

Pi-hole Moving Port 53

Free up port 53 (for Pi-hole Docker)

In Linux, you need to tell systemd-resolved **not to listen on port 53** (via its stub listener), then restart it. This keeps local DNS working on the host while freeing the port for Pi-hole.

Step 1: Confirm what's using port 53

Run one of these commands (use sudo if needed):

```
sudo ss -tulpn | grep ':53'
```

or

```
sudo lsof -i :53
```

or the classic:

```
sudo netstat -tulpn | grep ':53'
```

Look for output like:

- systemd-resolved or systemd-resolve listening on 127.0.0.53:53 (or sometimes 0.0.0.0:53)
- Possibly dnsmasq, unbound, named (BIND), or another DNS service if you've installed one before.

If it's systemd-resolved (most common), proceed.

Step 2: Free up port 53 (for Pi-hole Docker)

You need to tell systemd-resolved **not to listen on port 53** (via its stub listener), then restart it. This keeps local DNS working on the host while freeing the port for Pi-hole.

1. Edit the config file:

```
sudo nano /etc/systemd/resolved.conf
```

Find the line `#DNSStubListener=yes` (it might be commented out).
Change it to (uncomment and set):

text:

```
DNSStubListener=no
```

Save and exit.

- Restart the service:

```
sudo systemctl restart systemd-resolved
```

(Or if it was fully disabled before, `sudo systemctl enable --now systemd-resolved` isn't needed — just restart.)

- Verify port 53 is now free:

Run the check command from Step 1 again — no process should be listening on `:53` anymore.

-If the command returns blank, that is good.

If still taken, double-check for other services (e.g., `sudo systemctl stop unbound` if you have Unbound installed, or `sudo systemctl disable --now dnsmasq`).

Step 3: Restart your Pi-hole container

Now try again:

```
sudo docker compose down  
sudo docker compose up -d
```

It should start without the port error.

Important: Fix host DNS resolution after this change

Disabling the stub listener breaks the host's own DNS (it was using `127.0.0.53` as its resolver).

To restore it:

1. Remove the symlink to the stub resolver:

Bash

```
sudo rm /etc/resolv.conf
```

2. Create a new static /etc/resolv.conf with a working upstream DNS (temporarily use public ones; later change to your Pi-hole IP once it's up):

Bash

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

Put in something like:

text

```
nameserver 1.1.1.1  
nameserver 1.0.0.1  
# or nameserver 8.8.8.8
```

Save

Once its running: On your server (the host machine)

/etc/resolv.conf is currently:

```
nameserver 1.1.1.1  
nameserver 1.0.0.1
```

(or whatever DNS you put in there)

Change it to this: (add nameserver 127.0.0.1)

```
nameserver 127.0.0.1  
nameserver 1.1.1.1  
nameserver 1.0.0.1
```

Commands:

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

Paste the three lines above, save and exit (Ctrl+O → Enter → Ctrl+X).

Then lock the file so it survives reboot:

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

Test it works:

Bash

```
ping google.com
```

(Should resolve and ping.)

On your home router

1. Log in to your router's admin page.
2. Go to **LAN** → **DHCP Server** (or LAN Setup / DHCP Settings / Advanced Network).
3. Find the **DNS Server** fields.
4. Set **Primary DNS Server** to: **192.168.0.11** (this is the host/server IP – do **not** add any port here)
5. (Optional but recommended) Set **Secondary DNS Server** to: **9.9.9.9**
6. Click **Save** or **Apply**.
7. If prompted, reboot the router or wait 1-2 minutes.

After router changes

1. On your phone, laptop, or other devices (not the server): Turn Wi-Fi off and back on (or reboot the device) to pick up the new DHCP settings.
2. Test access to the Pi-hole dashboard from any device on your network:
 - Direct container access (bypassing NGINX, for testing):
<http://192.168.0.11:8081/admin> (replace 8081 with the actual host port you mapped in docker-compose.yml under ports: for the web interface, e.g., if you have "8000:80", use :8000)
 - If you already set up NGINX reverse proxy for Pi-hole: <http://192.168.0.11/admin> (or <https://192.168.0.11/admin> if HTTPS is configured) → no custom port needed in the

URL, NGINX handles it on 80/443

- If you set up local DNS in Pi-hole (recommended): <http://pi.hole/admin> (or <https://pi.hole/admin> if HTTPS) → no IP or port needed

3. Verify it's working:

- Dashboard loads.
- Visit a site with lots of ads (news site, YouTube app on phone) → most ads/trackers blocked.
- In Pi-hole dashboard → Query Log → see queries coming from multiple devices (phones, laptops, etc.).

Revision #11

Created 2026-02-28 06:36:29 UTC by Danicus

Updated 2026-03-01 07:57:24 UTC by Danicus