

# Installing FreeRADIUS version 3.x on Ubuntu 20.04

## Introduction

- Ubuntu 20.04 now comes with a FreeRADIUS 3.x release.
- Install FreeRADIUS and MySQL module.

```
sudo apt-get install libdatetime-perl
sudo apt-get install freeradius freeradius-mysql
# Answer yes to install these with their dependencies
# Please note that when this package is installed there are some things
generated that can take up lots of time on slower machines.
```

- Enable and Start FreeRADIUS

```
sudo systemctl enable freeradius
sudo systemctl start freeradius
sudo systemctl status freeradius
```

## Configuring FreeRADIUS version 3.x

- Do the following to configure FreeRADIUS 3.x to work with RADIUSdesk

```
# Stop the service if it is already running
sudo systemctl stop freeradius
# Backup the original FreeRADIUS directory
sudo mv /etc/freeradius /etc/freeradius.orig
# Extract the RADIUSdesk modified FreeRADIUS directory
sudo tar xzf /var/www/html/cake4/rd_cake/setup/radius/freeradius-3-
radiusdesk.tar.gz --one-top-level=/etc/freeradius/
sudo mv /etc/freeradius/freeradius /etc/freeradius/3.0
sudo chown -R freerad. /etc/freeradius/3.0/
sudo mkdir /var/run/freeradius
chown freerad. /var/run/freeradius
```

- Configure the site-wide shared secret. This will be the value used by ALL Dynamic Clients.

```
sudo vi /etc/freeradius/3.0/sites-enabled/dynamic-clients
```

- Look for this part in the file and change FreeRADIUS-Client-Secret to the value you choose to use.

```
# Echo the IP address of the client.
FreeRADIUS-Client-IP-Address = "%{Packet-Source-IP-Address}"

# require_message_authenticator
FreeRADIUS-Client-Require-MA = no
```

```
# secret
FreeRADIUS-Client-Secret = "testing123"

# shortname
FreeRADIUS-Client-Shortname = "%{Packet-Src-IP-Address}"
```

- Comment out the following two lines in the Systemd unit file

```
sudo vi /lib/systemd/system/freeradius.service
```

- See this sample to see which two lines to comment out. Failing to do this will result in a broken system with FreeRADIUS not starting up during boot

```
[Unit]
Description=FreeRADIUS multi-protocol policy server
After=syslog.target network.target
Documentation=man:radiusd(8) man:radiusd.conf(5) http://wiki.freeradius.org/
http://networkradius.com/doc/

[Service]
Type=forking
PIDFile=/run/freeradius/freeradius.pid
#EnvironmentFile=-/etc/default/freeradius
#ExecStartPre=/usr/sbin/freeradius $FREERADIUS_OPTIONS -Cxm -lstdout
ExecStart=/usr/sbin/freeradius $FREERADIUS_OPTIONS
Restart=on-failure
RestartSec=5

[Install]
WantedBy=multi-user.target
```

- After you completed these commands you can test if FreeRADIUS starts up fine.

```
sudo systemctl daemon-reload
sudo systemctl restart freeradius
sudo systemctl status freeradius
```

## Fixing a small bug

- There is a small bug which prevents FreeRADIUS to start up after a reboot.
- It has been reported here: <https://bugs.debian.org/cgi-bin/bugreport.cgi?bug=954911>
- There also seems to be a fix but it has not reached the Ubuntu repositories as of this writing.
- So here is the fix taken from the discussion in the link
- Create a file called **/usr/lib/tmpfiles.d/freeradius.conf**

```
sudo vi /usr/lib/tmpfiles.d/freeradius.conf
```

- Add the following line

```
d /run/freeradius 750 freerad freerad -
```

- If you are curious about what we did, here is a writeup on **tmpfiles.d**
  - <https://www.commandlinux.com/man-page/man5/tmpfiles.d.5.html>

## Add Nginx to run scripts

- To create the ability for the web server to exercise some control over FreeRADIUS, we will have a custom script which is added to the **sudoers** file.
- The correct way to edit the sudoers file is by using:

```
sudo visudo
```

- Add the following at the bottom

```
# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL www-data ALL =
NOPASSWD: /var/www/html/cake4/rd_cake/setup/scripts/radmin_wrapper.pl
```

- Confirm that this line is now inside the /etc/sudoers file

```
sudo cat /etc/sudoers
```

- This will allow the root user in RADIUSdesk to Start and Stop FreeRADIUS service and do on-the-fly activation of debug traces.

## Next steps

- You need to do a few small tweaks for your environment
- The first part of the instructions is specific to the Raspberry Pi. You can skip them and go to the **Adapt The Settings In MESHdesk** section if you are running RADIUSdesk on something else.
- [Tweak Your Install](#)

From:  
<http://www.radiusdesk.com/wiki/> - **RADIUSdesk**

Permanent link:  
[http://www.radiusdesk.com/wiki/getting\\_started/20\\_install\\_ubuntu\\_freeradius\\_3](http://www.radiusdesk.com/wiki/getting_started/20_install_ubuntu_freeradius_3)

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