

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  br-lan	Uptime: 3d 20h 57m 40s 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	 Connect  Stop  Edit  Delete
WAN  eth0	Uptime: 20d 5h 30m 32s MAC-Address: 00:00:00:00:00:00 RX: 763.48 MB (2619119 Pkts.) TX: 78.23 MB (386477 Pkts.) IPv4: 172.16.130.3/24 IPv6: FD61:25D2:85E6::1/60	 Connect  Stop  Edit  Delete

 Add new interface...

Global network options

IPv6 ULA-Prefix

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

OpenWrt

Status ▾System ▾Network ▾Logout

AUTO REFRESH ON

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 SetupAdvanced 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 SetupWireless SecurityMAC-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 Alphanumeric.

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 uamuiport 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,.hotspotssystem.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 - WNAME RADIUS;
- option radiusserver1 - , FreeRADIUS(WNAME);
- option net - IP- ();
- option radiuslisten - ;
- option uamserver - - WNAME;
- option uamallowed - - WNAME.

❗ , firewall (br-lan) ? WNAME. , , 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/softflowdctl'
option export_version '5'
option hoplimit ''
option tracking_level 'full'
option track_ipv6 '0'
option sampling_rate '1'
```

:

- , (tun0);
- (sampling_rate=1);
- (WNAME 20002 (172.16.130.5:20002)).

❗ softflowd - NetFlow, , WNAME, ().

softflowd, :

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

7. WNAME

WNAME ("" " ").

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.

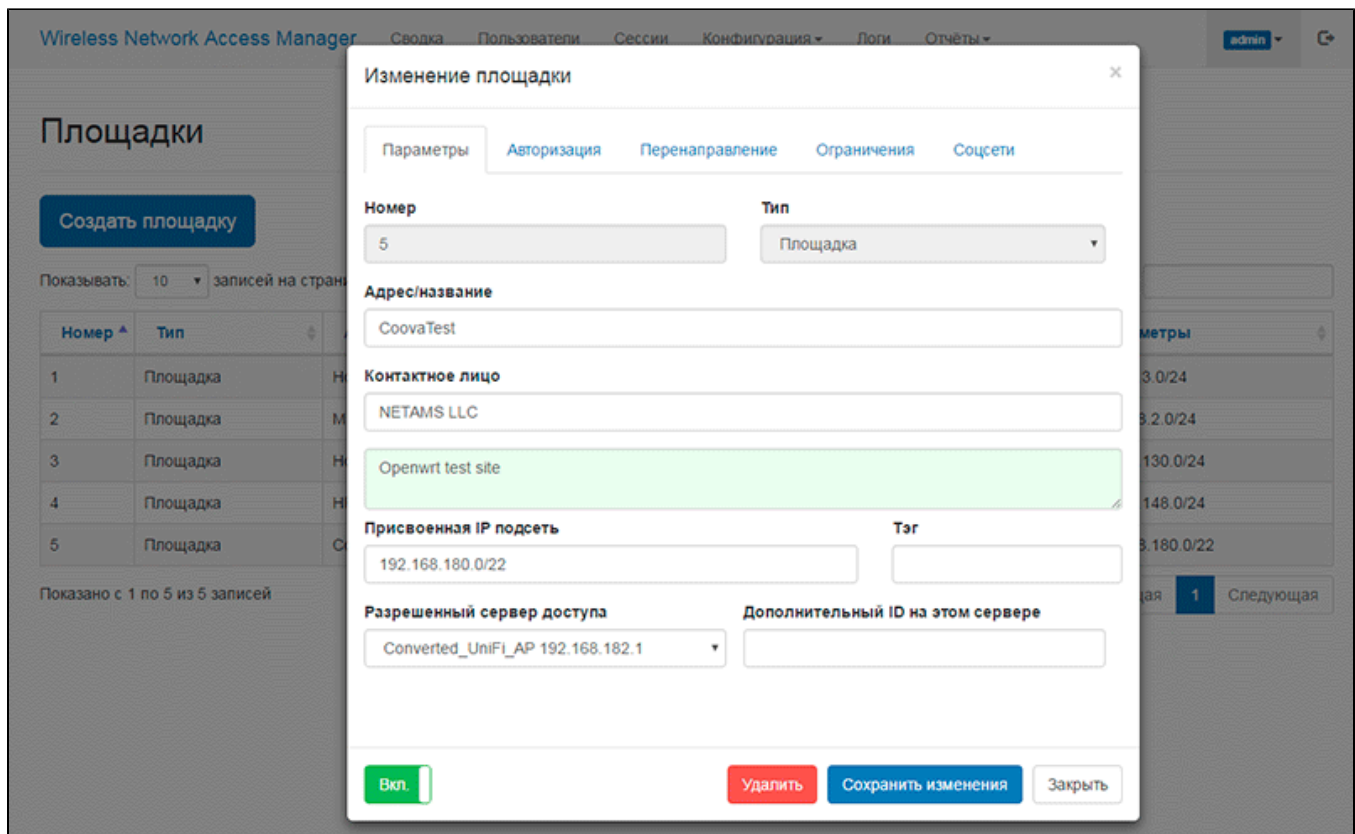
Сохранить изменения

Закреть

, 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
}
```

("" ").



, 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 = 0x0d4bdbbd05dc45b3d3d2fe9eb2340ef

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

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	0ч 3м 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)	Канал	
Пользователь	98:FE:94:...	7918:...	
Идентификатор сессии	58149e1600000005-...		

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

, softflowd .

Wireless Network Access Manager

Сводка

Пользователи

Сессии

Конфигурация ▾

Логи

Отчёты ▾

admin ▾

⌵

Потоки сессии 58149e1600000005-8b3858

Пользователь: 192.168.180.4 [98:FE:94:88:28:88], площадка: 5 CoovaTest

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