How do I disable NAT on my router?

An English version of this Wiki page is still in progress. Translations are incomplete.

This Wiki page isn't complete yet. If you know how to disable NAT for routers which are not listed here, please tell us how via helpdesk@fem.tu-ilmenau.de so we can improve this wiki page. Thank you for your help!

What is NAT?

NAT is a technology which alters the devices' addresses to connect them to the FeM-Net with only a single IP address. For this to work, so-called “local” IP-addresses are usesd “behind” the router which aren't used in the internet. A further effect is that connections cannot be established from the internet to the devices which are connected to the router.

NAT violates §9 of our terms of use and must not be used in the FeM-Net.

How can I disable NAT?

Consumer routers usually do not have a separate option to disable NAT. However, normally there are operation modes which enable further settings and suffice to disable NAT and provide a flawless operation in the FeM-Net. In the below sections we describe how to switch to such an operation mode for some common router manufacturers.

TP-Link

TP-Link provides a setting called “Access Point”. It disables NAT, the firewall, DHCP and thus makes the device compliant to the FeM-Net rules.

TP-Link provides several manual on their website:

- https://www.tp-link.com/de/support/faq/2066/
- https://www.tp-link.com/us/support/faq/1384/

AVM FritzBox

Systems of AVM have a mode called “IP client”. It disables NAT, the firewall, DHCP and thus makes the device compliant to the FeM-Net rules.

Activation of „IP client“ mode:

- Log in to the interface of your FritzBox (e.g. via `http://fritz.box` or

http://192.168.178.1)
- Navigate to „Home Network“ > „Network“ > „Network Settings“ (perhaps you have to activate the „Advanced View“)
- Choose „IP client“ as operating mode
- Choose if your router is connected via WiFi or LAN cable with FeM-Net. *Caution! This is not about how your devices connect to the router!* You have two options:
  - The FritzBox is connected via cable with your network socket.
    - Enable the option „via LAN“ for your home network access.
    - Connect the network cable to „LAN 1“ on the FritzBox and to your network socket in your room.
  - The FritzBox should be connected with FeM-Net via FeM-WiFi.
    - Enable the option „via Wi-Fi“ *(might also be called „via WLAN“?)* for your home network access.
    - Under „Select Wi-Fi Network“ *(might be called differently, e.g. „Radio Network“)*, select one of the FeM-WiFi networks (e.g. „FeM.PSK“ or „FeM.1X“) and enter your login data.
- Click on „Apply“. Now, the FritzBox interface is no longer available at http://fritz.box, but under the IP address that was assigned to your FritzBox. You can check this address on the MyInfo page.

The English option names were taken from the AVM manual page (last accessed on 2021-08-03), which does not describe the case for Wi-Fi connection. If you find any wrong labels, please let us know via helpdesk@fem.tu-ilmenau.de so we can improve this wiki page.

AVM FritzRepeater

The FritzRepeater isn't able to do NAT and thus doesn't require any special configuration to be compliant to the FeM-Net rules. However, it is probably wanted to connect the FritzRepeater to the FeM-Net via cable instead of WiFi. For this, the repeater needs to be configured accordingly.

An English version of this section is still in progress. Please refer to the German section or consult AVM's manuals.

Hint: In AVM's manuals whenever “FritzBox” is stated, it means the router and in case of the FeM-Net just the connection to the rest of the FeM-Net.

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