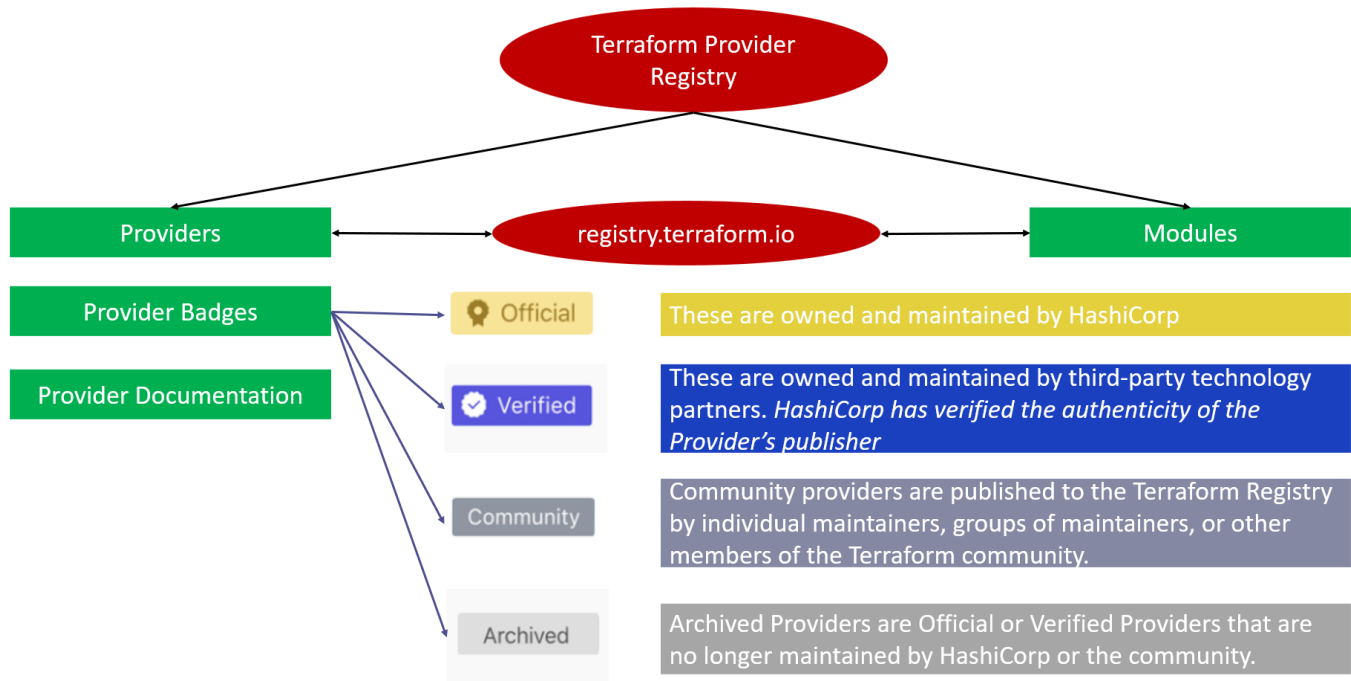


06-Terraform Providers

<https://www.terraform.io/language/providers>

- Terraform relies on plugins called "**providers**" to interact with cloud providers, SaaS providers, and other APIs. Terraform configurations must declare which providers they require so that Terraform can install and use them.
- Providers are **HEART** of Terraform
- Without Providers, Terraform cannot manage any infrastructure.
- Providers are distributed separately from Terraform and each provider has its own **release** cycles and **Version Numbers**
- Terraform **Registry** is publicly available which contains many Terraform Providers for most major Infra Platforms
- To find providers for the infrastructure platforms you use, browse [the provider's section of the Terraform Registry](#).



Terraform Registry: It is a repository where we can find all Terraform providers

<https://registry.terraform.io/>

<https://registry.terraform.io/browse/providers>

Official providers are owned and maintained by HashiCorp

<https://registry.terraform.io/browse/providers?tier=official>

Community providers are published to the Terraform Registry by individual maintainers, groups of maintainers, or other members of the Terraform community.

<https://registry.terraform.io/browse/providers?tier=community>

Verified providers are owned and maintained by third-party technology partners (Third-party organizations)

<https://registry.terraform.io/providers/zededa/zedcloud/1.0.1>

Terraform Block Definition

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

This is where we define the Terraform version and the provider version

PS: never use the latest provider because if it has a bug, your application will break

```

terraform {
  required_version = "~> 0.14" # which means any version equal & above
                                0.14 like 0.15, 0.16 etc and < 1.xx
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "~> 3.0"
    }
  }
}

```

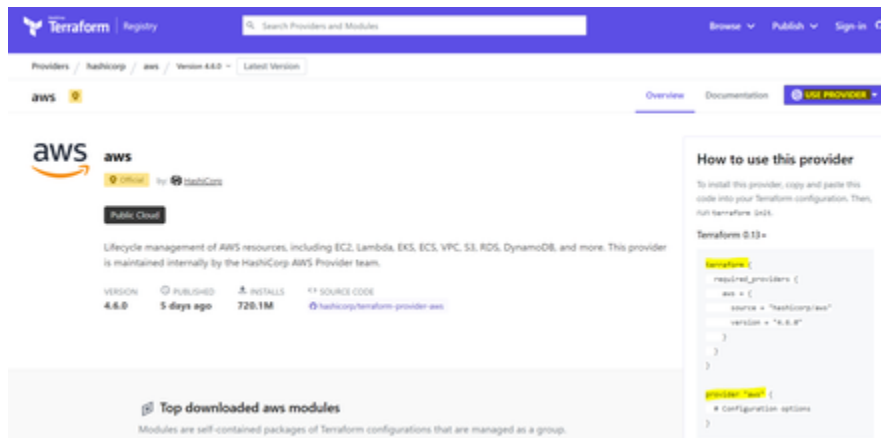
Provider Block

This is where we define the provider that we are going to use and the region where to create the resources

```

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

```



The screenshot shows the Terraform Registry page for the AWS provider. The page has a blue header with the Terraform logo and navigation links. Below the header, there's a breadcrumb trail: Providers / hashicorp / aws / Version 4.6.0. The main content area features the AWS logo, a 'Public Cloud' badge, and a description: 'Lifecycle management of AWS resources, including EC2, Lambda, EKS, ECS, VPC, S3, RDS, DynamoDB, and more. This provider is maintained internally by the HashiCorp AWS Provider team.' Below this, there's a table with metadata: VERSION 4.6.0, PUBLISHED 5 days ago, 726.1M INSTALLS, and a link to the SOURCE CODE. A section titled 'Top downloaded aws modules' is also visible. On the right side, there's a 'How to use this provider' section with a 'Terraform 0.13+' example block showing the configuration for the AWS provider.

```

Terraform 0.13+
terraform {
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "4.6.0"
    }
  }
}

provider "aws" {
  # Configuration options
}

```

```
# Terraform Block
terraform {
  required_version = "> 0.14.3"
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "~> 3.0"
    }
  }
}

# Provider Block
provider "aws" {
  profile = "default"
  region = "us-east-1"
}
```

Local Names

Local Names are **Module specific** and should be **unique** per-module

Terraform configurations always refer to **local name** of provider **outside** required_provider block

Users of a provider can choose **any local name** for it (myaws, aws1, aws2).

Recommended way of choosing local name is to use preferred local name of that provider (For AWS Provider: hashicorp/aws, **preferred local name** is aws)

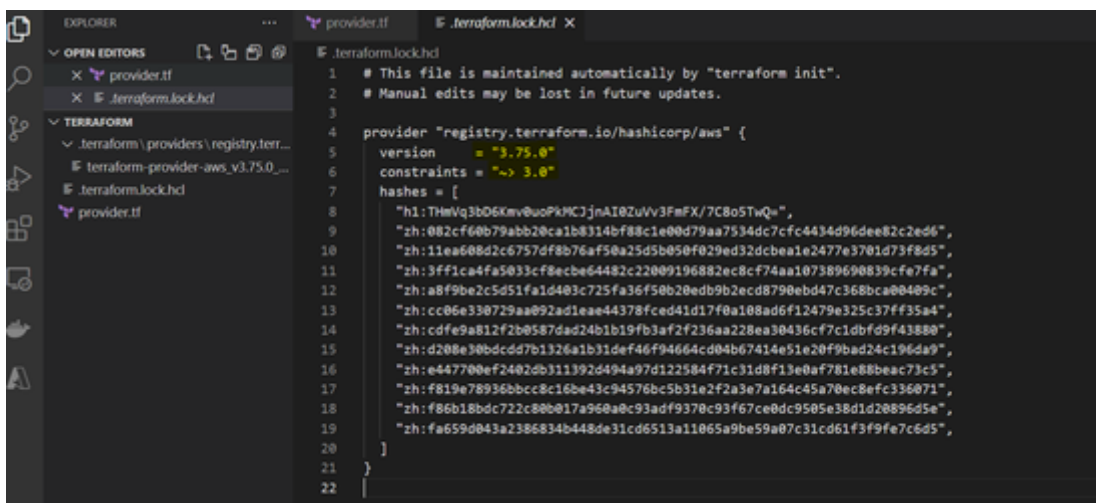
Source

It is the **primary location** where we can download the Terraform Provider

Download the provider with terraform init

```
terraform {
  required_version = "> 0.14"
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "~> 3.0"
    }
  }
}

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



```
1 # This file is maintained automatically by "terraform init".
2 # Manual edits may be lost in future updates.
3
4 provider "registry.terraform.io/hashicorp/aws" {
5   version = "3.75.0"
6   constraints = "~> 3.0"
7   hashes = [
8     "h1:THmVq3bD6Kmv0uoPkMCJjnAI0ZuVv3FmFX/7C8o5TwQ=",
9     "zh:082cf60b79abb20ca1b8314bf88c1e00d79aa7534dc7cfc4434d96dee82c2ed6",
10    "zh:11ea608d2c6757df8b76af50a25d5b050f029ed32dcbea1e2477e3701d73f8d5",
11    "zh:3ff1ca4fa5033cf8ecbe64482c22009196882ec8cf74aa107389690839cfe7fa",
12    "zh:a8f9be2c5d51fa1d403c725fa36f50b20edb9b2ecd8790ebd47c368bca00409c",
13    "zh:cc06e330729aa092ad1eae44378fced41d17f0a108ad6f12479e325c37ff35a4",
14    "zh:cdfe9a812f2b0587dad24b1b19fb3af2f236aa228ea30436cf7c1dbfd9f43880",
15    "zh:d208e30bdcd7b1326a1b31def46f94664cd04b67414e51e20f9bad24c196da9",
16    "zh:e447700ef2402db311392d494a97d122584f71c31d8f13e0af781e88beac73c5",
17    "zh:f819e78936bbcc8c16be43c94576bc5b31e2f2a3e7a164c45a70ec8efc336071",
18    "zh:f86b18bdc722c80b017a960a0c93adf9370c93f67ce0dc9505e38d1d20896d5e",
19    "zh:fa659d043a2386834b448de31cd6513a11065a9be59a07c31cd61f3f9fe7c6d5",
20   ]
21 }
22
```