

LAB | Building and Using Custom Terraform Modules

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,  
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":  
10: resource "aws_s3_bucket" "payroll_docs" {
```

vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform\$

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,  
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":  
10: resource "aws_s3_bucket" "payroll_docs" {
```

vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform\$

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,  
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":  
10: resource "aws_s3_bucket" "payroll_docs" {
```

vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform\$

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,  
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

```
10: resource "aws_s3_bucket" "payroll_docs" {
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

```
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

```
10: resource "aws_s3_bucket" "payroll_docs" {
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

```
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

```
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

```
10: resource "aws_s3_bucket" "payroll_docs" {
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

```
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

previous request to create the named bucket succeeded and you already own it.

previous request to create the named bucket succeeded and you already own it.

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

previous request to create the named bucket succeeded and you already own it.

```
with module.payroll.aws_s3_bucket.payroll_docs,
```

```
on modules/payroll/main.tf line 10, in resource "aws_s3_bucket" "payroll_docs":
```

```
10: resource "aws_s3_bucket" "payroll_docs" {
```

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform apply -auto-approve
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
```

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:

```
# module.payroll.aws_s3_bucket.payroll_docs will be created
+ resource "aws_s3_bucket" "payroll_docs" {
    + acceleration_status      = (known after apply)
    + acl                      = (known after apply)
    + arn                      = (known after apply)
    + bucket                   = "my-terraform-state-bucket-payroll-vijaya"
    + bucket_domain_name       = (known after apply)
    + bucket_prefix            = (known after apply)
    + bucket_region             = (known after apply)
    + bucketRegionalDomainName = (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                   = "eu-west-1"
    + request_payer            = (known after apply)
    + tags_all                 = (known after apply)
    + website_domain           = (known after apply)
    + website_endpoint          = (known after apply)

    + cors_rule (known after apply)

    + grant (known after apply)

    + lifecycle_rule (known after apply)

    + logging (known after apply)

    + object_lock_configuration (known after apply)

    + object_lock_configuration (known after apply)
    + object_lock_configuration (known after apply)
```

```
+ replication_configuration (known after apply)
+ replication_configuration (known after apply)

+ replication_configuration (known after apply)

+ server_side_encryption_configuration (known after apply)

+ versioning (known after apply)

+ website (known after apply)
}
```

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

```
module.payroll.aws_s3_bucket.payroll_docs: Creating...
module.payroll.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-vijaya]
```

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

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform init
Initializing the backend...
Initializing modules...
- payroll_europe in modules/payroll
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v6.28.0
```

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-FP4OP26:~/terra_course/terraform$ terraform plan
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
module.payroll.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-vijaya]
```

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:

```
# module.payroll_europe.aws_dynamodb_table.payroll_db will be created
+ resource "aws_dynamodb_table" "payroll_db" {
    + arn          = (known after apply)
    + billing_mode = "PAY_PER_REQUEST"
    + hash_key     = "EmployeeID"
    + id           = (known after apply)
    + name         = "PayrollDB-eu-west-2-vijaya"
    + read_capacity = (known after apply)
    + region       = "eu-west-2"
    + stream_arn   = (known after apply)
    + stream_label  = (known after apply)
    + stream_view_type = (known after apply)
    + tags_all     = (known after apply)
    + write_capacity = (known after apply)

    + attribute {
        + name = "EmployeeID"
        + type = "S"
    }

    + global_secondary_index (known after apply)

    + global_table_witness (known after apply)

    + point_in_time_recovery (known after apply)

    + server_side_encryption (known after apply)

    + ttl (known after apply)

    + warm_throughput (known after apply)
}

# module.payroll_europe.aws_instance.payroll_server will be created
+ resource "aws_instance" "payroll_server" {
    + ami          = "ami-0737d2d50c7fece1b"
    + 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_ip                      = (known after apply)
+ region                        = "eu-west-2"
+ 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" = "Payroll-Server"
}
+ tags_all                      = {
  + "Name" = "Payroll-Server"
}
+ 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)
}

# module.payroll_europe.aws_s3_bucket.payroll_docs will be created
+ resource "aws_s3_bucket" "payroll_docs" {
    + acceleration_status      = (known after apply)
    + acl                      = (known after apply)
    + arn                      = (known after apply)
    + bucket                   = "my-terraform-state-bucket-payroll-eu-west-2-vijaya"
    + bucket_domain_name       = (known after apply)
    + bucket_prefix            = (known after apply)
    + bucket_region             = (known after apply)
    + bucketRegionalDomainName = (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                   = "eu-west-2"
    + request_payer             = (known after apply)
    + tags_all                 = (known after apply)
```

```
+ website_domain          = (known after apply)
+ website_endpoint        = (known after apply)

+ cors_rule (known after apply)

+ grant (known after apply)

+ lifecycle_rule (known after apply)

+ logging (known after apply)

+ object_lock_configuration (known after apply)

+ replication_configuration (known after apply)

+ server_side_encryption_configuration (known after apply)

+ versioning (known after apply)

+ website (known after apply)
}
```

Plan: 3 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform apply -auto-approve
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
```

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:

```
# module.payroll_europe.aws_dynamodb_table.payroll_db will be created
+ resource "aws_dynamodb_table" "payroll_db" {
```

```

+ arn          = (known after apply)
+ billing_mode = "PAY_PER_REQUEST"
+ hash_key     = "EmployeeID"
+ id           = (known after apply)
+ name         = "PayrollIDB-eu-west-2-vijaya"
+ read_capacity = (known after apply)
+ region       = "eu-west-2"
+ stream_arn   = (known after apply)
+ stream_label = (known after apply)
+ stream_view_type = (known after apply)
+ tags_all     = (known after apply)
+ write_capacity = (known after apply)

+ attribute {
    + name = "EmployeeID"
    + type = "S"
}

+ global_secondary_index (known after apply)

+ global_table_witness (known after apply)

+ point_in_time_recovery (known after apply)

+ server_side_encryption (known after apply)

+ ttl (known after apply)

+ warm_throughput (known after apply)
}

# module.payroll_europe.aws_instance.payroll_server will be created
+ resource "aws_instance" "payroll_server" {
    + ami          = "ami-0737d2d50c7fece1b"
    + 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_ip                   = (known after apply)
+ region                      = "eu-west-2"
+ 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" = "Payroll-Server"
}
+ tags_all                     = {
  + "Name" = "Payroll-Server"
}
+ 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)
}

# module.payroll_europe.aws_s3_bucket.payroll_docs will be created
+ resource "aws_s3_bucket" "payroll_docs" {
    + acceleration_status      = (known after apply)
    + acl                      = (known after apply)
    + arn                      = (known after apply)
    + bucket                   = "my-terraform-state-bucket-payroll-eu-west-2-vijaya"
    + bucket_domain_name       = (known after apply)
    + bucket_prefix            = (known after apply)
    + bucket_region             = (known after apply)
    + bucketRegionalDomainName = (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                   = "eu-west-2"
    + request_payer             = (known after apply)
    + tags_all                 = (known after apply)
    + website_domain            = (known after apply)
    + website_endpoint          = (known after apply)

    + cors_rule (known after apply)

    + grant (known after apply)
```

```
+ lifecycle_rule (known after apply)

+ logging (known after apply)

+ object_lock_configuration (known after apply)

+ replication_configuration (known after apply)

+ server_side_encryption_configuration (known after apply)

+ versioning (known after apply)

+ website (known after apply)
}
```

Plan: 3 to add, 0 to change, 0 to destroy.

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Creating...
module.payroll_europe.aws_instance.payroll_server: Creating...
module.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
```

Plan: 3 to add, 0 to change, 0 to destroy.

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Creating...
module.payroll_europe.aws_instance.payroll_server: Creating...
module.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollDB-eu-we]
Plan: 3 to add, 0 to change, 0 to destroy.
module.payroll_europe.aws_s3_bucket.payroll_docs: Creating...
module.payroll_europe.aws_instance.payroll_server: Creating...
module.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollDB-eu-wemodule.payroll_europe.aws_instance.payroll_server: Creating...
module.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-wemodule.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-wemodule.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete
after 1s [id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-webucket-payroll-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-wemodule.payroll_europe.aws_dynamodb_table.payroll_db: Still creating...
[00m09s elapsed]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-west-2-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 10s
[id=PayrollIDB-eu-west-2-vijaya]
st-2-vijaya]
```

```
| Error: creating EC2 Instance: operation error EC2: RunInstances, https response error
StatusCode: 400, RequestID: d865c413-8f86-44eb-bbec-da0cc5fda066, api error
VPCIdNotSpecified: No default VPC for this user. GroupName is only supported for EC2-Classic
and default VPC.
```

```
|   with module.payroll_europe.aws_instance.payroll_server,
|   on modules/payroll/main.tf line 1, in resource "aws_instance" "payroll_server":
|     1: resource "aws_instance" "payroll_server" {
```

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform plan
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll_europe.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Refreshing state...
[id=PayrollIDB-eu-west-2-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
```

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:

```
# module.payroll_europe.aws_instance.payroll_server will be created
+ resource "aws_instance" "payroll_server" {
    + ami                  = "ami-018ff7ece22bf96db"
    + 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_ip                   = (known after apply)
    + region                     = "eu-west-2"
    + 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" = "Payroll-Server"  
}  
+ tags_all      = {  
+   "Name" = "Payroll-Server"  
}  
+ 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.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform\$ terraform apply -auto-approve

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Refreshing state...
[id=PayrollIDB-eu-west-2-vijaya]
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll_europe.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
```

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:

```
# module.payroll_europe.aws_instance.payroll_server will be created
+ resource "aws_instance" "payroll_server" {
    + ami                  = "ami-018ff7ece22bf96db"
    + 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_ip                      = (known after apply)
+ region                        = "eu-west-2"
+ 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" = "Payroll-Server"
}
+ tags_all                       = {
    + "Name" = "Payroll-Server"
}
+ 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.

module.payroll_europe.aws_instance.payroll_server: Creating...

```
| Error: creating EC2 Instance: operation error EC2: RunInstances, https response error
StatusCode: 400, RequestID: 9a2a5623-7eee-4192-a290-7b8a9b61a0c8, api error
VPCIdNotSpecified: No default VPC for this user. GroupName is only supported for EC2-Classic
and default VPC.

| with module.payroll_europe.aws_instance.payroll_server,
on modules/payroll/main.tf line 1, in resource "aws_instance" "payroll_server":
1: resource "aws_instance" "payroll_server" {
```

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform apply -auto-approve
module.payroll.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-vijaya]
module.payroll.aws_dynamodb_table.payroll_db: Refreshing state... [id=PayrollIDB-vijaya]
module.payroll_europe.aws_dynamodb_table.payroll_db: Refreshing state...
[id=PayrollIDB-eu-west-2-vijaya]
module.payroll_europe.aws_s3_bucket.payroll_docs: Refreshing state...
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
module.payroll.aws_instance.payroll_server: Refreshing state... [id=i-0961cae5ad4a872d7]
```

Terraform used the selected providers to generate the following execution plan. Resource actions

are indicated with the following symbols:

- + create
- /+ destroy and then create replacement

Terraform will perform the following actions:

```
# module.payroll_europe.aws_dynamodb_table.payroll_db must be replaced
-/+ resource "aws_dynamodb_table" "payroll_db" {
    ~ arn          =
    "arn:aws:dynamodb:eu-west-2:686699774218:table/PayrollIDB-eu-west-2-vijaya" -> (known after
apply)
    - deletion_protection_enabled = false -> null
    ~ id           =
    "PayrollIDB-eu-west-2-vijaya" -> (known after apply)
    ~ name         =
    "PayrollIDB-eu-west-2-vijaya" -> "PayrollIDB-eu-central-1-vijaya" #
forces replacement
```

```

~ read_capacity          = 0 -> (known after apply)
~ region                = "eu-west-2" -> "eu-central-1"
+ stream_arn             = (known after apply)
- stream_enabled         = false -> null
+ stream_label            = (known after apply)
+ stream_view_type        = (known after apply)
- table_class             = "STANDARD" -> null
- tags                   = {} -> null
~ tags_all               = {} -> (known after apply)
~ write_capacity          = 0 -> (known after apply)
# (2 unchanged attributes hidden)

~ global_secondary_index (known after apply)

~ global_table_witness (known after apply)

~ point_in_time_recovery (known after apply)
- point_in_time_recovery {
    - enabled           = false -> null
    - recovery_period_in_days = 0 -> null
}

~ server_side_encryption (known after apply)

~ ttl (known after apply)
- ttl {
    - enabled           = false -> null
    # (1 unchanged attribute hidden)
}

~ warm_throughput (known after apply)

# (1 unchanged block hidden)
}

# module.payroll_europe.aws_instance.payroll_server will be created
+ resource "aws_instance" "payroll_server" {
    + ami                  = "ami-0191d47ba10441f0b"
    + 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_ip                      = (known after apply)
+ region                        = "eu-central-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" = "Payroll-Server"
}
+ tags_all                      = {
  + "Name" = "Payroll-Server"
}
+ 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)
}

# module.payroll_europe.aws_s3_bucket.payroll_docs must be replaced
-/+ resource "aws_s3_bucket" "payroll_docs" {
    + acceleration_status      = (known after apply)
    + acl                      = (known after apply)
    ~ arn                      = "arn:aws:s3:::my-terraform-state-bucket-payroll-eu-west-2-vijaya" ->
(known after apply)
    ~ bucket                   = "my-terraform-state-bucket-payroll-eu-west-2-vijaya" ->
"my-terraform-state-bucket-payroll-eu-central-1-vijaya" # forces replacement
    ~ bucket_domain_name       =
"my-terraform-state-bucket-payroll-eu-west-2-vijaya.s3.amazonaws.com" -> (known after apply)
    + bucket_prefix            = (known after apply)
    ~ bucket_region             = "eu-west-2" -> (known after apply)
    ~ bucketRegionalDomainName =
"my-terraform-state-bucket-payroll-eu-west-2-vijaya.s3.eu-west-2.amazonaws.com" -> (known after apply)
    ~ hosted_zone_id           = "Z3GKZC51ZF0DB4" -> (known after apply)
    ~ id                       = "my-terraform-state-bucket-payroll-eu-west-2-vijaya" -> (known after apply)
    ~ object_lock_enabled       = false -> (known after apply)
    + policy                   = (known after apply)
    ~ region                   = "eu-west-2" -> "eu-central-1"
```

```
~ request_payer          = "BucketOwner" -> (known after apply)
- tags                  = {} -> null
~ tags_all              = {} -> (known after apply)
+ website_domain        = (known after apply)
+ website_endpoint      = (known after apply)
# (1 unchanged attribute hidden)

~ cors_rule (known after apply)

~ grant (known after apply)
- grant {
  - id      =
  - permissions = [
    - "FULL_CONTROL",
    ] -> null
  - type     = "CanonicalUser" -> null
  # (1 unchanged attribute hidden)
}

"2c8449331015d6389db9f90b3655ee636ecfcbb3e34b0675383dafa76272a6d4" -> null

~ lifecycle_rule (known after apply)

~ logging (known after apply)

~ object_lock_configuration (known after apply)

~ replication_configuration (known after apply)

~ server_side_encryption_configuration (known after apply)
- server_side_encryption_configuration {
  - rule {
    - bucket_key_enabled = false -> null

    - apply_server_side_encryption_by_default {
      - sse_algorithm   = "AES256" -> null
      # (1 unchanged attribute hidden)
    }
  }
}

~ versioning (known after apply)
- versioning {
  - enabled   = false -> null
  - mfa_delete = false -> null
```

```
}
```

```
~ website (known after apply)
```

```
}
```

Plan: 3 to add, 0 to change, 2 to destroy.

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Destroying...
```

```
[id=my-terraform-state-bucket-payroll-eu-west-2-vijaya]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Destroying...
```

```
[id=PayrollIDB-eu-west-2-vijaya]
```

```
module.payroll_europe.aws_instance.payroll_server: Creating...
```

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Destruction complete after 1s
```

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Creating...
```

```
module.payroll_europe.aws_s3_bucket.payroll_docs: Creation complete after 1s
```

```
[id=my-terraform-state-bucket-payroll-eu-central-1-vijaya]
```

```
module.payroll_europe.aws_instance.payroll_server: Still creating... [00m09s elapsed]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Still destroying...
```

```
[id=PayrollIDB-eu-west-2-vijaya, 00m09s elapsed]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Destruction complete after 12s
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Creating...
```

```
module.payroll_europe.aws_instance.payroll_server: Still creating... [00m18s elapsed]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Still creating... [00m09s elapsed]
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db: Creation complete after 11s
```

```
[id=PayrollIDB-eu-central-1-vijaya]
```

```
module.payroll_europe.aws_instance.payroll_server: Still creating... [00m28s elapsed]
```

```
module.payroll_europe.aws_instance.payroll_server: Creation complete after 30s
```

```
[id=i-08a66b97a266fea5b]
```

Apply complete! Resources: 3 added, 0 changed, 2 destroyed.

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$ terraform state list
```

```
module.payroll.aws_dynamodb_table.payroll_db
```

```
module.payroll.aws_instance.payroll_server
```

```
module.payroll.aws_s3_bucket.payroll_docs
```

```
module.payroll_europe.aws_dynamodb_table.payroll_db
```

```
module.payroll_europe.aws_instance.payroll_server
```

```
module.payroll_europe.aws_s3_bucket.payroll_docs
```

```
vijayagagla@DESKTOP-FP4OP26:~/terra_course/terraform$
```

Region- Europe(Ireland) - eu-west-1

EC2 > Instances > i-0961cae5ad4a872d7

Instance summary for i-0961cae5ad4a872d7 (Payroll-Server)

Updated less than a minute ago	Public IPv4 address 54.77.212.64 open address	Private IPv4 addresses 172.31.46.12
Instance ID i-0961cae5ad4a872d7	Instance state Running	Public DNS ec2-54-77-212-64.eu-west-1.compute.amazonaws.com open address
IPv6 address -	Private IP DNS name (IPv4 only) ip-172-31-46-12.eu-west-1.compute.internal	Elastic IP addresses -
Hostname type IP name: ip-172-31-46-12.eu-west-1.compute.internal	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations.
Answer private resource DNS name -	VPC ID vpc-0df92408ce1504f65	Auto Scaling Group name -
Auto-assigned IP address 54.77.212.64 [Public IP]	Subnet ID subnet-0d9b489c27e18f759	Managed false
IAM role -	Instance ARN arn:aws:ec2:eu-west-1:686699774218:instance/i-0961cae5ad4a872d7	
IMDSv2 Required		
Operator -		

Amazon S3 > Buckets > my-terraform-state-bucket-payroll-vijaya

my-terraform-state-bucket-payroll-vijaya

Objects	Metadata	Properties	Permissions	Metrics	Management	Access Points															
Objects (0)	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																					
<input type="text" value="Find objects by prefix"/> < 1 > ⚙ <table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Last modified</th> <th>Size</th> <th>Storage class</th> </tr> </thead> <tbody> <tr> <td colspan="5">No objects You don't have any objects in this bucket.</td> </tr> <tr> <td colspan="5">Upload</td> </tr> </tbody></table>							Name	Type	Last modified	Size	Storage class	No objects You don't have any objects in this bucket.					Upload				
Name	Type	Last modified	Size	Storage class																	
No objects You don't have any objects in this bucket.																					
Upload																					

Screenshot of the AWS DynamoDB console showing the 'PayrollDB-vijaya' table details.

Left Sidebar:

- DynamoDB
- Tables
- Explore items
- PartiQL editor
- Backups
- Exports to S3
- Imports from S3
- Integrations
- Reserved capacity
- Settings
- DAX
- Clusters
- Subnet groups
- Parameter groups
- Events

Table Details:

General Information:

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

Point-in-time recovery (PITR): No active alarms

Average item size: 0 bytes

Resource-based policy: Not active

Amazon Resource Name (ARN): arn:aws:dynamodb:eu-west-1:686699774218:table/PayrollDB-vijaya

Region- Europe(Frankfurt) - eu-central-1

Screenshot of the AWS EC2 Instances console showing the instance summary for i-08a66b97a266fea5b.

Left Sidebar:

- EC2
- Dashboard
- AWS Global View
- Events
- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations
- Capacity Manager
- Images
- AMIs
- AMI Catalog
- Elastic Block Store

Instance Summary: Updated less than a minute ago

Instance ID: i-08a66b97a266fea5b

IPv6 address: -

Hostname type: IP name: ip-172-31-32-43.eu-central-1.compute.internal

Answer private resource DNS name: -

Auto-assigned IP address: 35.159.23.92 [Public IP]

IAM role: -

IMDSv2: Required

Public IPv4 address: 35.159.23.92 | open address

Instance state: Running

Private IP DNS name (IPv4 only): ip-172-31-32-43.eu-central-1.compute.internal

Instance type: t2.micro

VPC ID: vpc-0fee5b5c96aca16b3

Subnet ID: subnet-02523a522f2712083

Instance ARN: arn:aws:ec2:eu-central-1:686699774218:instance/i-08a66b97a266fea5b

Private IPv4 addresses: 172.31.32.43

Public DNS: ec2-35-159-23-92.eu-central-1.compute.amazonaws.com | open address

Elastic IP addresses: -

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name: -

Managed: false

Amazon S3

Objects (0) Actions Create folder Upload

No objects

Upload

Find objects by prefix

Name Type Last modified Size Storage class

Account and organization settings

my-terraform-state-bucket-payroll-eu-central-1-vijaya

Objects

Metadata Properties Permissions Metrics Management Access Points

Buckets General purpose buckets Directory buckets Table buckets Vector buckets

Access management and security Access Points Access Points for FSx Access Grants IAM Access Analyzer

Storage management and insights Storage Lens Batch Operations

Amazon ID: 6866-9977-4218 Account ID: 6866-9977-4218 Europe (Frankfurt) vijayagagla

DynamoDB

Tables Explore items PartiQL editor Backups Exports to S3 Imports from S3 Integrations Reserved capacity Settings

Explore items

Autopreview View table details

Scan or query items Scan Query

Select a table or index Table - PayrollDB-eu-central-1-vijaya Select attribute projection All attributes

Filters - optional

Attribute name Condition Type Value

Enter attribute Equal to String Enter attribute val Remove

Add filter Run Reset

Completed - Items returned: 0 - Items scanned: 0 - Efficiency: 100% - RCU consumed: 2

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

PayrollDB-eu-central-1-vijaya

Tables (7)

Filter by tag Any tag key Filter by tag value Any tag value

Find tables

PayrollDB-eu-central-1-vijaya rimo-payroll-db-1 rimo-payroll-db-2 rimo-terraform-state-lock terraform-state-lock-fotios terraform-state-lock-

Autopreview View table details

Scan or query items Scan Query

Select a table or index Table - PayrollDB-eu-central-1-vijaya Select attribute projection All attributes

Filters - optional

Attribute name Condition Type Value

Enter attribute Equal to String Enter attribute val Remove

Add filter Run Reset

Completed - Items returned: 0 - Items scanned: 0 - Efficiency: 100% - RCU consumed: 2

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences