

Images of terraform code application and resources running on GCP

VPC CREATION:

```
christianchulou@Christians-MacBook-Pro-2 gcp-vpc % terraform init && terraform plan && terraform apply
Initializing modules...

Initializing the backend...

Initializing provider plugins...
- Reusing previous version of hashicorp/google from the dependency lock file
- Using previously-installed hashicorp/google v5.15.0

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.
module.vpc.google_compute_network.vpc: Refreshing state... [id-projects/devops-rms/global/networks/rms-vpc]
module.subnets.google_compute_subnetwork.public_subnet: Refreshing state... [id-projects/devops-rms/regions/us-central1/subnetworks/rms-public-subnet]
module.subnets.google_compute_subnetwork.private_subnet: Refreshing state... [id-projects/devops-rms/regions/us-central1/subnetworks/rms-private-subnet]
module.firewall.google_compute_firewall.allow_external: Refreshing state... [id-projects/devops-rms/global/firewalls/allow-external]
module.firewall.google_compute_firewall.allow_internal: Refreshing state... [id-projects/devops-rms/global/firewalls/allow-internal]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.
module.vpc.google_compute_network.vpc: Refreshing state... [id-projects/devops-rms/global/networks/rms-vpc]
module.firewall.google_compute_firewall.allow_external: Refreshing state... [id-projects/devops-rms/global/firewalls/allow-external]
module.firewall.google_compute_firewall.allow_internal: Refreshing state... [id-projects/devops-rms/global/firewalls/allow-internal]
module.subnets.google_compute_subnetwork.private_subnet: Refreshing state... [id-projects/devops-rms/regions/us-central1/subnetworks/rms-private-subnet]
module.subnets.google_compute_subnetwork.public_subnet: Refreshing state... [id-projects/devops-rms/regions/us-central1/subnetworks/rms-public-subnet]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.

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

Outputs:
firewall_external_id = "projects/devops-rms/global/firewalls/allow-external"
firewall_internal_id = "projects/devops-rms/global/firewalls/allow-internal"
private_subnet_id = "projects/devops-rms/regions/us-central1/subnetworks/rms-private-subnet"
public_subnet_id = "projects/devops-rms/regions/us-central1/subnetworks/rms-public-subnet"
vpc_id = "projects/devops-rms/global/networks/rms-vpc"
```

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Google Cloud

devops-rms

vpc

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VPC network

VPC networks

CREATE VPC NETWORK

REFRESH

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Bring your own IP

Firewall

Routes

VPC network peering

Shared VPC

Serverless VPC access

Packet mirroring

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SMTP port 25 disallowed in this project. [Learn more](#)

VPC networks

Filter Enter property name or value

Name	Subnets	MTU	Mode	Internal IP ranges	Gateways	Firewall rules	Global dynamic routing
default	42	1460	Auto			4	Off
ms-vpc	3	1460	Custom			2	Off

←

VPC network details

DELETE VPC NETWORK

rns-vpc

OVERVIEW

SUBNETS

STATIC INTERNAL IP ADDRESSES

FIREWALLS

FIREWALL ENDPOINTS

ROUTES

VPC NETWORK PEERING

Subnets

ADD SUBNET

FLOW LOGS

Filter

Enter property name or value

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<input type="checkbox"/>	Name ↑	Region	Stack Type	Internal IP ranges	External IP ranges	Secondary IPv4 ranges	Gateway	Private
<input type="checkbox"/>	rns-private-subnet	us-central1	IPv4	10.0.2.0/24	None	None	10.0.2.1	On
<input type="checkbox"/>	rns-public-subnet	us-central1	IPv4	10.0.1.0/24	None	None	10.0.1.1	Off

DATABASE CREATION:

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

Initializing provider plugins...
- terraform.io/builtin/terraform is built in to Terraform
- Reusing previously-installed hashicorp/google v5.15.0
- Using previously-installed hashicorp/google v5.15.0

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.
data.terraform_remote_state.vpc: Reading...
data.terraform_remote_state.vpc: Read complete after 0s
module.database.google_compute_global_address.private_ip_address: Refreshing state... [id=projects/devops-ms/global/addresses/database-private-ip]
module.database.google_service_networking_connection.private_vpc_connection: Refreshing state... [id=projects%2Fdevops-ms%2Fglobal%2Fnetworks%2Frns-vpc:serviceNetworking.googleapis.com]
module.database.google_sql_database_instance.db_instance: Refreshing state... [id=rns-db]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.
data.terraform_remote_state.vpc: Reading...
data.terraform_remote_state.vpc: Read complete after 0s
module.database.google_compute_global_address.private_ip_address: Refreshing state... [id=projects/devops-ms/global/addresses/database-private-ip]
module.database.google_service_networking_connection.private_vpc_connection: Refreshing state... [id=projects%2Fdevops-ms%2Fglobal%2Fnetworks%2Frns-vpc:serviceNetworking.googleapis.com]
module.database.google_sql_database_instance.db_instance: Refreshing state... [id=rns-db]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.

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

Outputs:
db_instance_id = "rns-db"
```

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console.cloud.google.com/sql/instances?project=devops-ms

☆

Finish update

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devops-ms

sql

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SQL

Instances

CREATE INSTANCE

MIGRATE DATA

SHOW INFO PANEL

Filter

Enter property name or value

?

⋮

<input type="checkbox"/>	Instance ID ↑	Cloud SQL edition	Type	Public IP address	Private IP address	Instance connection name	High availability	Location	Storage used	Labels	Actions
<input type="checkbox"/>	rns-db	Enterprise	PostgreSQL 12	34.66.151.197		devops-ms-us-central1-rns-db	ENABLE	us-central1-c	49 MB of 10 GB		

CREATE CLOUD RUN AND LOADBALANCER:

```
load_balancer_ip = "34.98.125.202"
service_url = "https://rns-service-ghtmekoyta-uc.a.run.app"
```

```
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
~ update in-place

Terraform will perform the following actions:

# google_cloud_run_service.cloud_run_service will be updated in-place
~ resource "google_cloud_run_service" "cloud_run_service" {
  id          = "locations/us-central1/namespaces/devops-rms/services/rms-service"
  name       = "rms-service"
  # (4 unchanged attributes hidden)

  ~ template {
    ~ metadata {
      ~ annotations = {
        + "run.googleapis.com/allow-unauthenticated" = "true"
        + "run.googleapis.com/ingress"              = "all"
        # (1 unchanged element hidden)
      }
    }
    # (2 unchanged attributes hidden)
  }
  # (1 unchanged block hidden)
}
# (2 unchanged blocks hidden)

Plan: 0 to add, 1 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

google_cloud_run_service.cloud_run_service: Modifying... [id=locations/us-central1/namespaces/devops-rms/services/rms-service]
google_cloud_run_service.cloud_run_service: Modifications complete after 1s [id=locations/us-central1/namespaces/devops-rms/services/rms-service]

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

Outputs:
load_balancer_ip = "34.98.125.202"
service_url      = "https://rms-service-ghmekoyta-uc.a.run.app"
```

