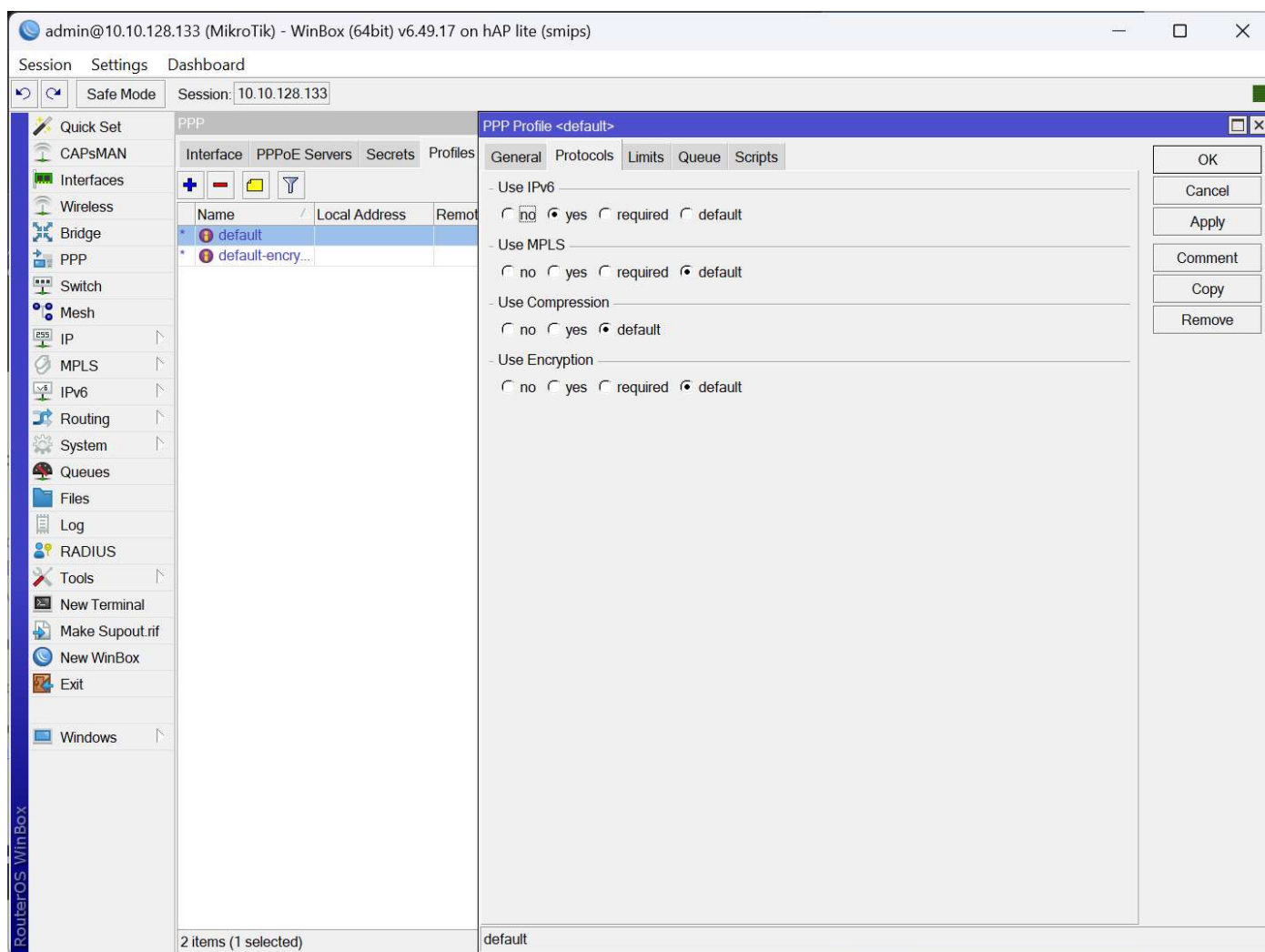


Návod na IPv6 přes PPPoE a Mikrotik (xDSL CETIN)

**Kontrola, zda na profile PPPoE máme zapnutou IPv6:
PPP/Profiles/Default**



Přidat IPv6/DHCPv6 Client

admin@10.10.128.133 (MikroTik) - WinBox (64bit) v6.49.17 on hAP lite (smips)

Session Settings Dashboard

Safe Mode Session: 10.10.128.133

Quick Set CAPsMAN Interfaces Wireless Bridge PPP Switch Mesh IP MPLS IPv6 Routing System Queues Files Log RADIUS Tools New Terminal Make Supout.rif New WinBox Exit Windows

DHCPv6 Client

DHCP Client Client Options

Release Renew Find

Interface	Request	Pool Name	Pool Pre...	Use P...	Add D...	Prefix	Prefix Expire...	Address	Address Ex...	DUID
pppoe-out-gigan...	prefix	ipv6-pool	64	yes	no	2a00:5c20:200:8a::/64	23:47:25			0x0003000

DHCPv6 Client <pppoe-out-gigaset>

DHCP Advanced Status

Interface: pppoe-out-gigaset

Request: ☐ info ☐ address ☒ prefix

Pool Name: ipv6-pool

Pool Prefix Length: 64

Prefix Hint:

☒ Use Peer DNS

☒ Rapid Commit

☐ Add Default Route

OK Cancel Apply Disable Comment Copy Remove Release Renew

enabled Status: bound

1 item (1 selected)

Jako Interface zadáme naše PPPoe

Request zaškrtneme jen položku prefix

Pool Name si nějaký zvolíme (třeba ipv6-pool)

Pool Prefix Length zadáme: 64

Zaškrtneme jen Use Peer DNS + Rapid Commit

Přidat ručně IPv6 adresu do IPv6/Address List na LAN (bridge)

admin@10.10.192.65 (GIGANET-xDSL-kancelar) - WinBox (64bit) v7.22 on RBD53GR-5HacD2HnD (arm)

Session Settings Dashboard

Safe Mode Session: 10.10.192.65

Quick Set

WiFi

Wireless

Interfaces

WireGuard

Bridge

PPP

Switch

Mesh

IP

IPv6

MPLS

Routing

System

Queues

Files

Log

RADIUS

Tools

New Terminal

Dot1X

Partition

Make Supout.nif

New WinBox

Exit

RouterOS WinBox

Windows

Addresses

	Address	From Pool	Interface	VRF	Advertise	Valid	Preferred
D	::1		lo	main	no		
G	2a00:5c20:200:c::1/64	ipv6pool	bridge-LAN	main	yes		
DL	fe80::f90:91cd:0:a/64		pppoe-out-giganet	main	no		
DL	fe80::de2c:6eff:fe0c:f4a6/64		vlan-848	main	no		
DL	fe80::de2c:6eff:fe0c:f4a6/64		ether1-internet	main	no		
DL	fe80::de2c:6eff:fe0c:f4a7/64		bridge-LAN	main	no		

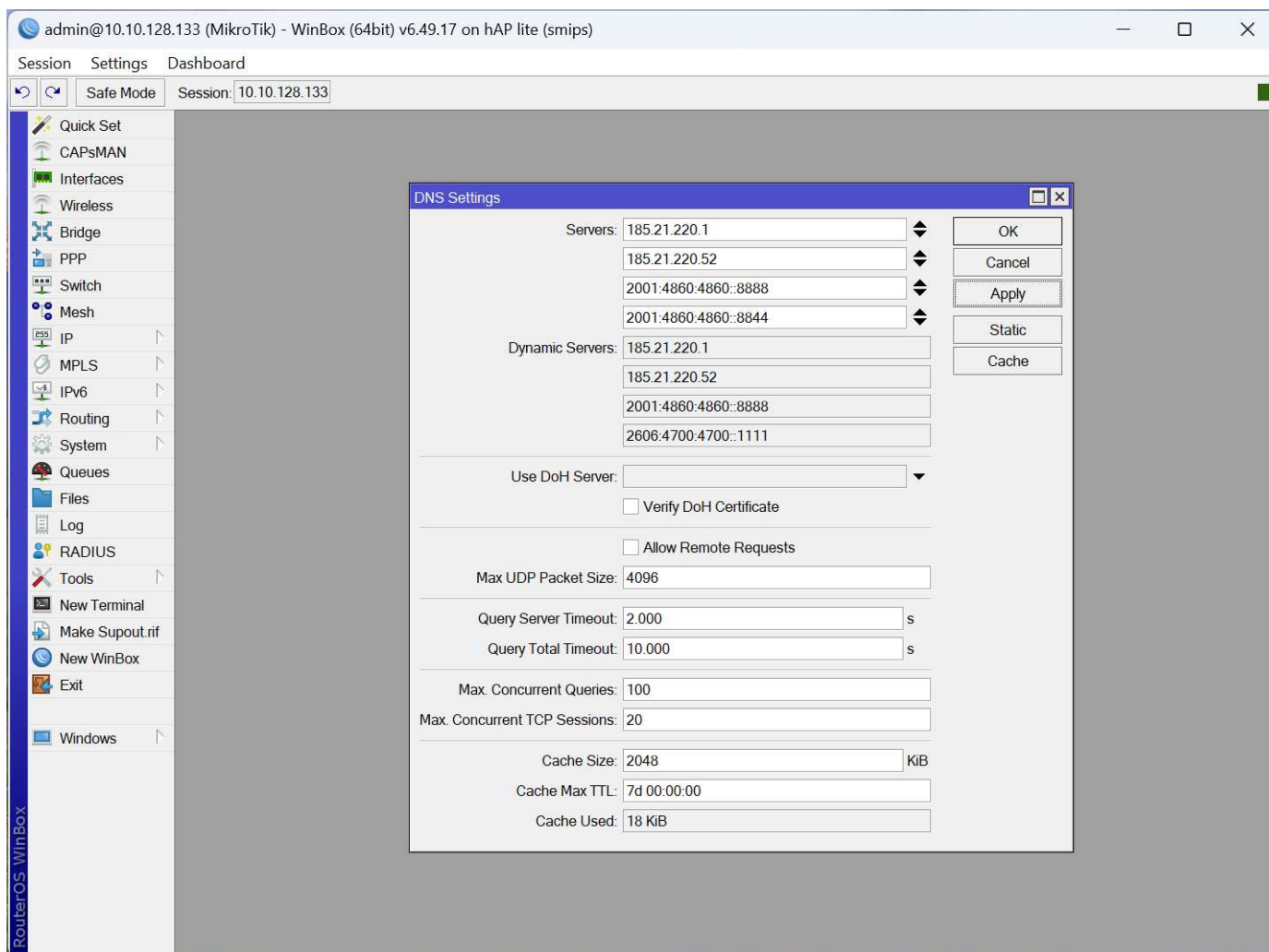
6 items

LAN IP na bridge:

Vaše IPv6 přidělená od GIGANET.cz (2a00:5c20:YYYYYYYYYY)

(přepíšeme ::/64 na ::1/64 a vybereme From Pool a dáme OK)

Pro jistotu takto nastavíme DNS IP/DNS

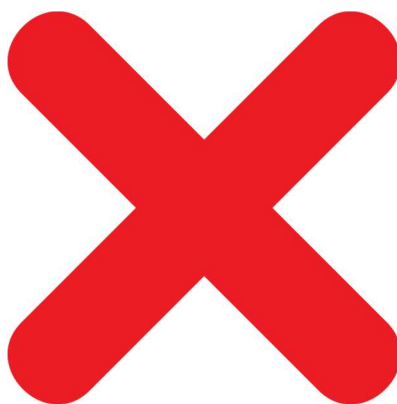


The screenshot shows the Mikrotik WinBox interface with the DNS Settings window open. The window is titled "DNS Settings" and contains the following fields and options:

- Servers:** 185.21.220.1, 185.21.220.52, 2001:4860:4860::8888, 2001:4860:4860::8844
- Dynamic Servers:** 185.21.220.1, 185.21.220.52, 2001:4860:4860::8888, 2606:4700:4700::1111
- Use DoH Server:** (dropdown menu)
- ☐ Verify DoH Certificate
- ☐ Allow Remote Requests
- Max UDP Packet Size:** 4096
- Query Server Timeout:** 2.000 s
- Query Total Timeout:** 10.000 s
- Max. Concurrent Queries:** 100
- Max. Concurrent TCP Sessions:** 20
- Cache Size:** 2048 KiB
- Cache Max TTL:** 7d 00:00:00
- Cache Used:** 18 KiB

Buttons on the right: OK, Cancel, Apply, Static, Cache.

Nepovolujeme Allow Remote Requests, jinak musíme ošetřit na firewallu, aby nenastal DDoS útok z internetu na náš Mikrotik přes DNS dotazy!



V IP/DHCP server/Network si nastavíme pro jistotu na klienty DNS IPv4

admin@10.10.128.133 (MikroTik) - WinBox (64bit) v6.49.17 on hAP lite (smips)

Session Settings Dashboard

Safe Mode Session: 10.10.128.133

Quick Set CAPsMAN Interfaces Wireless Bridge PPP Switch Mesh IP MPLS IPv6 Routing System Queues Files Log RADIUS Tools New Terminal Make Supout.tif New WinBox Exit

RouterOS WinBox

DHCP Server

DHCP Networks Leases Options Option Sets Vendor Classes Alerts

Find

Address	Gateway	DNS Servers	Domain	WINS Servers	Next Server
192.168.88.0/24	192.168.88.1	185.21.220.1, 185.21.220.52			

DHCP Network <192.168.88.0/24>

Address: 192.168.88.0/24 OK

Gateway: 192.168.88.1 Cancel

Netmask: Apply

☐ No DNS Comment

DNS Servers: 185.21.220.1 Copy

185.21.220.52 Remove

Domain:

WINS Servers:

NTP Servers:

CAPS Managers:

Next Server:

Boot File Name:

DHCP Options:

DHCP Option Set:

1 item (1 selected)

Kontrola, zda se nám automaticky přidala defaultní routa na naše PPPoE po připojení PPPoE

admin@10.10.128.133 (MikroTik) - WinBox (64bit) v6.49.17 on hAP lite (smips)

Session Settings Dashboard

Safe Mode Session: 10.10.128.133

Quick Set

CAPsMAN

Interfaces

Wireless

Bridge

PPP

Switch

Mesh

IP

MPLS

IPv6

Routing

System

Queues

Files

Log

RADIUS

Tools

New Terminal

Make Supout.rif

New WinBox

Exit

Windows

IPv6 Route List

Find

Dst. Address

in

+

-

Filter

	Dst. Address	Gateway	Distance
DAS	:::0	pppoe-out-giganet reachable	1
DAC	2a00:5c20:200:51::/64	pppoe-out-giganet reachable	0
DSU	2a00:5c20:200:8a::/64		1
DAC	2a00:5c20:200:8a::/64	bridge-lan reachable	0

4 items (1 selected)

IPv6/ND nastavte jen na lokální interface LAN

admin@10.10.192.65 (GIGANET-xDSL-kancelar) - WinBox (64bit) v7.22 on RBD53GR-5HacD2HnD (arm)

Session Settings Dashboard

Safe Mode Session: 10.10.192.65

Neighbor Discovery

Interfaces Prefixes Proxy

Interface	RA Interv...	RA Dela...	MTU	Reachabl...	Retransmi...	RA Lifetim...	Hop Limit	DNS Ser...	PREF64 ...	Advertise...
bridge-LAN	200-600	3	1492			1800				yes

ND <bridge-LAN>

Interface: bridge-LAN

RA Interval: 200-600 s

RA Delay: 3 s

RA Preference: medium

MTU: 1492

Reachable Time: s

Retransmit Interval: s

RA Lifetime: 1800 s

Hop Limit:

DNS Servers:

PREF64 Prefixes:

☒ Advertise MAC Address

Advertise DNS: yes

☐ Managed Address Configuration

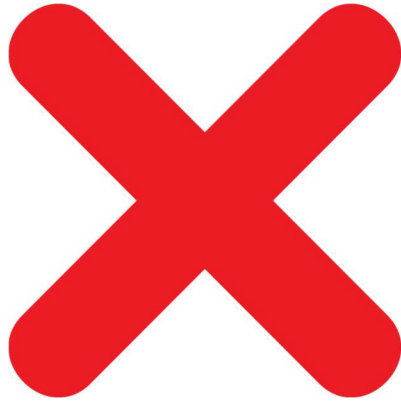
☐ Other Configuration

enabled default

1 item (1 selected)

Je nutné nechat jen ND na interface LAN (bridge) a nastavit **MTU na 1492**

IPv6/DHCPv6 Server – NENASTAVUJEME



Výsledek na www.test-ipv6.cz

Test IPv6Často kladené dotazyMirrorystatistiky

Testuje vaše IPv6 připojení.

SouhrnSpuštěné testySdílejte výsledky / KontaktDalší IPv6 stránkyPro help desk

Vaše IPv4 adresa ve veřejném internetu je 185.21.222.222

Vaše IPv6 adresa ve veřejném internetu je 2a00:5c20:101:111:7852:a0a2:c747:c1b9

Váš poskytovatel připojení k Internetu (ISP) bude nejspíš GIGANET

Vzhledem k tomu, že máte IPv6, přidáváme tab, který ukazuje, jak dobře se můžete připojit k dalším IPv6 stránkám. [Viz](#)

Váš DNS server (možná provozovaný Vaším poskytovatelem připojení) má přístup přes IPv6.

Vaše skóre

10/10

stabilita a připravenost pro IPv6, když poskytovatelé obsahu poskytnou obsah jen skrz IPv6

Klikněte pro [Test Data](#)

(Aktualizace stavu připravenosti na IPv6 na serveru dokončena)

Copyright (C) 2010, 2024 Jason Fester. Všechna práva vyhrazena. Version 1.1.1006 (bdfa7c5).
MirroryZdrojE-mail - - [Attributy](#) | [Debug](#) | [%cs.CZ](#) 57.73%
Toto je mirror stránek test-ipv6.com. Výsledky prezentované zde můžou ale nemusí být stejné jako na původních stránkách.

Test IPv6Často kladené dotazyMirrorystatistiky

Zrcadla test-ipv6.com

These are the known publicly accessible mirrors for test-ipv6.com.

Thank you to all of these organizations, who have put in significant effort to provide this mirror sites. If you have problems with the site you are on now, try another mirror site; perhaps one closer to you.

Hints Columns are sortable (click the first row): [click here](#) to re-check reachability from where you are to those mirrors.

link	location	provider	ipv6?	info
testipv6.de	DE	COSIMO Vertriebs -und Beratungs GmbH	✓	i
test-ipv6.iu13.net	US (PA)	Lancaster-Lebanon IU13	✓	i
frankfurt.test-ipv6.com	DE	Hosted at Linode (Akamai)	✓	i
amsterdam.test-ipv6.com	NL	Hosted at Linode (Akamai)	✓	i
test-ipv6.csclub.uwaterloo.ca	CA	University of Waterloo Computer Science Club	✓	i
sydney.test-ipv6.com	AU	Hosted at Linode (Akamai)	✓	i
main.test-ipv6.com	CA US	Hosted at Linode (Akamai)	✓	i
test-ipv6.com	Varies	Hosted at Linode (Akamai)	✓	i
test-ipv6.fratec.net	CR	Sistemas Fratec S.A.	✓	i
test-ipv6.freerangecloud.com	US (CA)	Christopher Munz-Michieliin	✓	i
test-ipv6.belwue.net	DE	Bel Wu	✓	i
test-ipv6.alpinedc.ch	CH	AlpineDC	✓	i
saopaulo.test-ipv6.com	BR	Hosted at Linode (Akamai)	✓	i
test-ipv6.roedu.net	RO	RoEduNet	✓	i
chennai.test-ipv6.com	IN	Hosted at Linode (Akamai)	✓	i
test-ipv6.se	SE	Interian Gefle AB	✓	i
miami.test-ipv6.com	FL US	Hosted at Linode (Akamai)	✓	i
test-ipv6.cz	CZ	nic.cz	✓	i
newark.test-ipv6.com	CA NJ	Hosted at Linode (Akamai)	✓	i
test-ipv6.karsolink.com	IT	2S Computers srl aka Karsolink	✓	i
test-ipv6.carnet.hr	HR	Croatian Academic and Research Network	✓	i
test-ipv6.hu	HU	Polaris-N Systems	✓	i
singapore.test-ipv6.com	SG	Hosted at Linode (Akamai)	✓	i
sixte.st	AU	Delan Azabani	✓	i
test-ipv6.cl	CL	NIC Chile	✓	i
test-ipv6.epic.network	US	epic.network	✓	i
osaka.test-ipv6.com	JP	Hosted at Linode (Akamai)	✓	i

Bez firewallu bude router z internetu plně otevřený i na IPv6, takže aspoň základ v IPv6 FIREWALL

```
/ipv6 firewall filter
```

```
# Povolit established/related
```

```
add chain=input action=accept connection-state=established,related comment="allow  
established,related"
```

```
add chain=forward action=accept connection-state=established,related comment="allow  
established,related"
```

```
# Povolit DHCPv6 client (z PPPoE, link-local)
```

```
add chain=input action=accept protocol=udp dst-port=546 src-address=fe80::/10 comment="allow  
DHCPv6 client"
```

```
/ipv6 firewall filter
```

```
# Povolit ICMPv6 (nutné pro funkční IPv6)
```

```
add chain=input action=accept protocol=icmpv6 comment="allow ICMPv6 to router"
```

```
add chain=forward action=accept protocol=icmpv6 comment="allow ICMPv6 through router"
```

```
# Povolit LAN -> internet
```

```
add chain=forward action=accept in-interface=bridge-lan out-interface=pppoe-out1 comment="allow  
LAN to WAN"
```

```
# Default drop z WAN na router a mezi sítěmi
```

```
add chain=input action=drop in-interface=pppoe-out1 comment="drop everything else to router from  
WAN"
```

```
add chain=forward action=drop comment="drop everything else"
```