

# OpenWRT in the role of upstream

Pavel Šimerda  
pavlix@pavlix.net

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<http://data.pavlix.net/installfest/2014/>

# Software used in OpenWRT

# System initialization

## Current OpenWRT

procd, ubox

## Former OpenWRT

busybox-init, hotplug2, block-mount

## Classic distributions

systemd

upstart, udev

sysvinit, rc, udev

# Interprocess communication service

Current OpenWRT

ubusd

Classic distributions

dbus-daemon

# Common configuration database

Current OpenWRT

uci

Classic distributions

none

# Network configuration service

Current OpenWRT

netifd, busybox-udhcpd, odhcp6c

Classic distributions

NetworkManager, dhclient

# Client configuration provider

## Current OpenWRT

odhcpd (dnsmasq is still default for IPv4)

## Classic distributions

dhcp

dnsmasq (for NetworkManager and libvirt)

# DNS cache

## Current OpenWRT

dnsmasq

## Classic distributions

none

dnsmasq

unbound (supports DNSSEC)



## Remote shell access

Current OpenWRT  
dropbear, telnetd

Classic distributions  
openssh

## Remote web access

Current OpenWRT  
uhttpd, luci

Classic distributions  
apache, webmin

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Software

Usable outside

Questions

# OpenWRT software worth considering

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# Networking software

netifd – the network configuration daemon

odhcpd – DHCPv4, DHCPv6 and RA server

odhcp6c – RA and DHCPv6 client

# Networking software: configuration example

Software

Usable outside

Questions

```
/etc/config/network
```

```
config interface lan
    option ifname    enp0s25
    option type      bridge
    option proto     static
    option ipaddr    192.168.1.1
    option netmask   255.255.255.0
```

## Networking software: configuration example

### ip address show

```
2: enp0s25: <NO-CARRIER,BROADCAST,MULTICAST,UP>
    mtu 1500 qdisc pfifo_fast
    master br-lan state DOWN qlen 1000
    link/ether f0:de:f1:24:97:32
    brd ff:ff:ff:ff:ff:ff
9: br-lan: <NO-CARRIER,BROADCAST,MULTICAST,UP>
    mtu 1500 qdisc noqueue state DOWN
    link/ether f0:de:f1:24:97:32
    brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.1/24 brd 192.168.1.255
    scope global br-lan
    valid_lft forever preferred_lft forever
```

## Other software, dependencies

procd, ubox, libubox – the base system  
ubusd, libubus – interprocess communication  
uci, libuci – common configuration access  
uhttpd, luci – web interface

# Questions?

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