

# Systemd

## basics

<https://www.shubhamdipt.com/blog/how-to-create-a-systemd-service-in-linux/>

rc.local: <https://www.troublenow.org/752/debian-10-add-rc-local/>

## network

disable predictable network names:

```
/etc/systemd/networkd/10-eth0.link:
```

```
[Match]
OriginalName=eth0

[Link]
NamePolicy=kernel
```

## dsa

```
/etc/systemd/network/eth0.network:
```

```
[Match]
Name=eth0

[Network]
DHCP=no
LinkLocalAddressing=no
ConfigureWithoutCarrier=true
```

```
/etc/systemd/network/wan.network
```

```
[Match]
Name=wan

[Network]
BindCarrier=eth0

Address=192.168.0.18/24
Gateway=192.168.0.10
DNS=192.168.0.10
```

If setting ConfigureWithoutCarrier on DSA-Port the default-route will not be set, because address is

invalid (network down at the time of configuration). Option can Only be set if no default route is needed.

For DNS resolved have to be enabled.

## bridge

Create bridge in netdev-file and configuration in network-file

/etc/systemd/network/lanbr.netdev:

```
[NetDev]
Name=lanbr0
Kind=bridge

[Bridge]
DefaultPVID=1
VLANFiltering=1
```

/etc/systemd/network/lanbr.network:

```
[Match]
Name=lanbr0

[Network]
BindCarrier=eth0
ConfigureWithoutCarrier=true

Address=192.168.1.1/24
#Address=192.168.0.18/24
#Gateway=192.168.0.10
#DNS=192.168.0.10
```

## VLAN

[https://wiki.archlinux.org/title/VLAN#Single\\_interface\\_with\\_multiple\\_VLANs\\_each\\_with\\_its\\_own\\_gateway](https://wiki.archlinux.org/title/VLAN#Single_interface_with_multiple_VLANs_each_with_its_own_gateway)

vlan have to be created with a netdev-file first and then linked in the network-file of physical interface

/etc/systemd/network/wan.110.netdev

```
[NetDev]
Name=wan.110
Kind=vlan
#MACAddress=10:c3:7b:4f:58:a4
#MTUBytes=1500
```

```
[VLAN]
Id=110
```

/etc/systemd/network/wan.network:

```
[Match]
Name=wan

[Link]
# Override MAC address (spoof MAC address)
MACAddress=08:22:33:44:55:66

[Network]
BindCarrier=eth0

#DHCP=ipv4

#static setup
Address=192.168.0.18/24
Gateway=192.168.0.10
DNS=192.168.0.10

VLAN=wan.110
VLAN=wan.140
```

## static routes

in the .network-file, which is the Gateway

```
[Route]
Gateway=192.168.0.10
Destination=10.0.3.0/24
GatewayOnLink=yes
```

## pppoe

<https://www.sherbers.de/diy-linux-router-part-3-pppoe-and-routing/>

## IPv6

### Address assignment

Like IPv4 in network-file with additional Address-value

```
[Network]
Address=192.168.1.1/24
```

```
Address=fd00:A::10/64
```

## DHCPv6/RA

In combination with ipv4-DHCP-Server ( DHCPv6Server=no/ohne DHCPv6Server-Section ⇒ nur IPv6)

```
[Match]
Name=lanbr0

[Network]
BindCarrier=eth0
ConfigureWithoutCarrier=true

Address=192.168.1.1/24
Address=fd00:A::10/64
#Address=192.168.0.18/24
#Gateway=192.168.0.10
#DNS=192.168.0.10
DHCPv6Server=yes
IPv6SendRA=yes
DHCPv6PrefixDelegation=yes

[DHCPv6Server]
PoolOffset=100
PoolSize=150

[IPv6SendRA]
Managed=true

[IPv6Prefix]
Prefix=fd00:A::/64
```

## Tunnel (he)

[https://wiki.archlinux.org/title/IPv6\\_tunnel\\_broker\\_setup#systemd-networkd](https://wiki.archlinux.org/title/IPv6_tunnel_broker_setup#systemd-networkd)

## issues

### boot hangs on wait-for-online

<https://askubuntu.com/a/1245672/1294721>

sudo systemctl edit systemd-networkd-wait-online.service

```
[Service]
ExecStart=
```

```
ExecStart=/usr/lib/systemd/systemd-networkd-wait-online --any
```

From:

<https://www.wiki.fw-web.de/> - **FW-WEB Wiki**

Permanent link:

<https://www.wiki.fw-web.de/doku.php?id=en:linux:systemd>

Last update: **2023/10/15 11:10**

