



Terraform: Understand Terraform Basics

Terraform : Deployment Automation

- **Section 3 : Understand Terraform Basics**
 - Handle Terraform and Provider Installation and Versioning
 - Describe Plugin based Architecture
 - Demonstrate using Multiple Providers

Terraform : Deployment Automation

- Handle Terraform and Provider Installation and Versioning :
- Terraform configurations must declare which providers they require.
- Provider configurations belong in the root module of a Terraform configuration.

```
provider "google" {  
  project = "acme-app"  
  region  = "us-central1"  
}
```

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- Handle Terraform and Provider Installation and Versioning :
- alias: Multiple Provider Configurations
- Multiple configurations can be defined for the same provider.
- Primary reason of alias is to support multiple regions for a cloud platform.

```
# it as the default, and it can be referenced as `aws`.
```

```
provider "aws" {  
  region = "us-east-1"  
}
```

```
# reference this as `aws.west`.
```

```
provider "aws" {  
  alias = "west"  
  region = "us-west-2"  
}
```

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- Handle Terraform and Provider Installation and Versioning :
- Selecting Alternate Provider Configurations

```
resource "aws_instance" "foo" {  
  provider = aws.west  
  # ...  
}
```

```
module "aws_vpc" {  
  source = "./aws_vpc"  
  providers = {  
    aws = aws.west  
  }  
}
```

Terraform : Deployment Automation

- Describe plug-in based architecture :
- Terraform uses a plugin-based architecture to support hundreds of infrastructure and service providers.
- Initializing a configuration directory downloads and installs providers used in the configuration.
`terraform init`
- Format your configuration.
`terraform fmt`
- Validate your configuration.
`terraform validate`
Success! The configuration is valid.

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, completing the cursive word 'Thank you!' on a white surface. The hand is positioned on the right side of the frame, with the index and thumb fingers visible, holding the marker. The marker's tip is just finishing the exclamation mark. The background is a plain, light-colored surface.

See you in next lecture ...