4DAlert
Modern Data Analytics Simplified.

BEAZLEY DOCUMENTATION

Connecting with your Virtual Machine using Windows Terminal

SSH Connection with VM (I.e. FDALERT) and '@' (IP Address of the VM)

```
PS C:\Users\gopal> ssh Beazley@20.36.129.108
The authenticity of host '20.36.129.108 (20.36.129.108)' can't be established.
ECDSA key fingerprint is SHA256:BpmEFGcOIcLTqDU45jIv+ekpCECjF1btjpf6OaeW58E.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '20.36.129.108' (ECDSA) to the list of known hosts.
Beazley@20.36.129.108's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1060-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

  System information as of Tue Apr 23 09:13:33 UTC 2024

  System load:  0.01             Processes:              113
  Usage of /:   5.0% of 28.89GB  Users logged in:        0
  Memory usage: 7%               IPv4 address for eth0:  10.0.0.4
  Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
```

sudo su

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Beazley@Beazley:~$ sudo su
```

sudo apt update

```
root@4DalertBeazleyDryrun:/home/Beazley# sudo apt update
Hit:1 http://azure.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:5 http://azure.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:6 http://azure.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2901 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu bionic-updates/main Translation-en [531 kB]
Get:11 http://azure.archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 Packages [1144 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu bionic-updates/restricted Translation-en [159 kB]
Get:13 http://azure.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1882 kB]
Get:14 http://azure.archive.ubuntu.com/ubuntu bionic-updates/universe Translation-en [410 kB]
Get:15 http://azure.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [25.6 kB]
Get:16 http://azure.archive.ubuntu.com/ubuntu bionic-updates/multiverse Translation-en [6088 B]
Get:17 http://azure.archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [53.3 kB]
Get:18 http://azure.archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [14.6 kB]
Get:19 http://azure.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [18.1 kB]
Get:20 http://azure.archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [8668 B]
Get:21 http://azure.archive.ubuntu.com/ubuntu bionic-security/main amd64 Packages [2569 kB]
Get:22 http://azure.archive.ubuntu.com/ubuntu bionic-security/main Translation-en [445 kB]
Get:23 http://azure.archive.ubuntu.com/ubuntu bionic-security/restricted amd64 Packages [1113 kB]
Get:24 http://azure.archive.ubuntu.com/ubuntu bionic-security/restricted Translation-en [154 kB]
Get:25 http://azure.archive.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [1270 kB]
```

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```
curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.5/install.sh | bash
source ~/.bashrc   # or source ~/.zshrc if you're using Zsh
```

```
root@Beazley:/home/Beazley# curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.39.5/install.sh | bash
hrc if you're using Zsh
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 15916  100 15916    0     0   161k      0 --:--:-- --:--:-- --:--:--  161k
=> Downloading nvm from git to '/root/.nvm'
=> Cloning into '/root/.nvm'...
remote: Enumerating objects: 365, done.
remote: Counting objects: 100% (365/365), done.
remote: Compressing objects: 100% (313/313), done.
remote: Total 365 (delta 43), reused 165 (delta 26), pack-reused 0
Receiving objects: 100% (365/365), 365.08 KiB | 33.19 MiB/s, done.
Resolving deltas: 100% (43/43), done.
* (HEAD detached at FETCH_HEAD)
  master
=> Compressing and cleaning up git repository

=> Appending nvm source string to /root/.bashrc
=> Appending bash_completion source string to /root/.bashrc
=> Close and reopen your terminal to start using nvm or run the following to use it now:

export NVM_DIR="$HOME/.nvm"
[ -s "$NVM_DIR/nvm.sh" ] && \. "$NVM_DIR/nvm.sh"  # This loads nvm
[ -s "$NVM_DIR/bash_completion" ] && \. "$NVM_DIR/bash_completion"  # This loads nvm bash_completion
root@Beazley:/home/Beazley# source ~/.bashrc  # or source ~/.zshrc if you're using Zsh
```

```
nvm install 16.16.0
```

```
nvm use 16.16.0
```

```
root@Beazley:/home/Beazley# nvm install 16.16.0
Downloading and installing node v16.16.0...
Downloading https://nodejs.org/dist/v16.16.0/node-v16.16.0-linux-x64.tar.xz...
######################################################################################################### 100.0%
Computing checksum with sha256sum
Checksums matched!
Now using node v16.16.0 (npm v8.11.0)
Creating default alias: default -> 16.16.0 (-> v16.16.0)
root@Beazley:/home/Beazley# nvm use 16.16.0
Now using node v16.16.0 (npm v8.11.0)
```

```
npm install -g npm@7.20.3
```

```
root@Beazley:/home/Beazley# npm install -g npm@7.20.3
npm WARN config global `--global`, `--local` are deprecated. Use `--location=global` instead.

removed 12 packages, changed 99 packages, and audited 260 packages in 3s

11 packages are looking for funding
  run `npm fund` for details

21 vulnerabilities (12 moderate, 7 high, 2 critical)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
```

```
sudo apt -y install gcc g++ make
```



```
node --version
npm --version
```


Docker setup

```
sudo apt-get update
```

apt install -y docker.io

```
root@Beazley:/home/Beazley# apt install -y docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base libidn11 pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io libidn11 pigz runc ubuntu-fan
0 upgraded, 9 newly installed, 0 to remove and 28 not upgraded.
Need to get 63.3 MB of archives.
After this operation, 267 MB of additional disk space will be used.
Get:1 http://azure.archive.ubuntu.com/ubuntu focal/universe amd64 pigz amd64 2.4-1 [57.4 kB]
Get:2 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 bridge-utils amd64 1.6-2ubuntu1 [30.5 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 runc amd64 1.1.7-0ubuntu1~20.04.2 [3836 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 containerd amd64 1.7.2-0ubuntu1~20.04.1 [32.5 MB]
Get:5 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 dns-root-data all 2023112702~ubuntu0.20.04.1 [5308 B]
Get:6 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 libidn11 amd64 1.33-2.2ubuntu2 [46.2 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 dnsmasq-base amd64 2.90-0ubuntu0.20.04.1 [350 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu focal-updates/universe amd64 docker.io amd64 24.0.5-0ubuntu1~20.04.1 [26.4 MB]
Get:9 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 ubuntu-fan all 0.12.13ubuntu0.1 [34.4 kB]
Fetched 63.3 MB in 1s (61.6 MB/s)
Preconfiguring packages ...
Selecting previously unselected package pigz.
(Reading database ... 58942 files and directories currently installed.)
Preparing to unpack .../0-pigz_2.4-1_amd64.deb ...
Unpacking pigz (2.4-1) ...
Selecting previously unselected package bridge-utils.
Preparing to unpack .../1-bridge-utils_1.6-2ubuntu1_amd64.deb ...
```

sudo systemctl start docker

sudo systemctl enable docker

docker --version

```
root@Beazley:/home/Beazley# sudo systemctl start docker
root@Beazley:/home/Beazley# sudo systemctl enable docker
root@Beazley:/home/Beazley# docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~20.04.1
```

docker pull niharrout2012/4dalert_poc:latest

```
root@Beazley:/home/Beazley# docker pull niharrout2012/beazley_docker:latest
latest: Pulling from niharrout2012/beazley_docker
7264a8db6415: Pull complete
eee371b9ce3f: Pull complete
93b3025fe103: Pull complete
d9059661ce70: Pull complete
b2c7eed0d53d: Pull complete
451073fc0fda: Pull complete
2001794766b9: Pull complete
5e51f45f48b0: Pull complete
7cf6d9081b68: Pull complete
6bd875cc3a8c: Pull complete
4154016b1222: Pull complete
Digest: sha256:d8ce279ab886840a350041629999ab776cbc54b79d8075383482eb6afd009d65
Status: Downloaded newer image for niharrout2012/beazley_docker:latest
docker.io/niharrout2012/beazley_docker:latest
```

```
docker run -d -p 3000:3000 --name 4dalert niharrout2012/4dalert_poc:latest

docker ps

docker logs -f 4dalert
```

```
root@Beazley:/home/Beazley# docker run -d -p 3000:3000 --name 4dalert niharrout2012/beazley_docker:latest
33415f06f0d13562a0317c6423dc40781dc5c1ace7af0a6a6e31e528e0dcb066
root@Beazley:/home/Beazley# docker ps
CONTAINER ID   IMAGE                             COMMAND                CREATED         STATUS         PORTS
     NAMES
33415f06f0d1   niharrout2012/beazley_docker:latest   "docker-entrypoint.s…"   8 seconds ago   Up 7 seconds   0.0.0.0:3000->3000/tcp, :::3000->3000/t
cp   4dalert
root@Beazley:/home/Beazley# docker logs -f 4dalert
2024-04-23T09:19:28: PM2 log: Launching in no daemon mode
2024-04-23T09:19:28: PM2 log: App [www:0] starting in -fork mode-
2024-04-23T09:19:28: PM2 log: App [www:0] online
WARNING: NODE_APP_INSTANCE value of '0' did not match any instance config file names.
WARNING: See https://github.com/node-config/node-config/wiki/Strict-Mode
current environment:   undefined
FDALERT database: CONNECTED
Background Jobs: STARTED
Server is listening on port 3000
(node:18) NOTE: We are formalizing our plans to enter AWS SDK for JavaScript (v2) into maintenance mode in 2023.
Please migrate your code to use AWS SDK for JavaScript (v3).
For more information, check the migration guide at https://a.co/7PzMCcy
(Use `node --trace-warnings ...` to show where the warning was created)
^C
root@Beazley:/home/Beazley# ^C
root@Beazley:/home/Beazley# ^C
```

Nginx setup

```
sudo apt update
```

```
root@Beazley:/home/Beazley# sudo apt update
Hit:1 http://azure.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
28 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

```
sudo apt install nginx
```

```
root@Beazley:/home/Beazley# sudo apt install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjbig0 libjpeg-turbo8 libjpeg8 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4 nginx-common nginx-core
Suggested packages:
  libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjbig0 libjpeg-turbo8 libjpeg8 libnginx-mod-http-image-filter
  libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4 nginx nginx-common nginx-core
0 upgraded, 17 newly installed, 0 to remove and 28 not upgraded.
Need to get 2438 kB of archives.
After this operation, 7925 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 fonts-dejavu-core all 2.37-1 [1041 kB]
Get:2 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 fontconfig-config all 2.13.1-2ubuntu3 [28.8 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 libfontconfig1 amd64 2.13.1-2ubuntu3 [114 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libjpeg-turbo8 amd64 2.0.3-0ubuntu1.20.04.3 [118 kB]
Get:5 http://azure.archive.ubuntu.com/ubuntu focal/main amd64 libjpeg8 amd64 8c-2ubuntu8 [2194 B]
Get:6 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libjbig0 amd64 2.1-3.1ubuntu0.20.04.1 [27.3 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libwebp6 amd64 0.6.1-2ubuntu0.20.04.3 [185 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libtiff5 amd64 4.1.0+git191117-2ubuntu0.20.04.12 [164 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libxpm4 amd64 1:3.5.12-1ubuntu0.20.04.2 [34.9 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libgd3 amd64 2.2.5-5.2ubuntu2.1 [118 kB]
Get:11 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx-common all 1.18.0-0ubuntu1.4 [37.7 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-http-image-filter amd64 1.18.0-0ubuntu1.4 [14.8 kB]
Get:13 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.18.0-0ubuntu1.4 [13.0 kB]
Get:14 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-mail amd64 1.18.0-0ubuntu1.4 [42.9 kB]
Get:15 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 libnginx-mod-stream amd64 1.18.0-0ubuntu1.4 [67.4 kB]
Get:16 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx-core amd64 1.18.0-0ubuntu1.4 [425 kB]
Get:17 http://azure.archive.ubuntu.com/ubuntu focal-updates/main amd64 nginx all 1.18.0-0ubuntu1.4 [3620 B]
Fetched 2438 kB in 0s (34.9 MB/s)
Preconfiguring packages ...
```

sudo ufw app list

sudo ufw allow 'Nginx HTTP'

sudo ufw status

```
root@Beazley:/home/Beazley# sudo ufw app list
Available applications:
  Nginx Full
  Nginx HTTP
  Nginx HTTPS
  OpenSSH
root@Beazley:/home/Beazley# sudo ufw allow 'Nginx HTTP'
Rules updated
Rules updated (v6)
root@Beazley:/home/Beazley# sudo ufw status
Status: inactive
```

```
sudo systemctl status nginx
```

```
cd /etc/nginx/sites-enabled
```

```
nano default
```

```
root@Beazley:/home/Beazley# sudo systemctl status nginx
● nginx.service – A high performance web server and a reverse proxy server
     Loaded: loaded (/lib/systemd/system/nginx.service; enabled; vendor preset: enabled)
     Active: active (running) since Tue 2024-04-23 09:20:42 UTC; 25s ago
       Docs: man:nginx(8)
   Main PID: 17828 (nginx)
      Tasks: 3 (limit: 4675)
     Memory: 4.3M
     CGroup: /system.slice/nginx.service
             ├─17828 nginx: master process /usr/sbin/nginx -g daemon on; master_process on;
             ├─17829 nginx: worker process
             └─17830 nginx: worker process

Apr 23 09:20:42 Beazley systemd[1]: Starting A high performance web server and a reverse proxy server...
Apr 23 09:20:42 Beazley systemd[1]: Started A high performance web server and a reverse proxy server.
root@Beazley:/home/Beazley# cd /etc/nginx/sites-enabled
root@Beazley:/etc/nginx/sites-enabled# nano default
```
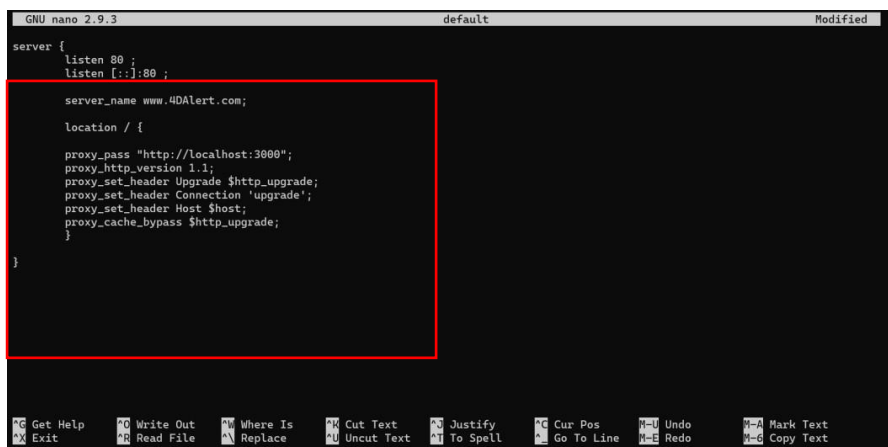
```
server {
listen 80 ;
listen [::]:80 ;

server_name www.4DAlert.com;

location / {

proxy_pass "http://localhost:3000";
proxy_http_version 1.1;
proxy_set_header Upgrade $http_upgrade;
proxy_set_header Connection 'upgrade';
proxy_set_header Host $host;
proxy_cache_bypass $http_upgrade;
}
}
```
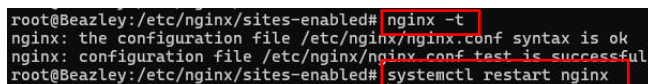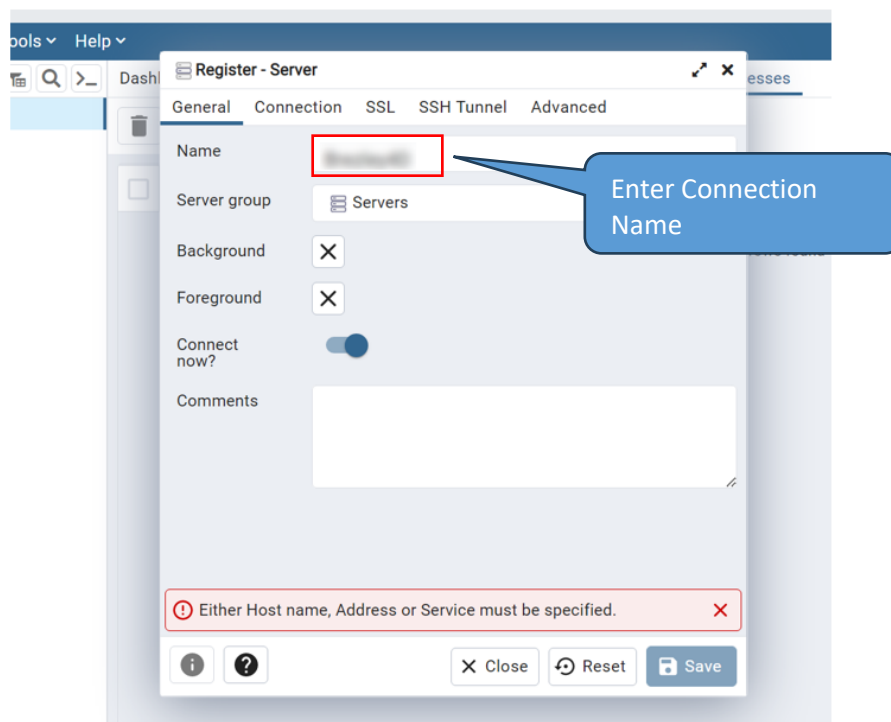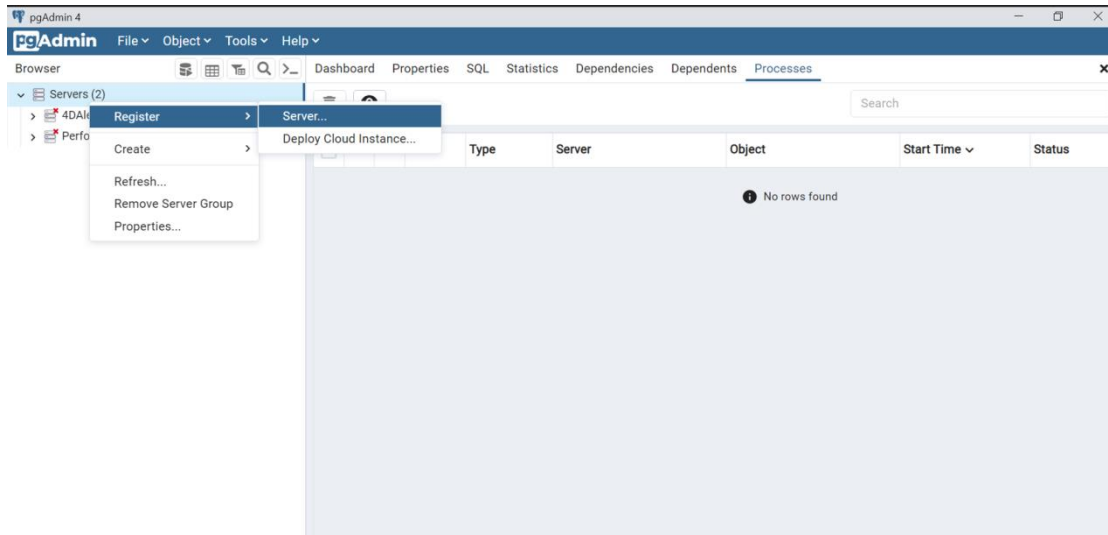
After using this command 'nano default' we will get the below screen.
In that screen we would be getting some default commands, we have to remove all the default commands and paste the above command.

nginx -t

systemctl restart nginx

Database Setup

To add a new server right click on the server, then click on the Register, and then click on Server.
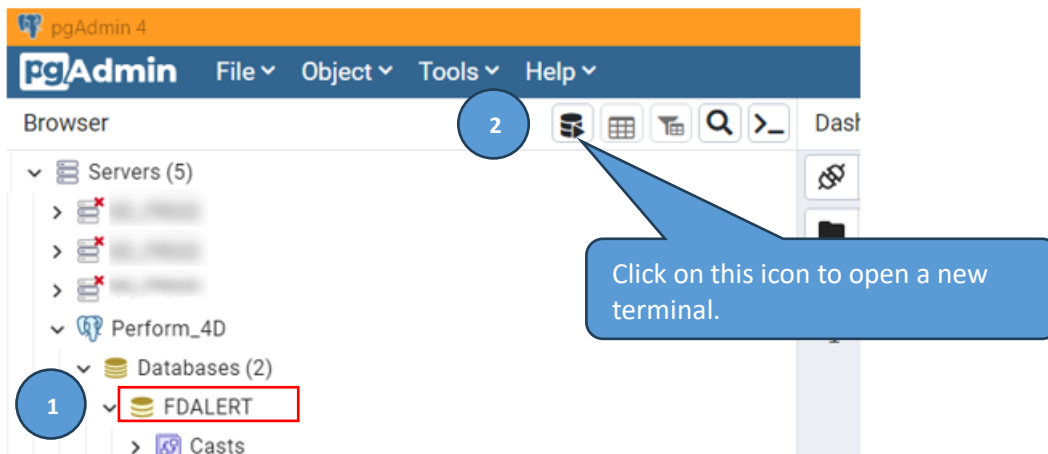
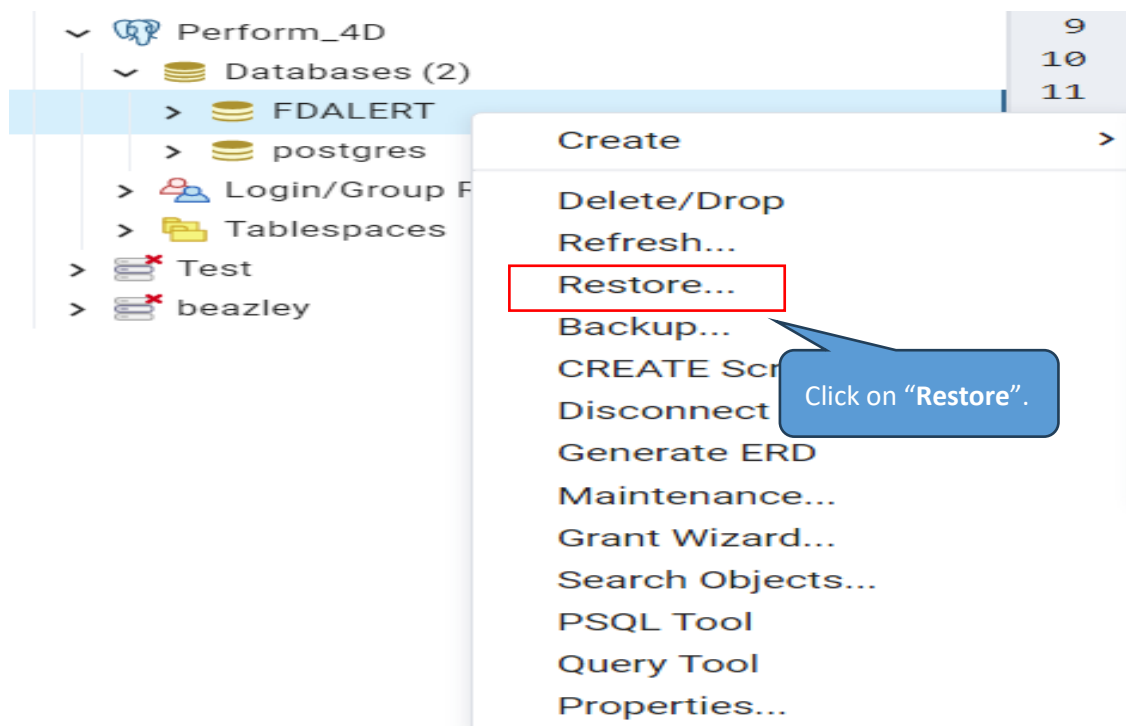Fill up all the necessary fields and click on the Save button.
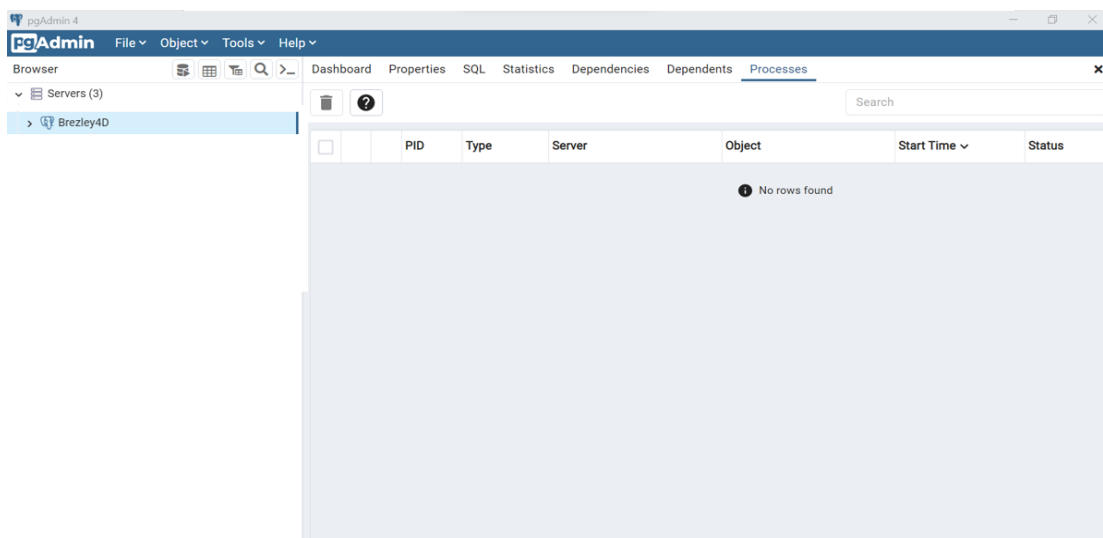
Now you can see the server connection is created with the given server's name.
We need to create a database("4dalert_db")/schema(fda) and role (fdalert).

```
CREATE DATABASE "4dalert_db";
```

After creating database refresh the server after that you will be able to see the new database.

Once database is created right click on the database you have created and restore the database backup file.

After putting the backup file path go to "**Data/Objects**" and go to "**Type of objects**" and choose "**Only Schema**" option. Now click on "**Restore**" button it will start the restore process.

Organization Insert

```
INSERT INTO fda."Organization"("OrganizationName","OrganizationType","GitHubInd")

values ('BEAZLEY','ENTERPRISE','Y');
```

Create Admin user for App Login

```
    SELECT fda."Proc_CreateUser"(
      '4DALERT@beazley.com',--"UserName",**
      '12345',--"UserPassword",**
      '4DALERT@beazley.com',--"UserEmail",**
      '4D',--"UserFirstname",**
      'Alert',--"UserLastname",**
      'BEAZLEY',--"OrgName",**
      '',--"UserMidname",
      '',--"UserPhotoId",
      '',--"UserStatus",
      '',--"AccessToken",
      '',--"RefreshToken",
      '',--"AccessTokenExpiration",
      '',--"UserJoinDate",
      '',--"UserLastLogin",
      '',--"UserAddress",
      '',--"UserCity",
      '',--"UserState",
      '0000',--"UserZipcode",**
      '',--"UserCountry",
      '',--"GitHubInd",
      '',--"QueryTitle",
      '',--"Query",
      '',--"Phone",
      'Snowflake',--"UserSystemName",**
      'R1');
      FETCH ALL IN "R1";
```

This script is used to create one user so that you can login to the application.

Create Application

```
INSERT INTO
fda."FDAApplications"("ApplicationCode","ApplicationName","ApplicationShortname","ApplicationO
wnerEmail")
VALUES ('4DALERT','4DALERT','4DALERT ', '4DALERT@beazley.com');
```

Module Config

```
insert into fda."FDAModuleByOrg"("FDAModuleByOrgId","OrganizationId","ModuleName")
values(1,1,'FDALERT-DATAQUALITY'),
(2,1, 'FDALERT-APPCONFIG-DATAQUALITY'),
(3,1,'FDALERT-DATAOPS'),
(4,1,'FDALERT-DATAMODELING');
```

Update User Role

```
UPDATE fda."UserRoleDetails_v2"

SET "UserRole" = 'FDALERT-SUPERUSER';
```

After restoring the backup file go to **"fda"** schema and right click on **"FDAReconCICDConfig"** table and restore the backup file given in setup file.

Now go to **"erd"** schema and right click on **"ERDDBDatatype"** table and restore the backup file given in setup file.

User Login

Now go to application and try to login using the user you have created.