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How do I set my DNS when resolv.conf is being overwritten?

Most of the info I see online says to edit `/etc/resolv.conf` , but any changes I make there just get overridden.

```
$ cat /etc/resolv.conf
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#     DO NOT EDIT THIS FILE BY HAND --
#     YOUR CHANGES WILL BE OVERWRITTEN
nameserver 127.0.1.1
```

It seems that 127.0.1.1 is a local instance of `dnsmasq` . The `dnsmasq` docs say to edit `/etc/resolv.conf` . I tried putting custom nameservers
in `/etc/resolv.conf.d/base` , but the changes didn't show up in `/etc/resolv.conf` after running `sudo resolvconf -u` .

FYI, I don't want to change DNS on a per-connection basis, I want to set default DNS settings to use for all connections when not otherwise
specified.

UPDATE:

I answered this question myself: https://unix.stackexchange.com/a/163506/67024

I think it's the best solution since:

1. It works.

2. It requires the least amount of changes and

3. It still works in conjunction with dnsmasq's DNS cache, rather than bypassing it.

/ linux   / ubuntu   / networking   / dns   / dnsmasq

                                                           edited Apr 13 '17 at 12:36   asked May 7 '14 at 1:31
                                                              Community ♦   Seán Hayes
                                                                 1   **1,406**   2   8   11

```
15 Answers
```

I believe if you want to override the DNS nameserver you merely add a line similar to this in
your `base` file under `resolv.conf.d` .

Example

```
$ sudo vim /etc/resolvconf/resolv.conf.d/base
```

Then put your nameserver list in like so:

```
nameserver 8.8.8.8
nameserver 8.8.4.4
```

Finally update `resolvconf` :

```
$ sudo resolvconf -u
```

If you take a look at the man page for `resolvconf` it describes the various files under
`/etc/resolvconf/resolv.conf.d/` .

```
   /etc/resolvconf/resolv.conf.d/base
          File  containing  basic  resolver  information.  The lines in this
          file are included in the resolver configuration file even when no
          interfaces are configured.

   /etc/resolvconf/resolv.conf.d/head
          File to be prepended to the dynamically generated resolver
          configuration file.  Normally this is just a comment line.
```

```
/etc/resolvconf/resolv.conf.d/tail
        File to be appended to the dynamically generated resolver
        configuration file.  To append nothing, make this  an  empty
        file.   This file is a good place to put a resolver options line
        if one is needed, e.g.,

            options inet6
```

Even though there's a warning at the top of the `head` file:

```
$ cat /etc/resolvconf/resolv.conf.d/head
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#     DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
```

this warning is is there so that when these files are constructed, the warning will ultimately work its way into the resulting `resolv.conf` file that these files will be used to make. So you could just as easily have added the `nameserver` lines that are described above for the `base` file, to the `head` file too.

References

- Persist dns nameserver for ubuntu 14.04
- How do I add a DNS server via resolv.conf?

edited Apr 13 '17 at 12:22	answered May 7 '14 at 2:01
Community ♦ 1	slm ♦ 211k 61 437 593

	I believe you should add this line to the `base` file as the head file basically contains the header comments to tell you not to modify the file. – xuhdev May 29 '14 at 6:18
	@xuhdev - I've changed the A to use `base` but you could've used `head` as well. See my updates for more info. – slm ♦ May 29 '14 at 6:34
10	Ubuntu 14.04 - when I put the nameservers into `base` and run `resolvconf -u`, the nameservers were *not* put into resolv.conf - when I put the nameservers into `head`, they were – HorusKol May 27 '15 at 0:48
4	Ubuntu 14.04 - Also had to comment out configuration set in `/run/resolvconf/interface/NetworkManager` – bitsoflogic Oct 13 '15 at 14:18
	type `nslookup google.com` and the first IP in the list should be your new nameserver, if not, you did it wrong – frazras Oct 30 '17 at 1:59

I am also interested in this question and I tried the solution proposed @sim.

To test it, I put

```
 nameserver 8.8.8.8
```

in `/etc/resolvconf/resolv.conf.d/base` and

```
 nameserver 8.8.4.4
```

in `/etc/resolvconf/resolv.conf.d/head`

Then I restarted the network with

```
 sudo service network-manager restart
```

The result is that `/etc/resolv.conf` looks like

```
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#     DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 8.8.4.4
nameserver 127.0.1.1
```

and `nm-tool` states that the dnsserver are

```
DNS:            208.67.222.222
DNS:            208.67.220.220
```

which are the ones provided by my router. On the other hand digging an address tells that

```
;; Query time: 28 msec
;; SERVER: 8.8.4.4#53(8.8.4.4)
```

If I am right, I conclude from all this that

1. only the "head" part is read by resolvonf: the "base" part is somehow controlled by dnsmasq

2. the dnsserver is actually forced to 8.8.4.4 regardless of the server provided by dhcp, BUT you loose the caching provided by dnsmasq, since the request is always sent to 8.8.4.4

3. dnsmasq is still using ONLY the dnsserver provided by dhcp.

All in all, it works but I don't think it is the intended result asked for. A more close solution I think is the following. Edit

```
sudo vim /etc/dhcp/dhclient.conf
```

then add

```
supersede domain-name-servers 8.8.8.8;
```

The result is the following: resolv.conf contains only 127.0.0.1, which means that dnsmasq cache is invoked and nm-tool says

```
DNS:            8.8.8.8
```

which means that if the name searched for is not in the cache, then it is asked for at 8.8.8.8 and not at the server provided by dhcp.

Another (perhaps better) option is to use "prepend" instead of "supersede": in this way, if the name is not resolved by 8.8.8.8, then the request falls back on the other server. In fact, nm-tool says

```
DNS:            8.8.8.8
DNS:            208.67.222.222
DNS:            208.67.220.220
```

edited Sep 9 '14 at 10:30	answered Sep 9 '14 at 10:10
	brad
	726　5　4

3　A much better answer than hacking into the NS configs. Especially the option to prepend a server in front of the dhcp provided ones. Seems like the perfect balance of solving the problem, without creating new ones! – Steve Midgley Nov 22 '14 at 21:08

2　So much clarity and thoughts into the answer and not just a command. – igaurav Dec 29 '14 at 5:00

2　Yo Man! "supersede domain-name-servers 8.8.8.8;" is THE answer – Jack Jul 27 '16 at 20:55

I found out that you can change the nameservers that `dnsmasq` uses by adding the following lines to `/etc/dnsmasq.conf` :

```
server=8.8.8.8
server=8.8.4.4
```

I didn't have a `/etc/dnsmasq.conf` file though, since it's installed by the dnsmasq package, but Ubuntu only comes with dnsmasq-base. I ran `sudo apt-get install dnsmasq`, then edited `/etc/dnsmasq.conf`, then `sudo service dnsmasq restart` and `sudo service network-manager restart`.

I ran `sudo tail -n 200 /var/log/syslog` to check my syslog and verify that `dnsmasq` was using the nameservers I specified:

```
Oct 21 23:00:54 mylaptop dnsmasq[8611]: using nameserver 8.8.8.8#53
Oct 21 23:00:54 mylaptop dnsmasq[8611]: using nameserver 8.8.4.4#53
```

edited Feb 5 '15 at 19:48	answered Oct 22 '14 at 3:06
Clint Eastwood	Seán Hayes
103　2	**1,406**　2　8　11

4　There is a reason why this is marked as the best answer...because it is indeed! thanks very much! I would add that, after all the steps you mentioned, a network restart might be necessary for everything to work smoothly (it was for me.... `sudo service network-manager restart`) – Clint Eastwood Feb 5 '15 at 19:16

3　On Ubuntu 14.04 Server about half the time a cold boot would result no internet connectivity using a URL but an IP-Address would work. I spent a lot of time fruitlessly trying to fix it, gave up for months, then found this solution. I, too, think it is the best answer. – Nate Lockwood Sep 24 '15 at 17:42

For static IP situations, the Ubuntu Server Guide says to change the file /etc/network/interfaces, which may look like this:

```
iface eth0 inet static
address 192.168.3.3
netmask 255.255.255.0
gateway 192.168.3.1
dns-search example.com
dns-nameservers 192.168.3.45 192.168.8.10
```

You change the IPs 192.168.3.45 192.168.8.10 for the ones you want, like 8.8.8.8

https://help.ubuntu.com/14.04/serverguide/serverguide.pdf Page 38

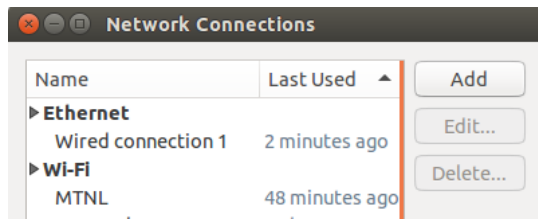| edited Mar 23 '15 at 19:34	answered Mar 23 '15 at 18:30
dhag	Rodolpho
9,781　3　24　38	**161**　1　2

　This certainly looks right but how do I now regenerate resolv.conf?! – Joel Berger Jan 22 '16 at 22:59

1　@JoelBerger `ifdown eth0; ifup eth0` . – Dzamo Norton Jul 25 '17 at 0:11

1. Search ' Network Connection'

2. Open it

3. Then select either WiFi or Ethernet, or whatever you are using, and click on edit. You'll get this:
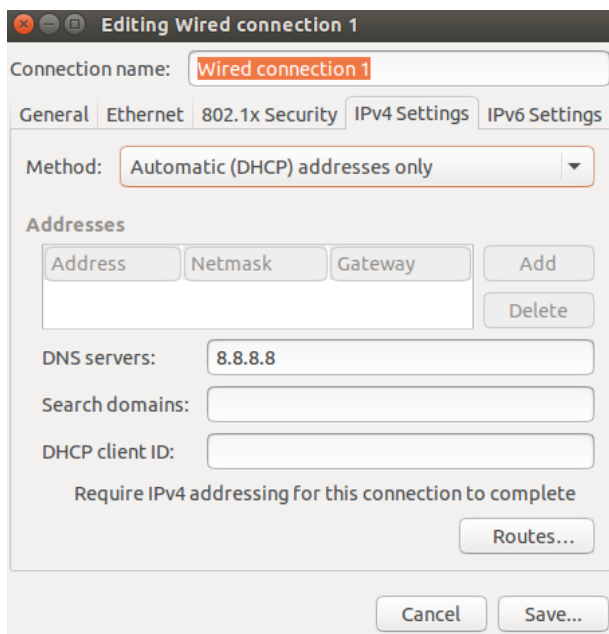
4. Select ipv4 in tabs

5. Select addresses only in method

6. Enter your DNS name below, and save it

7. You're done

edited Dec 2 '14 at 16:27   answered Nov 8 '14 at 14:47

slm ♦   pa1pal
211k   61   437   593   **229**   2   4

I'd have to do this for each network connection though. In the past you could change the default for all connections, which is what I was looking to do here. – Seán Hayes Nov 9 '14 at 18:17

1   I love you! this UI setting saved my ass from sudo and vim mess :'(– LongTTH Mar 28 '15 at 14:05

Using Mint (on Ubuntu 14.04) - but seen this with KDE, too - for some reason, setting DNS servers in the GUI Network Manager doesn't affect the DNS settings used in a terminal – HorusKol May 27 '15 at 0:51

2   Best answer imho. On Ubuntu 14.04 I got 2 external IP-addresses for DNS that wouldn't recognise clients inside my home network. Leaving Method on 'Automatic (DHCP)' for the wired connection *added* my router's IP-address to the existing list. For the wireless connection over wlan0, that didn't work, but Method on 'Automatic (DHCP) addresses only' *replaced* the external addresses with my router IP and then that worked too. Apply changes with `sudo service network-manager restart` , wait a bit, verify with `nmcli d list | grep 'DNS\|IP-IFACE'` . And ping your internal client by name. – RolfBly Jun 23 '15 at 15:09

A quick and dirty workaround that wasn't mentioned yet is setting the immutable flag on the `resolv.conf` file right after editing it.

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

Add this and save:

```
nameserver 8.8.8.8
```

Then:

```
$ sudo chattr +i /etc/resolv.conf
```

That should do the trick. I do this on my system too.

edited Dec 6 '14 at 17:55   answered Sep 10 '14 at 21:45

YouniS Bensalah
116   1   4

8	Anytime your solution involves chattr, it's not really a solution. – Jeff Jirsa Jun 10 '16 at 18:23
1	this is what I do on systems where I need to temporarily change the DNS for some reason and don't want to modify the configuration. As a permanent solution I wouldn't recommend it. – hochl Oct 24 '16 at 11:19
1	"quick and dirty workaround" – YouniS Bensalah Oct 24 '16 at 13:57
3	This isn't dirty. Programs that destroy local configuration because they think they know better are dirty. – Wumpus Q. Wumbley Apr 26 '17 at 21:24

My issue was a bit different, I wanted to override my routers DNS servers. I found this link from Ubuntu: https://wiki.ubuntu.com/OverrideDNSServers

It says: If you would like to override the DNS settings provided to you by a DHCP server, open

```
/etc/dhcp3/dhclient.conf
```

and add the following line:

```
supersede domain-name-servers <dns_ip_address1>,<dns_ip_address2>;
```

replacing `<dns_ip_address*>` items with the proper content.

edited Oct 23 '15 at 13:11   answered Oct 23 '15 at 12:47

Thomas Weinbrenner   **Ryan**
2,572   2   10   31   **71**   1   1

This is the answer that solved my issue. – Michael Jan 18 '17 at 19:01

Perfect. Just adding that you should sudo service networking restart to enable the changes. – Nick Triantafillou Mar 20 '17 at 22:21

Try adding `dns-nameservers XXX.XXX.XXX.X` into your `/etc/networking/interfaces` file.

edited Jun 4 '14 at 16:28   answered Jun 4 '14 at 15:57

drs   **Mike**
3,133   4   26   56   **39**   1

Leave a comment when you downvote, please. This is the method given in the manual, page 38. – Zook Jul 24 '14 at 16:07

| 1 | The unmentioned manual shows all IPs on one line. This answer seems to suggest adding a line. And why is the last number only one X wide? I think it mostly was the extremely informal and uncertain short chat-style writing that garnered the downvotes, @Zook. – Cees Timmerman Jun 12 '15 at 10:07 |

Maybe I'm missing something, but according to the config instructions at https://help.ubuntu.com/14.04/serverguide/network-configuration.html all you do is update the following. I am not running a proxy - just a machine behind a firewall and local DNS (example shows Googles, but set it to whatever you need).

```
nano /etc/network/interfaces
```

Default:

```
# This file...
# and how to activate...

# The loopback...
auto local
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet dhcp
```

UPDATED:

```
# This file...
# and how to activate...

# The loopback...
auto local
iface lo inet loopback

# The primary network interface
#iface eth0 inet dhcp
iface eth0 inet static
address x.x.x.x
netmask 255.255.255.0
gateway x.x.x.x
```

```
#nameservers
# you may not need dns-search
# I use it because I'm running this on a Windows network
# so its useful to have
# dns-search x.y
dns-nameservers 4.4.4.4 8.8.8.8
```

Reboot, if you can.

<div align="right">

answered Apr 26 '17 at 20:51

user5091959
21   1

</div>

EDIT MAY 6,2016

I've written a script to update all settings for system connections in the `/etc/Network-Manager/system-connections/` directory. The GUI that you use to edit individual connections, edits a particular file in that directory. The script updates all of the files - it just searches for those who don't have dns set with grep and sets it with awk.

Since accessing those files requires `sudo` access, run this script with `sudo` and then - restart network manager

```
#!/bin/bash
# Author: Serg Kolo
# Date: May 6, 2015
# Description: this script checks all settings for connections in
# /etc/NetworkManager/system-connections/ , and if there's no custom
# dns set , this script sets it;
# NOTE: run sudo service network-manager restart after running this script

set -x

for file in /etc/NetworkManager/system-connections/* ; do
      grep 'dns=208.67.220.220;' "$file"  || ( awk '{print;if ($1=="[ipv4]")
{getline; print "method=auto\ndns=208.67.220.
220;\nignore-auto-dns=true"}}' "$file" > .tmpfile && ( cat .tmpfile > "$file") )
done
```

Script in action:

ORIGINAL POST Some users here pointed out that DNS is somehow controlled by `dnsmasq` . That is indeed true. I've faced a somewhat smaller issue, where no matter how I changed `head` or `body` in `/etc/resolvconf/resolv.conf.d` , my computer couldn't actually access interned by domain name - only working with IP addresses.

What I did is to edit the `/etc/NetworkManager/NetworkManager.conf` file. Originally, it said `dns=dnsmasq` but I changed it to: `dns=208.67.222.222` . Although this way, `nm-tool` doesn't mention 208.67.222.222, I still was able to use domain names, not just IP addresses.

Here's how my `NetworkManager.conf` file looks like now:

```
[main]
plugins=ifupdown,keyfile,ofono
#dns=dnsmasq
dns=208.67.222.222

[ifupdown]
managed=false
```

NOTE: For more details on my problem and this solution, refer to my post on askubuntu.com.

UPDATE #1

Having returned home from the university today, I discovered that I couldn't connect to my home WiFi. I've read-up a little on `man NetworkManager.conf` and it turns out that `dns=` in `[main]` is actually a line for plug-ins, so line `dns=dnsmasq` is actually adding the dnsmasq plugin to the NetworkManager, apparently.

So my solution still worked, just not as I had expected. Here's excerpt from the man page:

```
dns=plugin1,plugin2, ... List DNS plugin names separated by ','.
```

DNS plugins are used to provide local caching nameserver functionality (which speeds up DNS queries) and to push DNS data to applications that use it.

So by setting `dns=208.67.222.222` I may have, basically, prevented NetworkManager from using that plugin, which would otherwise used the local DNS server (which apparently doesn't work).

edited Apr 13 '17 at 12:22	answered Oct 29 '14 at 1:52
Community ♦	Sergiy Kolodyazhnyy
1	**6,470** 1 13 38

The easy way to change DNS:

```
$ sudo nano /etc/network/interfaces
```

If issues come up, install `nano` :

```
$ sudo apt-get install nano -y
```

then ..

1. find this: `dns-nameservers`
2. if you don't find it just type it in there
3. I did mine like this: `dns-nameservers 199.85.126.10 199.85.127.10`

I hope this is the best way, I did it like this on a VPS by the way.

edited Jun 15 '15 at 7:09	answered Jun 15 '15 at 5:48
slm ♦	Saif Salim
211k 61 437 593	**1**

---

on root:
1) comment dns=dnsmasq on /etc/NetworkManager/NetworkManager.conf
2) add "supersede domain-name-servers 4.2.2.1,4.2.2.3,4.2.2.5,4.2.2.4,4.2.2.1,4.2.2.2;" at the end of /etc/dhcp/dhclient.conf
3) sudo service network-manager restart

```
sudo sed -i 's/dns\x3Ddnsmasq/\x23dns\x3Ddnsmasq/'
/etc/NetworkManager/NetworkManager.conf
echo 'supersede domain-name-servers 4.2.2.1,4.2.2.3,4.2.2.5,4.2.2.4,4.2.2.1,4.2.2.2;' |
sudo tee --append /etc/dhcp/dhclient.conf
sudo service network-manager restart
```

Wait 7/10 seconds to finish the restart process, check your config with "nslookup nist.gov"

Works well on Ubuntu LTS 14.04

answered Feb 15 '16 at 16:27
Sebastien Willemijns
1

I faced similar problem. I had ubuntu as guest and Windows 7 as host. I selected NAT and Bridge both but could not succeed. I, finally selected NAT, and checked my browser proxy settings. It was a lot of hit and trials but finally I'm happy. Thanks to somebody's suggestion. I was going mad & literally had to track packets using traceroute.

To change proxy setting in ubuntu, go to Settings->Advanced->under Network tab-> 'Change proxy settings'-> Lan settings-> replicate this as your host machine browser settings.

answered Jun 15 '16 at 11:53
Rahul Yadav
1 1

```
sudo echo -e "nameserver 8.8.8.8\n" | sudo resolvconf -a eth0
```

answered Aug 11 '14 at 10:05
yergo

9

7   Hi and welcome to the site We like answers to explain what they do and how they work here. Please don't post
    one-line code only answers. Also, there's no point in using `sudo` for the echo, you only need it for the
    `resolvconf`. Similarly, there is absolutely no point in using `-e` and `\n`. Simple `echo` adds a newline
    anyway, what you're doing will print an empty line. If that's what you wanted, then please explain why. – terdon ♦
    Aug 11 '14 at 11:05

Go to `resolv.config`

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

Add this and save in the file at last:

```
nameserver 8.8.8.8
```

Save the file by `Ctrl`+`X` followed by `y` `Return`. Then restart the service as:

```
sudo service network-manager restart
```

edited Dec 8 '14 at 15:06   answered Dec 8 '14 at 15:02

HalosGhost   Vinoj John Hosan
3,418   9   20   33   **101**   3

---

2   The file `/etc/resolv.conf` gets written by the system. – AlikElzin-kilaka Feb 11 '15 at 12:49

1   The file will be modified if you do changes in the network GUI – Vinoj John Hosan Feb 12 '15 at 6:24

    you could make it immutable with `chattr +i`, but this is more a quick hack than a permanent solution. – hochl
    Oct 24 '16 at 11:35