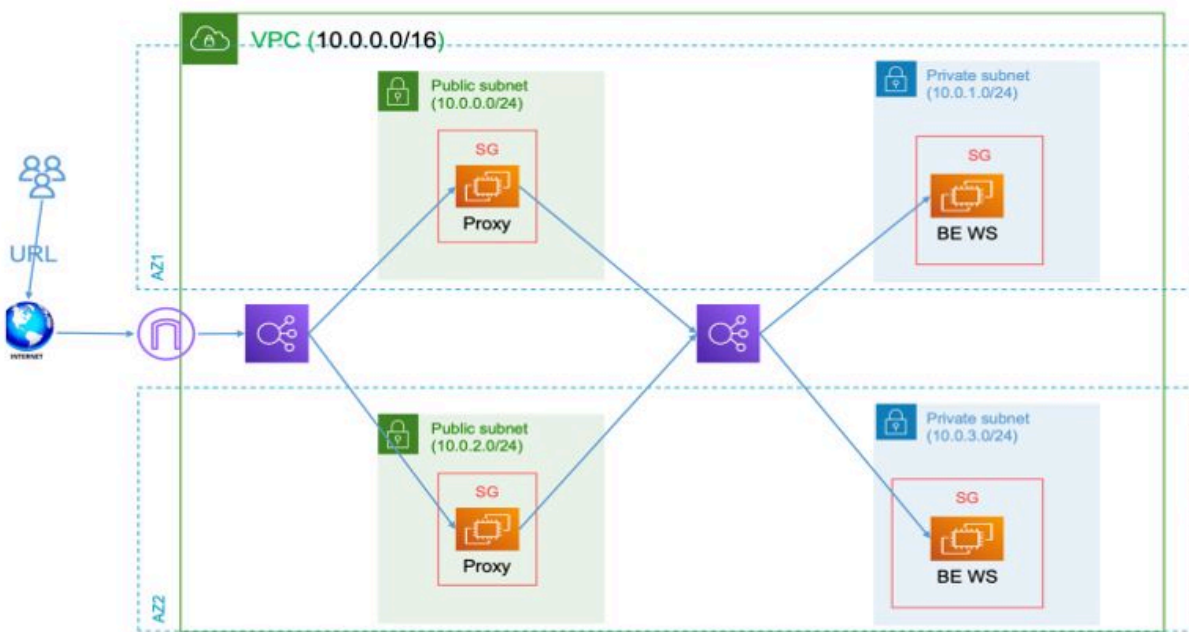# Terraform: lab3



# Load balncers:



## Load balancers (1/2)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

| | Name | State | Type | Scheme | IP address type |
|---|---|---|---|---|---|
| ☐ | multi-tier-private-alb | ⊘ Active | application | Internal | IPv4 |
| ☑ | multi-tier-public-alb | ⊘ Active | application | Internet-facing | IPv4 |

# Vpc:

| | Name | VPC ID | State | Block Public... | IPv4 CIDR | IPv6 CIDR | DHCP option set | Main route table |
|---|---|---|---|---|---|---|---|---|
| ☐ | multi-tier-proxy-vpc | vpc-03a878db9449d36ee | ⊘ Available | ⊖ Off | 10.0.0.0/16 | - | dopt-0dfc98a27cdccea1a | rtb-0d829279ced2 |
| ☐ | - | vpc-05c32ecffdebd69ee | ⊘ Available | ⊖ Off | 172.31.0.0/16 | - | dopt-0dfc98a27cdccea1a | rtb-06616356f47c |

## Subnets:

| | | | | | | |
|---|---|---|---|---|---|---|
| multi-tier-proxy-private-subnet-1 | subnet-0b300d05004ba14c1 | ✓ Available | vpc-03a878db9449d36ee \| mul... | ⊖ Off | 10.0.2.0/24 |
| multi-tier-proxy-public-subnet-2 | subnet-0c5115e5692d11f3f | ✓ Available | vpc-03a878db9449d36ee \| mul... | ⊖ Off | 10.0.3.0/24 |
| multi-tier-proxy-private-subnet-2 | subnet-02857a8856b31a155 | ✓ Available | vpc-03a878db9449d36ee \| mul... | ⊖ Off | 10.0.4.0/24 |
| multi-tier-proxy-public-subnet-1 | subnet-0e8c1009ee0e43e1f | ✓ Available | vpc-03a878db9449d36ee \| mul... | ⊖ Off | 10.0.1.0/24 |

## Instances:

| Name ✏ ▽ | Instance ID | Instance state ▽ | Instance type ▽ | Status check | Alarm status | Availability Zone ▽ | Public IPv4 DNS ▽ | Public IPv4 ... |
|---|---|---|---|---|---|---|---|---|
| multi-tier-pro... | i-0f2daa77b669ba042 | ✓ Running ⊕ ⊖ | t3.micro | ✓ 3/3 checks passed | View alarms ➕ | us-east-1a | ec2-34-238-42-178.co... | 34.238.42.178 |
| multi-tier-pro... | i-0e618839b8216a62a | ✓ Running ⊕ ⊖ | t3.micro | ✓ 3/3 checks passed | View alarms ➕ | us-east-1a | – | – |
| multi-tier-pro... | i-0f7789293f341b173 | ✓ Running ⊕ ⊖ | t3.micro | ✓ 3/3 checks passed | View alarms ➕ | us-east-1a | ec2-34-205-156-222.co... | 34.205.156.222 |
| multi-tier-pro... | i-0b3781af2908490f1 | ✓ Running ⊕ ⊖ | t3.micro | ✓ 3/3 checks passed | View alarms ➕ | us-east-1a | – | – |

## S3 bucket:

**General purpose buckets (1)** Info     🔄  📋 Copy ARN  Empty  Delete  **Create bucket**

Buckets are containers for data stored in S3.

🔍 Find buckets by name                                          ‹ 1 › ⚙

| | Name ▲ | AWS Region ▽ | Creation date ▽ |
|---|---|---|---|
| ○ | terraform-iti-s3-bucket | US East (N. Virginia) us-east-1 | September 22, 2025, 13:26:22 (UTC+03:00) |

## Dynamodb table:

ⓘ **Share your feedback on Amazon DynamoDB**
Your feedback is an important part of helping us provide a better customer exp

**Tables (1)** Info

🔍 Find tables

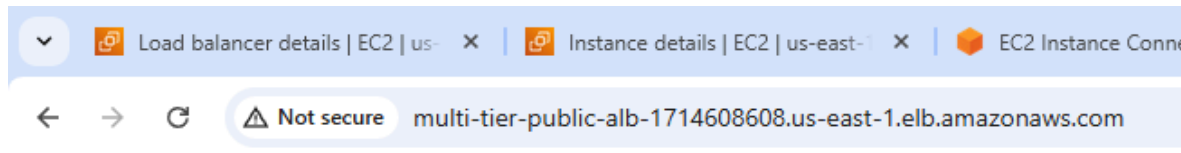| | Name ▲ | Status | Partition key |
|---|---|---|---|
| ☐ | terraform-state-lock-multi-tier-proxy | ✓ Active | LockID (S) |

Screenshot from workspace dev:

```
PS C:\Users\pc\OneDrive\Desktop\terraform-lab-3> terraform workspace show
dev
PS C:\Users\pc\OneDrive\Desktop\terraform-lab-3>
```

Configuration of the proxy:

```
[ec2-user@ip-10-0-1-129 ~]$ cat /etc/httpd/conf.d/proxy.conf
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_http_module modules/mod_proxy_http.so

<VirtualHost *:80>
    # Health check endpoint - serve locally, don't proxy
    ProxyPass /health !

    # Proxy all other requests to private ALB
    ProxyPreserveHost On
    ProxyPass / http://internal-multi-tier-private-alb-455121708.us-east-1.elb.amazonaws.com/
    ProxyPassReverse / http://internal-multi-tier-private-alb-455121708.us-east-1.elb.amazonaws.com/
</VirtualHost>
[ec2-user@ip-10-0-1-129 ~]$
```

Or you can check the proxy configuration in the code
of the user data of the public ec2.

Screenshot from sending an http req to the public load balancer and then it forwarding the proxy ec2 instances and then ec2 instances to private alb and then private alb to private ec2 instances.

Load balancer details | EC2 | us- ✕ | Instance details | EC2 | us-east- ✕ | EC2 Instance Conne

← → C ⚠ Not secure multi-tier-public-alb-1714608608.us-east-1.elb.amazonaws.com

# Hello from Terraform Lab2 - Backend Server

Instance ID: i-0b3781af2908490f1

Private IP: 10.0.2.94

Public IP:

# 404 – Not Found

Server Type: Backend

Load balancer details | EC2 | us- ✕ | Instance details | EC2 | us-east- ✕ | EC2 Instance Con

← → C ⚠ Not secure multi-tier-public-alb-1714608608.us-east-1.elb.amazonaws.com
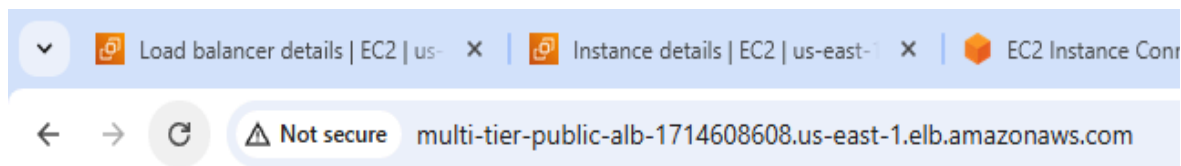
# Hello from Terraform Lab2 - Backend Server

Instance ID: i-0e618839b8216a62a

Private IP: 10.0.2.84

Public IP:

# 404 – Not Found

Server Type: Backend

# S3 containing tfstate file:

## dev/

**Objects** | Properties

**Objects (1)**    ⟳    [📋 Copy S3 URI] [📋 Copy URL] [⬇ Download] [Open ↗] [Delete] [Actions ▾] [Crea...

Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory ↗ to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permi...

🔍 Find objects by prefix         ⬤ Show versions

| ☐ | Name ▲ | Type | Last modified ▽ | Size ▽ | Storage clas |
|---|--------|------|-----------------|--------|--------------|
| ☐ | 📄 terraform.tfstate | tfstate | September 22, 2025, 13:47:26 (UTC+03:00) | 114.7 KB | Standard |