<https://learn.microsoft.com/en-us/azure/app-service/tutorial-python-postgresql-app?tabs=django%2Cwindows>

<https://github.com/aztfmods>

<https://learn.microsoft.com/en-us/azure/developer/terraform/create-resource-group?tabs=azure-cli>

<https://learn.microsoft.com/en-us/azure/app-service/provision-resource-terraform>

Database (New)

Username and password of the new database are generated automatically. To retrieve these values after the deployment, go to the App Settings section of the Configuration page.

Server name

msdocs-python-postgres-alg-server

Engine

PostgreSQL - Flexible Server

Region

UK South

Username

ioazrjzpus

Password

S0Z16011M45256V1$

**Vnet Integration**

[**https://docs.microsoft.com/en-us/azure/app-service/overview-vnet-integration**](https://docs.microsoft.com/en-us/azure/app-service/overview-vnet-integration)

**Postgres**

[**https://docs.microsoft.com/en-us/azure/postgresql/overview**](https://docs.microsoft.com/en-us/azure/postgresql/overview)

**App Service**

[**https://docs.microsoft.com/en-us/azure/app-service/overview**](https://docs.microsoft.com/en-us/azure/app-service/overview)

[**https://docs.microsoft.com/en-us/azure/app-service/environment/intro**](https://docs.microsoft.com/en-us/azure/app-service/environment/intro)

**App Service Plan**

[**https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans**](https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans)

**Key Vault**

[**https://docs.microsoft.com/en-us/azure/key-vault/general/overview**](https://docs.microsoft.com/en-us/azure/key-vault/general/overview)

[**https://docs.microsoft.com/en-us/azure/key-vault/general/basic-concepts**](https://docs.microsoft.com/en-us/azure/key-vault/general/basic-concepts)

**Private Traffic**

[**https://docs.microsoft.com/en-us/azure/architecture/example-scenario/private-web-app/private-web-app**](https://docs.microsoft.com/en-us/azure/architecture/example-scenario/private-web-app/private-web-app)

**DNS**

[**https://docs.microsoft.com/en-us/azure/app-service/web-sites-integrate-with-vnet#azure-dns-private-zones**](https://docs.microsoft.com/en-us/azure/app-service/web-sites-integrate-with-vnet#azure-dns-private-zones)

Graphical user interface, application

Description automatically generated

* VNET - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/virtual_network)
  + <name>-wa-vnet (eg – ciaran-wa-vnet) -
  + Subnets
    - webapp-subnet
      * 10.0.1.0/24
      * Subnet delegation to Microsoft.Web/serverFarms to allow vnet integration to the webapp
    - db-subnet
      * 10.0.2.0/24
      * Private link endpoint enabled to bring the PostgreSQL PaaS service into to the vnet using a private IP
    - kv-subnet
      * 10.0.3.0/24
      * Private link endpoint enabled to bring the Key Vault PaaS service into to the vnet using a private IP (We may not create an endpoint for KV yet but this allow for the possibility, so we we have the subnet in place)
* App Service Plan - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/data-sources/service_plan)
  + <name>-asp
  + Linux
  + Reserved
  + Size S1
* App Service (Web App) - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/linux_web_app)
  + <name>-wa
  + Vnet integration to the webapp-subnet
  + Leave the configuration for now until the rest of the environment has been built
* Key Vault - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/key_vault)
  + <name>-kv
  + Soft delete enabled for 7 days
  + Purge protection set to false
  + Sku set to standard
  + Random password – 16 chars
  + Secret for postgres server using the random password
* PostgreSQL
  + Server – [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/postgresql_server)
    - <name>-psql
    - Size GP\_Gen5\_2
    - Postgres version 11
    - 8GB
    - Backup retention 30 days
    - Geo-redundant backup disabled
    - Auto grow enabled
    - SSL enforcement enabled
  + Database - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/postgresql_database)
    - Charset - UTF8
    - Collation - English\_United States.1252
* Private DNS – [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/private_dns_zone)
  + DNS Zone
    - Name - "privatelink.postgres.database.azure.com"
  + DNS Network Link
    - DNS Zone & VNET
* Private Endpoint - [registry](https://registry.terraform.io/providers/hashicorp/azurerm/latest/docs/resources/private_endpoint)
  + <name>-psql-pe
  + Db-subnet
  + Private service connection to postgres server
  + Private dns zone group
    - Name - "privatelink-postgres-database-azure-com"