

Home Network

Lines of light ranged in the nonspace of the mind, clusters and constellations of data.

2021-11-27

Hardware

Cable Modem

TODO

Router

Hostname openwrt.lan

Model TP-Link Archer C5

Version 21.02.3

Updating

```
opkg update
opkg list-upgradable
opkg list-upgradable | cut -f 1 -d ' ' | xargs -r opkg upgrade
```

Switch

TODO

Wireless AP

Model TP-Link EAP610 V2

NAS

Hostname nas.lan

Model QNAP TS-251

Disk 1 WDC WD40EFRX-68WT0N0 4TB

Disk 2 WDC WD40EFRX-68WT0N0 4TB

Printer

Hostname BRW1008B16E541A.lan

Model Brother HL-L2340D

Unprintable Area (Margins) 0.16"

```
yay brlaser
```

Raspberry Pi Rack

Hosts

Ganymede

Hostname ganymede

Model Raspberry Pi 4 Model B Rev 1.2

RAM 4GB

Europa

Hostname europa

Model Raspberry Pi 4 Model B Rev 1.4

RAM 2GB

Io

Hostname io

Model Raspberry Pi 3 Model B Rev 1.2

RAM 1GB

Callisto

Hostname callisto

Model Raspberry Pi Model B Rev 2

RAM 512MB

Thebe

Hostname thebe

Model Raspberry Pi Model B Rev 2

RAM 512MB

Misc.

Copy SSH key to host:

```
ssh-copy-id -i ~/.ssh/id_rsa.pub kyle@io.lan
```

Detect model:

```
cat /sys/firmware/devicetree/base/model
```

Detect RAM:

```
free -h
```

Network

Static IPs

| IP Address | Hostname | Description |
|------------|-------------|-------------|
| 10.0.0.1 | openwrt.lan | Router |

Trusted VNET

IP Address 10.0.0.1
Network Address 10.0.0.0
Usable Host IP Range 10.0.0.1 - 10.0.255.254
Broadcast Address 10.0.255.255
Total Number of Hosts 65,536
Number of Usable Hosts 65,534
Subnet Mask 255.255.0.0
Wildcard Mask 0.0.255.255
Binary Subnet Mask 11111111.11111111.00000000.00000000
IP Class B
CIDR Notation /16
IP Type Private

Untrusted VNET

IP Address 10.1.0.1
Network Address 10.1.0.0
Usable Host IP Range 10.1.0.1 - 10.1.255.254
Broadcast Address 10.1.255.255
Total Number of Hosts 65,536
Number of Usable Hosts 65,534
Subnet Mask 255.255.0.0
Wildcard Mask 0.0.255.255
Binary Subnet Mask 11111111.11111111.00000000.00000000
IP Class B
CIDR Notation /16
IP Type Private

Configuration

Router

/etc/config/system

```

config system
    option hostname 'OpenWrt'
    option timezone 'UTC'
    option ttylogin '0'
    option log_size '64'
    option urandom_seed '0'

config timeserver 'ntp'
    option enabled '1'
    option enable_server '0'
    list server '0.openwrt.pool.ntp.org'
    list server '1.openwrt.pool.ntp.org'
    list server '2.openwrt.pool.ntp.org'
    list server '3.openwrt.pool.ntp.org'
  
```

/etc/config/network

```
config interface 'loopback'
    option device 'lo'
    option proto 'static'
    option ipaddr '127.0.0.1'
    option netmask '255.0.0.0'
```

```
config globals 'globals'
    option ula_prefix 'fdbe:7046:3929::/48'
```

```
config device
    option name 'br-lan'
    option type 'bridge'
    list ports 'eth1.1'
```

```
config interface 'lan'
    option device 'br-lan'
    option proto 'static'
    option ipaddr '10.0.0.1'
    option netmask '255.255.0.0'
    option ip6assign '60'
    list dns '10.0.0.125'
```

```
config interface 'wan'
    option device 'eth0.2'
    option proto 'dhcp'
```

```
config interface 'wan6'
    option device 'eth0.2'
    option proto 'dhcpv6'
```

```
config interface 'iot'
    option device 'br-iot'
    option proto 'static'
    option ipaddr '10.1.0.1'
    option netmask '255.255.0.0'
    option ip6assign '60'
```

```
config switch
    option name 'switch0'
    option reset '1'
    option enable_vlan '1'
```

```
config switch_vlan
    option device 'switch0'
    option vlan '1'
    option vid '1'
    option ports '0t 2 3 4'
    option description 'LAN'
```

```
config switch_vlan
    option device 'switch0'
    option vlan '3'
    option vid '3'
    option ports '0t 5'
    option description 'IoT'
```

```
config switch_vlan
    option device 'switch0'
    option vlan '2'
    option ports '6t 1'
```

`/etc/config/dhcp`

```

config dnsmasq
    option domainneeded '1'
    option localise_queries '1'
    option rebind_protection '1'
    option rebind_localhost '1'
    option local '/lan/'
    option domain 'lan'
    option expandhosts '1'
    option readethers '1'
    option leasefile '/tmp/dhcp.leases'
    option resolvfile '/tmp/resolv.conf.d/resolv.conf.auto'
    option ednspacket_max '1232'
    option sequential_ip '1'
    option authoritative '1'
    option localservice '1'

config dhcp 'lan'
    option interface 'lan'
    option start '100'
    option limit '150'
    option leasetime '12h'
    option dhcpv4 'server'
    option dhcpv6 'server'
    option ra 'server'
    list ra_flags 'managed-config'
    list ra_flags 'other-config'

config dhcp 'wan'
    option interface 'wan'
    option ignore '1'

config odhcpd 'odhcpd'
    option maindhcp '0'
    option leasefile '/tmp/hosts/odhcpd'
    option leasetrigger '/usr/sbin/odhcpd-update'
    option loglevel '4'

config dhcp 'iot'
    option interface 'iot'
    option start '100'
    option limit '150'
    option leasetime '12h'
    option dhcpv4 'server'
    option dhcpv6 'server'
    option ra 'server'
    option ra_slaac '1'
    list ra_flags 'managed-config'
    list ra_flags 'other-config'

config host
    option ip '10.0.0.134'
    option mac '2C:AA:8E:2C:63:9A'

# Wyze Cam 1
config host
    option ip '10.0.0.136'
    option mac '2C:AA:8E:2F:7A:15'

# Wyze Cam 2
config host

```

/etc/config/wireless

```
config wifi-device 'radio0'
    option type 'mac80211'
    option path 'pci0000:00/0000:00:00.0'
    option channel '36'
    option band '5g'
    option htmode 'VHT80'
    option cell_density '0'
    option disabled '1'

config wifi-device 'radio1'
    option type 'mac80211'
    option path 'platform/ahb/18100000.wmac'
    option channel '1'
    option band '2g'
    option htmode 'HT20'
    option cell_density '0'

config wifi-iface 'wifinet2'
    option device 'radio0'
    option mode 'ap'
    option ssid 'OpenWrt'
    option encryption 'sae-mixed'
    option key '0n0kd1n8'
    option network 'lan'
    option disabled '1'

config wifi-iface 'wifinet1'
    option device 'radio1'
    option mode 'ap'
    option network 'iot'
    option encryption 'psk-mixed'
    option key '0n0kd1n8'
    option ssid 'K IoT'
    option hidden '1'
```

/etc/config/firewall


```

config defaults
    option input 'ACCEPT'
    option output 'ACCEPT'
    option forward 'REJECT'
    option synflood_protect '1'

config zone
    option name 'lan'
    list network 'lan'
    option input 'ACCEPT'
    option output 'ACCEPT'
    option forward 'ACCEPT'

config zone
    option name 'iot'
    option input 'ACCEPT'
    list network 'iot'
    option output 'ACCEPT'
    option forward 'ACCEPT'

config zone
    option name 'wan'
    list network 'wan'
    list network 'wan6'
    option input 'REJECT'
    option output 'ACCEPT'
    option forward 'REJECT'
    option masq '1'
    option mtu_fix '1'

config forwarding
    option src 'lan'
    option dest 'wan'

config rule
    option name 'Block Wyze'
    option dest 'wan'
    option target 'REJECT'
    option src 'lan'
    list src_mac '2C:AA:8E:2C:63:9A'
    list src_mac '2C:AA:8E:2E:D8:86'
    list src_mac '2C:AA:8E:2F:7A:15'
    list src_mac '2C:AA:8E:2F:7A:A8'

config rule
    option name 'Allow-DHCP-Renew'
    option src 'wan'
    option proto 'udp'
    option dest_port '68'
    option target 'ACCEPT'
    option family 'ipv4'

config rule
    option name 'Allow-Ping'
    option src 'wan'
    option proto 'icmp'
    option icmp_type 'echo-request'
    option family 'ipv4'
    option target 'ACCEPT'

```

Misc.

Names

Moons of Saturn

- Titan
- Rhea
- Iapetus
- Dione
- Tethys
- Enceladus
- Mimas
- Hyperion
- Phoebe
- Janus

Moons of Jupiter

- Ganymede
- Callisto
- Io
- Europa
- Amalthea
- Himalia
- Elara
- Pasiphae
- Sinope
- Lysithea
- Thebe

Moons of Uranus

- Titania
- Oberon
- Umbriel
- Ariel
- Miranda
- Sycorax
- Puck
- Portia
- Juliet
- Belinda

Moons of Neptune

- Triton
- Proteus
- Nereid
- Larissa
- Galatea
- Despina
- Thalassa
- Naiad