

Mikrotik

WNAM , HTTP- , , . (hotspot), Mikrotik. - (UniFi, D-Link, - Mikrotik).

 Mikrotik RouterOS 7. .

```

:
/
/ip hotspot walled-garden
add dst-host=wnam_ip dst-port=80
/ip hotspot walled-garden ip
add action=accept disabled=no dst-address=wnam_ip !dst-address-list dst-port=80 protocol=tcp !src-address !src-address-list

```

wnam_ip ip- WNAM.

: <http://www.netams.com/files/wnam/misc/mikrotik.txt>.

- . Mikrotik. .

, IP-. 10.130.1.1 (ether2-master-local, bridge-local), 172.16.130.9 ether1-gateway, "" .

Quick Set				
Wireless				
Interfaces				
Bridge				
Switch				
PPP				
Mesh				
MPLS				
IP				
ARP				
Accounting				
Addresses				
Cloud				
DHCP Client				

Add New

3 items

		Address	Network	Interface
;;; default configuration				
-	D	10.130.1.1/24	10.130.1.0	ether2-master-local
-	E	X 10.130.2.1/24	10.130.2.0	wlan1
;;; WAN				
-	D	172.16.130.9/24	172.16.130.0	ether1-gateway

IP- , .

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

OKCancelApplyRemove

Name

dhcp1

Addresses

10.130.1.10-10.130.1.254

Next Pool

none

DHCP-, .

Quick Set

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

Settings

Socks

TFTP

Traffic Flow

OK

Cancel

Apply

Remove

not invalid

Enabled

☒

Name

default

Interface

bridge-local

Relay

Lease Time

06:00:00

Bootp Lease Time

forever

Address Pool

dhcp1

Src. Address

Delay Threshold

Authoritative

after 2s delay

Bootp Support

static

Lease Script

Add ARP For Leases

☒

Always Broadcast

☐

Use RADIUS

☐

, DHCP- , DHCP- IP- Mikrotik . UniFi, DHCP (43).

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

OK

Cancel

Apply

Remove

Address

10.130.1.0/24

Gateway

▼

10.130.1.1

▲

Netmask

▲

24

DNS Servers

▼

8.8.8.8

▲

Domain

▼

WINS Servers

▼

NTP Servers

▼

CAPS Managers

▼

Next Server

▼

Boot File Name

▼

DHCP Options

▼

unifi ▼ ▲

DHCP Option Set

▼

Comment

default configuration

, NAT (masquerade,). . NAT .

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

Filter Rules

NAT

Mangle

Service Ports

Connections

Address Lists

Layer7 Protocols

Add New

Reset All Counters

19 items

		#	Action	Chain	Src. Address	Dst. Address	Prot...	Src. Port	Dst. Port	Any. Port	In. Interf...	Out. Interface
-	D	0	jump	dstnat								
-	D	1	jump	hotspot								
-	D	2	redirect	hotspot			17 (udp)		53			
-	D	3	redirect	hotspot			6 (tcp)		53			
-	D	4	redirect	hotspot			6 (tcp)		80			
-	D	5	redirect	hotspot			6 (tcp)		443			
-	D	6	jump	hotspot			6 (tcp)					
-	D	7	jump	hotspot			6 (tcp)					
-	D	8	redirect	hs-unauth			6 (tcp)		80			
-	D	9	redirect	hs-unauth			6 (tcp)		3128			
-	D	10	redirect	hs-unauth			6 (tcp)		8080			
-	D	11	redirect	hs-unauth			6 (tcp)		443			
-	D	12	jump	hs-unauth			6 (tcp)		25			
-	D	13	redirect	hs-auth			6 (tcp)					
-	D	14	jump	hs-auth			6 (tcp)		25			
;;; place hotspot rules here												
-	E	X	15	passthrough	unused-hs-d							
-	D		16	masquerade	srcnat	10.130.1.0/24						ether1-gateway

!

, (firewall) fasttrack:

action=fasttrack-connection chain=forward comment="default configuration" connection-state=established,related

, , (Hotspot). ().

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Servers

Server Profiles

Users

User Profiles

Active

Hosts

IP Bindings

Service Ports

Walled Garden

Walled Garden IP List

Cookies

Add New

Hotspot Setup

2 items

		Name	Interface	Address Pool	Profile	Addresses Per MAC
-	D	mk1-hs	bridge-local	none	mk1	
-	D	mk2-hs	wlan1	dhcp2	mk2	1

() , , , DHCP .

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

OKCancelApplyRemoveReset HTML

not invalidnot HTTPS

Enabled☒

Name

Interface

bridge-local

Address Pool

none

Profile

mk1

Idle Timeout

Keepalive Timeout

Addresses Per MAC

IP of DNS Name0.0.0.0

Proxy Statusrunning

: hotspot, . "HTTP PAP". (Interim Update). , Location ID, .

255 IP ▼	Name	mk1	
ARP	Hotspot Address ▲	10.130.1.1	
Accounting	DNS Name ▼		
Addresses	HTML Directory	hotspot ▼	
Cloud	Rate Limit (rx/tx) ▼		
DHCP Client	HTTP Proxy ▼		
DHCP Relay	HTTP Proxy Port	0	
DHCP Server	SMTP Server ▼		
DNS			
Firewall			
Hotspot	Login By	☐ MAC ☐ Cookie ☐ HTTP CHAP ☐ HTTPS ☒ HTTP PAP ☐ Trial ☐ MAC Cookie	
IPsec	MAC Auth. Password		
Neighbors	HTTP Cookie Lifetime	3d 00:00:00	
Packing	SSL Certificate	none ▼	
Pool	Split User Domain	☐	
Routes	Trial Uptime Limit	00:30:00	
SMB	Trial Uptime Reset	1d 00:00:00	
SNMP	Trial User Profile	default1 ▼	
Services			
Settings	Use RADIUS	☒	
Socks	Default Domain ▼		
TFTP	Location ID ▼		
Traffic Flow	Location Name ▼		
UPnP	MAC Format	XX:XX:XX:XX:XX:XX ▼	
Web Proxy	Accounting	☒	
Routing ▶			
System ▶			
Queues			
Files			
Log			
Radius			
New Terminal			
Tools ▶			
MetaROUTER			
Partition			
Make Supout.rif			
Undo			
Redo			
Hide Menu			
Hide Passwords			
Safe Mode			
Design Skin			

Manual WinBox	Interim Update ▲00:10:00 NAS Port Type19 (wireless-802.11) ▼
-------------------------------------	--

, . , . "Session Timeout" , (-). WNAME "" ().

255 IP ▼	Name	default1
ARP	Address Pool	none ▼
Accounting	Session Timeout	▼
Addresses	Idle Timeout	▼
Cloud	Keepalive Timeout	▼
DHCP Client	Status Autorefresh	01:00:00
DHCP Relay	Shared Users	▼
DHCP Server	Rate Limit (rx/tx)	▼
DNS	Add MAC Cookie	☐
Firewall	MAC Cookie Timeout	3d 00:00:00
Hotspot	Address List	▼
IPsec	Incoming Filter	▼
Neighbors	Outgoing Filter	▼
Packing	Incoming Packet Mark	▼
Pool	Outgoing Packet Mark	▼
Routes	Open Status Page	always ▼
SMB	Transparent Proxy	☐
SNMP	Insert Queue Before	▼
Services	Parent Queue	▼
Settings	Queue Type	▼
Socks	Advertise	☐
TFTP	Advertise URL	http://www.mikrotik.com/ ▲
Traffic Flow		http://www.routerboard.com/ ▲
UPnP	Advertise Interval	00:30:00 ▲
Web Proxy		00:10:00 ▲
Routing ▶		
System ▶		
Queues		
Files		
Log		
Radius		
New Terminal		
Tools ▶		
MetaROUTER		
Partition		
Make Supout.rif		
Undo		
Redo		
Hide Menu		
Hide Passwords		
Safe Mode		

, (, , ,), (-) "IP Bindings", IP-

Quick Set

CAPsMAN

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

IP

ARP

Accounting

Servers

Server Profiles

Users

User Profiles

Active

Hosts

IP Bindings

Service Ports

Walled Garden

Add New

2 items

		#	MAC Address	Address	To Address	Server	
-	D	P	0	DC:9F:0A:00:00:00	0.0.0.0	10.130.3.254	all
;;; POS Terminal #123							
-	D	P	1	4C:57:00:00:00:00	0.0.0.0		all

Quick Set

CAPsMAN

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

OK

Cancel

Apply

Remove

bypassed

Enabled

☒

MAC Address

▲

4C:57:00:00:00:00

Address

▲

0.0.0.0

To Address

▼

Server

all ▼

Type

bypassed ▼

Comment

POS Terminal #123

VIP-, -. WNAM, , .

WNAM , , , . "" Walled Garden .

Wireless

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

Servers

Server Profiles

Users

User Profiles

Active

Hosts

IP Bindings

Service Ports

Walled Garden

Walled Garden IP List

Cookies

Add New

Reset All Counters

2 items

	▲ Action	Server	Method	Dst. Host	Dst. Port	Hits	
D	allow			172.16.130.5	8080	125	
;;; place hotspot rules here							
E X	allow					0	

WNAM IP- 172.16.130.5 ("") 8080 (WNAM). Nginx -, 80, 80. 443, Nginx SSL.

Interfaces

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

OK

Cancel

Apply

Remove

Reset Counters

Enabled ☒

Action ☒ allow ☐ deny

Server ▼

Src. Address ▼

Dst. Address

Method ▼

Dst. Host ▲

Dst. Port ▲

Path ▼

Hits 125

Comment

RADIUS, RADIUS- . WNAM 172.16.130.13.

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

Settings

Socks

TFTP

Traffic Flow

UPnP

Web Proxy

Routing

System

Queues

Files

Log

Radius

Add NewIncoming

1 item

	#	Service	Called ID	Domain	Address	Secret
- D	0	hotspot			172.16.130.13	*****

UDP (), (), /etc/freeradius/clients.conf.

Bridge	OK	Cancel	Apply	Remove	Reset Status
Switch					
PPP					
Mesh					
MPLS					
IP					
ARP					
Accounting					
Addresses					
Cloud					
DHCP Client					
DHCP Relay					
DHCP Server					
DNS					
Firewall					
Hotspot					
IPsec					
Neighbors					
Packing					
Pool					
Routes					
SMB					
SNMP					
Services					
Settings					
Socks					
TFTP					
Traffic Flow					
UPnP					
Web Proxy					
Routing					
System					
Queues					
Files					
Log					
Radius					
New Terminal					
Tools					
MetaROUTER					
Partition					

Enabled		☒
Service	☐ ppp ☐ login ☒ hotspot ☐ wireless ☐ dhcp	
Called ID	▼	
Domain	▼	
Address	172.16.130.13	
Secret		
Authentication Port	1812	
Accounting Port	1813	
Timeout	300	ms
Accounting Backup	☐	
Realm	▼	
Src. Address	▼	
Pending	0	
Requests	55	
Accepts	54	
Rejects	0	
Resends	3	
Timeouts	1	
Bad Replies	0	
Last Request RTT	20	
Comment		

NetFlow (IP-, TCP/IP) WNAM. (traffic flow) .

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

Settings

Socks

TFTP

Traffic Flow

UPnP

Apply

Targets

Enabled

☒

Interfaces

▼

bridge-local

▼

▲

Cache Entries

32k

▼

Active Flow Timeout

00:30:00

Inactive Flow Timeout

00:00:15

Finished Flows

0

Active Flows

0

Unmanaged Packets

0

Unmanaged Bytes

0

(WNAM) NetFlow .

Bridge

Switch

PPP

Mesh

MPLS

IP

ARP

Accounting

Addresses

Cloud

DHCP Client

DHCP Relay

DHCP Server

DNS

Firewall

Hotspot

IPsec

Neighbors

Packing

Pool

Routes

SMB

SNMP

Services

Settings

Socks

TFTP

Traffic Flow

UPnP

OKCancelApplyRemove

Address172.16.130.5

Port20002

Version5

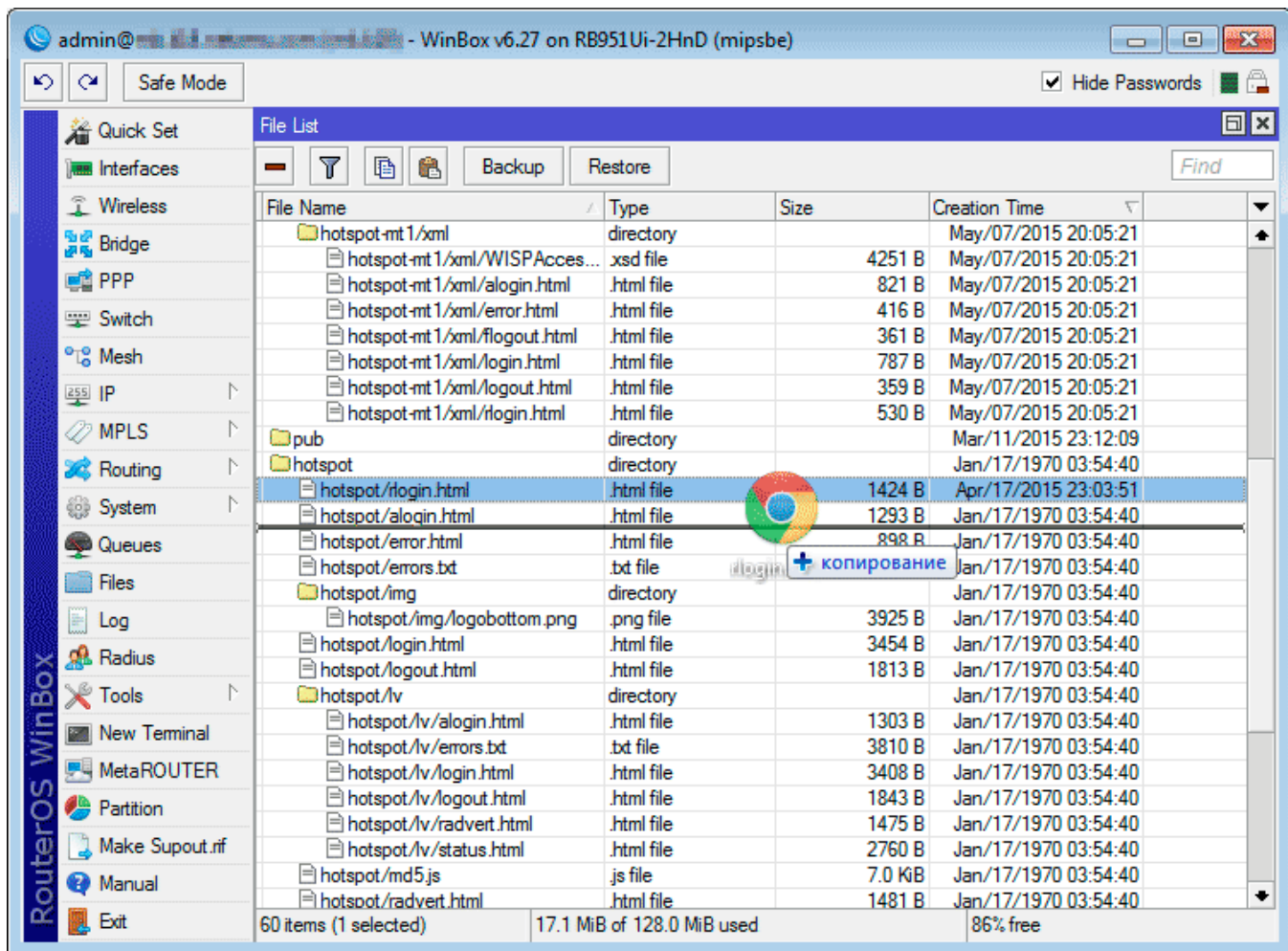
v9 Template Refresh20

v9 Template Timeout1800

rlogin.html /hotspot/ Mikrotik. winbox.exe (CLI).

!

, /v/ ().



: <http://www.netams.com/files/wnam/misc/>.

HTML- (-), "..."

(,) . - WNAM.

, , :

- action="http://172.16.130.5:8080/cp/mikrotik" - () WNAM, TCP- , - Tomcat - WNAM (80 8080). "/cp/mikrotik" . Mikrotik, .
- name="site-id" value = "1" - , . WNAM, IP- , () .

login.html, .

Mikrotik .

WNAM " ", "Mikrotik", IP-, " " .

Изменение сервера доступа

Параметры

RADIUS

SNMP/TACACS+

Порты

Категории

Клиент

Тип

Имя устройства

IP адрес (NAS-IP-Address)

Внешний IP адрес

Местоположение

Комментарий

Логин

Пароль

Использовать счетчики аккаунтинга

Менять местами счетчики приёма/передачи

Определять имена устройств абонентов

Принимать детализацию потоков NetFlow

получено 0 записей

получено 0 записей

Вкл.

Сохранить изменения

Заккрыть

Микротик

172.16.130.9

192.168.1.1

test

Комментарий

wnam

получено 0 записей

получено 0 записей

Вкл.

Сохранить изменения

Заккрыть

, -, , , (http://wiki.mikbill.ru/billing/nas_access_server/mikrotik_hosts).

1. Mikrotik Winbox

System|Scheduler

Schedule <clear_not_auth>

Name:

Start Date:

Start Time:

Interval:

On Event:

```
foreach i in [ /ip hotspot host find where
authorized =no and bypassed =no ] do={
/ip hotspot host remove $i
}
```

Owner:

Policy:

☒ ftp	☒ reboot
☒ read	☒ write
☒ policy	☒ test
☒ password	☒ sniff
☒ sensitive	

Run Count:

Next Run:

enabled

OK
Cancel
Apply
Disable
Comment
Copy
Remove

, "On Event" :

```
:foreach i in [ /ip hotspot host find where authorized =no and bypassed =no ] do={
/ip hotspot host remove $i
}
```

c .

2.

Schedule <clear_idle>

Name: clear_idle

OK

Start Date: Mar/30/2016

Cancel

Start Time: 15:45:57

Apply

Interval: 00:05:00

Disable

On Event:

Comment

```
foreach i in [ /ip hotspot host find where
idle-time>00:01:00 ] do={
/ip hotspot host remove $i
}
```

Copy

Remove

Owner: dh

Policy:

☒ ftp
☒ reboot

☒ read
☒ write

☒ policy
☒ test

☒ password
☒ sniff

☒ sensitive

Run Count: 0

Next Run: Mar/31/2016 00:05:57

enabled

, "On Event" :

```
:foreach i in [ /ip hotspot host find where idle-time>00:01:00 ] do={
/ip hotspot host remove $i
}
```