

AdGuard Home as container (LXC) in Proxmox VE

After some practical daily challenges, I have decided to give a try to AdGuard Home as local DNS resolver.

One of the big differences is ability to resolve external DNS servers using DNS-over-HTTPS, DNS-over-QUIC, DNSCrypt.

How does AdGuard Home compare to Pi-Hole

At this point, AdGuard Home has a lot in common with Pi-Hole. Both block ads and trackers using the so-called "DNS sinkholing" method and both allow customizing what's blocked.

Note

We're not going to stop here. DNS sinkholing is not a bad starting point, but this is just the beginning.

AdGuard Home provides a lot of features out-of-the-box with no need to install and configure additional software. We want it to be simple to the point when even casual users can set it up with minimal effort.

Note

Some of the listed features can be added to Pi-Hole by installing additional software or by manually using SSH terminal and reconfiguring one of the utilities Pi-Hole consists of. However, in our opinion, this cannot be legitimately counted as a Pi-Hole's feature.

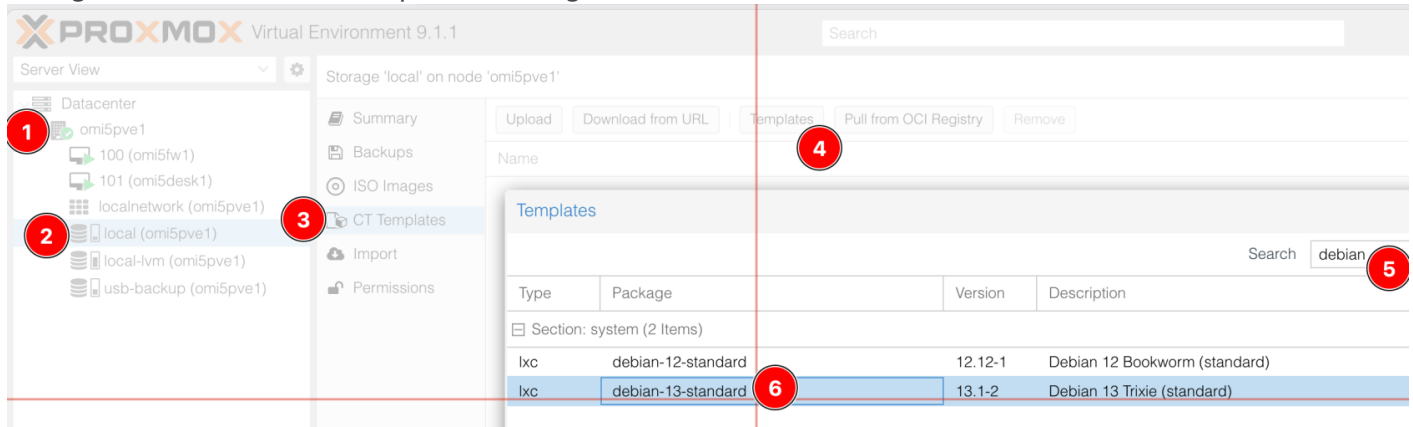
Feature	AdGuard Home	Pi-Hole
Blocking ads and trackers	✓	✓
Customizing blocklists	✓	✓
Built-in DHCP server	✓	✓
HTTPS for the Admin interface	✓	Kind of, but you'll need to manually configure lighttpd
Encrypted DNS upstream servers (DNS-over-HTTPS, DNS-over-TLS, DNSCrypt)	✓	✗ (requires additional software)
Cross-platform	✓	✗ (not natively, only via Docker)
Running as a DNS-over-HTTPS or DNS-over-TLS server	✓	✗ (requires additional software)
Blocking phishing and malware domains	✓	✗ (requires non-default blocklists)
Parental control (blocking adult domains)	✓	✗ (requires non-default blocklists)
Force Safe search on search engines	✓	✗
Per-client (device) configuration	✓	✓
Access settings (choose who can use AGH DNS)	✓	✗
Running without root privileges	✓	✗

ref

<https://github.com/AdguardTeam/AdGuardHome>

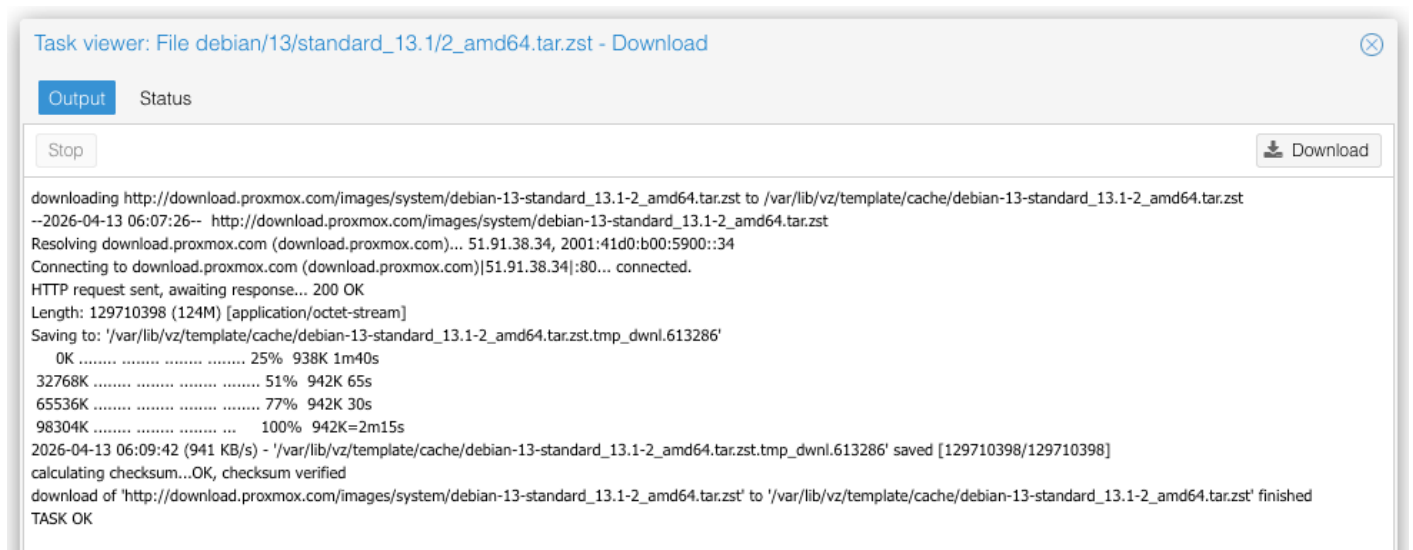
Login into Proxmox

?? Download Debian distro template for containers. For some reason it might be cancelled or disrupted. As we now, which one template is expecting to find, let's download that manually. Navigate to containers' templates storage, find suitable and hit [Download] button

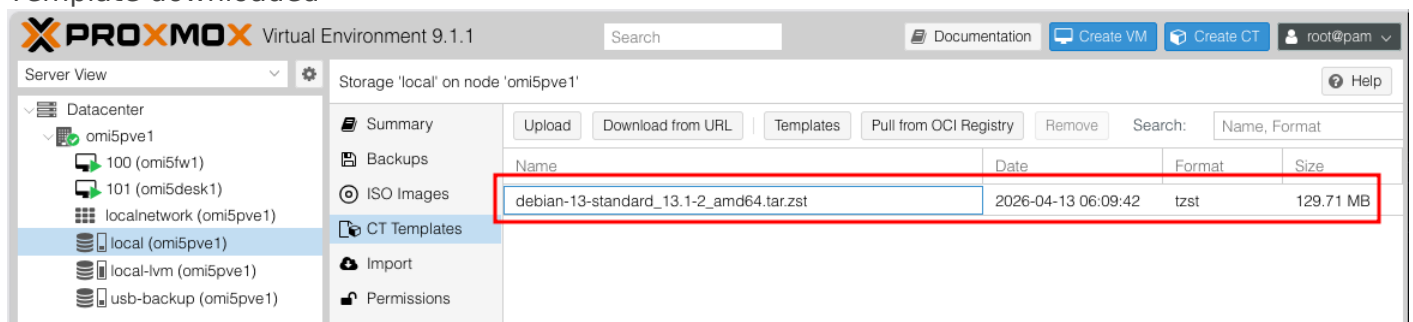


Download task itself

??



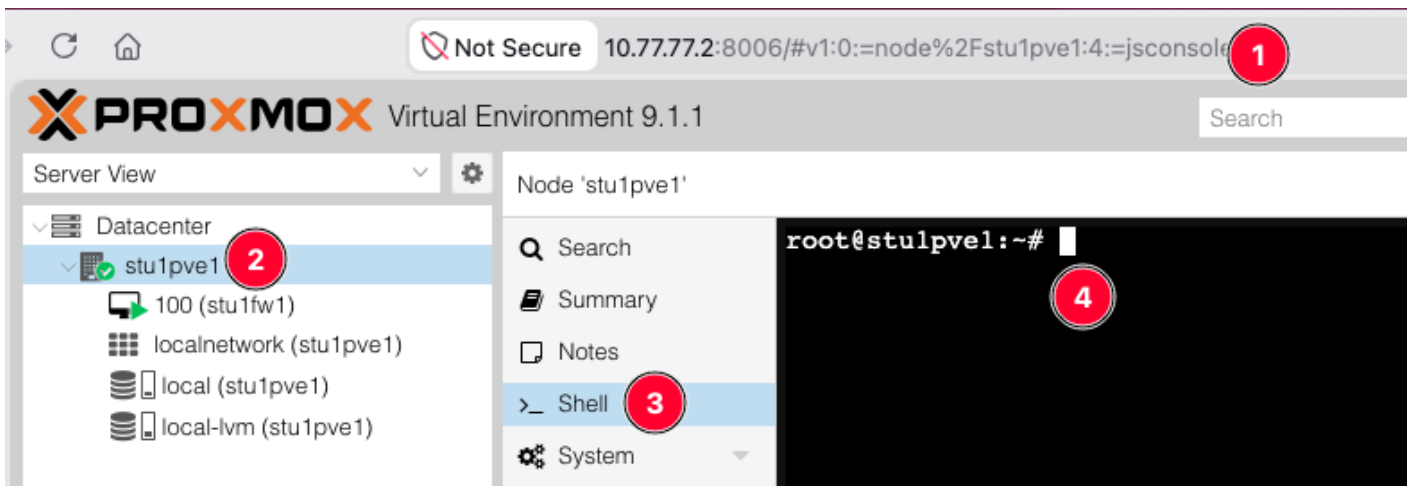
Template downloaded



Script location:

<https://community-scripts.org/scripts/adguard>

Open node shell



Download the script:

```
export dir="/root/delme/"
mkdir -p ${dir}
cd ${dir}

curl -O https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/ct/adguard.sh
ls -latr
```

Let's see what is inside of this script

```
Node 'stu1pve1'

1 #!/usr/bin/env bash
2 source <(curl -fsSL https://raw.githubusercontent.com/community-scripts/ProxmoxVE/main/misc/build.func)
3 # Copyright (c) 2021-2026 tteck
4 # Author: tteck (tteckster)
5 # License: MIT | https://github.com/community-scripts/ProxmoxVE/raw/main/LICENSE
6 # Source: https://adguard.com/ | Github: https://github.com/AdguardTeam/AdGuardHome
7
8 APP="Adguard"
9 var_tags="${var_tags:-adblock}"
10 var_cpu="${var_cpu:-1}"
11 var_ram="${var_ram:-512}"
12 var_disk="${var_disk:-2}"
13 var_os="${var_os:-debian}"
14 var_version="${var_version:-13}"
15 var_arm64="${var_arm64:-yes}"
16 var_unprivileged="${var_unprivileged:-1}"
17
18 header_info "$APP"
19 variables
20 color
21 catch_errors
22
23 function update_script() {
24     header_info
25     check_container_storage
26     check_container_resources
27     if [[ ! -d /opt/AdGuardHome ]]; then
28         msg_error "No ${APP} Installation Found!"
29         exit
30     fi
31     msg_error "Adguard Home can only be updated via the user interface."
32     exit
33 }
34
35 start
36 build container
37 description
38
39 msg_ok "Completed successfully!\n"
40 echo -e "${CREATING}${GN}${APP} setup has been successfully initialized!${CL}"
41 echo -e "${INFO}${YW}Access it using the following URL:${CL}"
42 echo -e "${GATEWAY}${BGN}http://${IP}:3000${CL}"
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```

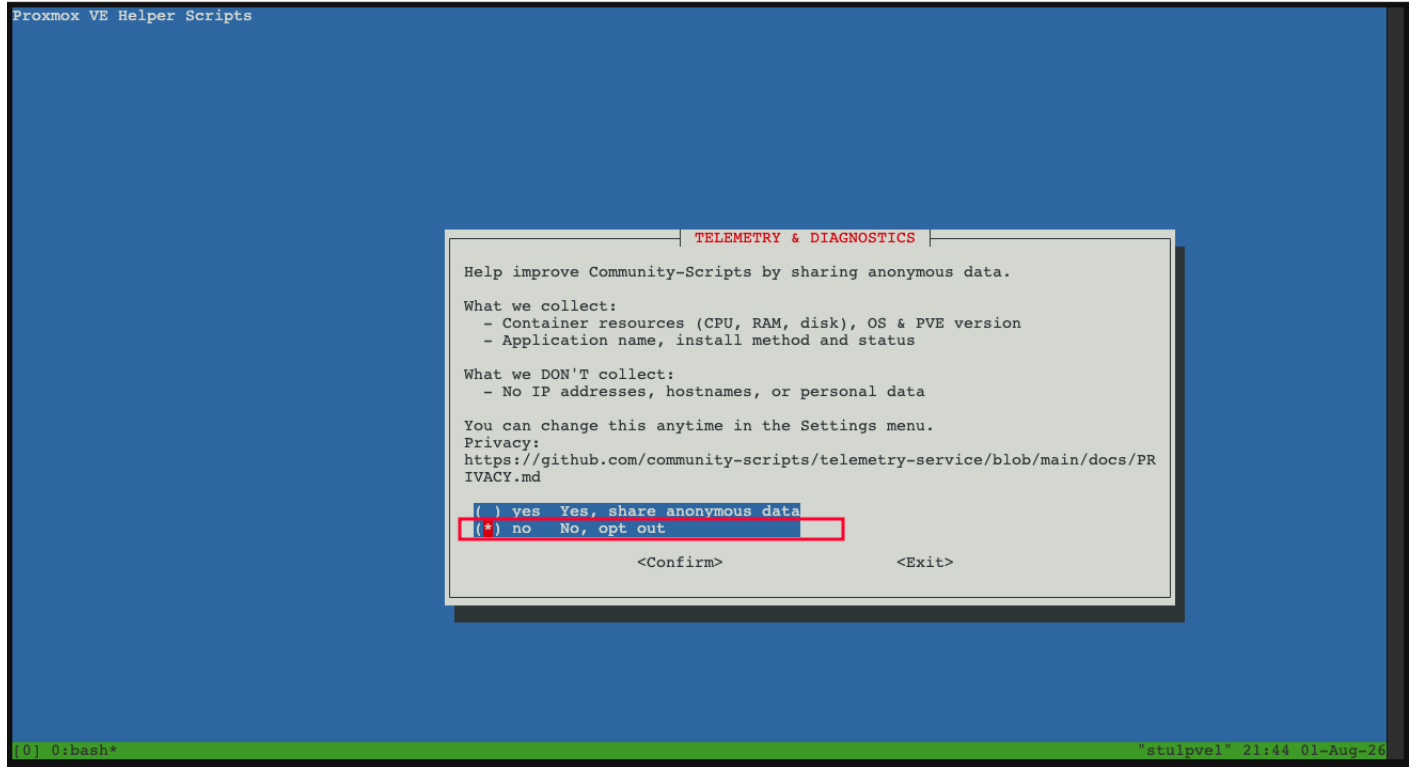
and invoke it's from the shell, when confident:

```
chmod +x adguard.sh
./adguard.sh
```

Installation questions

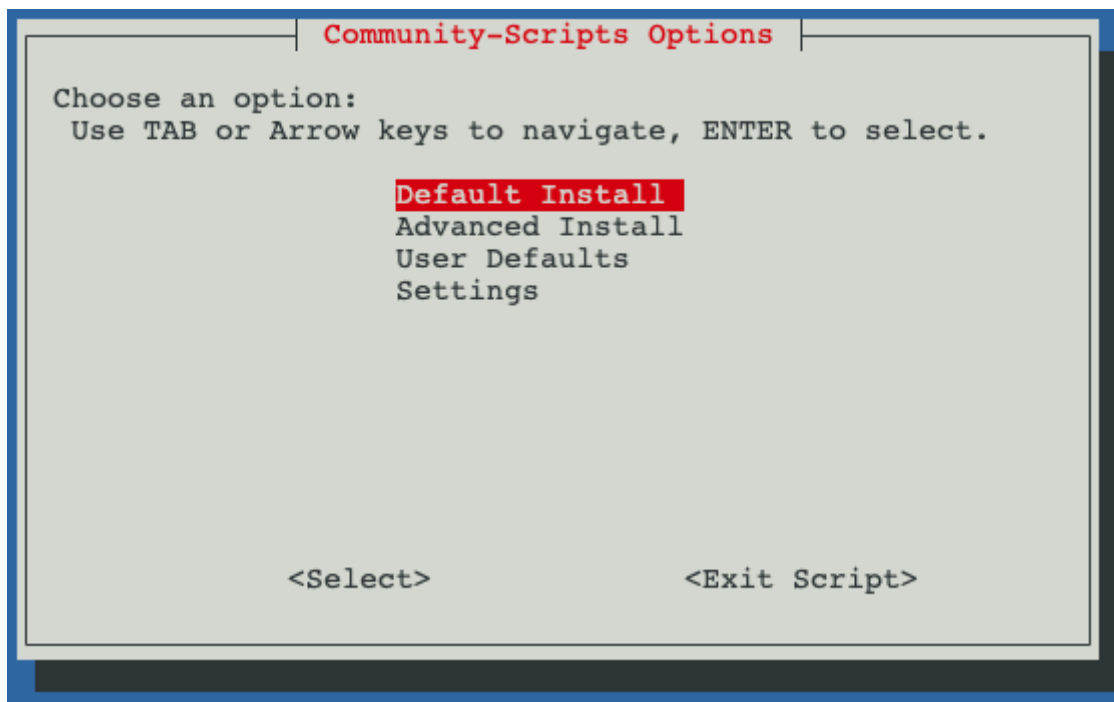
Telemetry and diagnostics

Use [Down], [Space], [Enter]



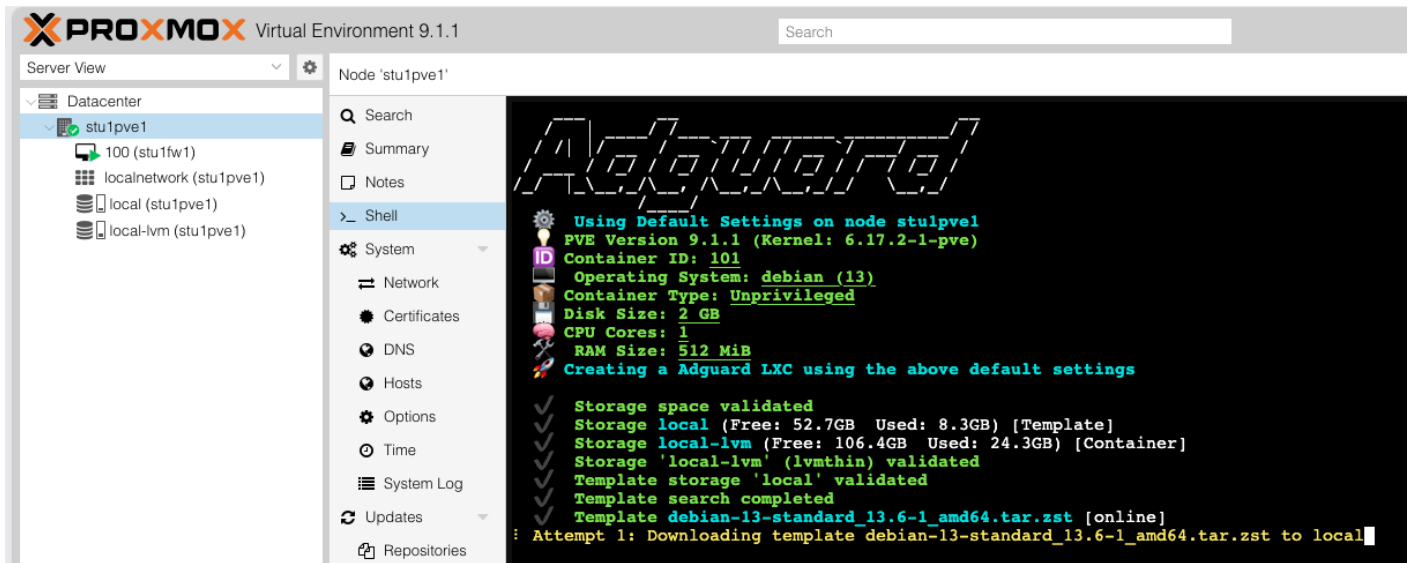
Kind of installation

Choose "Default Install"

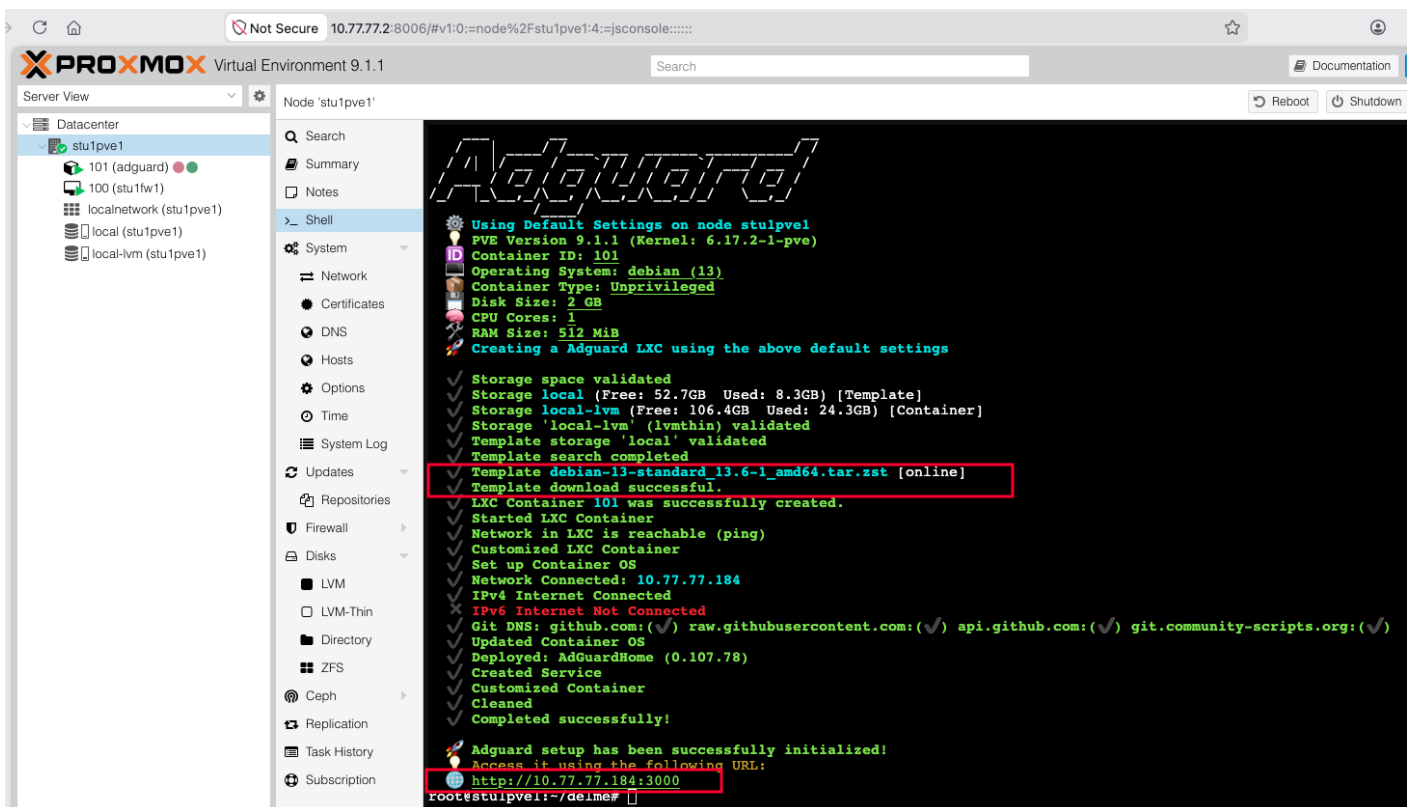


Installations

Script will search for template, and if it is not found, begin download



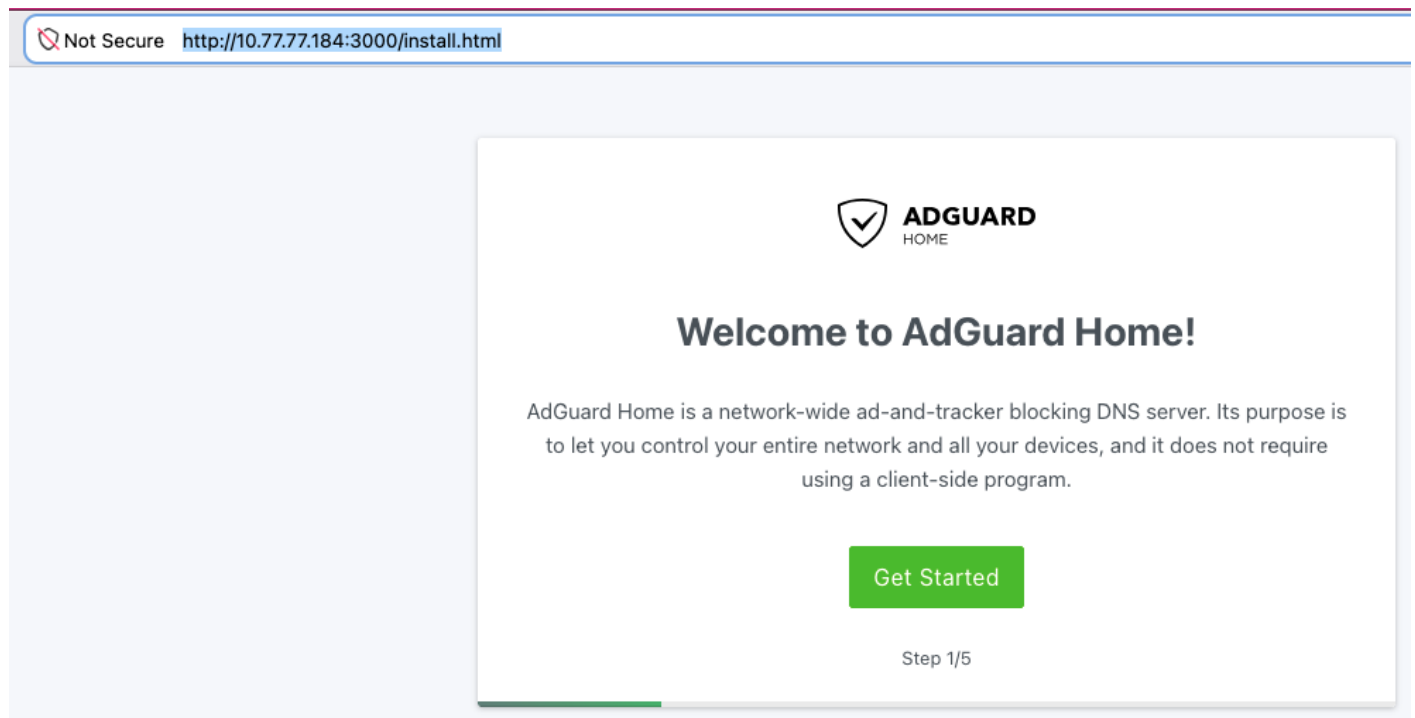
Installation successful



Applicatin configuration

Check in the browser the URL, which is indicated by installer (HTTPS will not work at this point)

http://10.77.77.184:3000



Do not change anything, proceed with defaults



Admin Web Interface

Listen interface

All interfaces

Port

80

Your AdGuard Home admin web interface will be available on the following addresses:

- <http://10.77.77.184>
- <http://127.0.0.1>
- <http://::1>
- <http://fe80::be24:11ff:fe7a:9c58%eth0>

DNS server

Listen interface

All interfaces

Port

53

You will need to configure your devices or router to use the DNS server on the following addresses:

- 10.77.77.184
- 127.0.0.1
- ::1
- fe80::be24:11ff:fe7a:9c58%eth0

Static IP Address

AdGuard Home is a server so it needs a static IP address to function properly. Otherwise, at some point, your router may assign a different IP address to this device.

Back

Next

Step 2/5

Create admin user (and note pass to password manager)



Authentication

Password authentication to your AdGuard Home admin web interface must be configured. Even if AdGuard Home is accessible only in your local network, it is still important to protect it from unrestricted access.

Username



Password

Confirm password

Back

Next

Step 3/5

Take instructions for other devices. Usually just skip it.



Configure your devices

To start using AdGuard Home, you need to configure your devices to use it.
AdGuard Home DNS server is listening on the following addresses:

- 10.77.77.184
- 127.0.0.1
- ::1
- fe80::be24:11ff:fe7a:9c58%eth0



Router



Windows



macOS



Android



iOS



DNS Privacy

Router

This setup automatically covers all devices connected to your home router, no need to configure each of them manually.

1. Open the preferences for your router. Usually, you can access it from your browser via a URL, such as <http://192.168.0.1/> or <http://192.168.1.1/>. You may be prompted to enter a password. If you don't remember it, you can often reset the password by pressing a button on the router itself, but be aware that if this procedure is chosen, you will probably lose the entire router configuration. If your router requires an app to set it up, please install the app on your phone or PC and use it to access the router's settings.
2. Find the DHCP/DNS settings. Look for the DNS letters next to a field which allows two or three sets of numbers, each broken into four groups of one to three digits.
3. Enter your AdGuard Home server addresses there.
4. On some router types, a custom DNS server cannot be set up. In that case, setting up AdGuard Home as a [DHCP server](#) may help. Otherwise, you should check the router manual on how to customize DNS servers on your specific router model.

Next

Step 4/5

Finalize application initial configuration



Congratulations!

The setup procedure is complete and you're now ready to start using AdGuard Home.

[Open Dashboard](#)

Step 5/5

Login with user created.



Username



Password

[Sign in](#)

[Forgot password?](#)

⌂

Not Secure

http://10.77.77.184

67%

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☰

 **ADGUARD**
HOME

ON

[Dashboard](#)

[Settings](#)

[Filters](#)

[Query Log](#)

[Setup Guide](#)

[Sign out](#)

Dashboard

Disable protection

Refresh statistics

0

DNS Queries

00%

Blocked by Filters

00%

Blocked malware/phishing

00%

Blocked adult websites

General statistics

for the last 24 hours

DNS Queries (?)0

Blocked by Filters (?)0

Blocked malware/phishing (?)0

Blocked adult websites (?)0

Enforced safe search (?)0

Average processing time (?)0

Top clients

for the last 24 hours

Client	Requests count
No clients found	

Top queried domains

for the last 24 hours

Domain	Requests count
No domains found	

Top blocked domains

for the last 24 hours

Domain	Requests count
No domains found	

Top upstreams

for the last 24 hours

Upstream	Requests count
No upstreams data found	

Average upstream response time

for the last 24 hours

Upstream	Response time
No upstreams data found	

Homepage

Privacy Policy

Report an issue

🌐

🌙

⌂

English

▼

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Version: v0.107.78

The only change we want to perform is to change IP address. Locate container, open it's network configuration, change from DHCP to STATIC and define desired IP address (remember do define

CIDR mask). Remember default gateway!

The screenshot shows the Proxmox VE interface for container 101 (adguard) on node 'stu1pve1'. The 'Network' tab is selected, and the 'Edit: Network Device (veth)' dialog is open. The dialog shows the following configuration:

Name	MAC address	Bridge	VLAN Tag	Firewall	IPv4	IPv6
eth0	BC:24:11:7A:9C:58	vmbro	no VLAN	☐	Static: 10.77.77.10/24 Gateway (IPv4): 10.77.77.1	Static: None

Open container's shell , take a note of network address and perform restart. Verify address (there are still old and new):

```
ip -br -a
```

The screenshot shows the Proxmox VE interface for container 101 (adguard) on node 'stu1pve1'. The 'Console' tab is selected, and the output of the 'ip -br -a' command is displayed. The output shows the network configuration for the eth0 interface, including the IP address 10.77.77.184/24 and the gateway 10.77.77.10/24.

```
Debian GNU/Linux 13 adguard tty1
adguard login:
Debian GNU/Linux 13 adguard tty1
adguard login: root (automatic login)

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

Adguard LXC Container
Provided by: community-scripts ORG | GitHub: https://github.com/community-scripts/ProxmoxVE
OS: Debian GNU/Linux 13 (trixie)
Hostname: adguard
IP Address: 10.77.77.184
root@adguard:~# ip -br -a
lo        UNKNOWN  127.0.0.1/8 ::1/128
eth0@if14 UP        10.77.77.184/24 10.77.77.10/24 fe80::be24:11ff:fe7a:9c58/64
root@adguard:~#
```

Restart container

```
shutdown -r now
```

After reboot, Verify again

```
ip -br -a
```

Container 101 (adguard) on node 'stu1pve1' adblock community-script

- Summary
- Console
- Resources
- Network
- DNS
- Options
- Task History
- Backup
- Replication
- Snapshots
- Firewall
- Permissions

```
Debian GNU/Linux 13 adguard tty1
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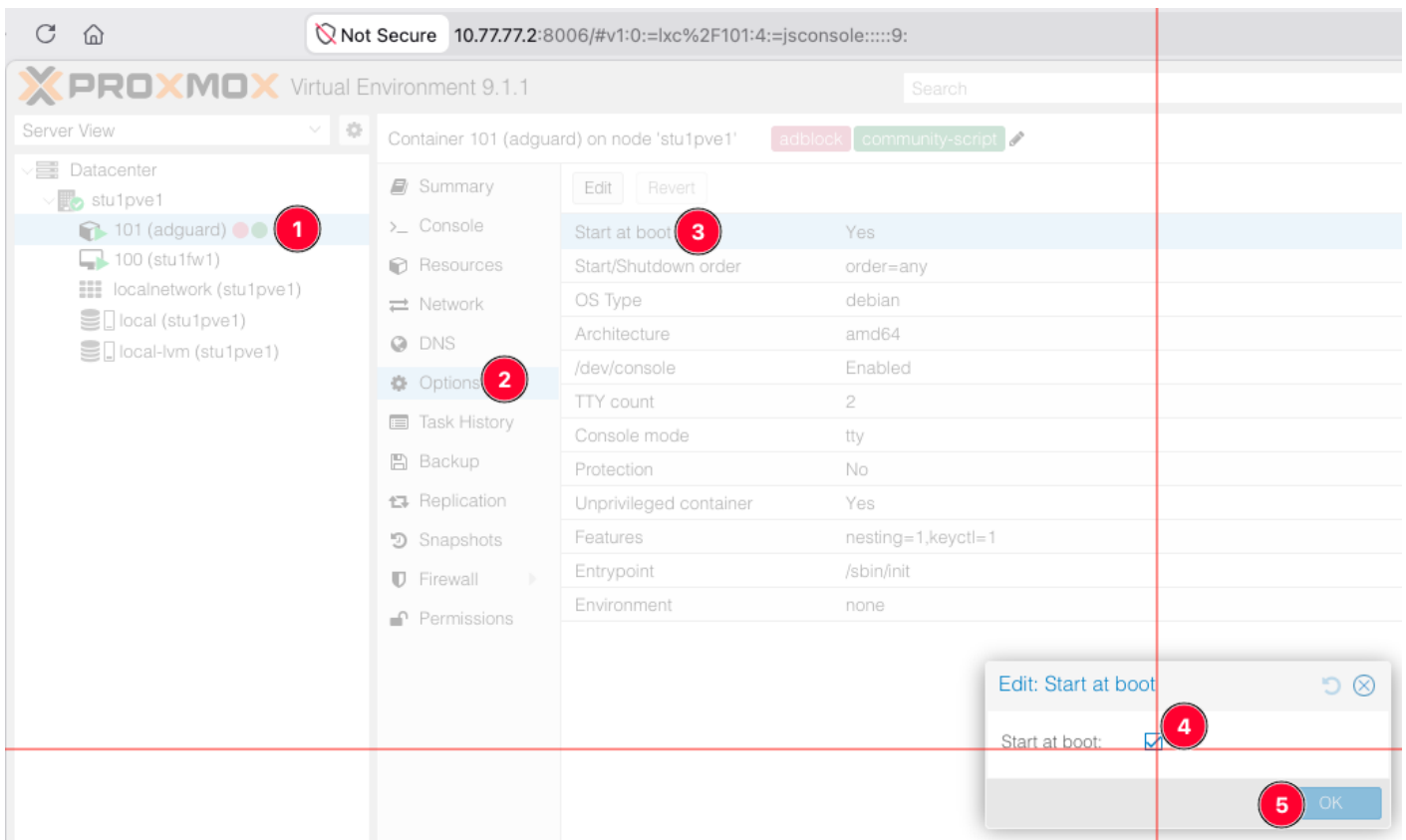
  OS: Debian GNU/Linux 13 (trixie)
  Hostname: adguard
  IP Address: 10.77.77.10

root@adguard:~# ip -br a
lo                UNKNOWN    127.0.0.1/8 ::1/128
eth0@if15         UP          10.77.77.10/24 fe80::be24:11ff:fe7a:9c58/64
root@adguard:~# uptime
 22:02:34 up 1 min,  0 users,  load average: 0.76, 0.38, 0.32
root@adguard:~#
```

```
ip -br a
```

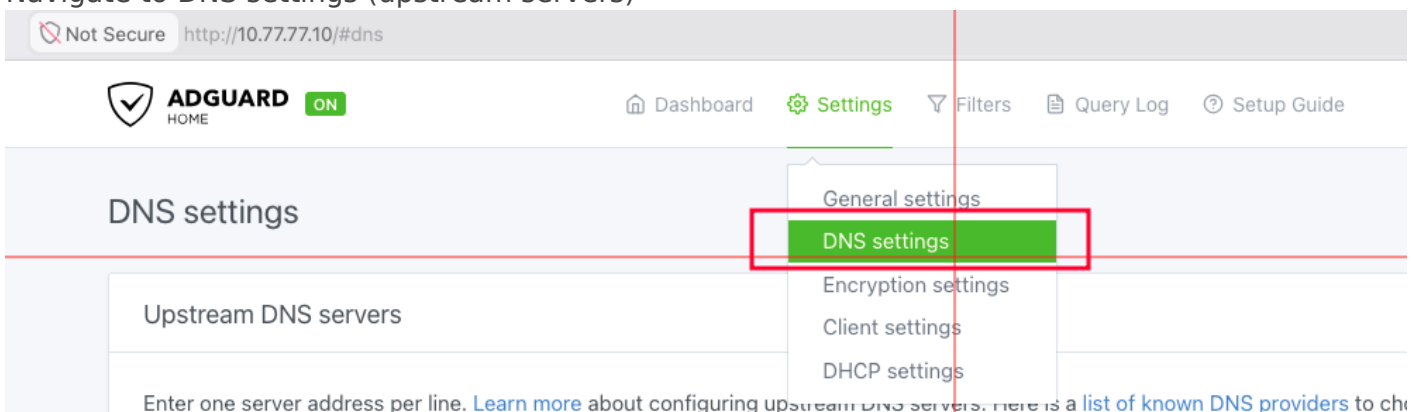
```
shutdown -r now
```

Last thing, before go: verify that container has "Start on boot" tick box enabled. Thus, we shall be sure that DNS server will be started with hypervisor. That applies to all machines, which need to be started (such as main router :)



Add public public name servers

Navigate to DNS settings (upstream servers)



List available here

<https://dox.installanduse.com/books/domain-name-system-dns/page/public-nss-doh-dot-dog>

Check for "Fastest IP address"

- ☐ Load-balancing
Query one upstream server at a time.
AdGuard Home uses a weighted random algorithm to select servers with the lowest number of failed lookups and the lowest average lookup time.
- ☐ Parallel requests
Use parallel queries to speed up resolving by querying all upstream servers simultaneously.
- ☒ Fastest IP address
Wait for responses from all DNS servers, measure the TCP connection speed for each server, and return the IP address of the server with the fastest connection speed.
This mode can significantly slow down DNS queries, if one or more upstream servers are not responding. Make sure that your upstream servers are stable and your upstream timeout is low.

Leave some public NSs to resolve list

Bootstrap DNS servers

IP addresses of DNS servers used to resolve IP addresses of the DoH/DoT resolvers you specify as upstreams. Comments are not permitted.

9.9.9.10
149.112.112.10

Save settings

Test upstreams

Apply

Next morning, after the first day of DNS traffic

(img)

With no filtering lists loads, DNS server served 54% of cached traffic to local clients. That is very good, which means, that local clients received DNS response earlier, rather than for original query.

(img)

Revision #4

Created 1 August 2026 18:29:57 by Anton

Updated 1 August 2026 19:23:56 by Anton