

Homework_Lesson_37

Задание:

1. Создать конфигурацию для GCP Storage. Добавить модуль, который будет отвечать за доп. параметры бакета (имя, размер, файлы для загрузки)
2. Используйте созданный модуль в основной конфигурации для развертывания инфраструктуры.
3. Настройте удаленное хранение tfstate в Terraform, используя GCP Storage в связке с CloudSQL
4. Перенесите свою существующую инфраструктуру на удаленное хранение стейта.
5. Создать в ручном режиме любой ресурс (лучше всего бакет либо VM) и импортируйте его в свою конфигурацию.

Создадим бакет для хранения состояния Terraform (tfstate) и добавим создание Cloud SQL экземпляра

```
gcpa4607@tms:~/HW37$ terraform apply
```

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:

google_sql_database.appdb will be created

```
+ resource "google_sql_database" "appdb" {
  + charset      = (known after apply)
  + collation    = (known after apply)
  + deletion_policy = "DELETE"
  + id          = (known after apply)
  + instance     = "tf-cloudsql-db"
  + name        = "appdb"
  + project      = (known after apply)
  + self_link    = (known after apply)
}
```

google_sql_database_instance.db will be created

```
+ resource "google_sql_database_instance" "db" {
  + available_maintenance_versions = (known after apply)
  + connection_name                = (known after apply)
  + database_version                = "POSTGRES_15"
  + deletion_protection             = true
  + dns_name                       = (known after apply)
  + encryption_key_name             = (known after apply)
  + first_ip_address                = (known after apply)
  + id                             = (known after apply)
  + instance_type                   = (known after apply)
  + ip_address                     = (known after apply)
  + maintenance_version             = (known after apply)
  + master_instance_name            = (known after apply)
  + name                           = "tf-cloudsql-db"
  + private_ip_address              = (known after apply)
  + project                        = (known after apply)
  + psc_service_attachment_link     = (known after apply)
  + public_ip_address               = (known after apply)
  + region                         = "europe-north1"
  + self_link                      = (known after apply)
  + server_ca_cert                  = (known after apply)
  + service_account_email_address = (known after apply)
```

```
+ replica_configuration (known after apply)
```

```

+ settings {
  + activation_policy    = "ALWAYS"
  + availability_type    = "ZONAL"
  + connector_enforcement = (known after apply)
  + disk_autoresize     = true
  + disk_autoresize_limit = 0
  + disk_size           = (known after apply)
  + disk_type           = "PD_SSD"
  + pricing_plan        = "PER_USE"
  + tier                 = "db-f1-micro"
  + user_labels         = (known after apply)
  + version             = (known after apply)

  + backup_configuration (known after apply)

  + ip_configuration (known after apply)

  + location_preference (known after apply)
}
}

# google_sql_user.usersvc will be created
+ resource "google_sql_user" "usersvc" {
  + host          = (known after apply)
  + id            = (known after apply)
  + instance      = "tf-cloudsql-db"
  + name          = "appuser"
  + password      = (sensitive value)
  + project       = (known after apply)
  + sql_server_user_details = (known after apply)
}

# module.app_bucket.google_storage_bucket.bucket will be created
+ resource "google_storage_bucket" "bucket" {
  + force_destroy      = true
  + id                 = (known after apply)
  + labels             = (known after apply)
  + location           = "EUROPE-NORTH1"
  + name              = "my-unique-app-bucket-1234"
  + project            = (known after apply)
  + public_access_prevention = (known after apply)
  + self_link          = (known after apply)
  + storage_class       = "STANDARD"
  + uniform_bucket_level_access = (known after apply)
  + url                = (known after apply)

  + soft_delete_policy (known after apply)

  + versioning (known after apply)

  + website (known after apply)
}

```

```
# module.app_bucket.google_storage_bucket_object.initial["welcome.txt"] will be created
+ resource "google_storage_bucket_object" "initial" {
  + bucket      = "my-unique-app-bucket-1234"
  + content     = (sensitive value)
  + content_type = (known after apply)
  + crc32c      = (known after apply)
  + detect_md5hash = "different hash"
  + id          = (known after apply)
  + kms_key_name = (known after apply)
  + md5hash     = (known after apply)
  + media_link  = (known after apply)
  + name       = "welcome.txt"
  + output_name = (known after apply)
  + self_link   = (known after apply)
  + source      = "welcome.txt"
  + storage_class = (known after apply)
}
```

Plan: 5 to add, 0 to change, 0 to destroy.

```
module.app_bucket.google_storage_bucket.bucket: Creating...
google_sql_database_instance.db: Creating...
module.app_bucket.google_storage_bucket.bucket: Creation complete after 2s [id=my-unique-app-bucket-1234]
module.app_bucket.google_storage_bucket_object.initial["welcome.txt"]: Creating...
module.app_bucket.google_storage_bucket_object.initial["welcome.txt"]: Creation complete after 0s [id=my-unique-app-bucket-1234-welcome.txt]
google_sql_database_instance.db: Still creating... [10s elapsed]
```

```
Apply complete! Resources: 5 added, 0 changed, 0 destroyed.

Outputs:

bucket_name = "my-unique-app-bucket-1234"
bucket_url  = "gs://my-unique-app-bucket-1234"
db_connection_name = "turnkey-realm-450613-c7:europa-north1:tf-cloudsql-db"
gcpa4607@tms:~/HW37$
```

SQL

Instances

Backups

CREATE INSTANCE

MIGRATE DATABASE

SHOW INFO PANEL

Starting Feb 1, 2025, all instances running community end-of-life versions of PostgreSQL and MySQL are under extended support. These instances will be charged for extended support from May 1 2025. Upgrade your instances running end-of-life versions before May 1, 2025 to prevent additional charges. [Learn more](#)

VIEW AFFECTED INSTANCES

DISMISS

Filter

Enter property name or value

Status

Instance ID

Issues

Cloud SQL edition

Type

Public IP address

Private IP address

Instance connection name

High availability

☒

tf-cloudsql-db

Enterprise

PostgreSQL 15

34.88.15.54

turnkey-realm-450613-...

ENABLE

Buckets

Create

Refresh

Go to

Filter

Filter buckets

<input type="checkbox"/>	Name ↑	Created	Location type	Location	Default storage class ?	Last modified
<input type="checkbox"/>	my-unique-app-bucket-1234	May 5, 2025, 1:44:11 PM	Region	europa-north1	Standard	May 5, 2025, 1:44:11 PM
<input type="checkbox"/>	terraform-state-your-id	May 5, 2025, 11:58:21 AM	Region	europa-north1	Standard	May 5, 2025, 11:58:21 AM

В процессе Terraform создал бакет и загрузил в него начальный welcome.txt