

# OpenWrt/dd-wrt CoovaChilli

1.3.886 WNAM , CoovaChilli (<https://coova.github.io/>), Chillispot (<http://www.chillispot.org/>), CoovaChilli () Lede Project (<https://lede-project.org/>), OpenWrt (<https://openwrt.org/>) dd-wrt (<http://www.dd-wrt.com/>). (. , " , Wi-Fi WNAM.

WNAM OpenWrt/dd-wrt , .

1.

( ) :

- <https://wiki.openwrt.org/toh/start> ( );
- <http://www.dd-wrt.com/site/support/router-database> , <http://www.dd-wrt.com/site/support/other-downloads>.



" , , .

2.

, , . : , IP- , , WLAN . OpenWrt Chaos Calmer 15.05 Ubiquiti UniFi. LAN , WAN.

3.

:

- coova-chilli;
- dnsmasq;
- dropbear;
- kmod-ipt-contrack;
- kmod-mac80211;
- kmod-tun;
- softflowd.

OpenWrt , .

4.

: SSID IP- br-lan.



CoovaChilli , IP- , dhcp . , " - unmanaged.

OpenWrt .

## Interfaces

### Interface Overview

| Network | Status  | Actions   |  |  |  |
|---------|---|---|--|--|--|
| LAN     | <p>Uptime: 3d 20h 57m 40s<br/>MAC-Address: 00:00:00:00:00:00<br/>RX: 38.15 MB (85303 Pkts.)<br/>TX: 63.38 MB (86197 Pkts.)<br/>IPv4: 10.130.4.1/24</p> <p> br-lan</p>                                    |  Connect |  Stop |  Edit |  Delete |
| WAN     | <p>Uptime: 20d 5h 30m 32s<br/>MAC-Address: 00:00:00:00:00:00<br/>RX: 763.48 MB (2619119 Pkts.)<br/>TX: 78.23 MB (386477 Pkts.)<br/>IPv4: 172.16.130.3/24<br/>IPv6: FD61:25D2:85E6::1/60</p> <p> eth0</p> |  Connect |  Stop |  Edit |  Delete |

 Add new interface...

### Global network options

IPv6 ULA-Prefix fd61:25d2:85e6::/48

## Interfaces - LAN

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several network interfaces separated by spaces. You can also use VLAN notation INTERFACE.VLANNR (e.g.: eth0.1).

### Common Configuration

[General Setup](#) [Advanced Settings](#) [Physical Settings](#) [Firewall Settings](#)

#### Status



br-lan

**Uptime:** 3d 20h 58m 11s**MAC-Address:** 00:00:00:00:00:00**RX:** 38.15 MB (85303 Pkts.)**TX:** 63.38 MB (86197 Pkts.)**IPv4:** 10.130.4.1/24

#### Protocol

Static address



#### IPv4 address

10.130.4.1

#### IPv4 netmask

255.255.255.0



#### IPv4 gateway

#### IPv4 broadcast

#### Use custom DNS servers



#### IPv6 assignment length

disabled

 [ⓘ Assign a part of given length of every public IPv6-prefix to this interface](#)

#### IPv6 address

#### IPv6 gateway

#### IPv6 routed prefix

 [ⓘ Public prefix routed to this device for distribution to clients.](#)

## DHCP Server

[General Setup](#) [Advanced Settings](#) [IPv6 Settings](#)

Ignore interface

 [ⓘ Disable DHCP for this interface.](#)

## Wireless Overview



Generic MAC80211 802.11bgn (radio0)  
Channel: 11 (2.462 GHz) | Bitrate: 65 Mbit/s

[Scan](#)[Add](#)

SSID: OpenWrt | Mode: Master  
72% BSSID: DC:9F:DB:89:80:C9 | Encryption: None

[Disable](#)[Edit](#)[Remove](#)

## Associated Stations

| SSID    | MAC-Address     | IPv4-Address | Signal  | Noise   | RX Rate                   | TX Rate                   |
|---------|-----------------|--------------|---------|---------|---------------------------|---------------------------|
| OpenWrt | 4C:57:CA:██████ | ?            | -59 dBm | -95 dBm | 24.0 Mbit/s, MCS 0, 20MHz | 65.0 Mbit/s, MCS 6, 20MHz |

## Wireless Network: Master "OpenWrt" (wlan0)

The *Device Configuration* section covers physical settings of the radio hardware such as channel, transmit power or antenna selection which are shared among all defined wireless networks (if the radio hardware is multi-SSID capable). Per network settings like encryption or operation mode are grouped in the *Interface Configuration*.

### Device Configuration

General Setup

Advanced Settings

Status

Mode: Master | SSID: OpenWrt  
 55% BSSID: DC:9F:DB:89:80:C9 | Encryption: None  
 Channel: 11 (2.462 GHz) | Tx-Power: 22 dBm  
 Signal: -71 dBm | Noise: -95 dBm  
 Bitrate: 65.0 Mbit/s | Country: US

Wireless network is enabled

 Disable

Operating frequency

|      |               |        |
|------|---------------|--------|
| Mode | Channel       | Width  |
| N    | 11 (2462 MHz) | 20 MHz |

Transmit Power

22 dBm (158 mW)

 dBm

### Interface Configuration

General Setup

Wireless Security

MAC-Filter

ESSID

OpenWrt

Mode

Access Point

Network

 lan: 

 wan: 

 create: 

Choose the network(s) you want to attach to this wireless interface or fill out the *create* field to define a new network.

Hide ESSID

WMM Mode

- WAN : 172.16.130.3/24;
- LAN : 10.130.4.1/24;
- SSID () : OpenWrt, , .



"" OpenWrt.

## 5. CoovaChilli

CoovaChilli - : <https://wiki.openwrt.org/doc/howto/wireless.hotspot.coova-chilli>.

/etc/config/chilli, () :

```
config chilli
# option disabled 1

# Your HotSpotSystem account details
option radiusnasid "openwrt"
option radiussecret "secret" #      "      FreeRADIUS-
option uamsecret "" #

# WISPr settings
# It is possible your provider has specific demands on these values. But for
WISPr the values are
# as shown below. (cc=2-digit ISO country; idd=phone-country;ac=phone-area-code)
# example: "isocc=se,cc=46,ac=584,network=CampingTiveden"
# the <SSID> does not actually need to be the SSID, but WISPr RFC calls it SSID
# the <sub-id> is just so you know which device on your network gave the
problem. Can be Alfanumeric.

option locationname "K18-VM" #
option radiuslocationname "<SSID>,<sub-ID>"
option radiuslocationid "isocc=<cc>,cc=<idd>,ac=<ac>,network=<SSID>"

# Radius parameters (change to the one for your provider)
option radiusserver1 172.16.130.5 # IP      RADIUS ,      WNAM
option radiusserver2 172.16.130.5 # IP      RADIUS ,      WNAM,

# Your device's LAN interface on which to put the hotspot
option dhcpif br-lan # ,

# set DNS to whatever is fastest. On slow saturated lines, best use your local
router for caching.
# on fast & wide lines, use or Google or your ISP's dns, whichever is fastest
option dns1 8.8.8.8 #      DNS,
option dns2 8.8.4.4 #      DNS,

# Tunnel and Subnet
option tundev 'tun0'
option net 192.168.180.0/22 # :      IP      . ,      ,      ,      "      "      WNAM
option radiuslisten 192.168.182.1 # :      . ,      ;      "      "      "      "      WNAM
option lease 86400 # 1 day
option leaseplus 600 # plus 10 minutes

# Universal access method (UAM) parameters
option uamserver "http://172.16.130.5:8080/cp/coovachilli" #      ,      WNAM
option uamuport 4990 # HotSpot UAM "UI" Port (on subscriber network)
option uamanydns 1
#option uamaliasip 1.0.0.1 # default: http://1.0.0.1 will goto login page
#option uamaliasname login # http://login will goto login page
#option uamlogoutip 1.0.0.0 # default: http://1.0.0.0 will logout
# # default: http://logout will logout
option nouamsuccess 1 # no success page, to original requested URL

# Hosts; services; network segments the client can access without first
authenticating (walled garden)
# Hosts are evaluated every 'interval', but this does not work well on multi-
homed (multi-IP'ed) hosts, use IP instead.
option uamallowed "172.16.130.5" #      IP      WNAM

# Domain suffixes the client can access without first authenticating (walled
garden)
# Host on the domain are checked by spying on DNS requests, so this does work
for multi-homed hosts too.
#option uamdomain ".paypal.com,.paypalobjects.com,.worldpay.com,.rbsworldpay.
com,.adyen.com,.hotspotsystem.com"

# Various debug and optimization values
option swapoctets 1 # swap input and output octets
option interval 3600 # config file and host lookup refresh
```

```

# Add the chilli firewall rules
option ipup '/etc/chilli/up.sh'
option ipdown '/etc/chilli/down.sh'

:

• option radiussecret - WNAM RADIUS;
• option radiusserver1 - , FreeRADIUS ( WNAM);
• option net - IP- ();
• option radiuslisten - ;
• option uamserver - - WNAM;
• option uamallowed - - WNAM.

```

**!** , firewall (br-lan ) ? WNAM. , , IP- .

CoovaChilli :

```
/etc/init.d/chilli start
```

, ps :

```
chilli -c /var/run/chilli_cfg021cfa.conf --pidfile /var/run/chilli_cfg021cfa.pid
--cmdsocket /var/run/chilli_cfg021cfa.sock --unixipc /var/run/chilli_cfg021cfa.
ipc
```

## 6. softflowd

softflowd, NetFlow. **/etc/config/softflowd** :

```

config softflowd
    option enabled '1'
    option interface 'tun0'
    option pcap_file ''
    option timeout ''
    option max_flows '8192'
    option host_port '172.16.130.5:20002'
    option pid_file '/var/run/softflowd.pid'
    option control_socket '/var/run/softflowd.ctl'
    option export_version '5'
    option hoplimit ''
    option tracking_level 'full'
    option track_ipv6 '0'
    option sampling_rate '1'

```

- , (tun0);
- (sampling\_rate=1);
- ( WNAM 20002 (172.16.130.5:20002)).

**!** softflowd - NetFlow, , WNAM , ( ).

softflowd :

```
/etc/init.d/softflowd restart
```

## 7. WNAM

WNAM (" "").

## Изменение сервера доступа

×

Параметры

RADIUS

SNMP/TACACS+

Категории



### Клиент

#### Тип

#### Имя устройства

OpenWRT/DD-WRT и CoovaChilli

openwrt

#### IP адрес (NAS-IP-Address)

#### Внешний IP адрес

172.168.182.1

192.168.1.1

### Местоположение

Converted\_UniFi\_AP

netflow\_ip=172.16.130.3

#### Логин

#### Пароль

Использовать счетчики аккаунтинга

получено 0 записей

Менять местами счетчики приёма/передачи

Определять имена устройств абонентов

Принимать детализацию потоков NetFlow

получено 0 записей

Вкл.

Сохранить изменения

Закрыть

, 192.168.182.1 (, NAS-IP-Address RADIUS). RADIUS NetFlow 172.16.130.3. "netflow\_ip=172.16.130.3", FreeRADIUS /etc/c/freeradius/clients.conf:

```
client 172.16.130.0/24 {
    secret=secret
}
```

( "" "" ).

Wireless Network Access Manager

Сводка Пользователи Сессии Конфигурация Логи Отчеты admin

## Площадки

**Создать площадку**

Показывать: 10 записей на странице

| Номер | Тип      | Номер | Тип      |
|-------|----------|-------|----------|
| 1     | Площадка | 1     | Площадка |
| 2     | Площадка | 2     | Площадка |
| 3     | Площадка | 3     | Площадка |
| 4     | Площадка | 4     | Площадка |
| 5     | Площадка | 5     | Площадка |

Показано с 1 по 5 из 5 записей

**Изменение площадки**

Параметры Авторизация Перенаправление Ограничения Соцсети

**Номер**: 5 **Тип**: Площадка

**Адрес/название**: CoovaTest

**Контактное лицо**: NETAMS LLC

**Openwrt test site**

**Присвоенная IP подсеть**: 192.168.180.0/22 **Тэг**: 6

**Разрешенный сервер доступа**: Converted\_UniFi\_AP 192.168.182.1 **Дополнительный ID на этом сервере**:

**Вкл.** **Удалить** **Сохранить изменения** **Закрыть**

```
, 192.168.180.0/22, /etc/config/chilli . " ".
CoovaChilli :
```

- ;
- ;
- ;

WNAM (, , ), , .. . . / .

### 8.

OpenWrt, CoovaChilli, . IP- CoovaChilli , , iptables tun0. HTTP- /etc/config/chilli, http://172.16.130.5:8080/cp /coovachilli. - WNAM. /cp/coovachilli URL. ():

- res=notyet;
- uamip=192.168.182.1;
- uamport=3990;
- challenge=161c53097a163d8263c94d720676f431;
- called=DC-9F-DB-89-80-C9;
- mac=4C-57-CA-XX-XX-XX;
- ip=192.168.180.5;
- nasid=openwrt;
- sessionid=5807bc5900000002;
- userurl=http%3a%2f%2fbash.im%2f;
- md=8E71CEACE13C1906A5D1D1F9C2EC19E6.

WNAM ( -, , , ..). , , - CoovaChilli (192.168.182.1:3390). CoovaChilli, , RADIUS- WNAM , RADIUS- (freeradius ):

```

rad_recv: Access-Request packet from host 172.16.130.3 port 47961, id=81,
length=310
  ChilliSpot-Version = "1.3.1-svn"
  User-Name = "4C:57:CA:XX:XX:XX"
  User-Password = "password"
  Service-Type = Login-User
  Acct-Session-Id = "5814ac5400000003"
  Framed-IP-Address = 192.168.180.5
  NAS-Port-Type = Wireless-802.11
  NAS-Port = 3
  NAS-Port-Id = "00000003"
  Calling-Station-Id = "4C-57-CA-XX-XX-XX"
  Called-Station-Id = "DC-9F-DB-89-80-C9"
  NAS-IP-Address = 192.168.182.1
  NAS-Identifier = "openwrt"
  WISPr-Location-ID = "isocc=<cc>,cc=<idd>,ac=<ac>,network=<SSID>"
  WISPr-Location-Name = "<SSID>,<sub-ID>"
  WISPr-Logoff-URL = "http://192.168.182.1:3990/logoff"
  Message-Authenticator = 0xd4bdbdbd05dc45b3d3d2fe9eb2340ef

rad_recv: Accounting-Request packet from host 172.16.130.3 port 35749, id=14,
length=252
  ChilliSpot-Version = "1.3.1-svn"
  ChilliSpot-Attr-10 = 0x00000001
  Event-Timestamp = "29 2016 17:08:14 MSK"
  User-Name = "4C:57:CA:XX:XX:XX"
  Acct-Status-Type = Start
  Acct-Session-Id = "5814ac5400000003"
  Framed-IP-Address = 192.168.180.5
  NAS-Port-Type = Wireless-802.11
  NAS-Port = 3
  NAS-Port-Id = "00000003"
  Calling-Station-Id = "4C-57-CA-XX-XX-XX"
  Called-Station-Id = "DC-9F-DB-89-80-C9"
  NAS-IP-Address = 192.168.182.1
  NAS-Identifier = "openwrt"
  WISPr-Location-ID = "isocc=<cc>,cc=<idd>,ac=<ac>,network=<SSID>"
  WISPr-Location-Name = "<SSID>,<sub-ID>"
```

WNAM

**Сессии пользователя**

**Параметры записи о сессии**

|                      |                                 |                  |                      |
|----------------------|---------------------------------|------------------|----------------------|
| MAC                  | 98:FE:94:██████                 | IP адрес         | 192.168.180.4        |
| Время начала         | 29.10.2016, 16:59:19            | Время завершения | ещё идёт, остановить |
| Длительность         | 04 Зм 46с                       | Сервер доступа   | 192.168.182.1        |
| Принято, байт        | 216823                          | Отправлено, байт | 72570                |
| Площадка             | 5 CoovaTest                     |                  |                      |
| Точка доступа        | DC:9F:DB:89:80:C9 (CoovaChilli) |                  |                      |
| Пользователь         | 98:FE:94:██████                 | Канал            | 791:██████           |
| Идентификатор сессии | 58149e1600000005-██████         |                  |                      |

Показано с 1 по 4 из 4 записей

**Потоки данных в этой сессии**    **Параметры учетной записи пользователя**

**Закрыть**

Отправлено

- 72570
- 56223
- 183839
- 635487

Следующая

, softflowd .

Потоки сессии 58149e1600000005-Пользователь: 192.168.180.4 [98:FE:94:

Показывать: 10 ▾ записей на странице

| URL  | Время               | Пакетов | Байт |
|--|---------------------|---------|------|
| TCP 192.168.180.4:64924 -> 31.13.91.2:443      | 29.10.2016 17:03:01 | 24      | 2066 |
| TCP 31.13.91.2:443 -> 192.168.180.4:64924      | 29.10.2016 17:03:01 | 18      | 5063 |
| TCP 192.168.180.4:64961 -> 91.192.148.28:443   | 29.10.2016 17:03:01 | 16      | 1914 |
| TCP 91.192.148.28:443 -> 192.168.180.4:64961   | 29.10.2016 17:03:01 | 13      | 4398 |
| TCP 192.168.180.4:64957 -> 151.101.12.207:443  | 29.10.2016 17:03:01 | 16      | 1740 |
| TCP 151.101.12.207:443 -> 192.168.180.4:64957  | 29.10.2016 17:03:01 | 11      | 7648 |
| TCP 192.168.180.4:64941 -> 104.122.251.195:443 | 29.10.2016 17:03:01 | 21      | 2377 |
| TCP 104.122.251.195:443 -> 192.168.180.4:64941 | 29.10.2016 17:03:01 | 14      | 4839 |
| TCP 213.180.193.90:443 -> 192.168.180.4:64962  | 29.10.2016 17:03:01 | 14      | 7601 |
| TCP 192.168.180.4:64962 -> 213.180.193.90:443  | 29.10.2016 17:03:01 | 16      | 2943 |

Показано с 1 по 10 из 48 записей

Предыдущая

1

2

3

4

5

Следующая

OpenWrt/CoovaChilli/WNAM .