Apache on Private Subnet

Install ec2 using cloudformation.

“A load balancer receives requests and then transfers them to targets defined in a target group. We can create an Application Load balancer either using the AWS management console or AWS CLI. There are several routing options with AWS Application Load Balancer, e.g., Host-Based routing.

In Host-based routing, incoming traffic is routed on the basis of the domain name or host name given in the Host Header. In this tutorial, we are going to create an Application Load balancer with Host-Based routing.”

Provision EC2 Webserver

Save the instance name of the EC2. This is used for viewing the webserver and is required for managing the LB; however the CF template saves this in the parameters.

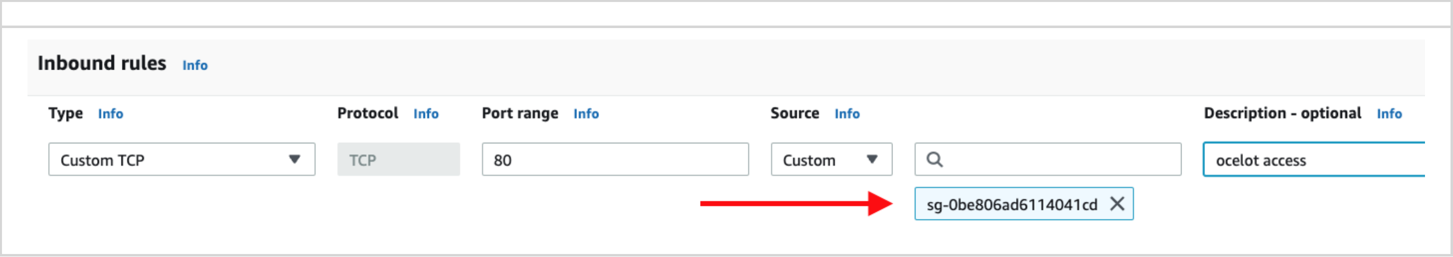
Stack name: `apache-priv-elxsj`
IntanceName: `apache-priv-elxsj`

Security Groups

During CF provisioning, thee default VPC SG is attached to the EC2.

In addition a SG for Ocelot traffic is required. Skip this step if Ocelot is not used. sg-0be806ad6114041cd

- Create a new SG
- Add Inbound rules - use the existing Ocelot SG in account.

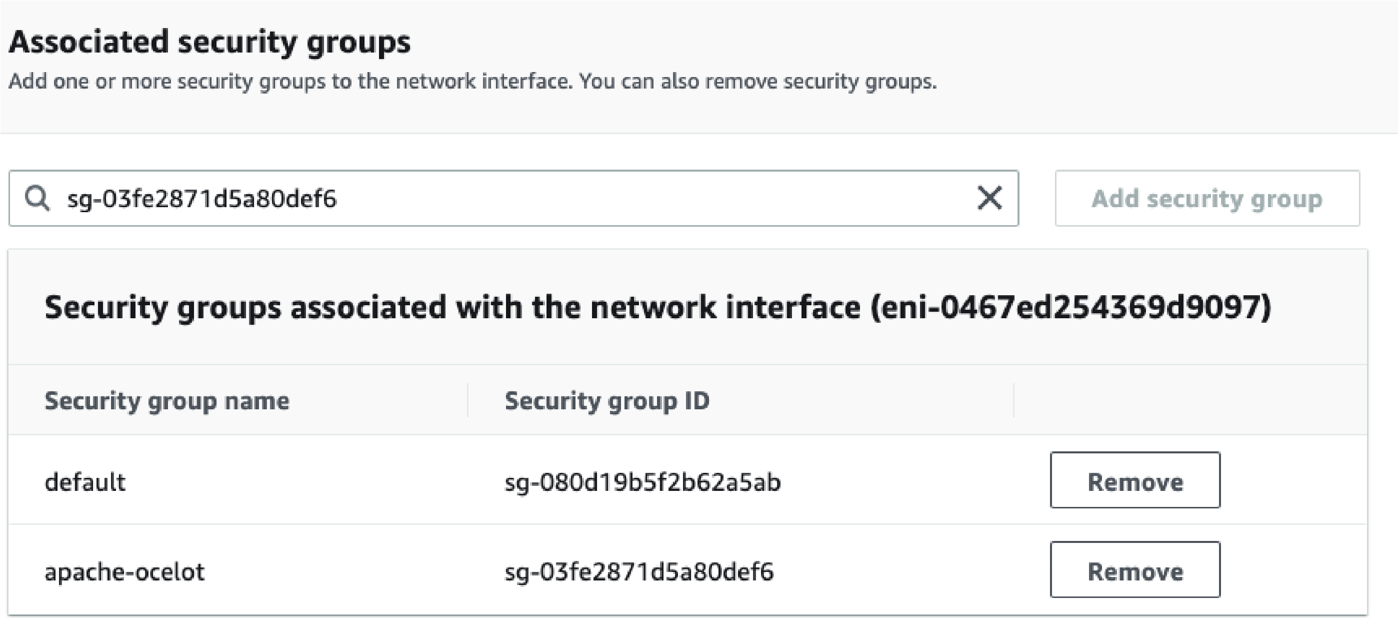


Inbound rules Info

Type Info	Protocol Info	Port range Info	Source Info		Description - optional Info
Custom TCP	TCP	80	Custom	sg-0be806ad6114041cd	ocelot access

Create the Ocelot Security Group. The existing Ocelot SG in the VPC, is used to represent the Ocelot traffic IPs.

- Associate SG with EC2



Associated security groups

Add one or more security groups to the network interface. You can also remove security groups.

Security groups associated with the network interface (eni-0467ed254369d9097)

Security group name	Security group ID	
default	sg-080d19b5f2b62a5ab	Remove
apache-ocelot	sg-03fe2871d5a80def6	Remove

Associate the new SG with the EC2. Notice our EC2 now has two SGs.

Load Balancer

Normally a new LB would be provisioned. For simplicity , we use an existing LB. The `fargate-infra` service catalog product provisions an LB.

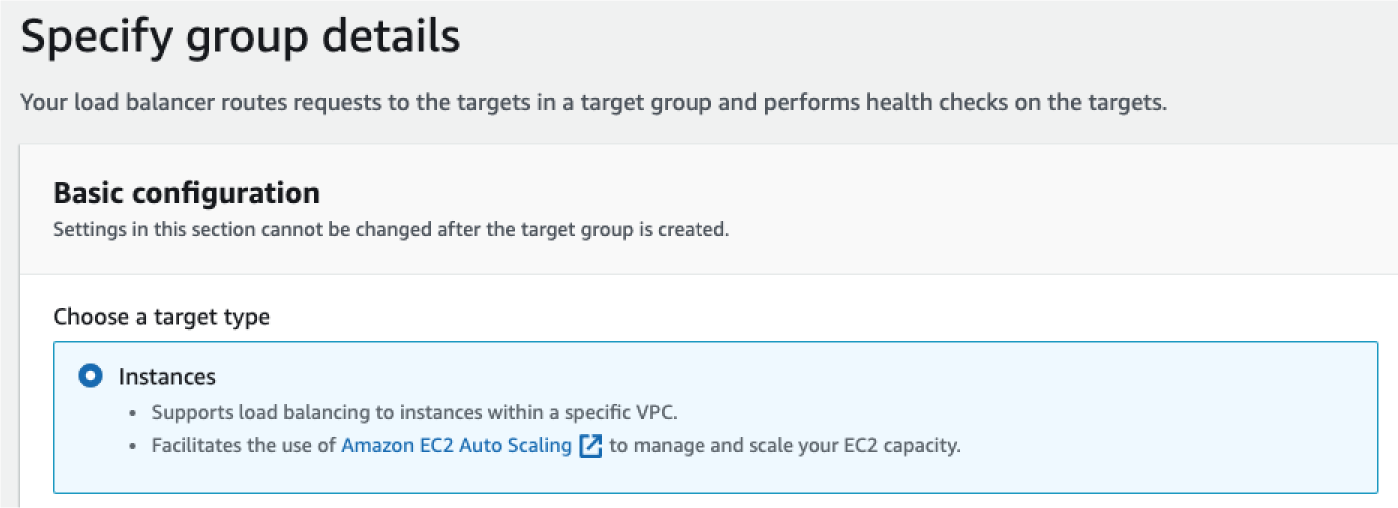
> `fargate-infra` creates infrastructure required by ECS Fargate services. The latest version includes an ALB, a Route53 alias record, an ACM certificate, and an ECS cluster. See https://devtools.bayer.com/docs/hosting/aws/fargate/

Create a New Target Group

Navigate to EC2 > Target groups > Create target group

target group name: `apache-priv-subnet`

- Choose instance based target type.



Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

Basic configuration

Settings in this section cannot be changed after the target group is created.

Choose a target type

● Instances

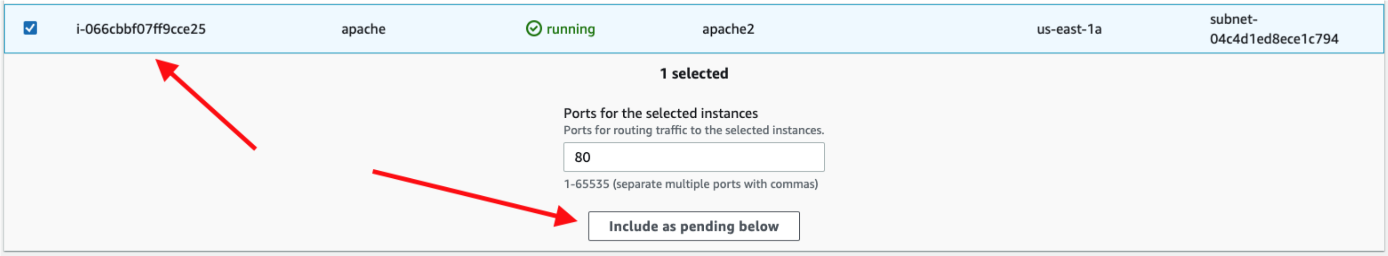
- Supports load balancing to instances within a specific VPC.
- Facilitates the use of Amazon EC2 Auto Scaling to manage and scale your EC2 capacity.

Target Group type

- For the “Protocol” and “Port” options, select “HTTP” and “80”, respectively.
- For the “VPC” option, choose the VPC containing your instances.
- We can modify health checks but skip that for now.

Register Targets

Register targets to ensure that your load balancer routes traffic to this target group.



☑	i-066cbbf07ff9cce25	apache	✓ running	apache2	us-east-1a	subnet-04c4d1ed8ece1c794

1 selected

Ports for the selected instances

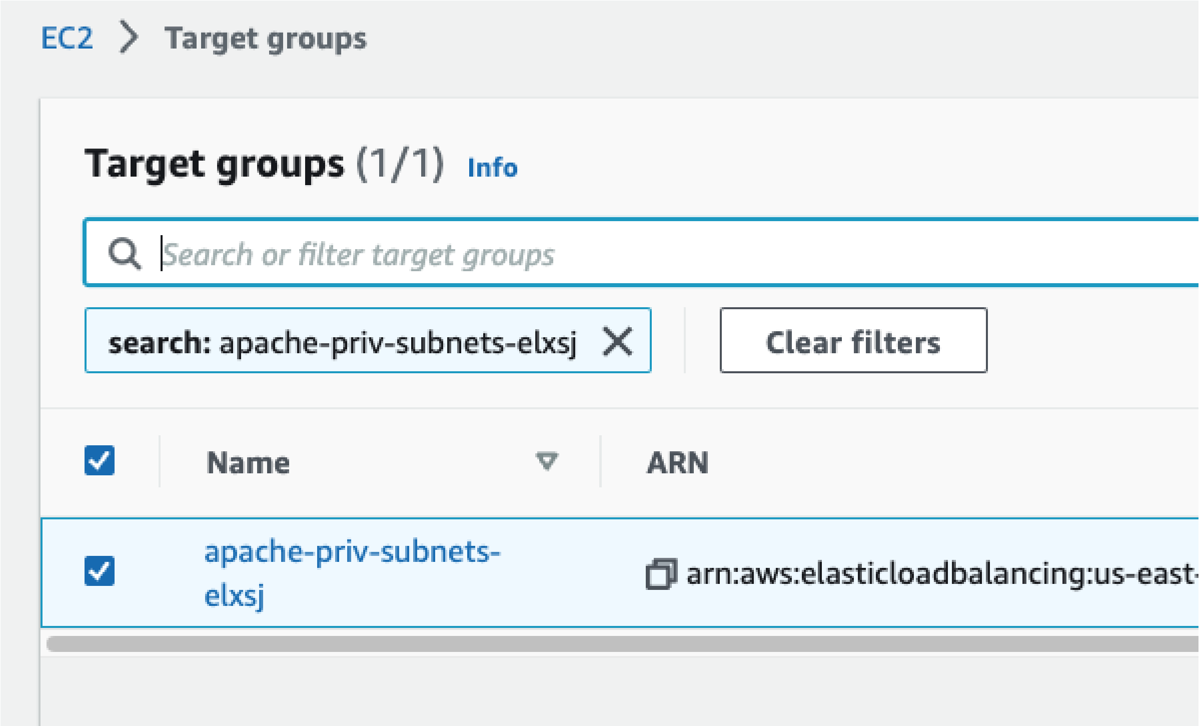
Ports for routing traffic to the selected instances.

80

1-65535 (separate multiple ports with commas)

Register targets. Select EC2 instance and select "include as pending below".

- Copy target name to use in listener



EC2 > Target groups

Target groups (1/1) Info

Search or filter target groups

search: apache-priv-subnets-elxsj ✕ | Clear filters

☑	Name	ARN
☑	apache-priv-subnets-elxsj	arn:aws:elasticloadbalancing:us-east-

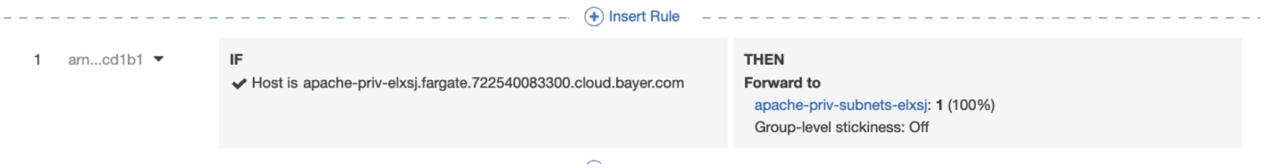
Target Group name: `apache-priv-subnets-elxsj`

> 📝 It is sometimes necessary to stop an EC2 instance. After stopping the EC2 instance the target group will have to be re-registered.

Add listener rule

After the load balancer is created and its status becomes active, we are required to add traffic forward rules.

- Navigate to the Listeners tab and under the "Rules" column, click on the "View/Edit rules" link. A new page appears here first; click on the "+" icon, then click on the "Insert Rule" link.
- The LB should be listed as `fargate-LB`.
  - For the IF column, enter the host or domain name inside the field corresponding to the label "is". For example: `apache-priv-elxsj.fargate.722540083300.cloud.bayer.com`
  - For the THEN column, add the target group.



⊕ Insert Rule

		IF	THEN
1	arn...cd1b1 ▾	✓ Host is apache-priv-elxsj.fargate.722540083300.cloud.bayer.com	Forward to apache-priv-subnets-elxsj: 1 (100%) Group-level stickiness: Off

LB listener rule

Using Ocelot

Copy the host from the listener rule and transfer to reverse proxy host

```
apache-priv-elxsj.fargate.722540083300.cloud.bayer.com
```

Check Apache Service in EC2

```
systemctl status httpd
```

End