RackSpace Task Summary

Go Live Task.

In this document I am using Terraform latest version, So i will fix the GoLive issue and update modules to match the latest version.

Deploy Networking module, show 1 missing part and 1 Warning Message :

1. Missing (aws_route_table_association for private_subs) and i added :
   resource "aws_route_table_association" "private_route_assoc" {
   count   = var.az_count * (var.enable_private_subnets == "true" ? 1 : 0)
   subnet_id   = element(aws_subnet.private_subnets.*.id, count.index)
   route_table_id = element(aws_route_table.private_route.*.id, count.index)
   }

2. Warning (Deprecated Argument of eip) and i fixed it by update :
   domain = "vpc"

```
Warning: Argument is deprecated

  with module.vpc.module.aws_eip.aws_eip.main,
  on ../../modules/aws_eip/main.tf line 5, in resource "aws_eip" "main":
   5:   vpc   = true

use domain attribute instead

(and 2 more similar warnings elsewhere)
```

Deploy Web module, show 2 missing part and 1 Warning Message :

1. Missing ALB Security Group Which allows traffic from anywhere.
   I Created a new SG called "alb_sg" and attached it to ALB Resource.

2. Missing web-sg Egress section.

3. Missing ALB Target Group Listener to the wrong port 8080.
   I Updated it to listen to port 80.

4. Missing ALB Target Group Health Check to the wrong port 443.
   I Updated it to listen to port 80.

5. Missing web_sg the right CIDR.
   I Updated CIDR to [10.0.0.0/16]

6. Error "aws_autoscaling_group" tags argument deprecated.
   I used dynamic tag block and commented the old one but with var.tags because null was already deprecated also.

```
Error: Unsupported argument

  on ../../modules/aws_asg_server/main.tf line 92, in resource "aws_autoscaling_group" "autoscaling_group":
  92:   tags                = data.null_data_source.asg_tags.*.outputs

An argument named "tags" is not expected here.
```

7. Error in "alb_target_group_arn" resource.
   I updated it to be "lb_target_group_arn"

```
Error: Unsupported argument

  on ../../modules/aws_asg_server/main.tf line 71, in resource "aws_autoscaling_attachment" "asg_attachment_bar":
  71:   alb_target_group_arn  = aws_lb_target_group.target_group.arn

An argument named "alb_target_group_arn" is not expected here. Did you mean "lb_target_group_arn"?
```

ext-alb-webserver-1793210661.us-west-2.elb.amazonaws.com

Docker-Project   TF-Project

Hello Onica!

Apache Logs to S3 Bucket

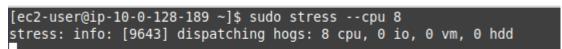**There are couple of ways we can handle apache logs :**
- CloudWatch to stream logs and export to S3 bucket.
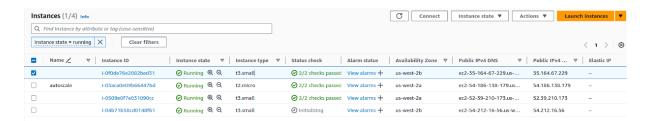- Using Logrotate and Copy Files to S3 bucket).

In this task i used a simple way for testing without waiting a daily cronjob.

1. I Updated IAM Policy with s3 full permission which attached to IAM Role/Instance Profile.

2. I Created an S3 Bucket which used to upload logs on it with a life cycle rule (Expired Files) of 30 days.

3. I Updated user_data script to do the following:
   - Compress apache log files everyday.
   - Sync with s3 bucket to copy zip files.
   - Delete expired files Which created 30 days ago.
   - Add all above as a cronjob which runs everyday.

Auto Scaling Based on CPU Performance

1. I Created AutoScaling Policy and CloudWatch Alarm based on CPU Metric (Up/Down)

2. I Updated the min=1 Disered=2 max=3.

3. Fired Up alarm by increasing CPU Utilization with "stress" command, And Scale UP worked fine and reached the max number.

```
[ec2-user@ip-10-0-128-189 ~]$ sudo stress --cpu 8
stress: info: [9643] dispatching hogs: 8 cpu, 0 io, 0 vm, 0 hdd
```


4. Canceled stress command and monitor instances (Scale Down) worked fine and decreased instances to Desired > Min.