

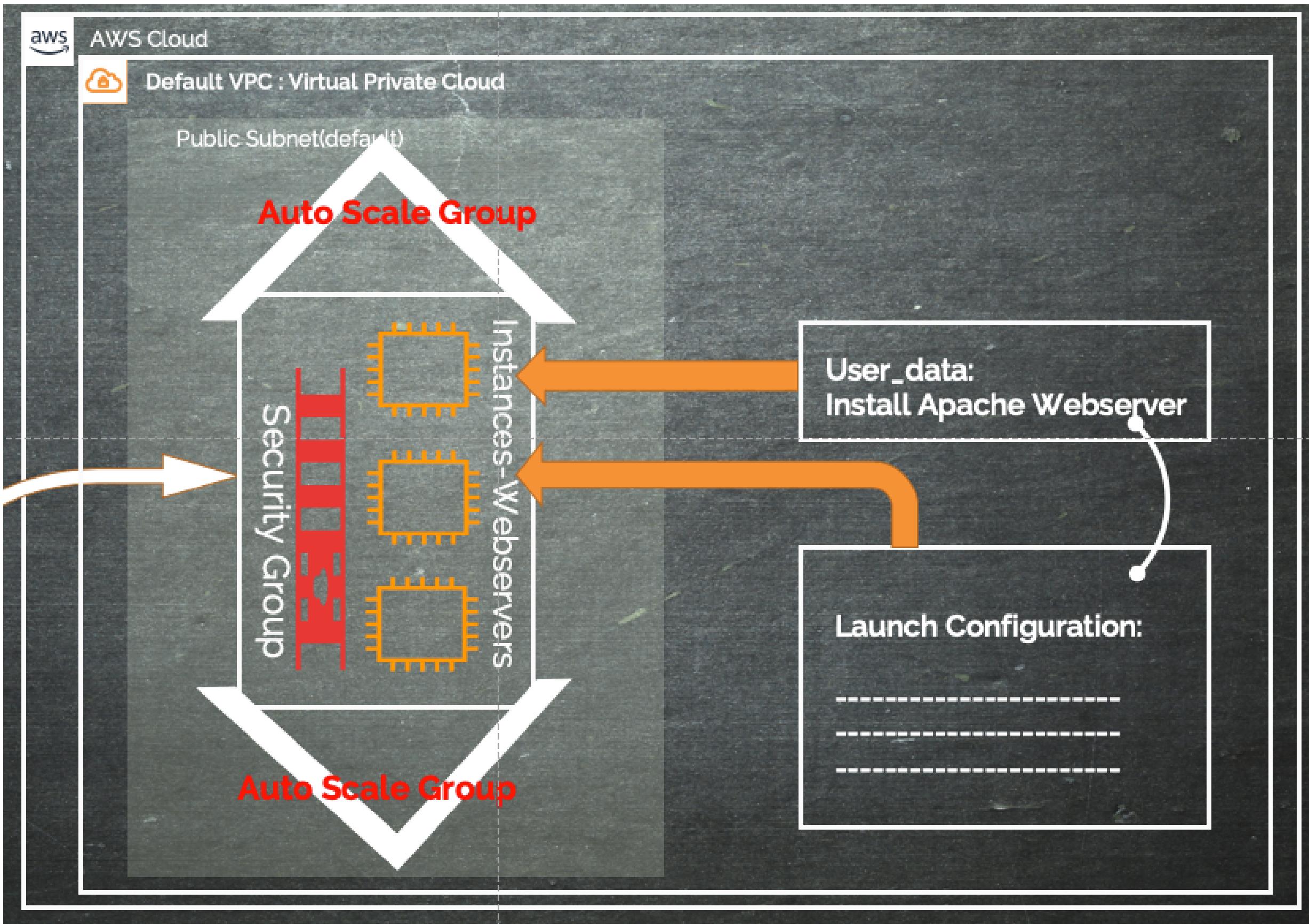
Deploy cluster of web servers in Auto Scaling Group

Topics covered:

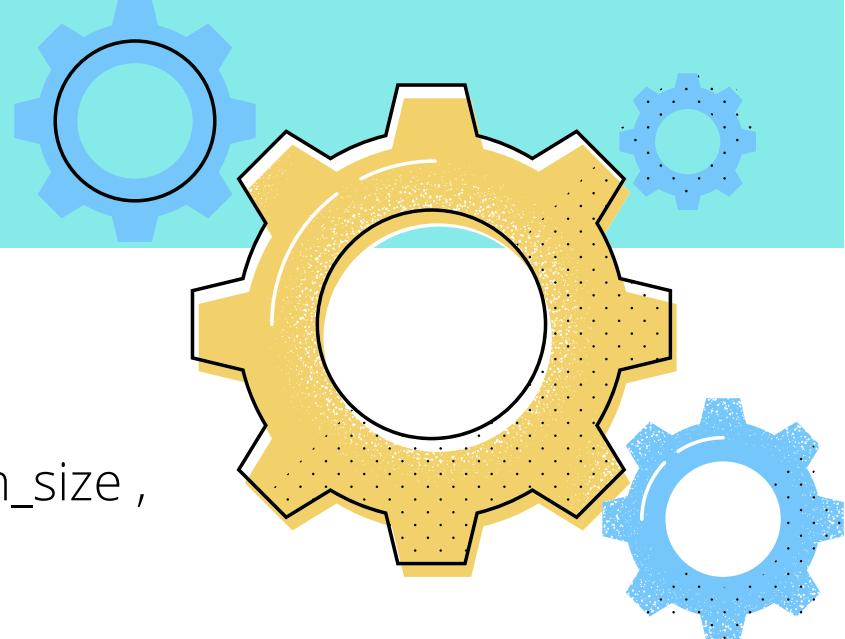
- Introduction to Auto Scaling Group
- Discuss Architecture of cluster of web servers in Auto Scaling Group
- Update the last code and demonstrate to create ASG
- Introduction to Auto Scaling Policy and apply TargetTrackingPolicy
- Declare output variable and interpolate the attribute value of ASG ARN , once resource is created



Architecture : cluster of web servers in Auto Scaling Group



Auto Scaling Group



Auto Scaling Group allow us to scaling up and scaling down the resources based of usage. Notice the min_size , max_size and desired capacity value in arguments. You can create 1 instance in ASG assigning 1 to value for min_size , max_size and desired_capacity

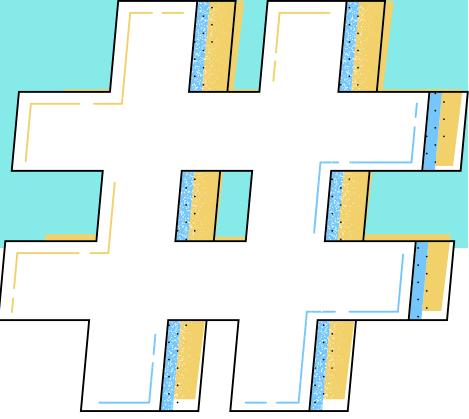
```
resource "aws_autoscaling_group" "my_first_asg" {  
  launch_configuration = aws_launch_configuration.my-first-launch-conf.id  
  availability_zones = var.azs
```

```
  min_size = 2  
  max_size = 10  
  desired_capacity = 3
```

```
  tag {  
    key = "Name"  
    value = "terraform-asg"  
    propagate_at_launch = true  
  }  
}
```

Note: propagate_at_launch is argument which allows resource update(in this case ,tag) while launching.

Auto Scaling Policy



key feature of Auto Scaling Group is to scale up or scale down resources based on Auto Scaling Policy we attach. Notice policy_type and predefined_metric_type in below auto scaling policy resource. This policy will monitor the cpu usage and calculate number of ec2 instance to spin up to scale up ec2 instances if average cpu goes higher than target_value=60. And scale down the instances if usage below the average target_value=60. Awesome!

```
resource "aws_autoscaling_policy" "my_asg_policy" {
    name = "webservers_autoscale_policy"
    policy_type = "TargetTrackingScaling"
    autoscaling_group_name = aws_autoscaling_group.my_first_asg.name

    target_tracking_configuration {
        predefined_metric_specification {
            predefined_metric_type = "ASGAverageCPUUtilization"
        }
        target_value = "60"
    }
}
```

Output the resource attributes when its created



Declare a output variable with any meaningful name (you can specify any name, example "asg_arn") and interpolate the attribute you want as output.

```
output "asg_arn" {  
    value = ["${aws_autoscaling_group.my_first_asg.arn}"]  
}
```

How can we get the public IP assigned to our lab system



Run below command to get public ip assigned to your lab system..

```
$ curl https://checkip.amazonaws.com
```

73.241.51.131

```
$
```

OR

Search in google.com "what is my ip "

OR

Go to <https://www.ipchicken.com/> and note current IP address