

QNAP DNS Server Instructions

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This documentation is likely out of date. Feel free to comment if you'd like to update it or if you confirm that it still works.

SETUP

1. Install Optware ipkg from list of apps in QNAP->Administration->Application Servers->QPKG Center
2. Enable SSH server
3. Install putty and connect
4. Check ipkg installation by typing `ipkg --version`
5. Update pkgmgr and install packages. See http://wiki.qnap.com/wiki/Using_IPKG

`ipkg update`

`/opt/bin/ipkg install dnsmasq`

`ipkg install nano`

6. Copy the hosts file to a place where it won't be overwritten at boot. See <http://forum.qnap.com/viewtopic.php?f=90&t=24512>

`mkdir /etc/config/user`

`cp /etc/hosts /etc/config/user/dnsmasq-hosts.conf`

7. Copy the resolv file to a place where it won't be overwritten at boot

`cp /etc/resolv.conf /etc/config/user/dnsmasq-resolv.conf`

8. Edit hosts file to contain your ip/ name resolutions

`nano /etc/config/user/dnsmasq-hosts.conf`

edit:

```
127.0.0.1      localhost      localhost
ipaddress0     QNAPServer.com QNAPServer
ipaddress1     name1
ipaddress2     name2
```

Ctrl+o - Save as

Enter - Select

Ctrl+x - Exit

9. Edit resolv file. See <http://forum.qnap.com/viewtopic.php?f=90&t=24512>

(As of today I will be using 8.8.8.8 and 8.8.4.4 [Google Domain Name Servers](#))

`nano /etc/config/user/dnsmasq-resolv.conf`

edit:

```
nameserver X.X.X.X (IP of normal DNS entry 1)
nameserver Y.Y.Y.Y (IP of normal DNS entry 2)
search Aydindril (where Aydindril is your workgroup)
```

Ctrl+o - Save as

Enter - Select

Ctrl+x - Exit

10. Edit dnsmasq.conf file. See <http://forum.qnap.com/viewtopic.php?f=90&t=24512> (If not using Qnap, but other linux machine, could be in `/etc/dnsmasq.conf` instead)

`nano /opt/etc/dnsmasq.conf`

edit:

```
user=admin
no-hosts #don't use /etc/hosts because it is overwritten at boot
addn-hosts=/etc/config/user/dnsmasq-hosts.conf #Read custom hosts
resolv-file=/etc/config/user/dnsmasq-resolv.conf #Override resolv.conf
```

11. Run the service. (`/etc/init.d/dnsmasq start` on other linux machines)

`/opt/etc/init.d/S56dnsmasq start`

TESTING

From a computer change the dns settings to manually assign rather than automatic. Test that you can go to your custom hosts from a browser or other means. Test that you can still reach

unspecified hosts (try your favorite website or something). If it works then you are done!

IMPLEMENTATION

First have it run on startup of the server, otherwise manually start the service every time. In the following setup for a QNAP server we will go ahead and run every script that is necessary for ipkg to kill two birds with one stone. See: <http://forum.qnap.com/viewtopic.php?p=252745>

1. Create a new script

```
nano /share/<choose_your_own_path__Avoid_spaces>/IPKGScripts.sh
```

2. Write your startup script to look something like this

```
#!/opt/bin/bash
for script in /opt/etc/init.d/*
do
    "$script"
done
```

Ctrl+o - Save as

Enter - Select

Ctrl+x - Exit

3. Make the script executable

```
chmod +x /share/<your_path_name>/IPKGScripts.sh
```

4. Modify the QPKG config file (make sure you do not have QPKG Center open in Administration)

```
nano /etc/config/qpkg.conf
```

Add the following

```
[IQPKGScripts]
Name = IQPKGScripts
Version = 1.0
Enable = TRUE
QPKG_File = IQPKGScripts.qpkg
Date = 2012-03-25
Shell = /share/<your_path_name>/IPKGScripts.sh
Install_Path = /share/<your_path_name>
Author = CTDragon
```

(Example of Mine Below)

```
[IQPKGScripts]
Name = IQPKGScripts
Version = 1.0
Enable = TRUE
QPKG_File = IQPKGScripts.qpkg
Date = 2012-03-25
Shell = /share/Access/Media/QNAP_Scripts/IPKGScripts.sh
Install_Path = /share/Access/Media/QNAP_Scripts
Author = CTDragon
```

5. Reboot and see if it works. See TESTING above

```
reboot
```

Second, setup your network to use the DNS server. *If you have a router*

1. Login to the administration options
2. Find the WAN settings
3. Change the DNS options from automatic to the IP address of your QNAP device

Alternatively configure manual dns settings for every client machine or find the most appropriate method for your setup.

SOURCES

http://wiki.qnap.com/wiki/Install_Optware_IPKG

http://wiki.qnap.com/wiki/Using_IPKG

<http://forum.qnap.com/viewtopic.php?f=90&t=24512>

<http://www.thekelleys.org.uk/dnsmasq/docs/dnsmasq-man.html>

http://wiki.qnap.com/wiki/Running_Your_Own_Application_at_Startup (This does not work, but i did use it as a source.)

<http://forum.qnap.com/viewtopic.php?p=252745>

<https://developers.google.com/speed/public-dns/> Google DNS Servers