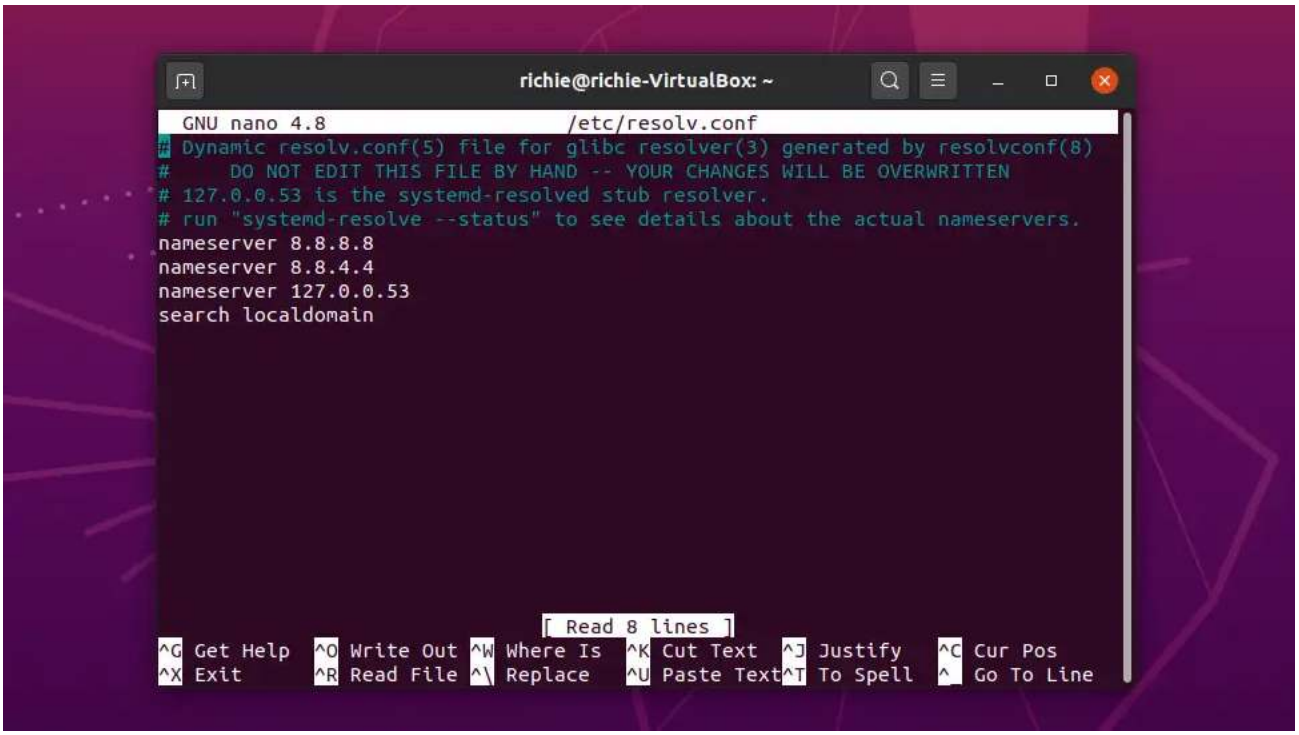
Ricmedia

Tech Guides for Everyone

Set permanent DNS nameservers on Ubuntu/Debian with resolv.conf

Posted Jul 02, 08:38 AM
Comments 0



Setting **custom DNS servers on Linux** can increase performance, security and even thwart some websites using Geo-blocking via DNS. There are several ways to do this including **Network Manager** GUI that's included in many Linux distros like Debian, Ubuntu and derivatives, Netplan which is now included as standard in Ubuntu 20.04; or using `resolv.conf` (not directly, but via the `head` file). This guide will use `resolv.conf`, see my other guide for setting custom DNS servers using Network Manager or Netplan.

FYI: The `resolv.conf` file is overwritten on each boot so we can't edit this file directly. Instead, we edit one of the two files used to create the `resolv.conf` file, those being the `head` and `base` files. We'll be editing the `head` file so that each boot-up, `resolv.conf` gets written with our custom DNS servers at the top.

Contents

Free DNS providers

Before changing DNS servers, you'll need to find a third-party DNS provider, there are plenty of good (and free) services available. I recommend Google DNS which is what I use and have never had an issue. I will list here the most popular DNS providers:

GOOGLE

- Primary IPv4: 8.8.8.8
- Secondary IPv4: 8.8.4.4
- Preferred IPv6: 2001:4860:4860::8888
- Alternate IPv6: 2001:4860:4860::8844

OPENDNS

- Primary: 208.67.222.222

- Secondary: 208.67.220.220
- Preferred IPv6: 2620:0:ccc::2
- Alternate IPv6: 2620:0:ccd::2

DNS.WATCH

- Primary: 84.200.69.80
- Secondary: 84.200.70.40

LEVEL3

- Primary: 209.244.0.3
- Secondary: 209.244.0.4

NORTON

- Primary: 199.85.126.10
- Secondary: 199.85.127.10

COMMODO

- Primary: 8.26.56.26
- Secondary: 8.20.247.20

VERISIGN

- Primary: 64.6.64.6
- Secondary: 64.6.65.6

MORE SERVERS...

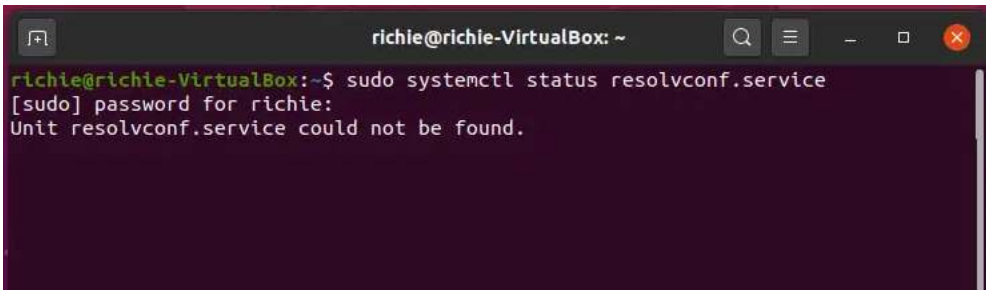
- See: Free and Public DNS Servers
- See: Free DNS Providers

Installing resolvconf package

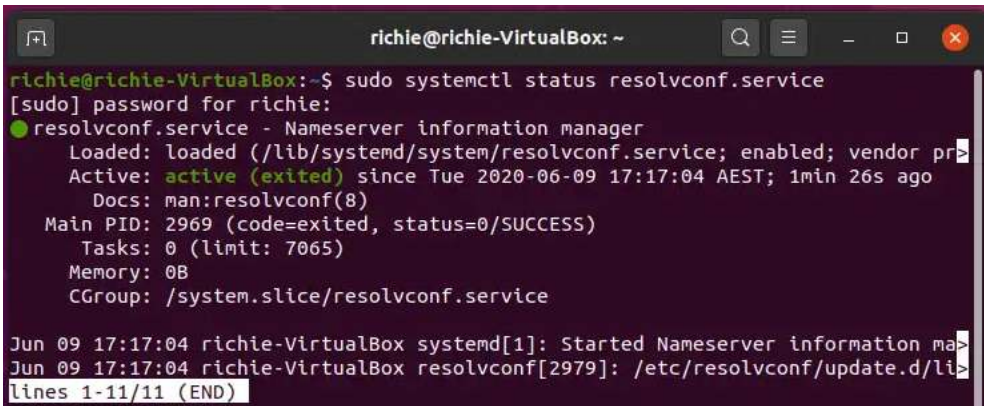
Depending on which version of Ubuntu/Debian you're using, resolvconf may or may not be installed, so let's check before we continue. Open up a Terminal window and enter the following:

```
sudo systemctl status resolvconf.service
```

If you get the following message "Unit: resolvconf.service could not be found" then skip ahead and install resolvconf.



If you get this message "Active: active (exited)" then resolvconf is already installed. Skip to step 2.



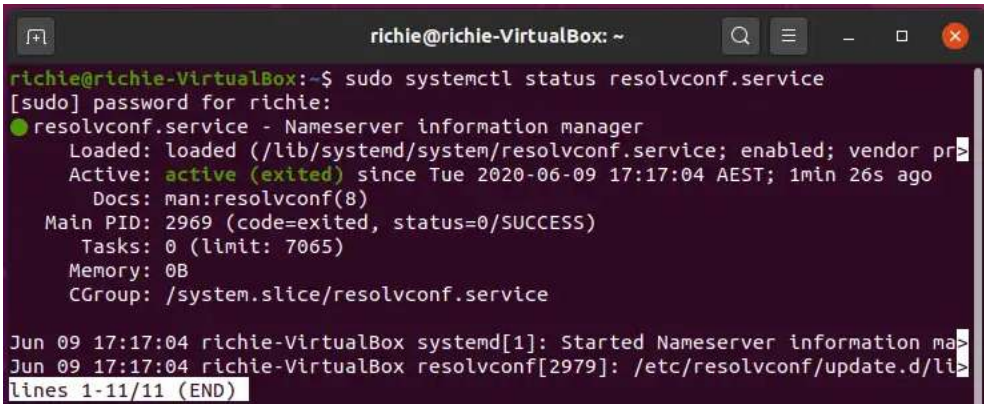
Let's install the resolvconf package:

```
sudo apt update
sudo apt install resolvconf
```

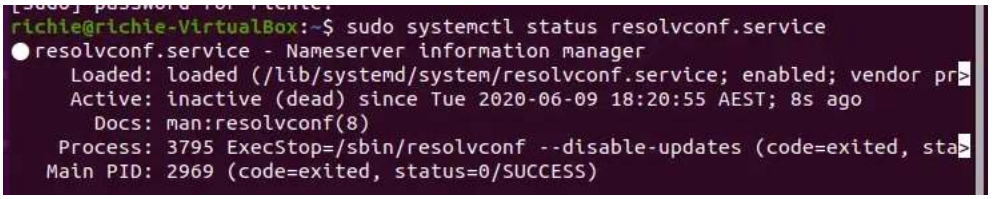
Let's make sure resolvconf was successfully installed and is running:

```
sudo systemctl status resolvconf.service
```

You should see "Active: active (exited)" message as show below:



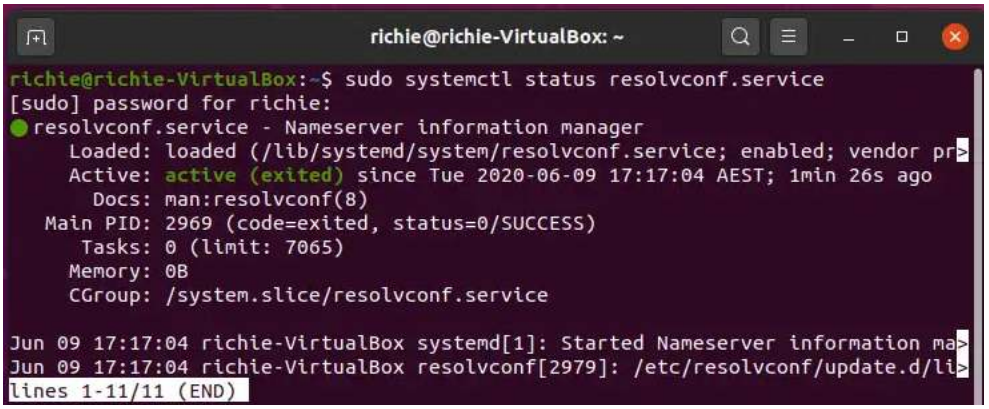
If you see a message “Active: inactive (dead)“ you’ll need to enable and start the service.



Let’s enable and start the resolvconf service:

```
sudo systemctl enable resolvconf.service
sudo systemctl start resolvconf.service
sudo systemctl status resolvconf.service
```

After the last command, you should see the “Active: active (exited)“ message:



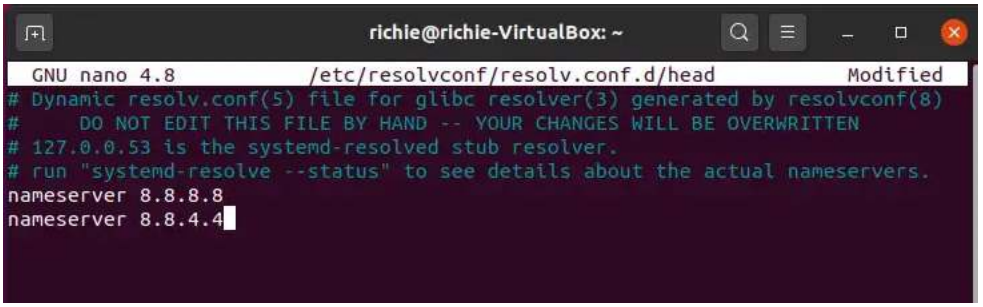
Set DNS servers in resolv.conf using head file

Now we get to the meat of this article. Let’s open the head file:

```
sudo nano /etc/resolvconf/resolv.conf.d/head
```

Enter your nameservers below the comments (I’m using Google’s DNS servers).

```
nameserver 8.8.8.8
nameserver 8.8.4.4
```



Then save `ctrl` + `o`, `ENTER` and exit nano `ctrl` + `x`.

We need to update `resolv.conf` to use the new nameservers:

```
sudo resolvconf --enable-updates
sudo resolvconf -u
```

Now open `resolv.conf` to confirm our nameservers have been written to it:

```
sudo nano /etc/resolv.conf
```

You should see your DNS server IP's for the `nameserver` option:

Video: Set permanent DNS nameservers on Ubuntu/Debian with resolv.conf

Conclusion

I hope this guide helped you to set your custom (and permanent) DNS servers for your Ubuntu or Debian machine. If you had any trouble or just want to say hi, leave a comment and I'll help you out.

See Also

- Set custom DNS servers on Ubuntu 18.04 or 20.04

Further Reading

- Ubuntu
- Ask Ubuntu
- Debian
- Debian Admin Handbook – Domain Name Servers
- How To Flush Linux / UNIX DNS Cache
- Linux Network Manager at Wikipedia.org
- Linux Network Manager at Archlinux.org

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Categories Debian, Ubuntu

Comments

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