

LAB | Storing Terraform State in Remote S3 with DynamoDB

```
vijayagagla@DESKTOP-FP40P26:~/terra_course/remote-state-example$ terraform init  
Initializing the backend...
```

```
Successfully configured the backend "s3"! Terraform will automatically  
use this backend unless the backend configuration changes.
```

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

- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v6.28.0...
- Installed hashicorp/aws v6.28.0 (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,  
rerun this command to reinitialize your working directory. If you forget, other  
commands will detect it and remind you to do so if necessary.
```

```
vijayagagla@DESKTOP-FP40P26:~/terra_course/remote-state-example$ terraform validate  
Success! The configuration is valid.
```

```
vijayagagla@DESKTOP-FP40P26:~/terra_course/remote-state-example$ terraform plan
```

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_instance.web_server will be created
+ resource "aws_instance" "web_server" {
    + ami                                = "ami-07d9b9ddc6cd8dd30"
    + arn                                = (known after apply)
    + associate_public_ip_address        = (known after apply)
    + availability_zone                  = (known after apply)
    + disable_api_stop                  = (known after apply)
    + disable_api_termination           = (known after apply)
    + ebs_optimized                     = (known after apply)
    + enable_primary_ipv6               = (known after apply)
    + force_destroy                     = false
    + get_password_data                = false
    + host_id                           = (known after apply)
    + host_resource_group_arn          = (known after apply)
    + iam_instance_profile              = (known after apply)
    + id                                = (known after apply)
    + instance_initiated_shutdown_behavior = (known after apply)
    + instance_lifecycle                = (known after apply)
    + instance_state                   = (known after apply)
    + instance_type                     = "t2.micro"
    + ipv6_address_count               = (known after apply)
    + ipv6_addresses                   = (known after apply)
    + key_name                          = (known after apply)
    + monitoring                        = (known after apply)
    + outpost_arn                      = (known after apply)
    + password_data                    = (known after apply)
    + placement_group                  = (known after apply)
    + placement_group_id               = (known after apply)
    + placement_partition_number       = (known after apply)
    + primary_network_interface_id    = (known after apply)
    + private_dns                       = (known after apply)
    + private_ip                        = (known after apply)
    + public_dns                        = (known after apply)
```

```
+ public_dns          = (known after apply)
+ public_ip           = (known after apply)
+ region              = "eu-west-1"
+ secondary_private_ips = (known after apply)
+ security_groups     = (known after apply)
+ source_dest_check   = true
+ spot_instance_request_id = (known after apply)
+ subnet_id           = (known after apply)
+ tags                = {
    + "Name" = "Terraform-Managed-Instance-vijaya"
}
+ tags_all            = {
    + "Name" = "Terraform-Managed-Instance-vijaya"
}
+ tenancy              = (known after apply)
+ user_data_base64     = (known after apply)
+ user_data_replace_on_change = false
+ vpc_security_group_ids = (known after apply)

+ capacity_reservation_specification (known after apply)

+ cpu_options (known after apply)

+ ebs_block_device (known after apply)

+ enclave_options (known after apply)

+ ephemeral_block_device (known after apply)

+ instance_market_options (known after apply)

+ maintenance_options (known after apply)

+ metadata_options (known after apply)

+ network_interface (known after apply)

+ primary_network_interface (known after apply)

+ private_dns_name_options (known after apply)
```

```
+ root_block_device (known after apply)
}
```

Plan: 1 to add, 0 to change, 0 to destroy.

```
vijayagala@DESKTOP-FP4OP26:~/terra_course/remote-state-example$ terraform apply -auto-approve
Acquiring state lock. This may take a few moments...
```

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_instance.web_server will be created
+ resource "aws_instance" "web_server" {
    + ami                                = "ami-096f46d460613bed4"
    + arn                                = (known after apply)
    + associate_public_ip_address        = (known after apply)
    + availability_zone                  = (known after apply)
    + disable_api_stop                  = (known after apply)
    + disable_api_termination           = (known after apply)
    + ebs_optimized                     = (known after apply)
    + enable_primary_ipv6               = (known after apply)
    + force_destroy                     = false
    + get_password_data                = false
    + host_id                           = (known after apply)
    + host_resource_group_arn          = (known after apply)
    + iam_instance_profile              = (known after apply)
    + id                                = (known after apply)
    + instance_initiated_shutdown_behavior = (known after apply)
    + instance_lifecycle                = (known after apply)
    + instance_state                   = (known after apply)
    + instance_type                     = "t2.micro"
    + ipv6_address_count               = (known after apply)
    + ipv6_addresses                   = (known after apply)
    + key_name                          = (known after apply)
    + monitoring                        = (known after apply)
    + outpost_arn                      = (known after apply)
    + password_data                    = (known after apply)
    + placement_group                  = (known after apply)
    + placement_group_id               = (known after apply)
    + placement_partition_number       = (known after apply)
    + primary_network_interface_id     = (known after apply)
```

```
+ primary_network_interface_id      = (known after apply)
+ private_dns                      = (known after apply)
+ private_ip                       = (known after apply)
+ public_dns                       = (known after apply)
+ public_ip                        = (known after apply)
+ region                           = "eu-west-1"
+ secondary_private_ips            = (known after apply)
+ security_groups                  = (known after apply)
+ source_dest_check                = true
+ spot_instance_request_id         = (known after apply)
+ subnet_id                        = (known after apply)
+ tags                             = {
    + "Name" = "Terraform-Managed-Instance-vijaya"
}
+ tags_all                         = {
    + "Name" = "Terraform-Managed-Instance-vijaya"
}
+ tenancy                          = (known after apply)
+ user_data_base64                 = (known after apply)
+ user_data_replace_on_change      = false
+ vpc_security_group_ids           = (known after apply)

+ capacity_reservation_specification (known after apply)

+ cpu_options (known after apply)

+ ebs_block_device (known after apply)

+ enclave_options (known after apply)

+ ephemeral_block_device (known after apply)

+ instance_market_options (known after apply)

+ maintenance_options (known after apply)

+ metadata_options (known after apply)

+ network_interface (known after apply)

+ primary_network_interface (known after apply)
```

```

+ metadata_options (known after apply)

+ network_interface (known after apply)

+ primary_network_interface (known after apply)

+ private_dns_name_options (known after apply)

+ root_block_device (known after apply)
}

```

Plan: 1 to add, 0 to change, 0 to destroy.

aws_instance.web_server: Creating...

aws_instance.web_server: Still creating... [00m09s elapsed]

aws_instance.web_server: Still creating... [00m20s elapsed]

aws_instance.web_server: Creation complete after 22s [id=i-02542bf404c1b071f]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.

The screenshot shows the AWS S3 console interface. On the left, there's a navigation sidebar with options like 'Amazon S3', 'Buckets', 'Access management and security', 'Storage management and insights', and 'Account and organization settings'. The main area is titled 'my-terraform-state-bucket-vijaya info'. It shows a table of objects with one entry:

Name	Type	Last modified	Size	Storage class
terraform.tfstate	tfstate	January 27, 2026, 14:24:51 (UTC+01:00)	181.0 B	Standard

Screenshot of the AWS DynamoDB console showing the table details for 'terraform-state-lock-vijaya'.

General Information:

- Partition key: LockID (String)
- Sort key: -
- Capacity mode: On-demand
- Table status: Active
- Table size: 0 bytes

Additional Info:

- Point-in-time recovery (PITR): Off
- Item count: 0
- Resource-based policy: Not active

Amazon Resource Name (ARN): arnaws:dynamodb:eu-west-1:1686699774218:table/terraform-state-lock-vijaya

Screenshot of the AWS DynamoDB console showing the table configuration for 'terraform-state-lock-vijaya'.

Warm throughput:

Name	Status	Type	Read units per second	Write operations per second
terraform-state-lock-vijaya	Active	Table	12,000	4,000

Deletion protection: Off

Time to Live (TTL):

Encryption:

Provides enhanced security by encrypting all your data at rest using encryption keys stored in AWS Key Management Service.

Key management: AWS owned key

Screenshot of the AWS EC2 console showing the instance summary for 'i-02542bf404c1b071f'.

Instance summary: i-02542bf404c1b071f (Terraform-Managed-Instance-vijaya)

Instance Details:

- Public IPv4 address: 54.247.30.217
- Instance state: Running
- Private IP DNS name (IPv4 only): ip-172-51-38-148.eu-west-1.compute.internal
- Instance type: t2.micro
- VPC ID: vpc-0df92408ce1504f65
- Subnet ID: subnet-0d9b489c27e18f759
- Instance ARN: arn:aws:ec2:eu-west-1:1686699774218:instance/i-02542bf404c1b071f

Networking:

- Private IPv4 addresses: 172.31.38.148
- Public DNS: ec2-54-247-30-217.eu-west-1.compute.amazonaws.com
- Elastic IP addresses: -
- AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more
- Auto Scaling Group name: -
- Managed: false