



GDataSystems - Version 0.1 (BETA)

Server Setup

A standard VPS server will be suitable to host the database, web server, and shiny server. Here are the instructions to setup the server on a UBUNTU operating system.

Configuring the GDataSystems server.

Installing PostgreSQL14

```
sudo apt install postgresql postgresql-client
```

Checking install

```
systemctl status postgresql.service
```

Replacing postgres user password (Optional)

```
sudo -u postgres psql
```

```
postgres=# \password postgres
```

```
postgres=# \q
```

Installing postgis 3

```
sudo sudo apt install gnupg2
```

```
sudo apt install postgis postgresql-14-postgis-3
```

Listening to all addresses -Remember to open port 5432

```
sudo nano /etc/postgresql/14/main/postgresql.conf
```

```
listen_addresses = '*'
```

Set Client authentication (adjust properly, below is an example to a very permissive configuration).

```
sudo nano /etc/postgresql/14/main/pg_hba.conf
```

```
# TYPE DATABASE USER ADDRESS METHOD
```

```
host all all 127.0.0.1/32 md5
```

Restarting PostgreSQL

```
systemctl restart postgresql.service
```

Installing Apache2 and R

```
sudo apt install apache2
```

```
sudo apt install r-base
```

```
sudo apt-get install libpq-dev
```

```
sudo apt-get install gdal-bin proj-bin libgdal-dev libproj-dev
```

Installing the necessary R packages

```
sudo R
```

```
install.packages('DT')
```

```
install.packages('rpostgis')
```

```
install.packages('rgdal')
```

```
install.packages('leaflet')
```

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```
install.packages('leaflet.extras')
install.packages('glue')
install.packages('ggplot2')
install.packages('shiny')
install.packages('shinymanager')
install.packages('dplyr')
install.packages('rmarkdown')
q()
```

Installing shiny

```
sudo apt-get install gdebi-core
wget https://download3.rstudio.org/ubuntu-18.04/x86_64/shiny-server-1.5.20.1002-amd64.deb
sudo gdebi shiny-server-1.5.20.1002-amd64.deb
```

Configuring shiny as a server

```
sudo a2enmod proxy
sudo a2enmod proxy_http
sudo a2enmod proxy_wstunnel
nano /etc/apache2/sites-enabled/000-default.conf
```

Add the following to the file at the end.

```
<Proxy /shiny/>
    Allow from localhost
</Proxy>
ProxyPreserveHost On
ProxyPass /shiny/ http://localhost:3838/
ProxyPassReverse /shiny/ http://localhost:3838/
DocumentRoot /var/www/html
```

Add the following lines to the file /etc/shiny-server/shiny-server.conf

```
disable_websockets true;
sanitize_errors off;disable_protocols xdr-streaming xhr-streaming iframe-eventsourcing iframe-
htmlfile;
```

Installing PHP

```
sudo apt -y install software-properties-common
sudo add-apt-repository ppa:ondrej/php
sudo apt-get update
sudo apt -y install php7.4
sudo apt-get install php7.4-pgsql
sudo apt install php7.4-mbstring
```

That's it! The server is now configured and ready to receive the mineral exploration database.