

# Network Settings

The following additional Network configurations are not mandatory for the operation of NAS4Free, but may be required in some network configurations.

## Ethernet Interface properties

To configure advanced interface properties, go to the Network LAN Management page:

### Network | LAN Management

IPv4 Configuration	
Type	Static <input type="button" value="v"/>
IP address	192.168.1.238 / 24 <input type="button" value="v"/>
Gateway	192.168.1.232

IPv6 Configuration <input type="checkbox"/> Activate	
Type	Auto <input type="button" value="v"/>
IP address	fe80::6a05:caff:f / <input type="text"/>
Gateway	<input type="text"/>

Advanced Configuration	
MTU	<input type="text"/> <small>Set the maximum transmission unit of the interface to n, default is interface specific. The MTU is used to limit the size of packets that are transmitted on an interface. Not all interfaces support setting the MTU, and some interfaces have range restrictions.</small>
Media	1000baseTX <input type="button" value="v"/>
Duplex	full-duplex <input type="button" value="v"/>
Wake On LAN	Off <input type="button" value="v"/>
Extra options	<input type="text"/> <small>Extra options to ifconfig (usually empty).</small>

**Warning:**  
After you click "Save", you may also have to do one or more of the following steps before you can access NAS4Free again:

- change the IP address of your computer
- access the webGUI with the new IP address

On this page you can configure IP addressing type: DHCP or static. Note: In both situations(Static or DHCP) you must set the DNS manually.

MTU size: Useful for enabling Jumbo frame support (if your NIC support it). You can check if your NIC card supports jumbo frame from this web site (FreeBSD manpage):

<http://www.freebsd.org/cgi/man.cgi> Just enter your interface name (go on the Interface: Assign page for display the name of your card: fxp for example).

## Additional Ethernet interfaces

In addition to the LAN interface, additional Ethernet Interfaces can be defined, if required. This can be

either wired Ethernet interface or Wireless interfaces. See section 5.2.3 for more information relating to wireless LAN interfaces.

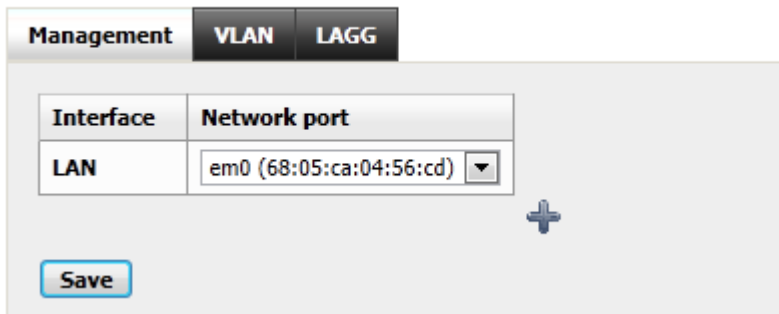
The additional interfaces may be used to administer NAS4Free or to access the shares, so it can be a useful redundant interface to NAS4Free for either function.

The additional Ethernet Interface can be within the existing LAN subnet or on a completely different subnet depending on your networks configuration. Where the additional interface is on a different subnet to that of the LAN interface, additional static routes may be required to facilitate connections to the other subnet, for example, the other subnet's gateway and beyond.

Before adding an additional Ethernet Interface to NAS4Free, ensure that the additional interfaces are installed when NAS4Free is booted.

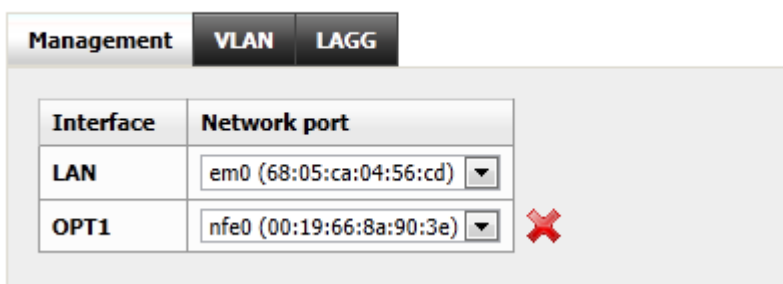
To add an additional interface, go to the Interfaces (assign) page. If your additional Ethernet interface is recognised, you will have a **+** alongside the standard display, as shown below. If you do not have a **+** on this display, your interface is either not correctly installed or not recognised by NAS4Free.

### Network | Interface Management



Clicking on the **+** to add the additional Interface called OPT1.

### Network | Interface Management



OPT1 is the default name of the interface, and this can be customized. Once OPT1 is configured you will notice an additional level under Interfaces (assign) called OPT1.

Click Save and reboot NAS4Free to ensure the additional interface is recognised. You can reboot NAS4Free via the Diagnostics/Reboot System page.

Once NAS4Free is again operational, you can configure the OPT1 interface and rename it to something more relevant to your network.

As per the display shown below, Click the Enable Optional 1 interface check box.

- Enter a description for the interface.
- Enter the IP Address and Subnet for the Interface and click Save.
- Change the MTU size if you need/want to. We recommend leaving this blank unless you know what you are doing and have a requirement to change the MTU size.
- This new Interface name in the Navigation Tree and other displays like ping/traceroute, etc will be updated.

A reboot is not required.

### Interfaces | Optional 1 (OPT1)

IPv4 Configuration <span style="float: right;"><input checked="" type="checkbox"/> Activate</span>	
Type	Static ▼
Description	OPT1 Office <small>You may enter a description here for your reference.</small>
IP address	192.168.1.239 / 24 ▼
IPv6 Configuration <span style="float: right;"><input type="checkbox"/> Activate</span>	
Type	Auto ▼
IP address	<input type="text"/> / <input type="text"/>
Advanced Configuration	
MTU	1500 <small>Set the maximum transmission unit of the interface to n, default is interface specific. The MTU is used to limit the size of packets that are transmitted on an interface. Not all interfaces support setting the MTU, and some interfaces have range restrictions.</small>
Media	1000baseSX ▼
Duplex	full-duplex ▼
Extra options	<input type="text"/> <small>Extra options to ifconfig (usually empty).</small>
<input type="button" value="Save"/>	

Security Note on additional interfaces: NAS4Free does not provide any routing between Ethernet interfaces, so any potential security risks of 'joining' two networks via NAS4Free should be limited. But, there is always the potential for virus infected files stored on NAS4Free to be accessible from either network, and so, it is important that a current and up to date anti-virus application is able to scan all files stored on NAS4Free, from time to time. Is not a case of viruses 'jumping' from one network to another, its more likely that a user on one network will save a file on NAS4Free and then that is access by another user on the other network.

## Wireless LAN interfaces

If a Wireless NIC is identified by the NAS4Free server, then you can configure this interface to access NAS4Free.

Note: Do not configure a wireless interface as Primary network interface for FreeNAS.

**(More detail to follow here)**





## Default Gateway

If you have a Default Gateway in your network, you may need to configure the Default Gateway within NAS4Free. You may also need to configure the Default Gateway to permit NAS4Free to connect to NTP time servers.

Using the Navigation Tree on the Left Hand side of the screen, select *Interfaces/LAN*



Configure the address your *Default Gateway*. (192.168.80.254, in this example) If you change your Default Gateway, or select Save at this point, you will be prompted to reboot the NAS4Free server with the following message:

“The changes have been saved. You must reboot your NAS for changes to take effect.”

To Reboot the NAS4Free server, Expand the Diagnostics item in the Navigation Tree, select Reboot System and select Yes. The NAS4Free PC will reboot.

Once the NAS4Free server is rebooted, again point your web browser at the FreeNAS PC. You should be presented with the System Status page again. Login if prompted.

## Static Routes

In most LAN environments, a single LAN interface will be used (the LAN interface) and its default gateway will provide the interface to other networks. Where multiple LAN interfaces are configured in NAS4Free, then additional static routes may be needed in FreeNAS to permit network traffic to the other networks. Note: This configuration is usually not required unless you have to direct traffic from one subnet via another.

In the example below the interface 'LAN' has the IP Address of 192.168.80.130 and its default gateway is 192.168.80.254, my Internet router. I have another router with a local address of 192.168.80.2 that is connect to another network (10.1.1.0/24). In order for FreeNAS to direct traffic to the 10.1.1.0/24 network, a static route is configured directing any 10.1.1.0/24 traffic to the 192.168.80.2 (local router to its remote network) via the LAN NIC.

### Network | Static routes | Add

<b>Interface</b>	<input type="text" value="LAN"/> <input type="button" value="v"/> Choose which interface this route applies to.
<b>Destination network</b>	<input type="text" value="10.1.1.0"/> / <input type="text" value="24"/> <input type="button" value="v"/> Destination network for this static route
<b>Gateway</b>	<input type="text" value="192.168.80.2"/> Gateway to be used to reach the destination network.
<b>Description</b>	<input type="text" value="To Secondary House"/> You may enter a description here for your reference.

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