

CSDO1010-007-B-W24-LAB2 Report

Task

- Manage AWS Infrastructure with Terraform (IaC) and Ansible (CM)

Requirements

- `webserver-Public-URL` and the `URL` assigned from the end of the Terraform apply output.
 - Please do not include all of the output from apply, just the `webserver-Public-URL` value
- The Cloud Computing Course webpage in your browser, including the address bar showing the URL
- Provisioned Infrastructure as viewed through your AWS account, including the public IP of your `webserver`, under Instances
- `ls` command output from `putty` session to your EC2 instance to show folder contents.

Report

- `webserver-Public-URL` and the `URL` assigned from the end of the Terraform apply output.

```
module.compute.aws_instance.webserver (remote-exec): localhost : ok
module.compute.aws_instance.webserver: Creation complete after 2m39s [id=i-0d759e219]
Apply complete! Resources: 8 added, 0 changed, 0 destroyed.
Outputs:
Apache-Webserver-Public-URL = "http://3.86.81.77"
~/justin-irl/CSDO1010-007-B-W24-LAB3 on 20240404_justin-irl__apache-playbook
```

- I noticed in the doc, the steps for `fmt` and `plan` were not included. After running `plan` this is the message regarding the `URL`:

```
+ tags = {
+   + "Name" = "Terraform-VPC"
+ }
+ tags_all = {
+   + "Name" = "Terraform-VPC"
+ }
}

Plan: 8 to add, 0 to change, 0 to destroy.

Changes to Outputs:
+ Apache-Webserver-Public-URL = (known after apply)

Saved the plan to: tfplan

To perform exactly these actions, run the following command to apply:
  terraform apply "tfplan"
```

- The Cloud Computing Course webpage in your browser, including the address bar showing the url

Cloud Computing Strategy Program

Cloud Computing

Public vs Private vs Hybrid Cloud

GCP

AWS

Azure

Applied Approaches to Cloud Adoption

Thursday, Apr 4, 2024, 09:33 PM

Host 3.86.81.77

Congratulations on completing the labs of applied approaches to cloud adoption course and building a highly available web application using the services of the public cloud market leaders (AWS, Azure, and GCP). Hopefully, you enjoyed the course and labs so far.

I wish you all the best on completing the course successfully. Enjoy watching the videos!

What is Cloud Computing?

Public Cloud vs Private Cloud vs Hybrid Cloud

- Provisioned Infrastructure as viewed through your AWS account, including the public IP of your webserver, under Instances.

Instances (1/2)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4	Elastic IP	IPv6
webserver	i-00bf441cae75083e2	Stopping	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-18-234-198-110.co...	18.234.198.110	-	-
webserver_tf	i-0d759e2191d88a449	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-3-86-81-77.compute...	3.86.81.77	-	-

Instance: i-0d759e2191d88a449 (webserver_tf)

Instance summary

- Instance ID: i-0d759e2191d88a449 (webserver_tf)
- IPV6 address: -
- Hostname type: IP name: ip-10-0-1-227.ec2.internal
- Answer private resource DNS name: -
- Auto-assigned IP address: 3.86.81.77 [Public IP]
- IAM Role: -
- IMDSv2: Optional
- EC2 recommends setting IMDSv2 to required | Learn more

Instance details

- Platform: Amazon Linux (Inferred)
- Platform details: Linux/UNIX
- Stop protection: Disabled
- Public IPv4 address: 3.86.81.77 [open address]
- Instance state: Running
- Private IP DNS name (IPv4 only): ip-10-0-1-227.ec2.internal
- Instance type: t2.micro
- VPC ID: vpc-0c0f991dfa7a77953 (Terraform-VPC)
- Subnet ID: subnet-09187136e11e40755 (Terraform-Subnet)
- AMI ID: ami-0cf43e890af9e3351
- AMI name: amzn2-ami-hvm-2.0.20240329.0-x86_64-gp2
- Launch time: Thu Apr 04 2024 21:28:16 GMT-0400 (Terraform Desktop Time) (about 1 hour)
- Monitoring: disabled
- Termination protection: Disabled
- AMI location: us-east-1-amazon-ami-2.0.20240329.0-x86_64-gp2

- `ls` command output from `putty` session to your EC2 instance to show folder contents.

```
~/.justin-irl/CSD01010-007-B-W24-LAB3 on 📁 20240404_justin-irl__apache-playbook ●  
$ > ssh ec2-user@3.86.81.77  
The authenticity of host '3.86.81.77 (3.86.81.77)' can't be established.  
ED25519 key fingerprint is SHA256:BCKu+XxKzYw+2SMrmVmLrXcjZu5WcctL+sMBERMyKvU.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? f  
Please type 'yes', 'no' or the fingerprint: fingerprint  
Please type 'yes', 'no' or the fingerprint: yes  
Warning: Permanently added '3.86.81.77' (ED25519) to the list of known hosts.  
Last login: Fri Apr 5 01:30:28 2024 from 136.144.17.243  
  
#_  
~\_ ##### Amazon Linux 2  
~~ \#####\  
~~ \###| AL2 End of Life is 2025-06-30.  
~~ \#/_____  
~~ V~' '->  
~~~~  
~~~~_. _ / A newer version of Amazon Linux is available!  
~~~~/_/_/  
_/_/_/_/ Amazon Linux 2023, GA and supported until 2028-03-15.  
_/_/_/_/ https://aws.amazon.com/linux/amazon-linux-2023/  
  
[ec2-user@ip-10-0-1-227 ~]$ sudo dnf check-update  
sudo: dnf: command not found  
[ec2-user@ip-10-0-1-227 ~]$ ls -la  
. .. .ansible .bash_logout .bash_profile .bashrc .cache install_apache.yaml .ssh  
[ec2-user@ip-10-0-1-227 ~]$ pwd  
/home/ec2-user
```

Notes

- Similar to the previous lab, created & configured repo with `tfenv` and `tflint` and bumped to `tf 1.7.5` & `aws 5.43.0`
- Resources destroyed

```
module.compute.aws_key_pair.tf_aws_key: Destruction complete
module.vpc.aws_subnet.tf_public_subnet: Destruction complete
module.vpc.aws_security_group.tf_public_sg: Destruction complete
module.vpc.aws_vpc.tf_vpc: Destroying... [id=vpc-0c0f99
module.vpc.aws_vpc.tf_vpc: Destruction complete after 1

Destroy complete! Resources: 8 destroyed.
```