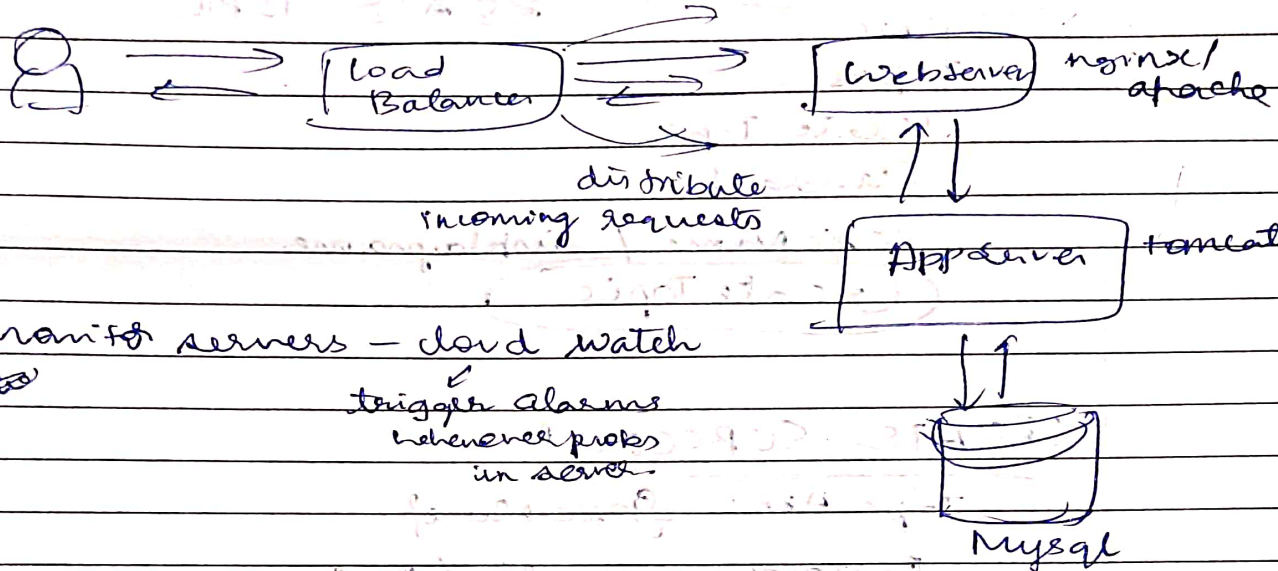
28/8/25

URBAN EDGE ___/___/___

Three Tier Architecture



Monitor servers – cloud watch
↓
trigger alarms whenever probs in server

Horizontal & vertical scaling

Vertically increasing server resources:
RAM/ROM/CPUs ---

→ increasing servers

Autoscaling

automatically add/remove servers based on traffic & policies

cost: pay as you go

SNS – simple notification service.
Sends notifications to registered emails

URBAN EDGE

Subscription SNS — CREATE TOPIC

SNS
Topics
Create Topic
Standard
Topic Name / displayname
Create Topic

CREATE SUBSCRIPTN

Topic Arn: {Topic Name}
Protocol → Email / SMS → Add no. first in Sandbox then continue.
Endpoint
↳ Email
or
Ph.No.

Topics → Publish message
Enter fields → Publish Message

Topics → Select topic → Delete

URBAN EDGE

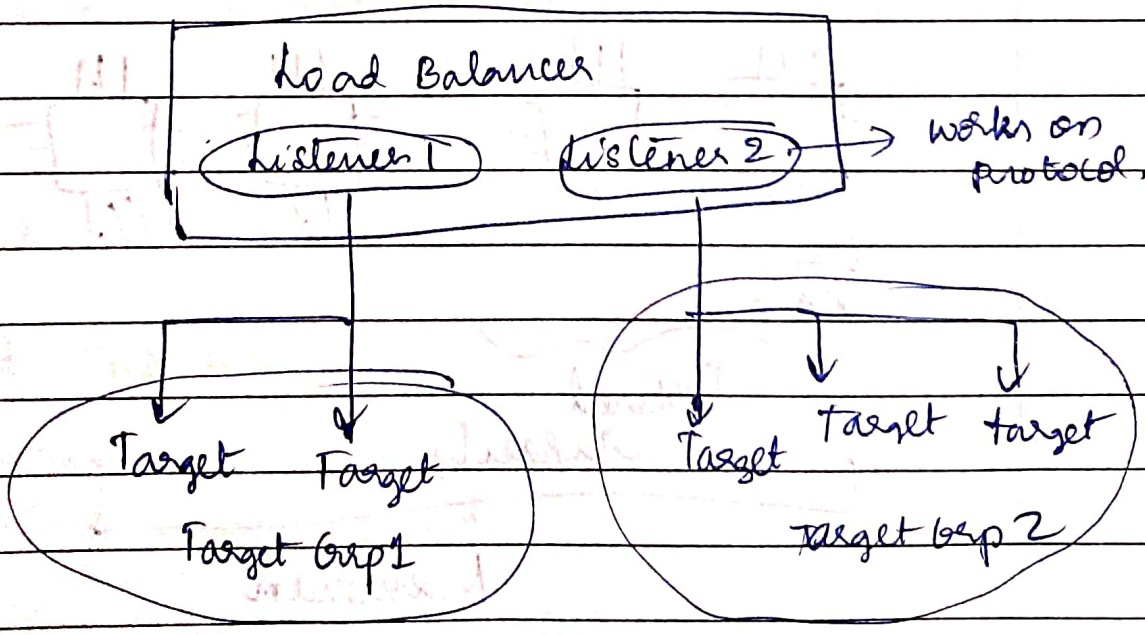
Elastic load Balancing

- Automatically distributes traffic across multiple targets
- Provides high availability
- Incorporates security feature
- Performs health checks

Types

- Applicat^{n} load balancer — HTTP / HTTPS
- Network load balancer — TCP / UDP
- Gateway Load balancer — IP

Load Balancer Components



URBAN EDGE

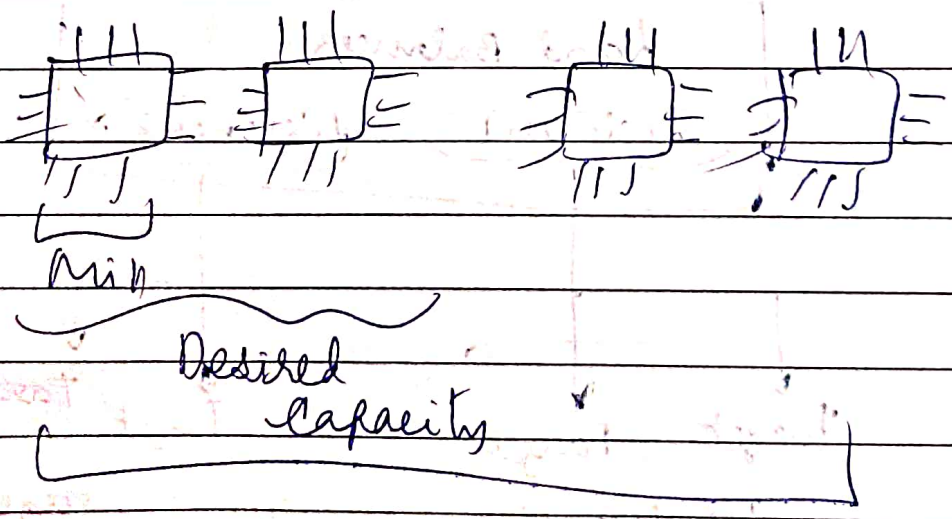
EC2 Autoscaling

- Helps control ~~auto~~ EC2 instances available to handle load for ur applicat°
- Launches /& Terminates your AWS resources based on specific cond°'s
- Registers new instances with load balancers when specified.

Components

Launch Templates

What size do u need.



URBAN EDGE

Search → ec2

Instances

Lauch Instance

Name & tags

Applicat° & OS Images (Amazon Linux)

Instance type (t2.micro)

Key pair (create new) namekey

Network setting edit

remone security grp name

name-g

Configure storage 8 Gib

Advanced details

Placement grp → no order of storing servers in partition. So we need availability of our data

Launch instance

To connect

Select instance

Connect

Scroll down connect

u'll get a terminal

URBAN EDGE

> Sudo su (normal to root user)
> yum update
> yum install nginx -y

Copy public IP address
paste in google addres bar.

Configure firewalls / protocols
Inbound outbound

click on instance id
Security tab
security grp name.

Inbound rules (SSH)
no HTTP HTTPS allowed
so no

Edit inbound rules
Add rule

HTTP IPV4
HTTPS IPV4

So Total inbound rules
SSH
HTTP
HTTPS.

Cross check by putting IP address in google.

URBAN EDGE

Sudo su

Systemctl start nginx → Youll get welcome nginx

MOBAXterm

Sessions

ssh

Remote host: *Public IP address*

Advanced setting

Use private key

Upload option open from downloads

the key downloaded when u do key pair when creating new instance

login as: ec2-username

↓

will find in instance after connecting

Terminate Instance

Select instance → Instance state

Terminate

Load balancer.

URBAN EDGE

Launch instance

Same :

Keypair not recommended.

Allow HTTP HTTPS then edit.

Security group:

alb-name-sg

Advanced details

Paste the code !/bin/bash - - -

Launch Instance

Select an instance

go to Action → Image & Templates →

Launch more like this

name1

name2

↑ :

2 opts

Creates more of same configurat".

Change Script

change message inside that

Launch Instance

Proceed w/o key pair

URBAN EDGE ___/___/___

Load Balancing (Left)

Target groups.

Create

Target grp name
alb-tg
Shamitha

} rest all default

next.

Select our targets name1 name2

Include as pending below

Create target grp.

Load Balancers.

Create load balancer.

Applicat^n load balancer

Create

Load balance name
alb-testing name
Availability zones
Select all three.

→ Cancel default security group.

Select alb-name-sg.

listener

Select (alb) tg. Shamitha

Create load Balancer.

URBAN EDGE

copy dns

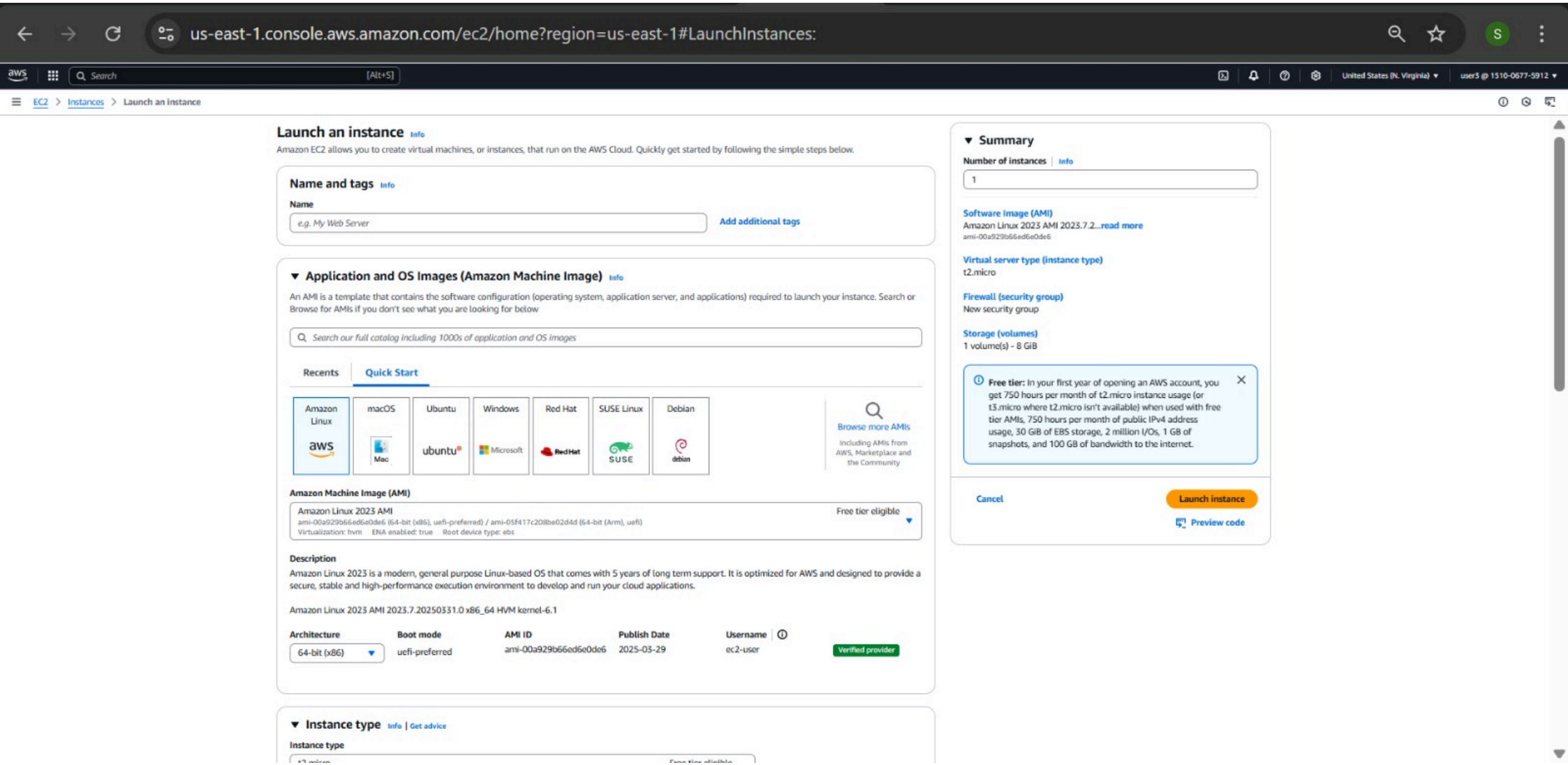
Provisioning

ull get o/p:

Refresh 2 diff o/p's.

Active

Auto Scaling


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:
Search [Alt+S]
United States (N. Virginia)
user3 @ 1510-0677-5912
EC2 > Instances > Launch an instance
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
e.g. My Web Server
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon Linux
macOS
Ubuntu
Windows
Red Hat
SUSE Linux
Debian
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Amazon Linux 2023 AMI
ami-00a929b66ed6e0de6 (64-bit (x86), uefi-preferred) / ami-05f417c208be02d4d (64-bit (Arm), uefi)
Virtualization: hvm ENA enabled: true Root device type: ebs
Free tier eligible
Description
Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.
Amazon Linux 2023 AMI 2023.7.20250331.0 x86_64 HVM kernel-6.1
Architecture
64-bit (x86)
Boot mode
uefi-preferred
AMI ID
ami-00a929b66ed6e0de6
Publish Date
2025-03-29
Username
ec2-user
Verified provider
Instance type Info | Get advice
Instance type
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2023 AMI 2023.7.2...read more
ami-00a929b66ed6e0de6
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.
Cancel
Launch instance
Preview code

Manage AWS Resources - AWS | Amazon Web Services Sign-In

eu-north-1.signin.aws.amazon.com/oauth?client_id=arn%3Aaws%3Asignin%3A%3A%3Aconsole%2Fcanvas&code_challenge=pkH4QXT-Tmjvp-cIAGMUaq...

New sign in | Multi-session disabled | English

You are currently using the improved sign in UI experience.
The improved sign in experience will launch soon. During this time, you can still change back to legacy sign in using the dropdown in the upper right corner.

aws

IAM user sign in

Account ID or alias (Don't have?)

151006775912

Remember this account

IAM username

Password

Show Password | Having trouble?

Sign in

29°C Mostly clear | Search | ENG IN | 09:14 PM 11-04-2025