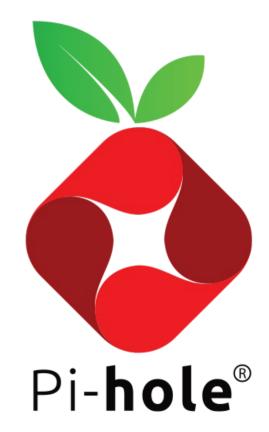
#### PiHole – Home DNS

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HV Open September 2020 Meeting



### Why PiHole

- ISP problems:
  - Your ISP hijacks DNS
  - You don't trust your ISP's DNS
- Privacy:
  - Ad blocking
  - Choose your DNS provider
  - Use multiple DNS providers
- Replace Broken or Limited Home Network Equipment



### Features

- Allow and Block Lists
- Logging
- Auditing
- Monitoring
- Statistics
- DHCP Server

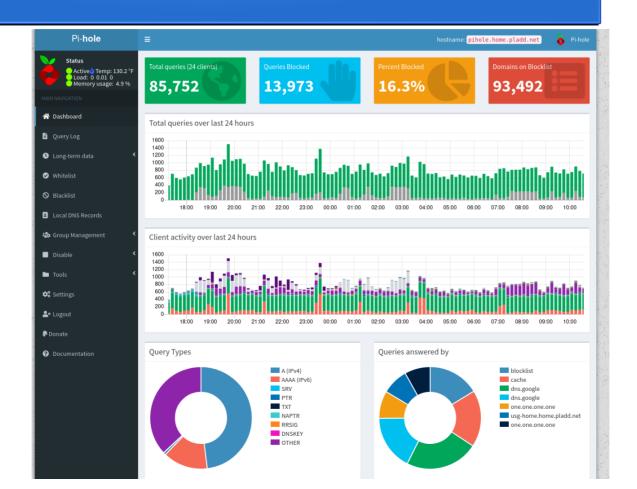


### Tech

- Lightweight, but scalable with larger hardware
  - 2GB storage, 4GB recommended
  - 512MB RAM
- Underlying bits:
  - dnsmasq
  - curl
  - lighttpd
  - php
  - AdminLTE dashboard
  - sqlite3

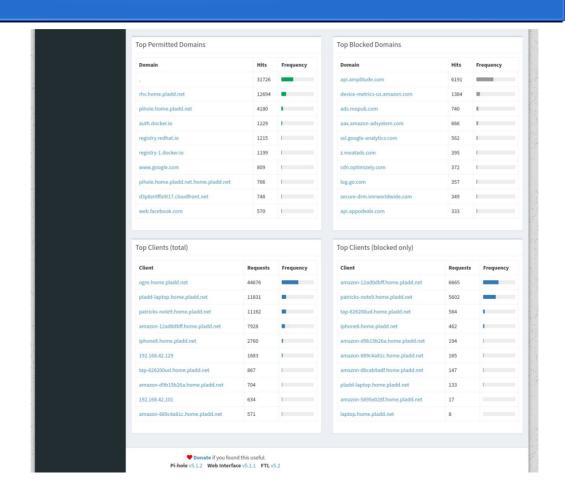


### Dashboard



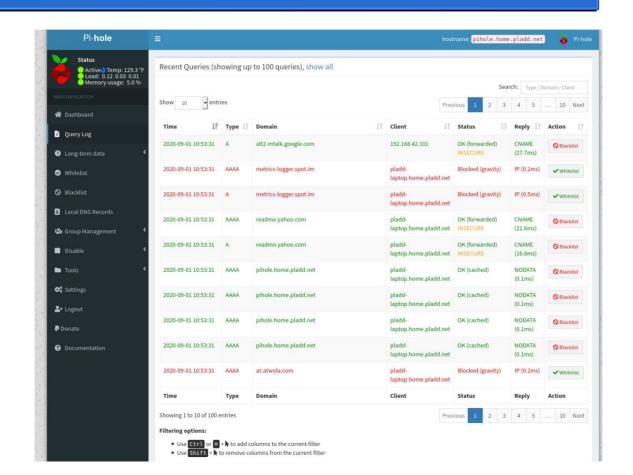


## Dashboard (cont'd)



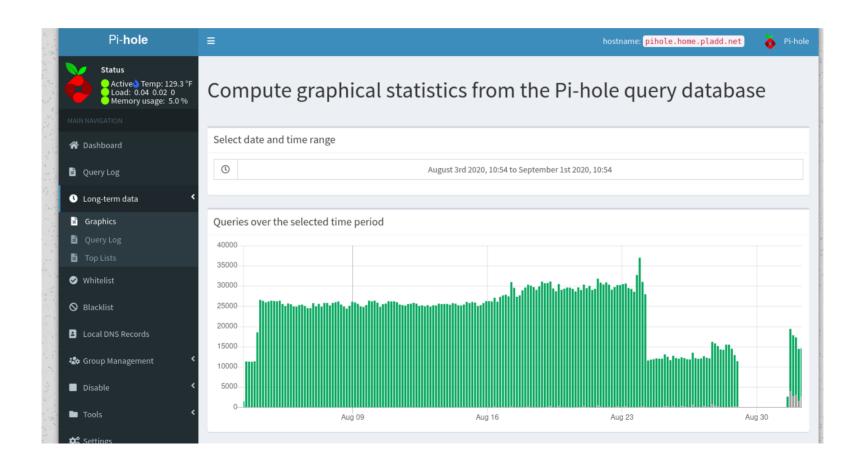


# Query Log



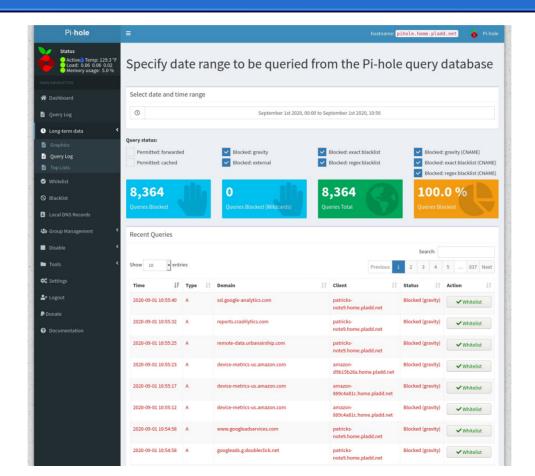


### **Graphical Log Summary**



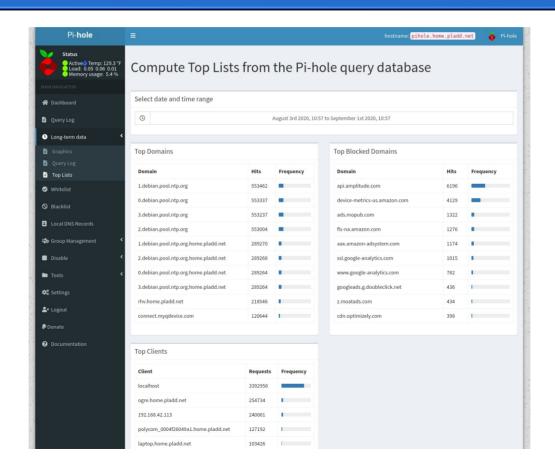


# Log Search



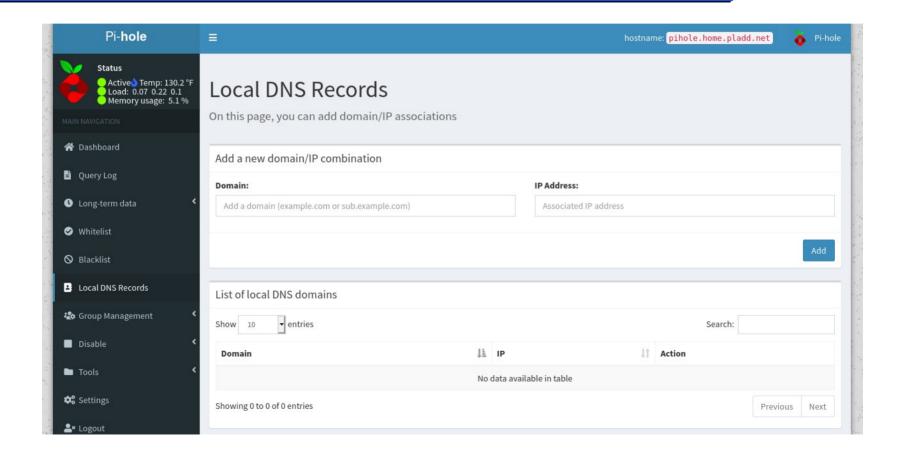


# Top Lists





### Local DNS





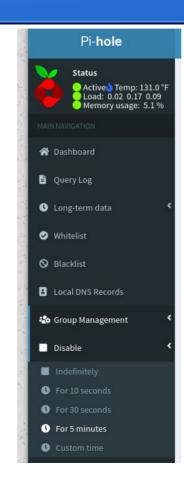
# **Audit**



### **Network List**



# Temporary Disable





#### Install

#### **One-Step Automated Install**

Those who want to get started quickly and conveniently may install Pi-hole using the following command:

```
curl -sSL https://install.pi-hole.net | bash
Info
Piping to bash is a controversial topic, as it prevents you from
reading code that is about to run on your system.
If you would prefer to review the code before installation, we provide these alternative
installation methods.
```

#### Alternative 1: Clone our repository and run

```
git clone --depth 1 https://github.com/pi-hole/pi-hole.git Pi-hole
cd "Pi-hole/automated install/"
sudo bash basic-install.sh
```

#### Alternative 2: Manually download the installer and run

```
wget -0 basic-install.sh https://install.pi-hole.net
sudo bash basic-install.sh
```



#### Post-Install

- Configure DHCP server to point to PiHole IP address
- Updates:
  - Run sudo pihole -up; sudo apt upgrade

```
[i] Checking for updates...
[i] Pi-hole Core:
[i] Web Interface:
[i] FTL out of date, it will be updated by the installer.
[/] Root user check
[/] Update local cache of available packages
[i] Existing PHP installation detected : PHP version 7.3.14-1~deb10ul
[i] Performing unattended setup, no whiptail dialogs will be displayed
[/] Disk space check
[/] Checking apt-get for upgraded packages... 82 updates available
[i] Installer Dependency checks...
[/] Checking for dhcpcd5
[/] Checking for git
[/] Checking for iproute2
[/] Checking for whiptail
```

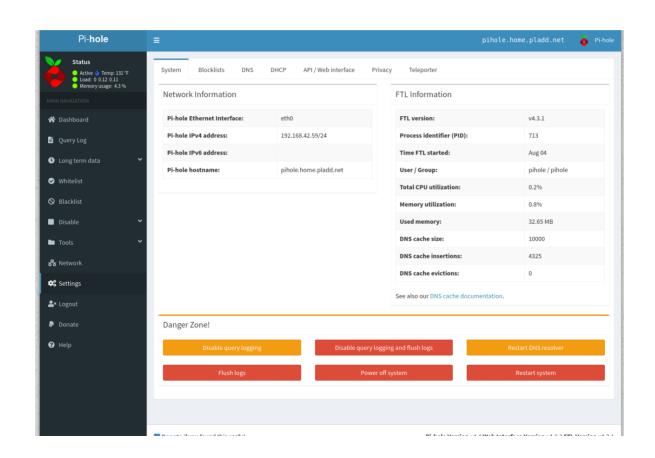
[/] Checking for dnsutils

```
| Supported to detected
| Stimus most firsted
| Stimus most firsted
| Stimus most firsted
| Stimus most firsted
| Resetting repository within /atc/.pihole...
| Checking for curl
| Checking for further firsted
| Checking for supilistic firsted
| Checking for supilistic firsted
| Checking for supilistic firsted
| Checking for music firsted
| Checking for music firsted
| Checking for phys.-salt (will be installed)
| Checking for district (will be installed)
| Checking for district (will be installed)
| Checking for district (will be installed)
| Ch
```

```
ocessing triggers for libc-bin (2.28-10+rpil)
[/] Enabling lighttpd service to start on reboot..
1 Checking for user 'pihole'
[i] FTL Checks...
[i] Checking for existing FTL binary...
[/] Downloading and Installing FTL
[i] Installing configs from /etc/.pihole..
[/] Copying 01-pihole.conf to /etc/dnsmasq.d/01-pihole.conf
[i] Installing blocking page..
Creating directory for blocking page, and copying files
[i] Backing up index.lighttpd.html
   No default index.lighttpd.html file found... not backing up
[/] Installing sudoer file
[/] Installing latest Cron script
[/] Installing latest logrotate script
 /] man pages installed and database updated
[i] Testing if systemd-resolved is enabled
[i] Systemd-resolved is not enabled
  ] Restarting lighttpd service.
 Enabling lighttpd service to start on reboot...
  ] Enabling pihole-FTL service to start on reboot..
  Restarting pihole-FTL service..
 i] Creating new gravity database
   Migrating content of /etc/pihole/adlists.list into new database
   Migrating content of /etc/pihole/regex.list into new database
   Deleting existing list cache
   Neutrino emissions detected.
   Pulling blocklist source list into range
```

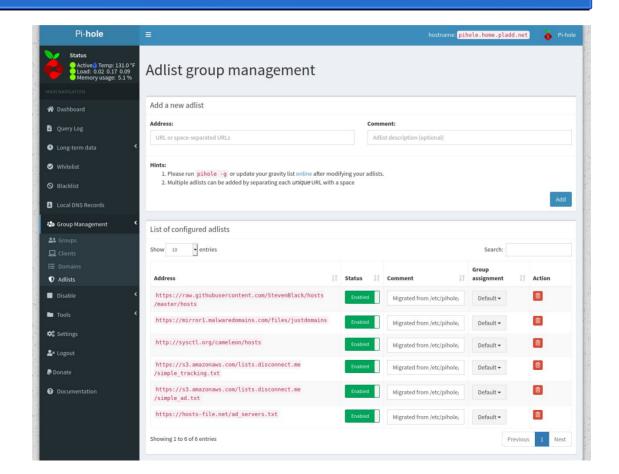
```
[/] Preparing new gravity database
[i] Target: https://raw.githubusercontent.com/StevenBlack/hosts/master/hos
 [/] Status: Retrieval successful
[i] Received 55654 domains
[i] Target: https://mirrorl.malwaredomains.com/files/justdomains
[/] Status: Retrieval successful
[i] Received 26854 domains
[i] Target: http://sysctl.org/cameleon/hosts
[/] Status: Retrieval successful
[i] Received 20567 domains
[i] Target: https://s3.amazonaws.com/lists.disconnect.me/simple tracking.
[/] Status: Retrieval successful
[i] Received 34 domains
[i] Target: https://s3.amazonaws.com/lists.disconnect.me/simple ad.txt
[/] Status: Retrieval successful
[i] Received 2701 domains
[i] Target: https://hosts-file.net/ad servers.txt
[x] Status: Connection Refused
[x] List download failed: no cached list available
 [/] Storing downloaded domains in new gravity database
[/] Building tree
[/] Swapping databases
[i] Number of gravity domains: 105810 (93492 unique domains)
[i] Number of exact blacklisted domains: 0
[i] Number of regex blacklist filters: 0
[i] Number of exact whitelisted domains: 0
[i] Number of regex whitelist filters: 0
[/] Flushing DNS cache
[/] Cleaning up stray matter
[/] DNS service is running
[/] Pi-hole blocking is Enabled
[i] The install log is located at: /etc/pihole/install.log
Current Pi-hole version is v5.1.2.
Current AdminLTE version is v5.1.1.
Current FTL version is v5.2.
ladd@pihole:~ $
```

# Settings



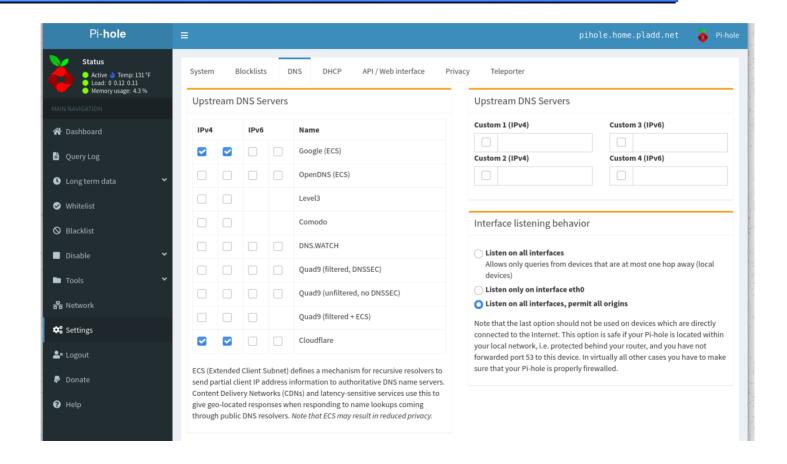


# Settings (Lists)



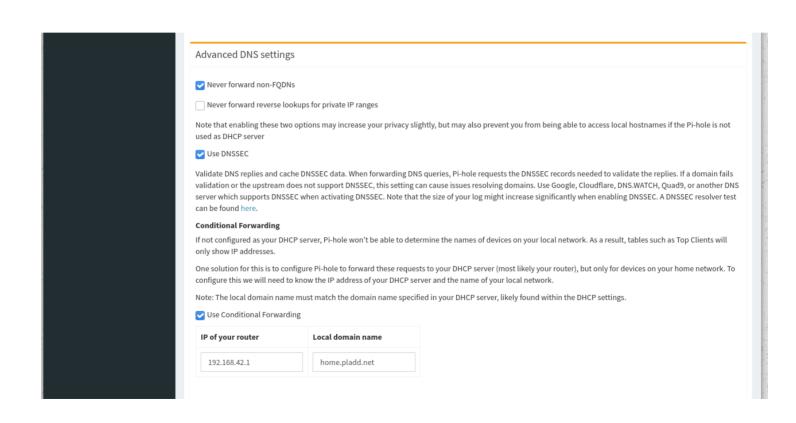


### Settings (DNS)



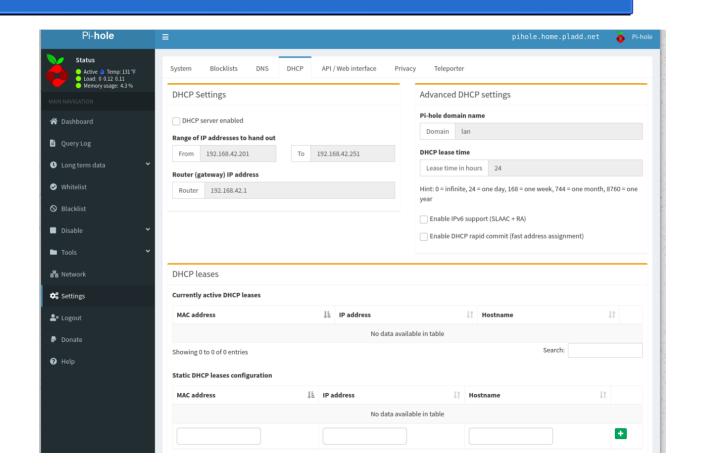


### Settings (Advanced DNS)



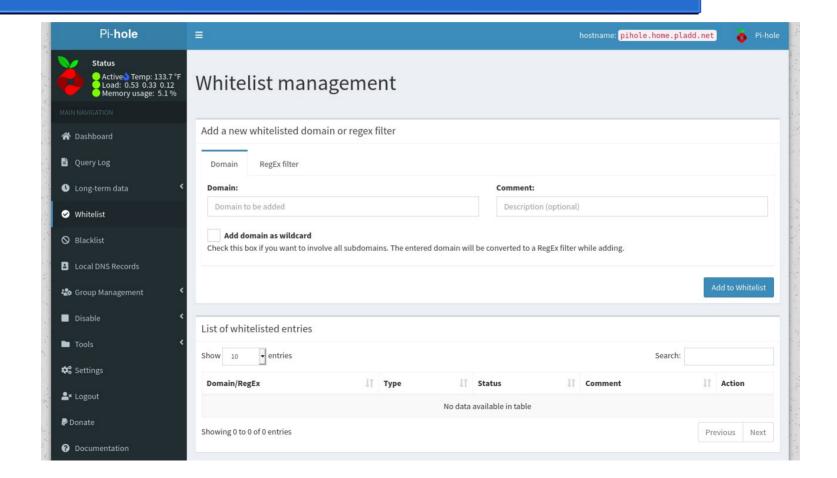


## Settings (DHCP)





## Settings (Allow List)





# Settings (Block List)

