

Installing FreeRADIUS version 3.x

- Ubuntu is still sticking with FreeRADIUS version 2.x even with the 16.04 LTS release.
- Fortunately adding the repository with the version 3.x packages of FreeRADIUS is a snap and super easy.
- <https://launchpad.net/~freeradius/+archive/ubuntu/stable-3.0>
- Add the Personal Package Archive (PPA) for the version 3 of FreeRADIUS.

```
sudo apt-get install software-properties-common python-software-properties
sudo add-apt-repository ppa:freeradius/stable-3.0
#Answer yes to include the PPA with it's keys
#Update all the reposiores
sudo apt-get update
```

- Install the following FreeRADIUS packages.

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

- Enable and start freeradius

```
sudo systemctl enable freeradius.service
sudo systemctl start freeradius.service
```

Please Take Note



- The current version of FreeRADIUS available on the repository (3.0.12) has this bug:
<http://lists.freeradius.org/pipermail/freeradius-users/2016-October/085317.html>
- While we wait for the maintainer of the repository to update to the latest stable release please follow the instructions in this page to [Upgrade FreeRADIUS](#) using our own set of packages.
- Once the repository has been updated we will remove this 'detour' instructions

Configuring FreeRADIUS version 3.x

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

```
#Stop the service if it might be running
sudo systemctl stop freeradius.service
#Backup the original
sudo mv /etc/freeradius /etc/freeradius.orig
#Copy the RADIUSdesk specific one
```

```
sudo cp /usr/share/nginx/html/cake2/rd_cake/Setup/Radius/freeradius-3-  
radiusdesk.tar.gz /etc/  
cd /etc  
#Extract it  
sudo tar -xzvf freeradius-3-radiusdesk.tar.gz
```

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

```
sudo vi /etc/freeradius/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-Src-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 service 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.service
sudo systemctl status freeradius.service
```

- If in future you need to run FreeRADIUS in debug mode on the terminal use this as a reference:



```
#Stop the current FreeRADIUS instance
sudo systemctl stop freeradius.service
#If it is perhaps stuck use killall
sudo killall freeradius
#Start it in debug mode
sudo freeradius -X
```

Add script to sudoers file



Failing to do this step will leave the advanced features of RADIUSdesk broken.

- 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:/usr/share/nginx/html/cake2/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 and also to do on-the-fly activation of debug traces.

Configure MESHdesk and APdesk

- If you will be using **MESHdesk** or **APdesk** this section is for you and will make life easier for you.

- We need to configure default settings for the Coova Chilli Captive Portal which are used in both **MESHdesk** and **APdesk**.
- Please get the following information ready.
 - The IP Address which the server can be reached through. This will typically be a public IP Address but it can also be a private IP Address if you run RADIUSdesk on a private network.
 - The FQDN for the server if you registered in on a DNS service.
 - The site wide FreeRADIUS shared secret used by the Dynamic RADIUS Clients. This was done earlier in this page when you configured the Dynamic Clients.
 - There are two files which you need to edit to reflect your installations detail.
- For MESHdesk:

```
sudo vi /usr/share/nginx/html/cake2/rd_cake/Config/MESHdesk.php
```

- Look for this bit and change accordingly:

```
//=====
//== Pre-set values for the Captive Portals
$config['Meshes']['captive_portal']['radius_1']      = '198.27.111.78';
// This will be the public IP Address of the FreeRADIUS / RADIUSdesk
$config['ApProfiles']['captive_portal']['radius_2']  =
'198.27.111.78'; //Optional second fallback RADIUS
$config['Meshes']['captive_portal']['radius_secret'] = 'testing123';
//Change this to the common site wide secret used by Dynamic RADIUS Clients
//Use DNS name in uam_url to looks more professional / or IP Address
$config['Meshes']['captive_portal']['uam_url']       =
'http://198.27.111.78/cake2/rd_cake/dynamic_details/chilli_browser_detect/';
$config['Meshes']['captive_portal']['uam_secret']    = 'greatsecret';
//Usually you will not change this value

$config['ApProfiles']['captive_portal']['walled_garden'] =
'www.radiusdesk.com,www.google.com'; //Optional
$config['Meshes']['captive_portal']['swap_octet']      = true;
$config['Meshes']['captive_portal']['mac_auth']       = true;
$config['Meshes']['captive_portal']['coova_optional']  =
'ssid=radiusdesk';
```

- For APdesk

```
sudo vi /usr/share/nginx/html/cake2/rd_cake/Config/APProfiles.php
```

- Look for this bit and change accordingly:

```
//=====
//== Pre-set values for the Captive Portals
$config['ApProfiles']['captive_portal']['radius_1']      =
'198.27.111.78'; // This will be the public IP Address of the FreeRADIUS /
RADIUSdesk
$config['ApProfiles']['captive_portal']['radius_2']      =
'198.27.111.78'; //Optional second fallback RADIUS
$config['ApProfiles']['captive_portal']['radius_secret'] = 'testing123';
```

```
//Change this to the common site wide secret used by Dynamic RADIUS Clients
//Use DNS name in uam_url to look more professional / or IP Address
$config['ApProfiles']['captive_portal']['uam_url'] =
'http://198.27.111.78/cake2/rd_cake/dynamic_details/chilli_browser_detect/';
$config['ApProfiles']['captive_portal']['uam_secret'] = 'greatsecret';
//Usually you will not change this value

//$config['ApProfiles']['captive_portal']['walled_garden'] =
'www.radiusdesk.com,www.google.com'; //Optional
$config['ApProfiles']['captive_portal']['swap_octet'] = true;
$config['ApProfiles']['captive_portal']['mac_auth'] = true;
//$config['ApProfiles']['captive_portal']['coova_optional'] =
"ssid=radiusdesk";
//_____
```

- By defining these items the Add Captive Portal Exit Point windows will be **pre-populated** for you, making it **a snap** to add new Captive Portals to either a mesh or an Access Point profile. 😊

Next steps

- Be sure to also install **Node.js**.
- [Install node.js](#)

From:

<https://www.radiusdesk.com/docuwiki/> - **RADIUSdesk**

Permanent link:

https://www.radiusdesk.com/docuwiki/getting_started/install_ubuntu_freeradius_3

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