CH00 Environment Setup

Welcom to Join HashiCorp Terraform Workshop ^^

* Please Complete This Exercise Before 2018/09/15, Due to AWS Account Need to Takes Some Time to Enable Cloud9...

Outline

- AWS Registeration
- AWS Cloud9 Setup
- Tools Installation
- IAM Role Setup

AWS Registeration

What is the First Thing Before Starting to Explore Terraform?

A: Of course, A Cloud Provider Account!! And This Workshop Choose AWS Plaform

Registration Flow

Visit Here Through Browser,Filling in...

- Email Addres
- Password (Confirm Password)
- AWS Account Name
- Phone Number (Don't to add +886)
- Address
- Credit Card Information
- ...etc

Congratulations !!

- The AWS Account Has been Created.

- There Are Several Region Within AWS

- This Workshop will Use Region Oregon (Change from Upper Right corner, Beside Account)

AWS Cloud9

- In order to Save Time, Let Everyone's Workshop Environment is The Same

- Visit Here Through Browser to Open Cloud9 Console

What is Cloud9?

- Cloud9 is a Cloud IDE for Writing, Running, and Debugging Code

- In Fact, It will Boot A EC2 VM for Development

Creating Environment (1/3)

- Click The Creating Environment Button

- Input Name, Description

- Click `Next Step` Button

Creating Environment (2/3)

- Environment Type: Create a New Instance Environment

- Instance Type: t2.micro

- Cost-Saving Setting: After 30 minutes (default)

- Click `Next Step` Button

Creating Environment (3/3)

- Review Environment Name and Settings

- Click `Create Environment` Button

- Then Just Waiting Few Minutes

- Brand New AWS Account May Create Fail, Due to AWS Takes Time to Enable Cloud9 Function

- Seeing the IDE Show Up !

- Left Side is file Panel

- There are two Items in Right Side

- Above is File Panel

- Below is Terminal Panel

Tools Installation

- There are Several Tools Need to be installed

- HashiCorp Terraform

- Gruntwork Terragrunt

- kubectl

- heptio-authenticator-aws

HashiCorp Terraform

Follow Below Command to Install Terraform

```
name:~/environment $ curl -o terraform_0.11.8_linux_amd64
name:~/environment $ unzip terraform_0.11.8_linux_amd64.z
name:~/environment $ sudo mv terraform /usr/local/bin/
name:~/environment $ rm terraform_0.11.8_linux_amd64.zip
name:~/environment $ terraform version
Terraform v0.11.8
```

Gruntwork Terragrunt

Follow Below Command to Install Terragrunt

```
name:~/environment $ curl -Lo terragrunt_linux_amd64 https

name:~/environment $ chmod +x terragrunt_linux_amd64

name:~/environment $ sudo mv terragrunt_linux_amd64 /usr/

name:~/environment $ terragrunt help

...

VERSION:
   v0.16.8

AUTHOR(S):
   Gruntwork <www.gruntwork.io>
```

kubectl

Follow Below Command to Install kubectl

```
name:~/environment $  curl -o kubectl https://amazon-eks.s

name:~/environment $ chmod +x ./kubectl

name:~/environment $ sudo mv kubectl /usr/local/bin/

name:~/environment $ kubectl version

Client Version: version.Info{Major:"1", Minor:"10", GitVe
The connection to the server localhost:8080 was refused -
```

heptio-authenticator-aws

Follow Below Command to Install heptio-authenticator-aws

```
name:~/environment $ curl -o aws-iam-authenticator https:/

name:~/environment $ chmod +x ./aws-iam-authenticator

name:~/environment $ sudo mv aws-iam-authenticator /usr/l

name:~/environment $ heptio-authenticator-aws help

A tool to authenticate to Kubernetes using AWS IAM creden

Usage:
  heptio-authenticator-aws [command]
...
```

IAM Role Setup

- Cloud9 Default Permission is Not Allow to Create Other AWS Resource

- Hence, Need to Create a Role then attach to the EC2 Instance Which Links to Cloud9 Environment

Create Policy (1/2)

- Visit Here and Click "Create policy" Button and Choose "JSON", Paste Below Content

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "VisualEditor0",
            "Effect": "Allow",
            "Action": [
                "iam:*",
                "s3:*",
                "ec2:*",
                "autoscaling:*",
                "eks:*"
            ],
            "Resource": "*"
        }
    ]
}
```

Create Policy (2/2)

- Click "Preview Policy" Button, Name the Policy and Click "Create policy" Button Finally

Create Role (1/2)

- Visit Here and Click "Create Role" Button

- type of trusted entity: "AWS Service"

- the service that will use this role: "EC2"

- Click "Next: Permission" Button

- Choose the Policy Created Just Now, then Click "Next: Preview" Button

Create Role (2/2)

- Name the Role, Click "Create role" Button

- Visit The EC2 Panel, Attach the Role Created Just Now to The Cloud9 EC2 Instance (Name: aws-cloud9-*)

Congratulations !!

You Have Completed the Workshop Environment Setup

Looking Forward to Seeing You at 9/15