



Lab: Terraform TLS Provider

The Terraform TLS provider provides utilities for working with Transport Layer Security keys and certificates. It provides resources that allow private keys, certificates and certificate requests to be created as part of a Terraform deployment.

- Task 1: Check Terraform
- Task 2: Install Terraform TLS Provider
- Task 3: Creates a self-signed certificate with TLS Provider

Task 1: Check Terraform version

Run the following command to check the Terraform version:

```
terraform -version
```

You should see:

```
Terraform v1.0.8
```

Task 2: Install Terraform TLS Provider

Edit the file titled `terraform.tf` to add the Terraform TLS provider.

`terraform.tf`

```
terraform {
  required_version = ">= 1.0.0"
  required_providers {
    aws = {
      source = "hashicorp/aws"
    }
    http = {
      source = "hashicorp/http"
      version = "2.1.0"
    }
    random = {
      source = "hashicorp/random"
      version = "3.1.0"
    }
    local = {
      source = "hashicorp/local"
      version = "2.1.0"
    }
  }
}
```





```
}
tls = {
  source = "hashicorp/tls"
  version = "3.1.0"
}
}
```

Install the provider by performing a `terraform init`

```
terraform init
```

This informs Terraform that it will install the TLS provider for working with Transport Layer Security keys and certificates.

Validate the installation by running a `terraform version`

```
terraform version
```

```
Terraform v1.0.8
on linux_amd64
+ provider registry.terraform.io/hashicorp/aws v3.62.0
+ provider registry.terraform.io/hashicorp/http v2.1.0
+ provider registry.terraform.io/hashicorp/local v2.1.0
+ provider registry.terraform.io/hashicorp/random v3.1.0
+ provider registry.terraform.io/hashicorp/tls v3.1.0
```

Task 3: Creates a self-signed certificate with TLS Provider

Update the `main.tf` file with the followig configuration blocks for generating a TLS self signed certificate and saving the private key locally.

```
resource "tls_private_key" "generated" {
  algorithm = "RSA"
}

resource "local_file" "private_key_pem" {
  content = tls_private_key.generated.private_key_pem
  filename = "MyAWSKey.pem"
}
```

Note: This example creates a self-signed certificate for a development environment. THIS IS NOT RECOMMENDED FOR PRODUCTION SERVICES.

Create the Keypair via Terraform





```
terraform apply
```

```
Plan: 2 to add, 0 to change, 0 to destroy.
```

```
Do you want to perform these actions?  
Terraform will perform the actions described above.  
Only 'yes' will be accepted to approve.
```

```
Enter a value: yes
```

```
Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```

Validate you now have a self-signed private key inside your current working directory name `MyAWSKey.pem`

```
ls -la  
  
-rwxr-xr-x 1 student student MyAWSKey.pem  
  
cat MyAWSKey.pem  
  
-----BEGIN RSA PRIVATE KEY-----  
MIIEowIBAAKCAQEA7Y/09hkhORQUPEdsmWSej62NoTucPvZCyaKqtKs/UnGM31A  
Q2w7yQ2VPuEUP1SPJsk0CgJFRHdLQ/uUFWJAAtTTE0iV2sOKL77mMZKZREsmG3wT0  
m5Xh3uT8SPHkLF0wgQfPjVdCKFNs8Qip4S6sktWgtw0mV/SioDNYZArNhV+viye0  
wa/jXu55H/C1d4HcaALb9+UcruT0M5Kqo1Xjgt6gGDpQjIdK0Qsdjyaoz8JKQMbk  
fZV3DWC9RJ+Sm94gqt9QbiJgnCVLP8IWEcyMBA6P99RSjNB/geH/H4Jvoeg7W1B1  
56/s1vZ4G0XzydlyLY7v5j0vyRumAq5boCv3QIDAQABAoIBAFv4Qoa0uSsSTP2H  
rod20t5yV1ewTfNF3snKo5tVli2sXrjMzZeKx00e8IpJ0DzRhBtHSv/CNxixYhor  
Bs97Yy+LMSDfeCFDjX5jtUZTw3EP3PQAnJhHPyR/Fcir40KjA3njFV7pDYPrAchg  
L58nlQKcGY23cT2gzq0r/iuAQzhH6SRoNvu+DXvKPGWIpWxSPhhSHMHe08N3spLJ  
4DptEf0hJ/IiBIJpXoaN09sYVBoRufD4g3SapqP0cwVK27R/Zy1Fc0ujuqzeE/0t  
Rrk80aVSa+50F4SnY7LAGtdME3D39d6c4FpVGXKAoOp1tFpswAQDubib64YKDSNU  
0/fMLMECgYEAxVtJwK4v7BCNqNLW9cR5A/LLTFGgVpBNP9BIyV0aCrX9rjezC7ny  
Q+2I3/dMAPI9+kuchktzPfsTjUEGM01Iu6HLQjZDEC0VC4tUyjA41I1Unz2E2t3u  
bWxQN5bDVPLX14VH4Gt/8Ku1WLu+u79jmaByT6jHA3S2iNkrQBrr1M8CgYEA+K2T  
eIniHzjRsx7PZmrMDN/qIi6VC6zUfwSaoQxmREQ0FLQixNumfjnJ3/wBWvsL1f89  
5xG1m7Ro4WA+0dQhr3POHCY/JiAIVN7CBVjAUGUa/RjkuDsSujFrGx0U0EGM0RZe  
k7uW4BjNiVSp00v7bZXPY23h0sZYMLmzqB/b85MCgYB22+npP37hH38RhBmuXqu7  
cwh5aFe2iqXbnueXS0BnQuo2eJk+oLiFrJNYv6lokHw/0DaGsv4u//3gfp7rWspJ  
JsIxmFh/ac6j60AfnTc82/lxBi3zWuHzyN3u/L+bc74Gs0B/Cn89RUysqjXPAQ9N  
QNjXo4BoVmxwsspXi18pBQKBgC9QLw+vBD02hsdSpFkzFpGYhJ5uSHNjNcdY6mab  
ymkaL0LWrSRm7MuYYdZfHTuUMktX+S3zNRMD2xZ+HnJopCyMtPOPx0M4qjrHPUR  
dr2VDvZ6pwGaU6zTPDKTbMZshuu9Gs920HTgozJuxif/A95Ms4GSZVjeZecXXeQt  
85Y7AoGBALUqqStHLKYwFI2WRiBkHlfz2Kx/ap81F+q+ngBMQWm26eQW7TrBPdaj  
QVXqbZSdF3IDYF3Wnk42QAVKqimYCGqbZoUokWobTENrHAhtjznH4etqXQLTsJp  
q90kP3kpPogLdTC1QNZ06x4tFx4M5P+GZViynodX+jZfCp0C41VB
```





```
-----END RSA PRIVATE KEY-----
```

We will use this private key in a future lab for associating with our server instances and using it for a means of authentication.

