**MODULE - 01 INTRODUCTION**

Use same project for deploy on different cloud providers (resources on AWS and Azure).

Plan before applying changes (what if) – not possible with AWS Cloudformation.

**MODULE - 01 CONFIGURING TERRAFORM WITH AWS**

Create AWS account (Free tier).

Create TerraformUser on IAM Users with full access.

Install Terraform (<https://www.terraform.io/>) and configure System variables.

Create System Variable for AWS\_ACCESS\_KEY\_ID and AWS\_SECRET\_ACCESS\_KEY.

**MODULE - 02 CREATING AN AWS RESOURCE WITH TERRAFORM**

Code samples: <https://github.com/kevholditch/terraform-course-examples>

Sample code to create S3 bucket

Go to sample code folder (main.tf file) and Terraform init

Terraform plan

Terraform apply

Created S3 bucket rodolfomarra-myfirst-bucket on us-east-1

Terraform destroy

Deleted S3 bucket rodolfomarra-myfirst-bucket on us-east-1

**MODULE – 02 TERRAFORM RESOURCES**

<https://registry.terraform.io/providers/hashicorp/aws/latest/docs>

Resources have arguments: required and optional

Resources could have Exported Attributes (ie. [ARN returned after having created S3 bucket](https://registry.terraform.io/providers/hashicorp/aws/latest/docs/resources/s3_bucket#attributes-reference))

Interpolation Syntax: replace information generated after creating AWS object (ie. pass ARN from S3 Bucket to IAM Role).

Interpolation syntax format:

“${<resource\_type>.<resource\_name>.<exported\_attribute>}”

Example:

Resource “aws\_s3\_bucket” “my\_bucket” {

Bucket = “rodolfomarra-myfirst-bucket”

}

Reference using: “$(aws\_s3\_bucket.my\_bucket.arn}”

Data types for resources attributes:

Int – defined using – port = 21

String – defined using – host = “localhost”

List – defined using – security\_groups = [“abc”,”def”]

Bool – defined using – enabled = false

Sample code to create S3 bucket and IAM Policy to list Bucket

Go to sample code folder (main.tf file) and Terraform init

Terraform apply

Created S3 bucket rodolfomarra-myfirst-bucket on us-east-1

Created IAM Policy my-bucket-policy on us-east-1

Terraform destroy

Deleted S3 bucket rodolfomarra-myfirst-bucket on us-east-1

Deleted IAM Policy my-bucket-policy on us-east-1