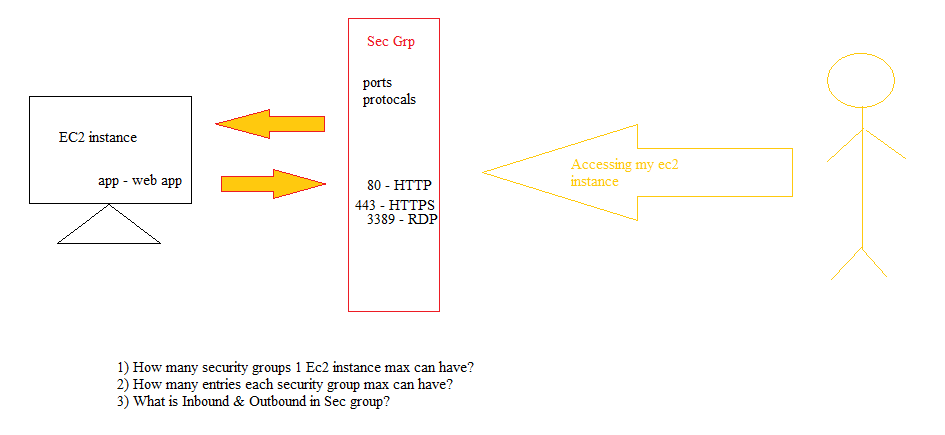
Username: Administrator

Password: mgW6qvNYSNP6MsDYhPt(%pKQpsRPnnby

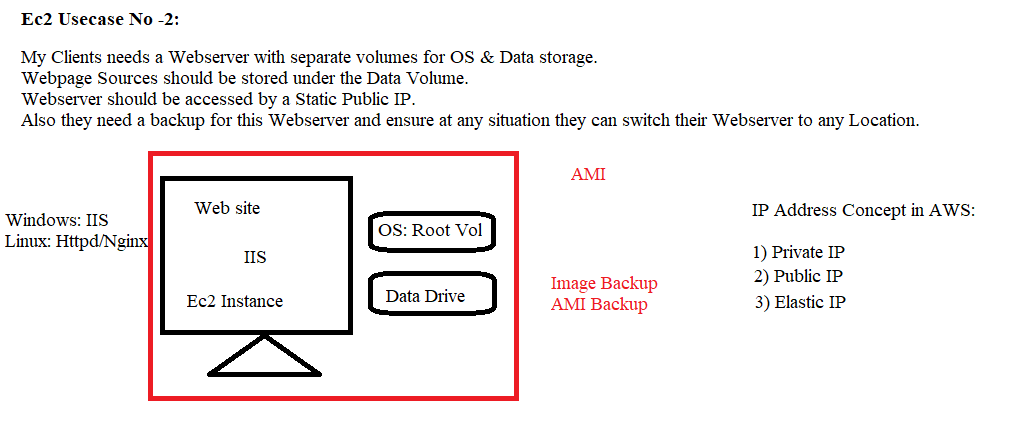
IP : 3.84.98.31

19-Apr-2022





20-Apr-2022



21-Apr-2022

S3 Storage Class:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-> S3 Standard

-> S3 IA

-> S3 RRS

-> S3 Glacier

S3 Important Features:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-> Versioning

-> Server Access Log

-> Cloud Trail Log

-> Encryption

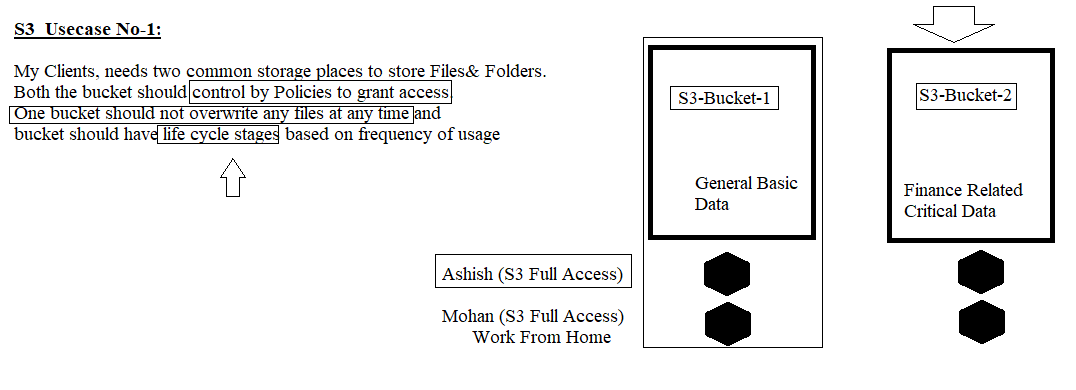
-> Static Website Hosting

-> Private & Public Bucket Access

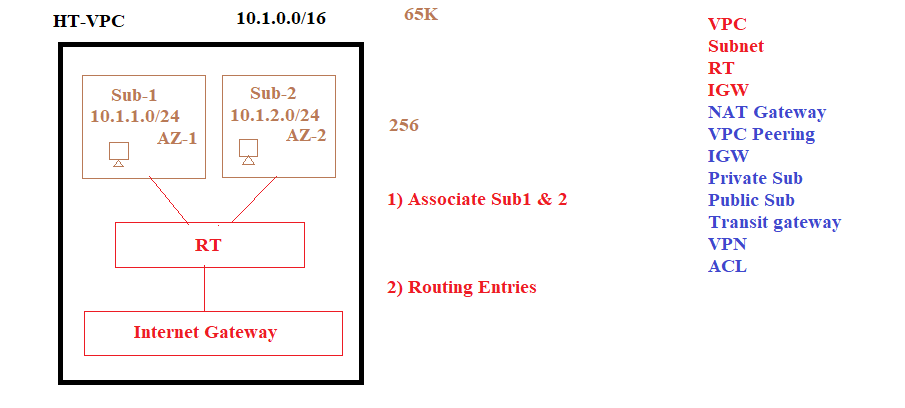
-> S3 Custom Policy

-> Life Cycle Access

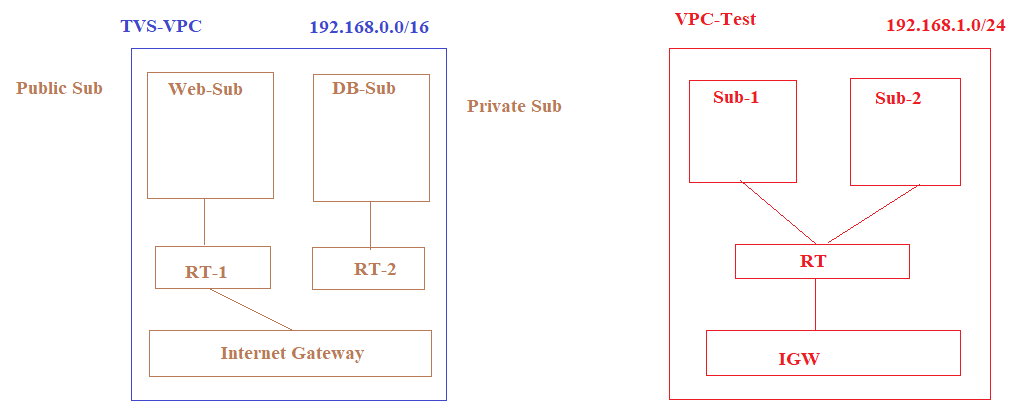
22-Apr-2022



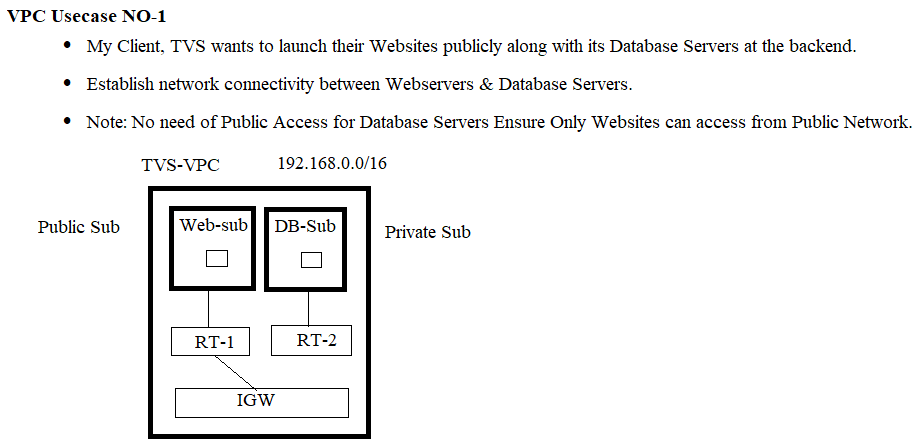
26-Apr-2022

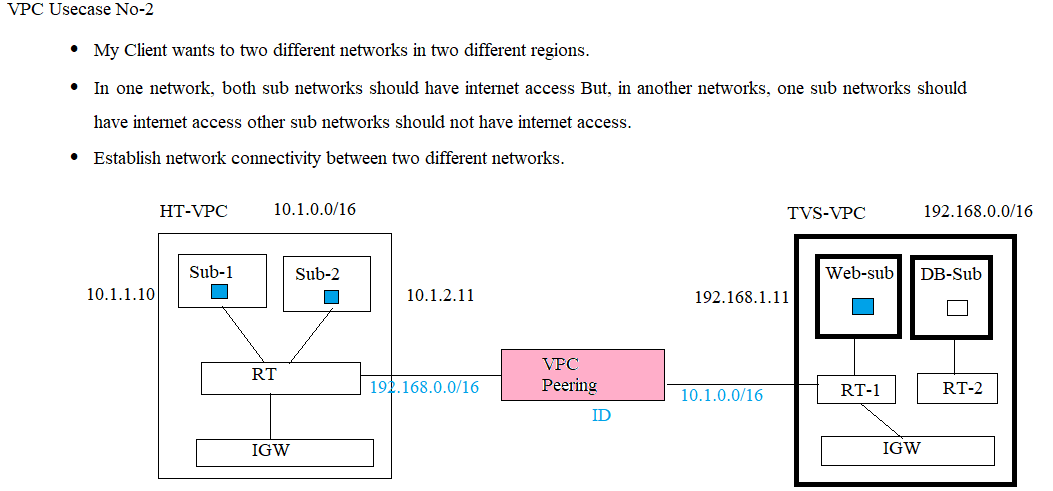


task

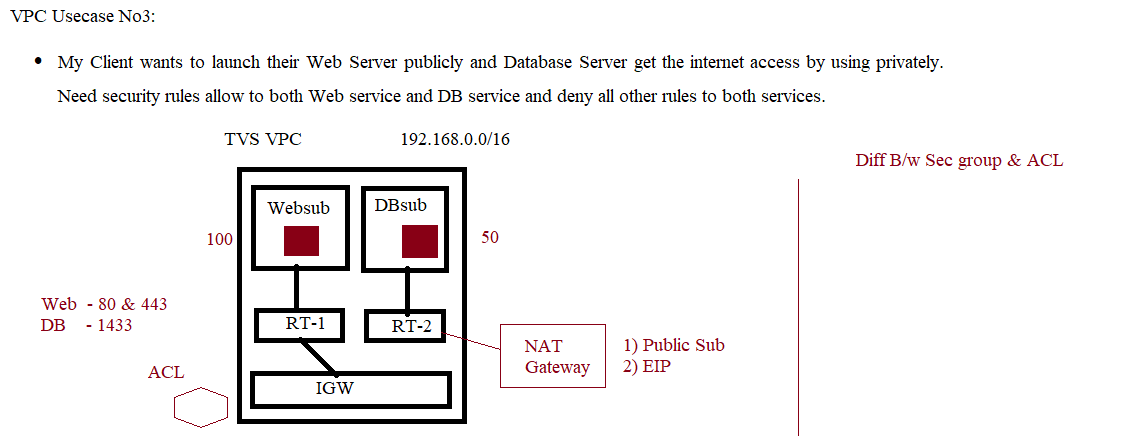


27-Apr-2022

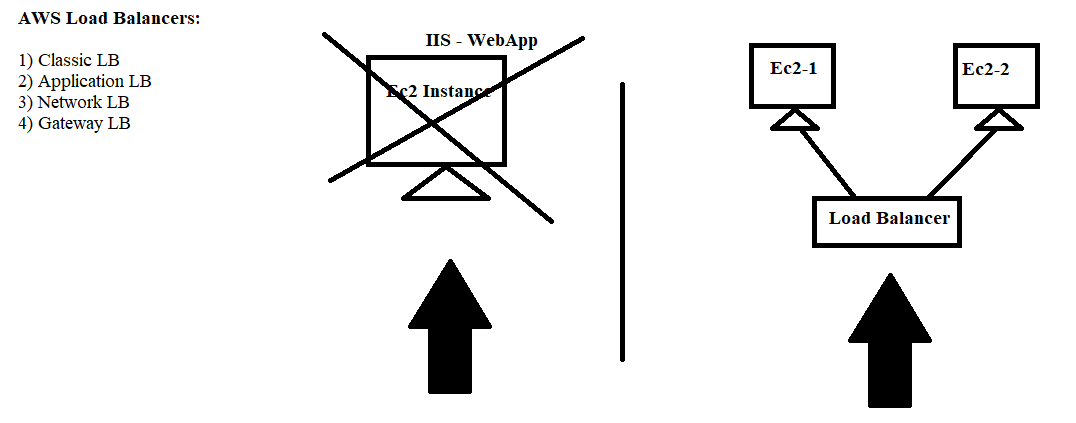


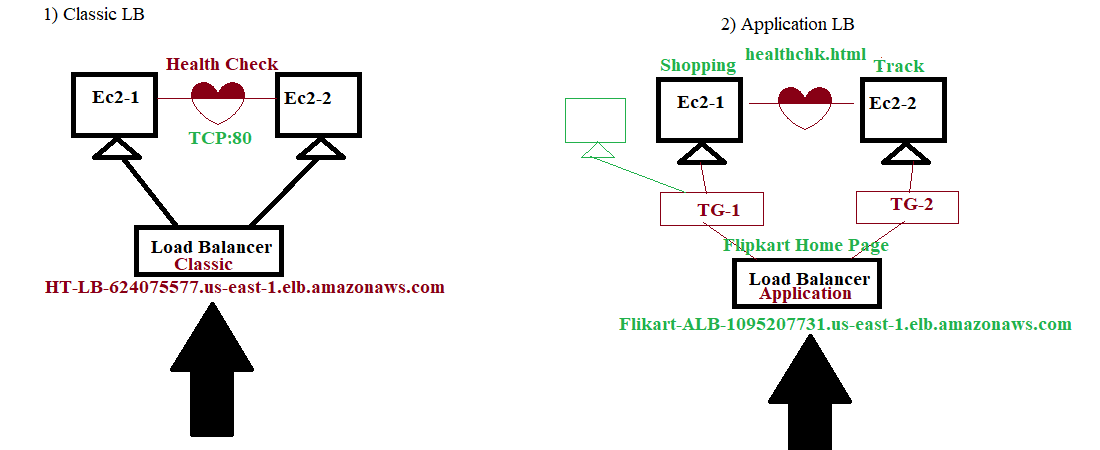


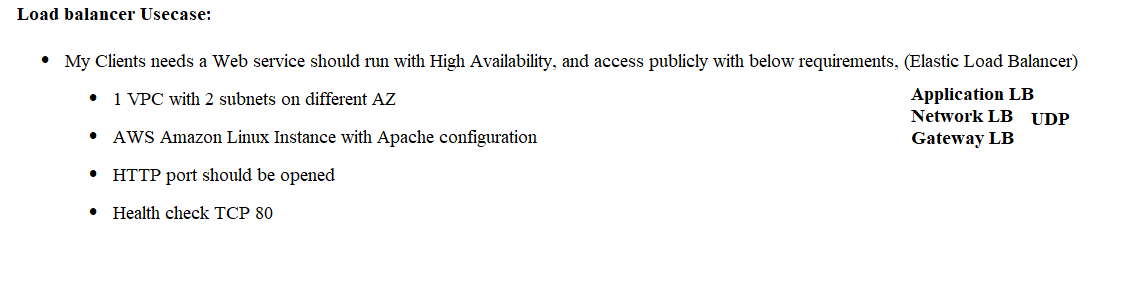
28-Apr-2022

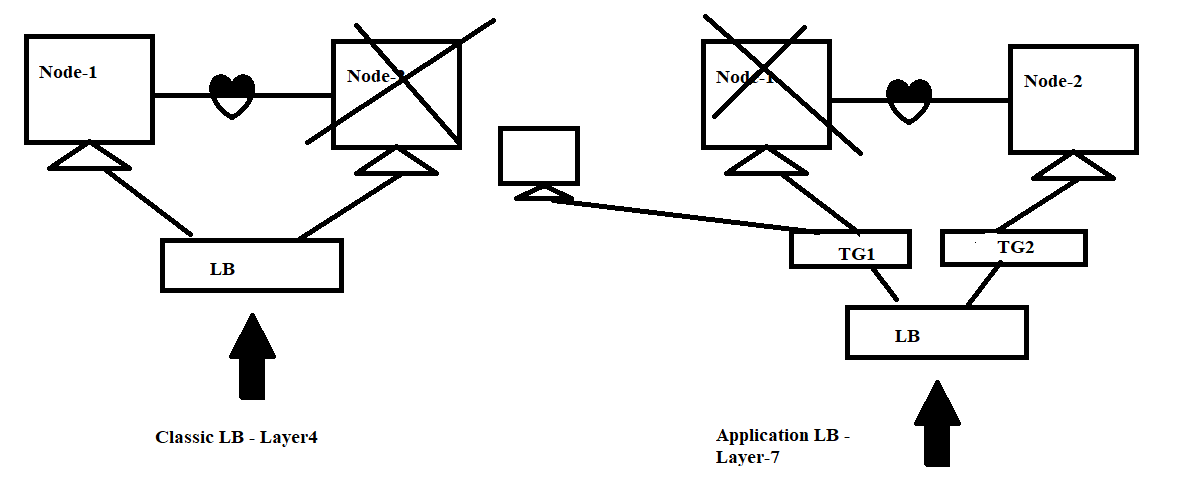


02-May-2022

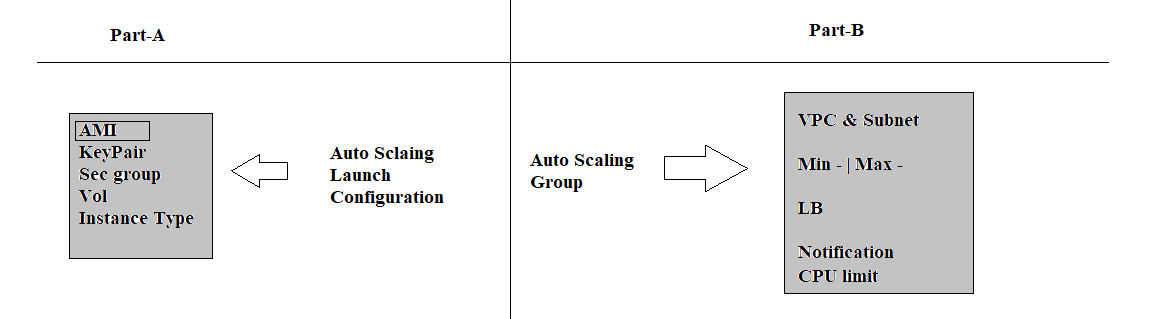


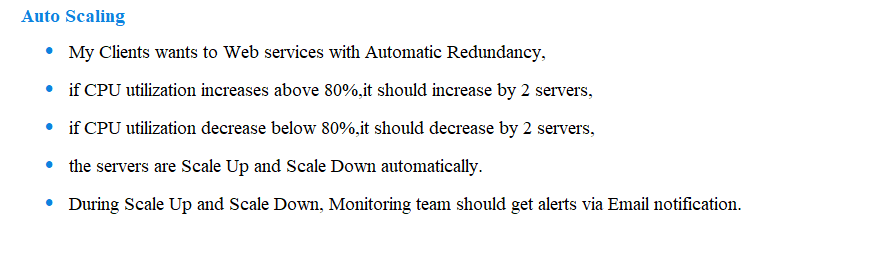




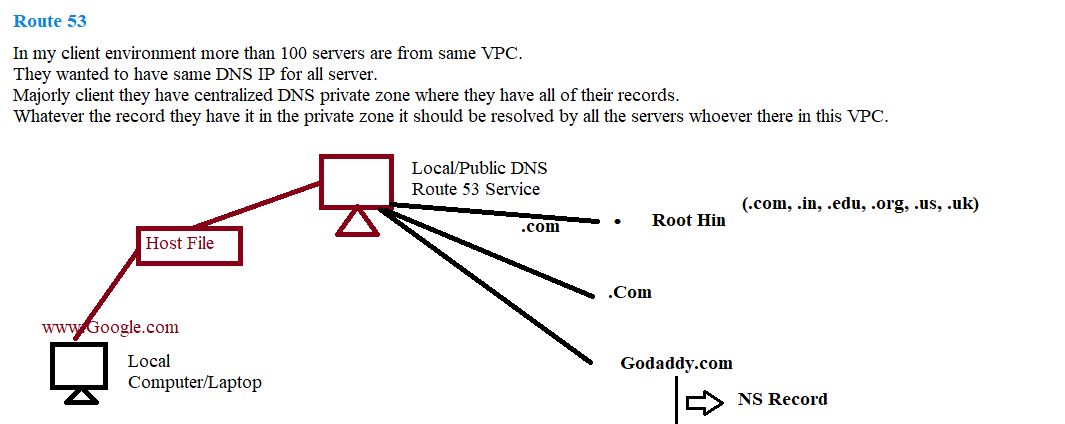


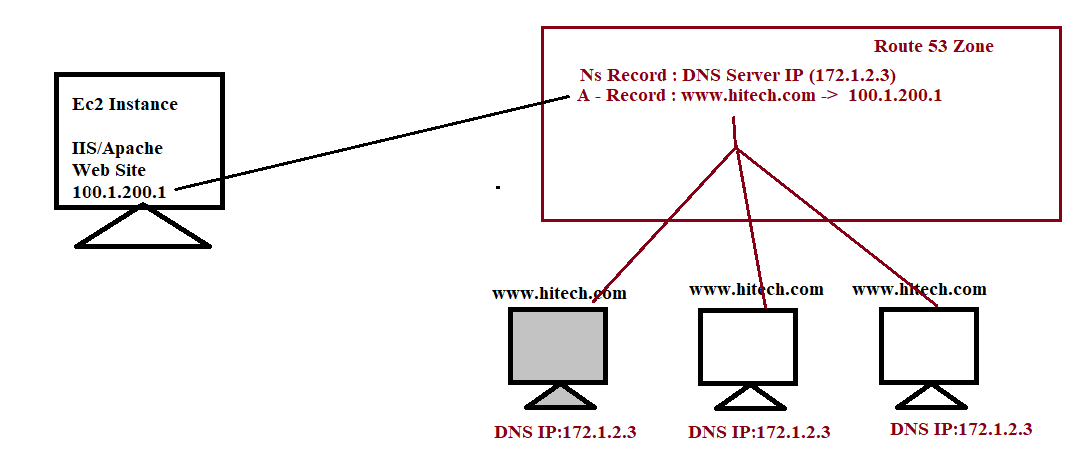






04-May-2022





To Became a Proper Cloud Architect:

8 - Points:

1) Fundamental AWS Services used in Real Infrastructure

2) Cloud Resources Monitorings & Loggings

3) AWS Security Service to enforced & Security Audit

4) AWS Network Connectivity Internal & External on-Prem

5) Understanding on end to end AWS Infrastructure Achitecture Diagram

6) AWS Billing knowledge and Optimizing the Billing

7) Important Interview Questions & Mock Interview Experience

8) Building the Resume with AWS Roles & Responsibility

—

**13-May-2022**

Programming: (Python)

\*\*\*\*\*\*\*\*\*\*\*\*\*

-> Core Python

-> Application Python -> CloudAWS

================================================

Python + Boto3 => AWS Automation

What is Automation in AWS?

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-> All mannual work will be automated using coding

-> Resources creation will be done by the code

-> Time saving process

-> Repeated work can be automted using python code

-> 1st time implementataion always a chellange

-> for the long run it will work without any issue

-> Bcz of automations in place we can reduce no of man power in a project

Eg:

Coting saving:

AWS => 50 Engg

Each Engineer Using 3 Servers [1 PRD, 1 Dev, 1 testing]

Total Ec2 Instances = 50 \* 3 = 150 Instance

50 - PRD | 100 - Non-Prod => (Cost - 5$ | 150\*5 = $ 750 Per day)

Monday - Friday = Working | Weekend = Leave

1 month = 4 weekend | 8 Sat & sun

8 Sat & sun = Planning to stop -> 100 - Non-Prod ($ 500 save per day)

8 Days in a month = 500 \* 8 = $4000 per month | INR 3,09,344 (Per month)

1 Financial year => INR 3,09,344 \* 12 = INR 37,12,128/-

Automation:

-> Write a script

Friday - 8PM => Stop 100 - Non-Prod

Monday - 8AM => Start 100 - Non-Prod

Implementation Steps:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1) Write a code using Python Boto3 and Test it in any of the Test account

2) Put that code in RunTime i.e Lambda, Jenkins -> and schedule the code

=================================================================================================

In order to understand Boto3 :

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-> Python Variable & Input

-> Python List & Dictionary

-> Python For Loop

-> Python If statement

-> Python Basic of Functions

Task Video: 45mins

AWS automation = Python + Boto3

=============================================================================

Boto3 Installation:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Linux:

yum install python3 python-pip -y

pip3 install boto3

pip3 install awscli

Windows:

Install Python

Download -> git-pip.py (https://bootstrap.pypa.io/get-pip.py)

Cmd -> python /get-pip.py

cmd -> pip install boto3

==============================================================================

**16-May-2022**

Boto3:

Python + Boto3 = AWS Automation

Two Rules:

\*\*\*\*\*\*\*\*\*\*

1) If you output response of Boto3 code is Dict -> We can get the value Directly

2) If you output response of Boto3 code is List -> We should use For Loop to get val

eg\_list = ["Manoj","Rajit","Nagprasad","Saivivek"]

print (eg\_list)

for xyz in eg\_list:

print (xyz)

eg\_dict = {"Name":"Manoj","Age":"29","Location":"USA"}

print (eg\_dict["Name"])

print (eg\_dict["Age"],eg\_dict["Location"])

=================================================================

Stages of Learning Boto3:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1) List the resources from aws console

2) Generate CSV report

3) Wokring with Multiple Functions

4) Integrating Boto3 script into Lambda/Jenkins

**28-May-2022**

**AWSCLI:**

**\*\*\*\*\*\***

Ref Link: https://docs.aws.amazon.com/cli/latest/userguide/getting-started-install.html

curl "https://awscli.amazonaws.com/awscli-exe-linux-x86\_64.zip" -o "awscliv2.zip"

apt-get update

apt install unzip -y

unzip awscliv2.zip

sudo ./aws/install

./aws/install -i /usr/local/aws-cli -b /usr/local/bin

sudo ./aws/install --bin-dir /usr/local/bin --install-dir /usr/local/aws-cli --update

which aws

aws --version

**EKSCTL:**

**\*\*\*\*\*\*\***

Ref Link: https://docs.aws.amazon.com/eks/latest/userguide/eksctl.html

curl --silent --location "https://github.com/weaveworks/eksctl/releases/latest/download/eksctl\_$(uname -s)\_amd64.tar.gz" | tar xz -C /tmp

sudo mv /tmp/eksctl /usr/local/bin

eksctl version

**KUBECTL:**

**\*\*\*\*\*\*\*\***

Ref Link: https://docs.aws.amazon.com/eks/latest/userguide/install-kubectl.html

curl -o kubectl https://amazon-eks.s3.us-west-2.amazonaws.com/1.21.2/2021-07-05/bin/linux/amd64/kubectl

curl -o kubectl.sha256 https://amazon-eks.s3.us-west-2.amazonaws.com/1.21.2/2021-07-05/bin/linux/amd64/kubectl.sha256

chmod +x ./kubectl

mkdir -p $HOME/bin && cp ./kubectl $HOME/bin/kubectl && export PATH=$PATH:$HOME/bin

echo 'export PATH=$PATH:$HOME/bin' >> ~/.bashrc

kubectl version --short --client