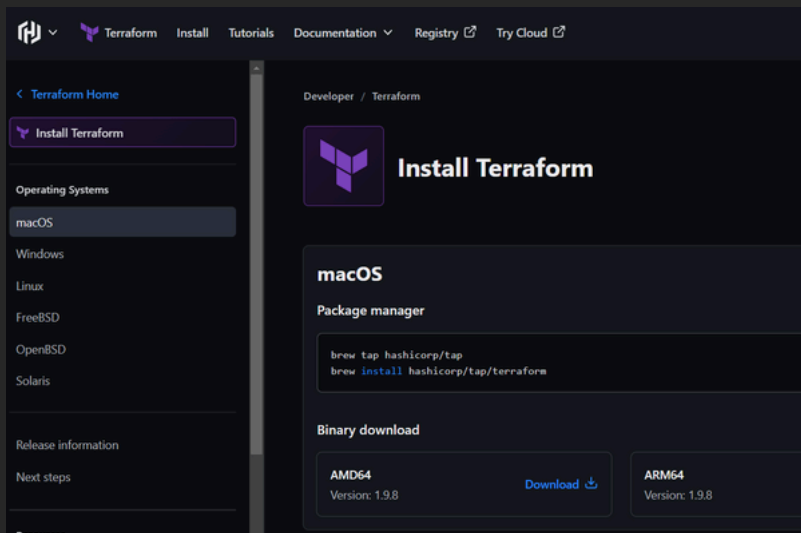


Automated Deployment of EC2 and S3 Infrastructure Using Terraform



Install Terraform:



The screenshot shows the Terraform website's installation page for macOS. The page has a dark theme. At the top, there is a navigation bar with links for Terraform, Install, Tutorials, Documentation, Registry, and Try Cloud. On the left, a sidebar menu includes links to Terraform Home, Install Terraform (highlighted), Operating Systems (with macOS selected), Windows, Linux, FreeBSD, OpenBSD, Solaris, Release information, and Next steps. The main content area is titled 'Developer / Terraform' and features the Terraform logo and the heading 'Install Terraform'. Under the 'macOS' section, the 'Package manager' subsection provides terminal commands: `brew tap hashicorp/tap` and `brew install hashicorp/tap/terraform`. The 'Binary download' subsection shows two options: AMD64 (Version: 1.9.8) and ARM64 (Version: 1.9.8), each with a 'Download' button and a download icon.

Navigation: Terraform, Install, Tutorials, Documentation, Registry, Try Cloud

Left Sidebar:

- Terraform Home
- Install Terraform
- Operating Systems
 - macOS
 - Windows
 - Linux
 - FreeBSD
 - OpenBSD
 - Solaris
- Release information
- Next steps

Main Content:

Developer / Terraform

Install Terraform

macOS

Package manager

```
brew tap hashicorp/tap
brew install hashicorp/tap/terraform
```



Binary download

Architecture	Version	Action
AMD64	Version: 1.9.8	Download
ARM64	Version: 1.9.8	Download

Configure AWS provider

```
provider.tf > ...
1 terraform {
2     required_providers {
3         aws = {
4             source = "hashicorp/aws"
5             version = "~> 5.0"
6         }
7     }
8 }
9
10 # Configure the AWS Provider
11 provider "aws" {
12     region = "ap-south-1"
13     access_key = ""
14     secret_key = ""
15 }
16 }
```

EC2 Configuration File

main.tf >  resource "aws_instance" "web" >  ami

```
resource "aws_instance" "web" {  
  ami = "ami-0dee22c13ea7a9a67"  
  instance_type = "t2.micro"  
  
  tags = {  
    Name = "Terraform-Ec2"  
  }  
}
```

S3 Configuration File

```
resource "aws_s3_bucket" "terraform-bucket" {  
    bucket = "terraform-bucket-kkrish"  
  
}  
  
resource "aws_s3_object" "bucket-data" {  
    bucket = aws_s3_bucket.terraform-bucket.bucket  
    source = "./demo-file.txt"  
    key = "terraform-data.txt"  
}
```

Initialize Terraform

```
kkrish@LAPTOP-LAKNHJCS MINGW64 ~/Vsc/Terraform-1/aws-s3
```

```
• $ terraform init
```

```
Initializing the backend...
```

```
Initializing provider plugins...
```

```
- Finding hashicorp/aws versions matching "5.54.1"...
```

```
- Installing hashicorp/aws v5.54.1...
```

```
- Installed hashicorp/aws v5.54.1 (signed by HashiCorp)
```

Terraform has created a lock file **.terraform.lock.hcl** to record the provider selections it made above. Include this file in your version control repository so that Terraform can guarantee to make the same selections by default when you run "terraform init" in the future.

```
Terraform has been successfully initialized!
```

You may now begin working with Terraform. Try running "terraform plan" to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform,

Plan the Configuration

```
kkrish@LAPTOP-LAKNHJCS MINGW64 ~/Vsc/Terraform-1/aws-s3
```

```
$ terraform plan
```

Terraform used the selected providers to generate the following execution plan.
+ create

Terraform will perform the following actions:

```
# aws_s3_bucket.terraform-bucket will be created
+ resource "aws_s3_bucket" "terraform-bucket" {
  + acceleration_status = (known after apply)
  + acl                 = (known after apply)
  + arn                 = (known after apply)
```

Apply the Configuration

```
kkrish@LAPTOP-LAKI#DC5 MINGW64 ~/Vsc/Terraform-1/aws-s3
```

- \$ terraform apply -auto-approve

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:

- + create

Terraform will perform the following actions:

```
# aws_s3_bucket.terraform-bucket will be created
+ resource "aws_s3_bucket" "terraform-bucket" {
  + acceleration_status = (known after apply)
  + acl                 = (known after apply)
  + arn                 = (known after apply)
  + bucket              = "terraform-bucket-kkrish"
  + bucket_domain_name = (known after apply)
  + bucket_prefix       = (known after apply)
  + bucket_regional_domain_name = (known after apply)
  + force_destroy       = false
  + hosted_zone_id      = (known after apply)
  + id                  = (known after apply)
  + object_lock_enabled = (known after apply)
  + policy              = (known after apply)
  + region              = (known after apply)
```


Terraform Deployment Results

Instances (1/1) [Info](#)

Last updated: less than a minute ago [Refresh](#) [Connect](#) [Instance state](#)

Find Instance by attribute or tag (case-sensitive) [All states ▼](#)

Instance state = running [X](#) [Clear filters](#)

<input checked="" type="checkbox"/>	Name 🔗	Instance ID	Instance state ▼	Instance type ▼	Status check
<input checked="" type="checkbox"/>	Terraform-Ec2	i-083be1aa5e874f830	● Running 🔍 🔍	t2.micro	🔄 Initializing

i-083be1aa5e874f830 (Terraform-Ec2)

[Details](#) | [Status and alarms](#) | [Monitoring](#) | [Security](#) | [Networking](#) | [Storage](#) | [Tags](#)

[Amazon S3](#) > [Buckets](#) > terraform-bucket-kkrish

terraform-bucket-kkrish [Info](#)

[Objects](#) | [Properties](#) | [Permissions](#) | [Metrics](#) | [Management](#) | [Access Points](#)

Objects (1) [Info](#)

[🔄](#) [📄 Copy S3 URI](#) [📄 Copy URL](#) [⬇️ Download](#) [📄 Open](#) [🗑️ Delete](#) [Actions ▼](#) [Create folder](#) [📤 Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	terraform-data.txt	txt	November 13, 2024, 17:48:38 (UTC+05:30)	29.0 B	Standard