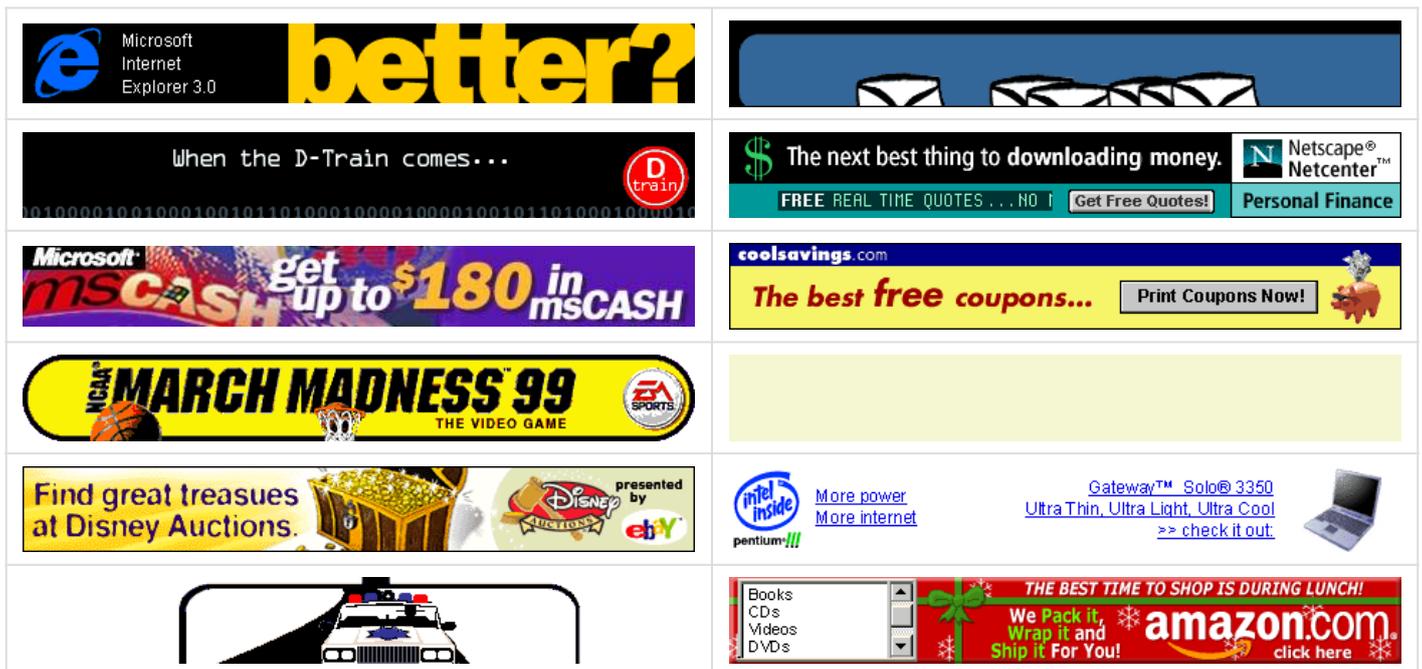


Using dnsmasq and Pi-Hole for DNS Services in the Network

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I know you're ?...

No one likes ads. Blocking almost all ads over the network was a distant dream. I had deployed my own DNS Service using `dnsmasq` back in Grade 10, but only for resolving my internal domains — `c.love.atheesh.org`, `inside.atheesh.org`, `wan.atheesh.org`, `mediacenter.atheesh.org`, etc.

Blocking so many ad-servers using `dnsmasq` by resolving those domains to `0.0.0.0` was next to impossible. Then I came to know about Pi-Hole, a wrapper around `dnsmasq` which just adds ad-lists from <https://raw.githubusercontent.com/StevenBlack/hosts/master/hosts> to `dnsmasq.conf`. Although I could have grabbed the ad-list (a `dnsmasq` configuration file) and directly put it in my server, I didn't do so, the really beautiful user interface of Pi-Hole prevented me.

Thank Gravity-Sync, a Pi-Hole DNS Replication service. It helps me sync DNS Entries uniformly among all three Dynamic Name Servers — `ns01.atheesh.org`, `ns02.atheesh.org` and `ns03.atheesh.org`.

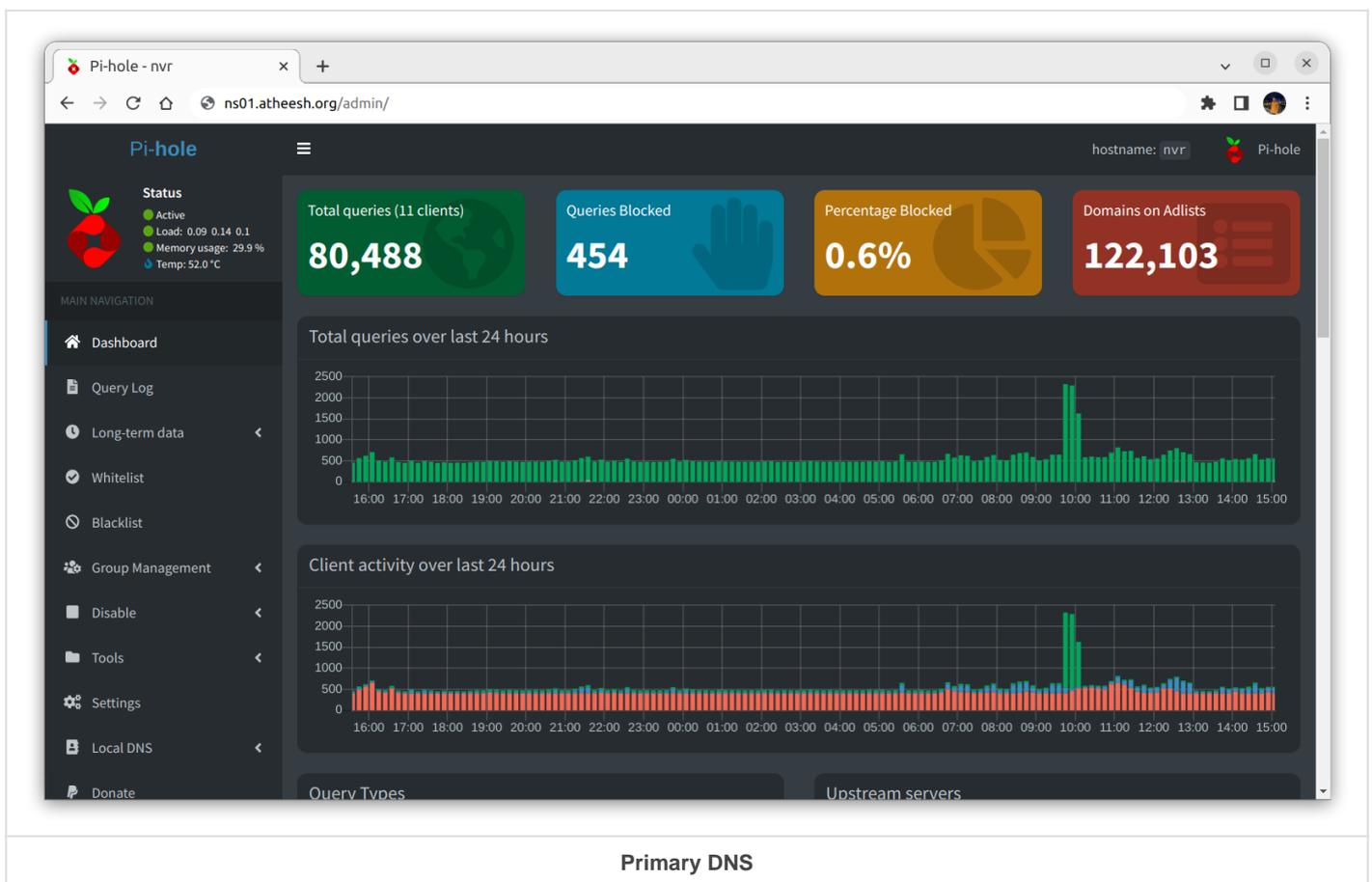
A DHCP Server?

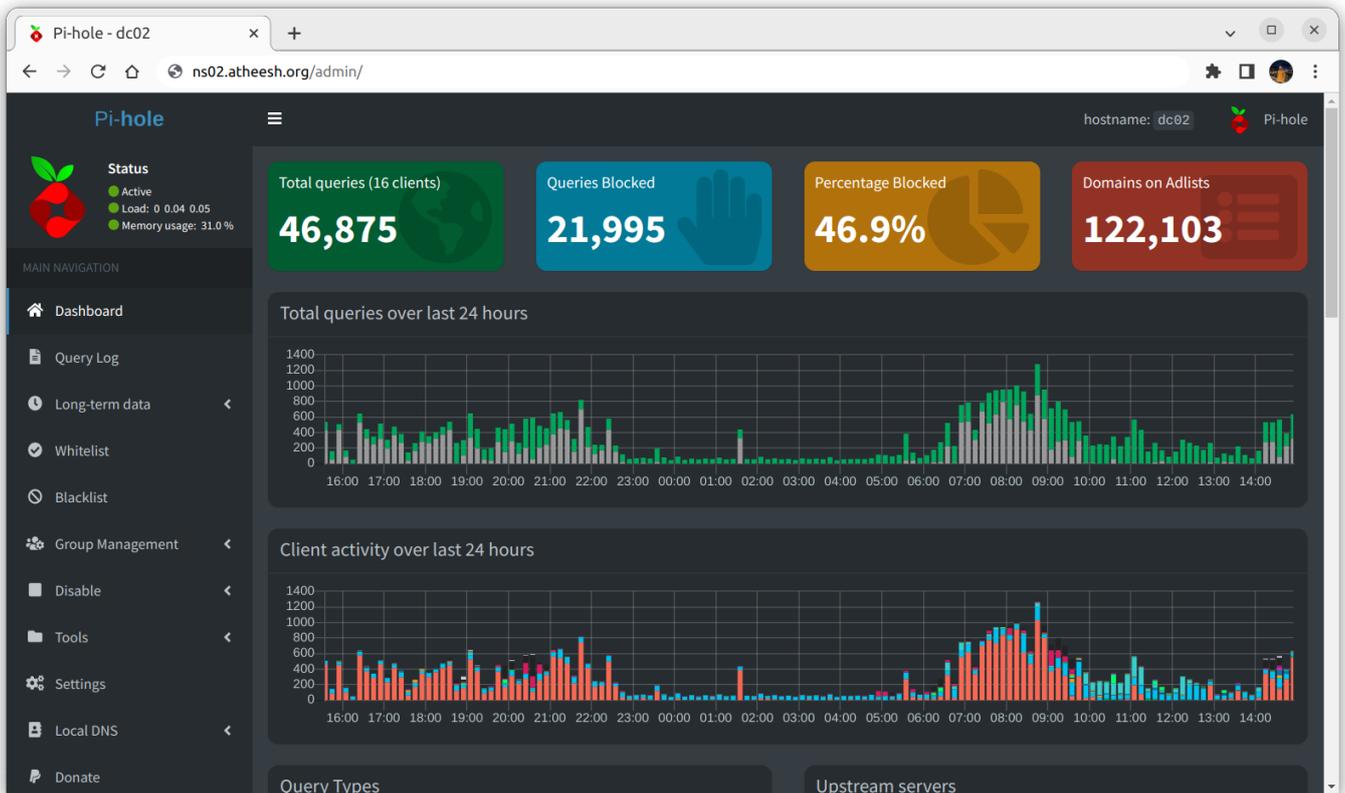
As I mentioned earlier, I used to use `dnsmasq` for DNS Services. I also used to use it as a DHCP Server for all the clients in my network. (I made sure to disable my router's internal DHCP Server. You know what two DHCP Servers do when left improperly configured do...)

Why did I need one? **To Resolve domains differently for different clients.** I used the DHCP Service of `dnsmasq` to Group Clients (Called tagging in `dnsmasq`) and block certain websites for those specific groups (that is, resolving certain domains like `youtube.com` as `0.0.0.0` for all clients in that group).

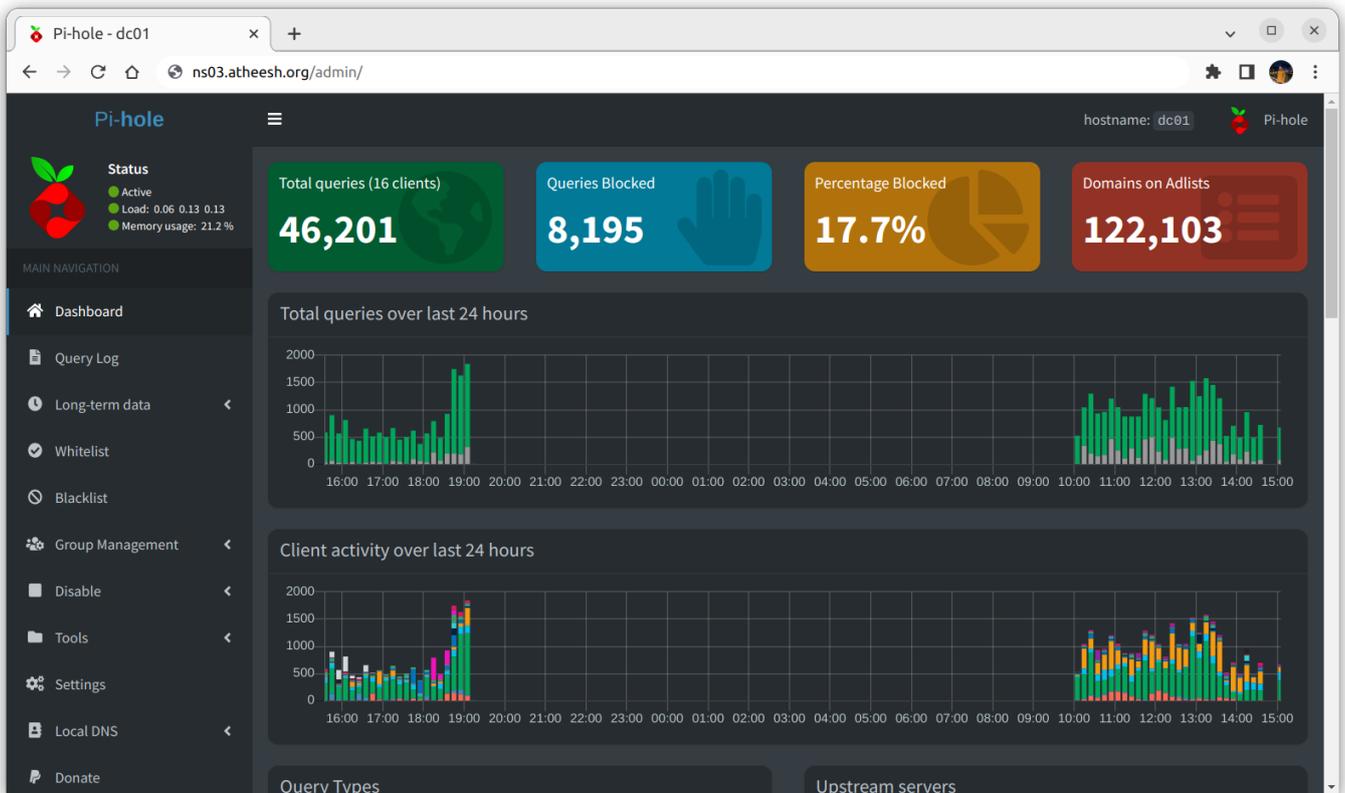
Again Pi-Hole to the rescue. Pi-Hole could do the same thing without much complexity but by just using the source IP from DNS Request headers (again, it's a wrapper around `dnsmasq` with improvements) which `dnsmasq` couldn't do. I configured Pi-Hole to do the same and made my router the DHCP Server creating simplicity in the network.

Screenshots





Secondary DNS



Tertiary DNS

