

# Vaja 9

ssh-jamo se v server za boljši dostop

```
skrbnik@rakov-debian: ~  
Microsoft Windows [Version 10.0.22631.2506]  
(c) Microsoft Corporation. Vse pravice pridržane.  
  
C:\Users\Vegova>ssh skrbnik@192.168.56.10  
The authenticity of host '192.168.56.10 (192.168.56.10)' can't be established.  
ED25519 key fingerprint is SHA256:ETW/XTadtjqjY/8eQKPjHG0mFIUoRECTtHtHKr3t4hI.  
This key is not known by any other names  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '192.168.56.10' (ED25519) to the list of known hosts.  
skrbnik@192.168.56.10's password:  
Linux rakov-debian 6.1.0-31-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.128-1 (2025-02-07) x86_64  
  
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Mon Mar 24 07:47:51 2025  
skrbnik@rakov-debian:~$
```

1. skrbnik@rakov-debian:~\$ sudo su
2. root@rakov-debian:/home/skrbnik# apt update
3. root@rakov-debian:/home/skrbnik# apt install bind9
4. root@rakov-debian:/home/skrbnik# cd /etc/bind

db. - datoteke z vpisi dns (če ls-jamo, vidimo datoteke. Tiste ki se začnejo z db. so datoteke z vpisi dns)

5. root@rakov-debian:/etc/bind# nano named.conf.options

```
GNU nano 7.2 named.conf.options *  
options {  
    directory "/var/cache/bind";  
  
    // If there is a firewall between you and nameservers you want  
    // to talk to, you may need to fix the firewall to allow multiple  
    // ports to talk. See http://www.kb.cert.org/vuls/id/800113  
  
    // If your ISP provided one or more IP addresses for stable  
    // nameservers, you probably want to use them as forwarders.  
    // Uncomment the following block, and insert the addresses replacing  
    // the all-0's placeholder.  
  
    forwarders {  
        193.2.1.66;  
        192.2.1.72;  
        8.8.8.8;  
        1.1.1.1;  
    };  
  
    //=====  
    // If BIND logs error messages about the root key being expired,  
    // you will need to update your keys. See https://www.isc.org/bind-keys  
    //=====  
    dnssec-validation auto;  
  
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark  
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^_/ Go To Line  M-E Redo      M-G Copy
```

6. root@rakov-debian:/etc/bind# systemctl restart named

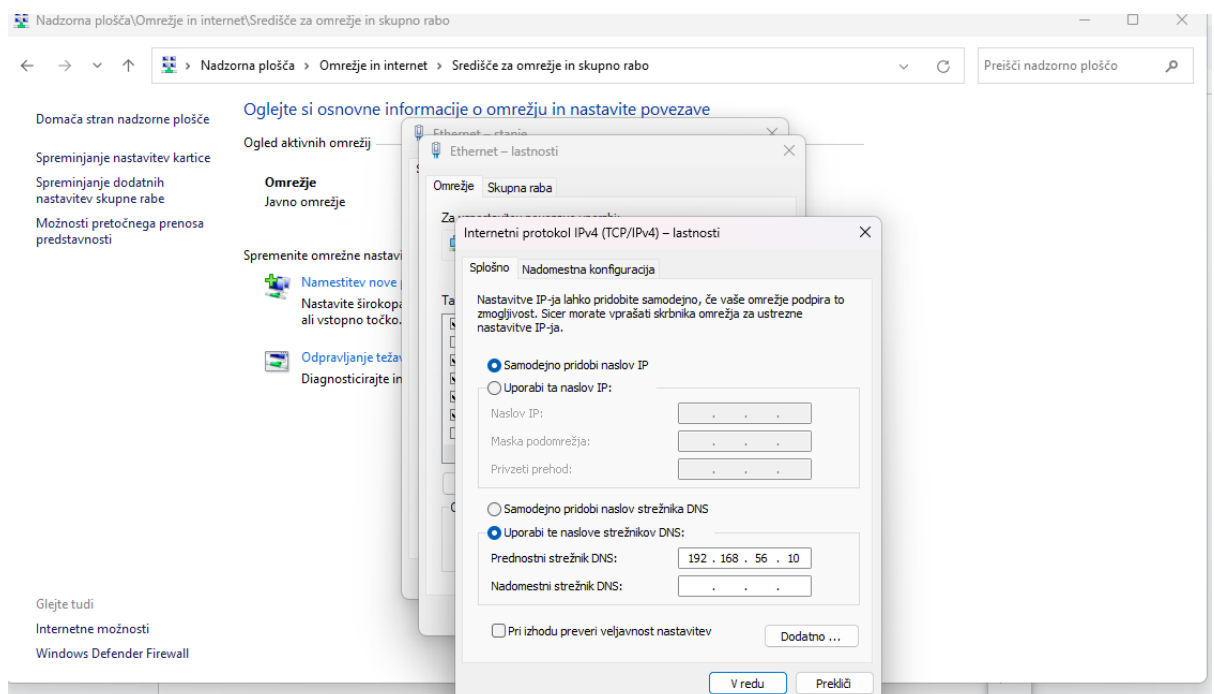
(navadni cmd)

```
C:\Users\Vegova>nslookup www.vegova.si 192.168.56.10
Server:      UnKnown
Address:     192.168.56.10

Non-authoritative answer:
Name:   www.vegova.si
Address: 194.249.3.118

C:\Users\Vegova>|
```

Nastavimo dns server: (na windows pc-ju)



TEST (na windos pc-ju)

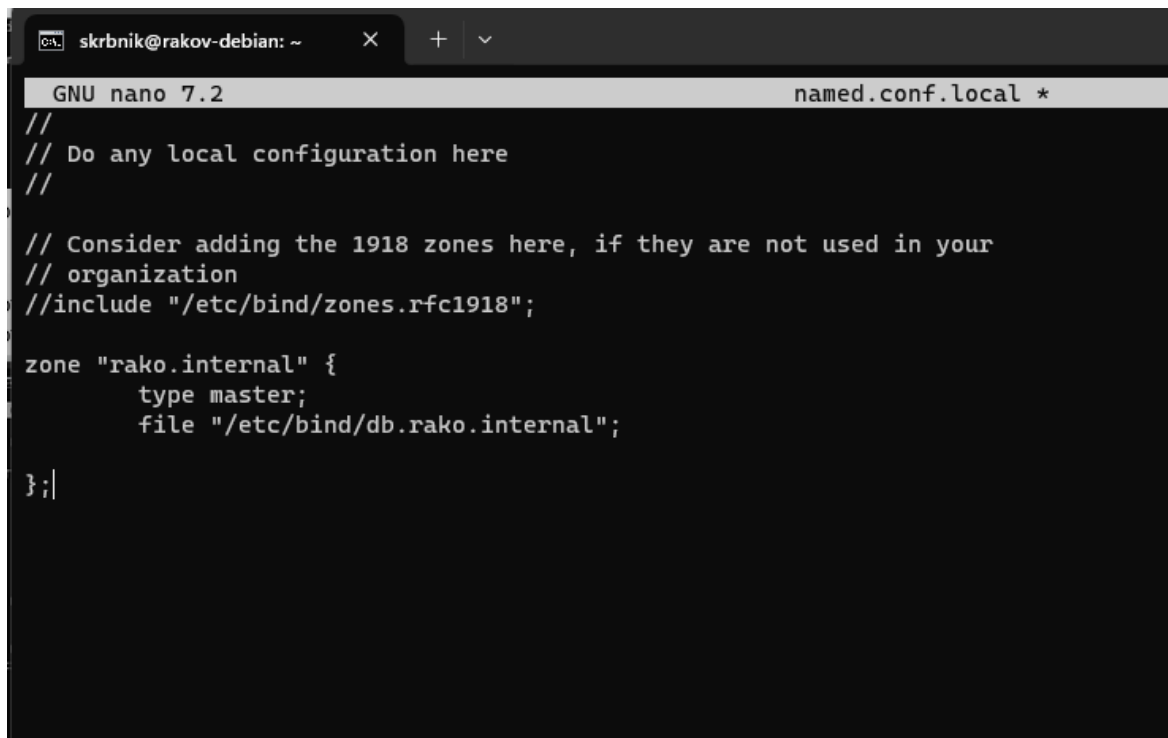
```
C:\Users\Vegova>nslookup www.vegova.si
Server:    UnKnown
Address:   192.168.56.10

Non-authoritative answer:
Name:      www.vegova.si
Address:   194.249.3.118

C:\Users\Vegova>
```

Debian:

```
root@rakov-debian:/etc/bind# nano named.conf.local
```



```
GNU nano 7.2 named.conf.local *
//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "rako.internal" {
    type master;
    file "/etc/bind/db.rako.internal";
};
```

(zone: naš server je zadolžen za domeno rako.internal)

```
root@rakov-debian:/etc/bind# cp db.local db.rako.internal
```

```
root@rakov-debian:/etc/bind# nano db.rako.internal
```

```
GNU nano 7.2 db.rako.internal *
;
; BIND data file for local loopback interface
;
$TTL      604800
@          IN      SOA      streznik.rako.internal. root.rako.internal. (
                                3          ; Serial
                                604800     ; Refresh
                                86400      ; Retry
                                2419200    ; Expire
                                604800 )   ; Negative Cache TTL
;
; DNS vnos za naš dns streznik
                IN      NS      streznik.rako.internal.
; DNS vnosi za našo domeno
streznik       IN      A        192.168.56.10
```

root@rakov-debian:/etc/bind# systemctl restart named

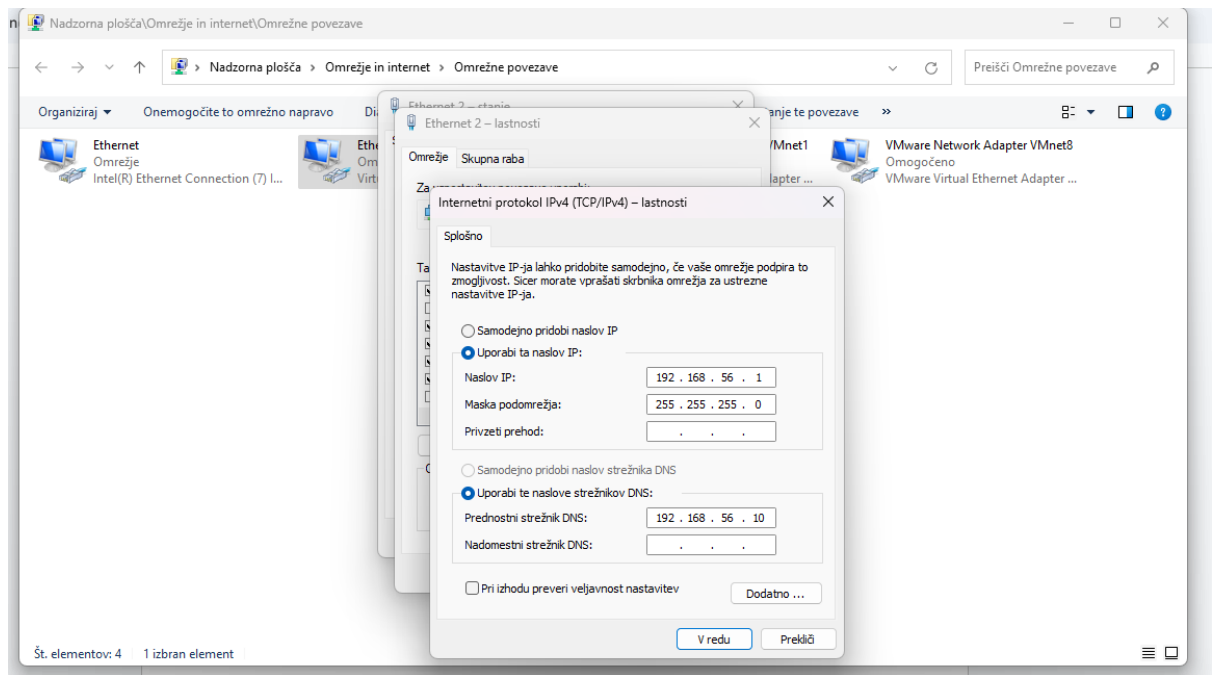
test (windows pc)

```
Ukazni poziv
Microsoft Windows [Version 10.0.22631.2506]
(c) Microsoft Corporation. Vse pravice pridržane.

C:\Users\Vegova>nslookup streznik.rako.internal
Server:      UnKnown
Address:     192.168.56.10

Name:       streznik.rako.internal
Address:    192.168.56.10

C:\Users\Vegova>
```



nato onemogočimo ethernet, ter v brskalnik napišemo:

```
root@rakov-debian:/etc/bind# nano db.rako.internal
```

```
skrbnik@rakov-debian: ~  
GNU nano 7.2 db.rako.internal *  
;  
; BIND data file for local loopback interface  
;  
$TTL      604800  
@          IN      SOA      streznik.rako.internal. root.rako.internal. (  
                                3          ; Serial  
                                604800     ; Refresh  
                                86400      ; Retry  
                                2419200    ; Expire  
                                604800 )   ; Negative Cache TTL  
;  
; DNS vnos za naš dns streznik  
          IN      NS       streznik.rako.internal.  
  
; DNS vnosi za našo domeno  
streznik   IN      A        192.168.56.10  
krompir    IN      CNAME    streznik.rako.internal.  
jaz        IN      CNAME    streznik.rako.internal.
```

```
root@rakov-debian:/etc/bind# systemctl restart named
```

Za test napišemo v browser: *jaz.rako.internal* ali pa *krompir.rako.internal* . Mora se nam pokazati stran s praženim krompirjem od Kralja.

Preskočili smo del z obratno ip cono

Debian:

```
root@rakov-debian:/etc/bind# cd /etc/apache2/sites-available/
```

```
root@rakov-debian:/etc/apache2/sites-available# nano 000-default.conf
```

```
skrbnik@rakov-debian: ~  
GNU nano 7.2 000-default.conf *  
<VirtualHost *:80>  
    ServerName krompir.rako.internal|  
  
    ServerAdmin ziga.kralj@vegova.si  
    DocumentRoot /var/www/html  
  
    ErrorLog ${APACHE_LOG_DIR}/error.log  
    CustomLog ${APACHE_LOG_DIR}/access.log combined  
  
</VirtualHost>  
  
<VirtualHost *:80>  
    ServerName jaz.rako.internal  
  
    ServerAdmin ziga.kralj@vegova.si  
    DocumentRoot /var/www/jaz  
  
    ErrorLog ${APACHE_LOG_DIR}/error.log  
    CustomLog ${APACHE_LOG_DIR}/access.log combined  
  
</VirtualHost>
```

```
root@rakov-debian:/etc/apache2/sites-available# systemctl restart apache2
```

```
root@rakov-debian:/etc/apache2/sites-available# cd /var/www
```

```
root@rakov-debian:/var/www# mkdir jaz
```

```
root@rakov-debian:/var/www# chown -R skrbnik:www-data jaz
```

```
root@rakov-debian:/var/www# chmod 775 jaz
```

```
root@rakov-debian:/var/www# ls -la
```

```
total 16
```

```
drwxr-xr-x 4 root    root    4096 Mar 24 08:41 .
```

```
drwxr-xr-x 12 root    root    4096 Mar 10 08:21 ..
```

```
drwxrwxr-x 2 skrbnik www-data 4096 Mar 10 08:54 html
```

```
drwxrwxr-x 2 skrbnik www-data 4096 Mar 24 08:41 jaz
```

```
root@rakov-debian:/var/www# exit
```

```
skrbnik@rakov-debian:/var/www/jaz$ nano index.html
```

```
skrbnik@rakov-debian:/var/www/jaz$
```

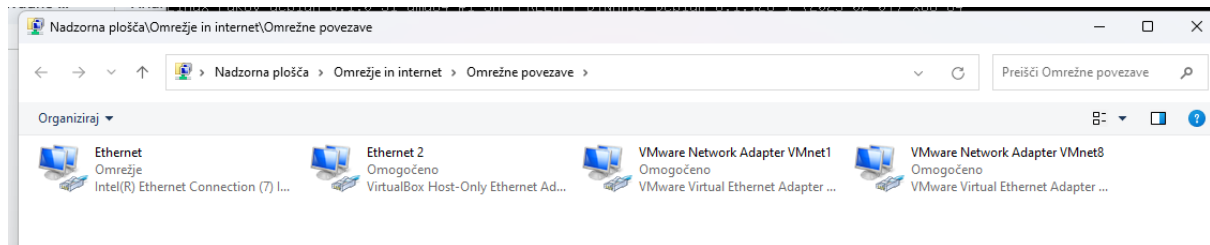
## vaja 10

Preнесemo debian file in ga заženemo v virtual boxu (2 krat klikni na .vbox file)

V etc so konfiguracijske datoteke

**Uporabnik:** skrbnik

**Geslo:** Passw0rd!



CMD (windows): ifconfig

sudo su

nano /etc/network/interfaces

iface enp0s3 inet static



```

GNU nano 7.2 /etc/network/interfaces *
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
allow-hotplug enp0s8
iface enp0s8 inet dhcp

iface enp0s3 inet static
    address 192.168.56.10/24
    gateway 192.168.56.1

```

```

GNU nano 7.2 /etc/network/interfaces *
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
allow-hotplug enp0s8
iface enp0s8 inet dhcp

auto enp0s3

iface enp0s3 inet static
    address 192.168.56.10/24
#_    gateway 192.168.56.1

```

```

root@rakov-debian:/home/skrbnik# ifup enp0s3
RTNETLINK answers: File exists
ifup: failed to bring up enp0s3
root@rakov-debian:/home/skrbnik# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:fc:be:51 brd ff:ff:ff:ff:ff:ff
    inet 192.168.56.10/24 brd 192.168.56.255 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe3c:be51/64 scope link
        valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:3c:87:f9 brd ff:ff:ff:ff:ff:ff
    inet 10.0.3.15/24 brd 10.0.3.255 scope global dynamic enp0s8
        valid_lft 85301sec preferred_lft 85301sec
    inet6 fe80::a00:27ff:fe3c:87f9/64 scope link
        valid_lft forever preferred_lft forever
root@rakov-debian:/home/skrbnik#

```

v windowsu: ping 192.168.56.10. Moralo biti pingati

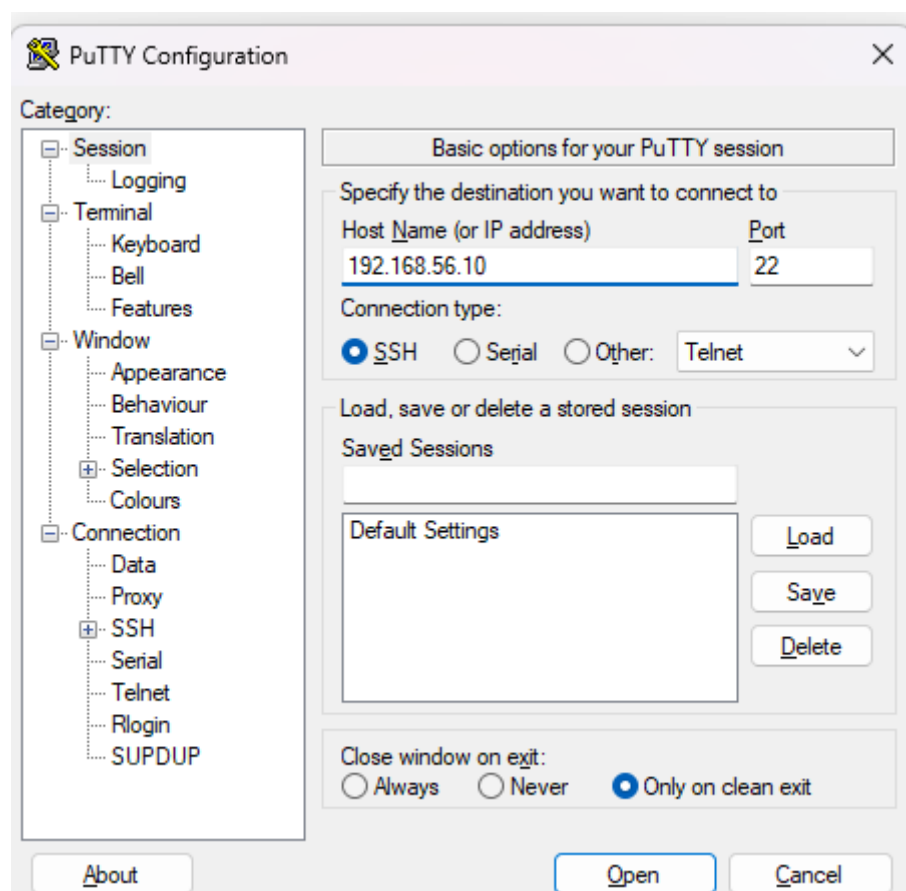
Linux:

sudo apt install openssh-server

```
Processing triggers for libc-bin (2.38-3+deb12u3) ...  
root@rakov-debian:/home/skrbnik# apt install openssh-server
```

pojdi na putty in se poveži s ssh

Poveži se s ssh



Lahko se prijavimo tudi tako preko ssh (v windowsu):

```
C:\Users\Vegova>ssh skrbnik@192.168.56.10
The authenticity of host '192.168.56.10 (192.168.56.10)' can't be established.
ED25519 key fingerprint is SHA256:S2S50E2Ribt/LCZKKPUQ+J3pwf7hSorf2yUpAofsZwc.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.56.10' (ED25519) to the list of known hosts.
skrbnik@192.168.56.10's password:
Linux rakov-debian 6.1.0-31-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.128-1 (2025-02-07) x86_64

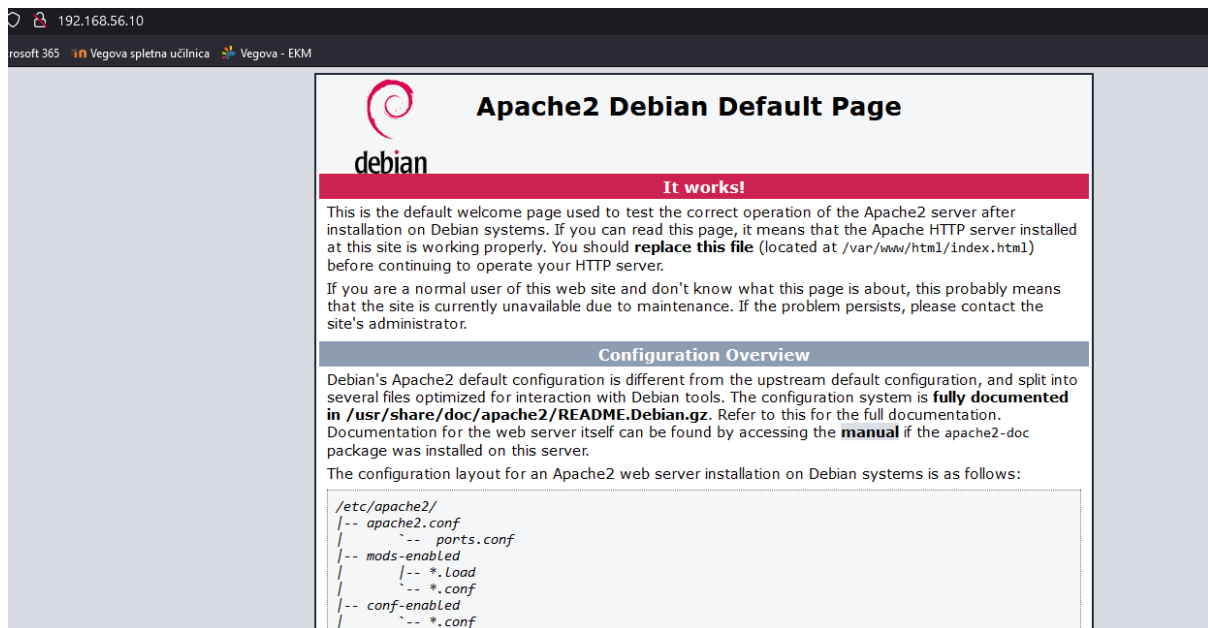
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Mar 10 08:16:14 2025 from 192.168.56.1
skrbnik@rakov-debian:~$ |
```

Nastavimo http strežnik

```
skrbnik@rakov-debian:~$ sudo su
[sudo] password for skrbnik:
root@rakov-debian:/home/skrbnik# cd
root@rakov-debian:~# ls
root@rakov-debian:~# ls -a
.  ..  .bash_history  .bashrc  .local  .profile  .ssh
root@rakov-debian:~# pwd
/root
root@rakov-debian:~# apt install apache2
```

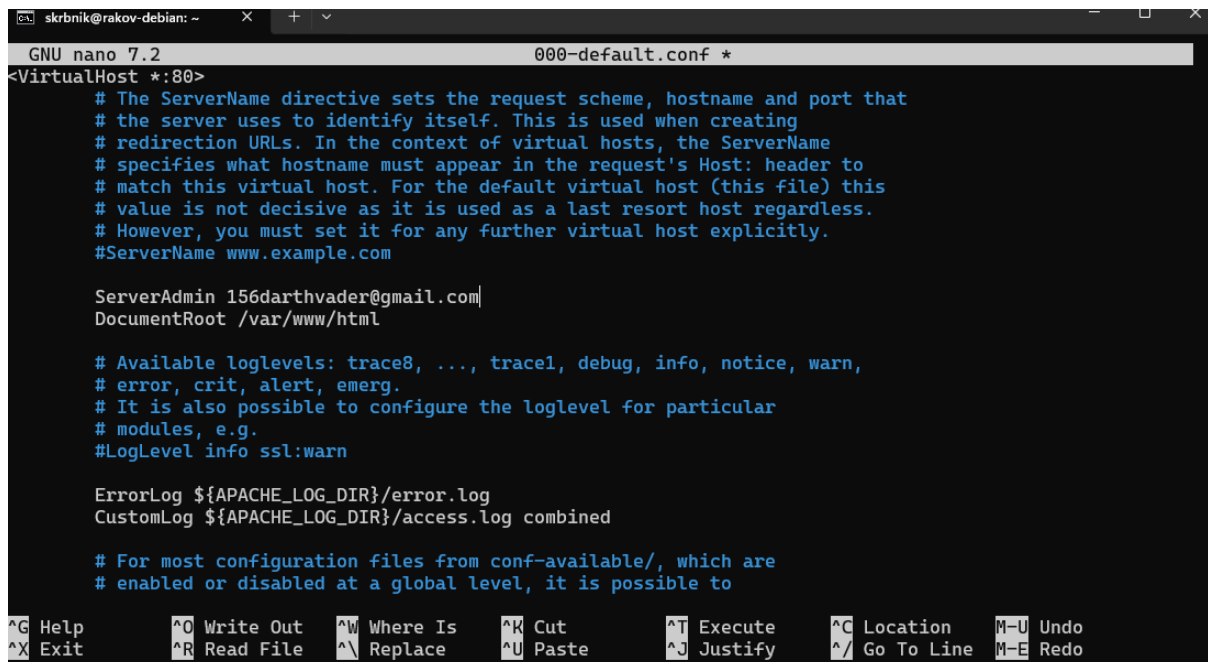
gremo na naš ip z browserjem



Nastavimo error 404 sporočilo:

```
root@rakov-debian:~# cd /etc/apache2/sites-available/
root@rakov-debian:/etc/apache2/sites-available# ls
000-default.conf  default-ssl.conf
root@rakov-debian:/etc/apache2/sites-available# |
```

nano 000-default.conf



```
skrbnik@rakov-debian: ~  
root@rakov-debian:/etc/apache2/sites-available# cd /var/  
root@rakov-debian:/var# ls  
backups cache lib local lock log mail opt run spool tmp www  
root@rakov-debian:/var# cd www  
root@rakov-debian:/var/www# ls  
html  
root@rakov-debian:/var/www# ls -la  
total 12  
drwxr-xr-x  3 root root 4096 Mar 10 08:21 .  
drwxr-xr-x 12 root root 4096 Mar 10 08:21 ..  
drwxr-xr-x  2 root root 4096 Mar 10 08:21 html  
root@rakov-debian:/var/www# ls  
html  
root@rakov-debian:/var/www# chown -R skrbnik www-data  
chown: cannot access 'www-data': No such file or directory  
root@rakov-debian:/var/www# chown -R skrbnik www-data html/  
chown: cannot access 'www-data': No such file or directory  
root@rakov-debian:/var/www# chown -R skrbnik:www-data html/  
root@rakov-debian:/var/www# ls -al  
total 12  
drwxr-xr-x  3 root  root  4096 Mar 10 08:21 .  
drwxr-xr-x 12 root  root  4096 Mar 10 08:21 ..  
drwxr-xr-x  2 skrbnik www-data 4096 Mar 10 08:21 html  
root@rakov-debian:/var/www# |
```

```
skrbnik@rakov-debian: ~  
root@rakov-debian:/etc/apache2/sites-available# cd /var/  
root@rakov-debian:/var# ls  
backups cache lib local lock log mail opt run spool tmp www  
root@rakov-debian:/var# cd www  
root@rakov-debian:/var/www# ls  
html  
root@rakov-debian:/var/www# ls -la  
total 12  
drwxr-xr-x  3 root root 4096 Mar 10 08:21 .  
drwxr-xr-x 12 root root 4096 Mar 10 08:21 ..  
drwxr-xr-x  2 root root 4096 Mar 10 08:21 html  
root@rakov-debian:/var/www# ls  
html  
root@rakov-debian:/var/www# chown -R skrbnik www-data  
chown: cannot access 'www-data': No such file or directory  
root@rakov-debian:/var/www# chown -R skrbnik www-data html/  
chown: cannot access 'www-data': No such file or directory  
root@rakov-debian:/var/www# chown -R skrbnik:www-data html/  
root@rakov-debian:/var/www# ls -al  
total 12  
drwxr-xr-x  3 root  root  4096 Mar 10 08:21 .  
drwxr-xr-x 12 root  root  4096 Mar 10 08:21 ..  
drwxr-xr-x  2 skrbnik www-data 4096 Mar 10 08:21 html  
root@rakov-debian:/var/www# chmod 775 html/  
root@rakov-debian:/var/www# ls -al  
total 12
```

## Nastavimo spletno stran:

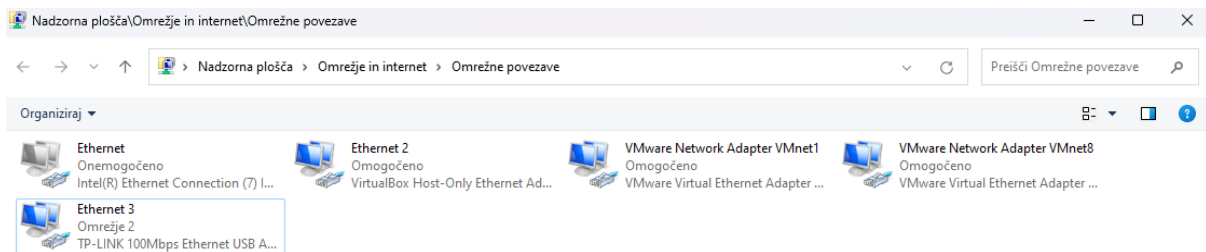
v ssh damo

Na testu

dobimo fizični router, zvežemo ju in povežemo vm in pc. Potem lahko uporabljamo internet

# VAJA 11

onemogočimo vmesnik ethernet



na ethernet 3 dobimo od dhcp ip naslov

proklopimo router

```
Ethernet adapter Ethernet 3:

Connection-specific DNS Suffix . : 
Link-local IPv6 Address . . . . . : fe80::5728:722f:8530:19de%38
IPv4 Address. . . . . : 192.168.88.254
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.88.1
PS C:\Users\Vegova>
```

192.168.88.1 v browser, da dostopamo do vmesnika

Najdemo password na listku od routerja

*coko*

nastavimo static ip, ter vse ostalo:

Internet

Address Acquisition ☒ Static ☐ Automatic ☐ PPPoE

IP Address 100.64.0.17

Netmask 255.255.255.128 (/25)

Gateway 100.64.0.1

DNS Servers 100.64.0.126 - +  
193.21.66 - +

MAC Address F4:1E:57:6A:98:BE

Firewall Router ☒

Testiramo:

ping 8.8.8.8

Local Network

IP Address 192.168.1.1

Netmask 255.255.255.0 (/24)

DHCP Server ☒

DHCP Server Range - 192.168.1.20-192.168.1.254

NAT ☒

UPnP ☐

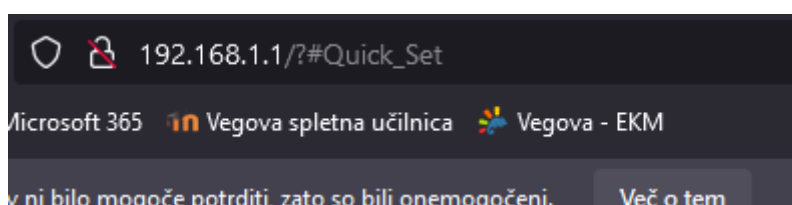
Port Mapping

Izlopimo router za 15 sekund in ga vklopimo nazaj

Ipconfig – dobimo nov ip

```
Ethernet adapter Ethernet 3:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::5728:722f:8530:19de%38
    IPv4 Address. . . . . : 192.168.1.254
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
PS C:\Users\Vegova> |
```



Geslo: varnogeslo

Wireless

2GHz

5GHz

Network Name

Bohinjc

Bohinjc\_5g

Country

+

WiFi Password

-

.....

☒ Hide

WPS Accept

Guest Wireless Network

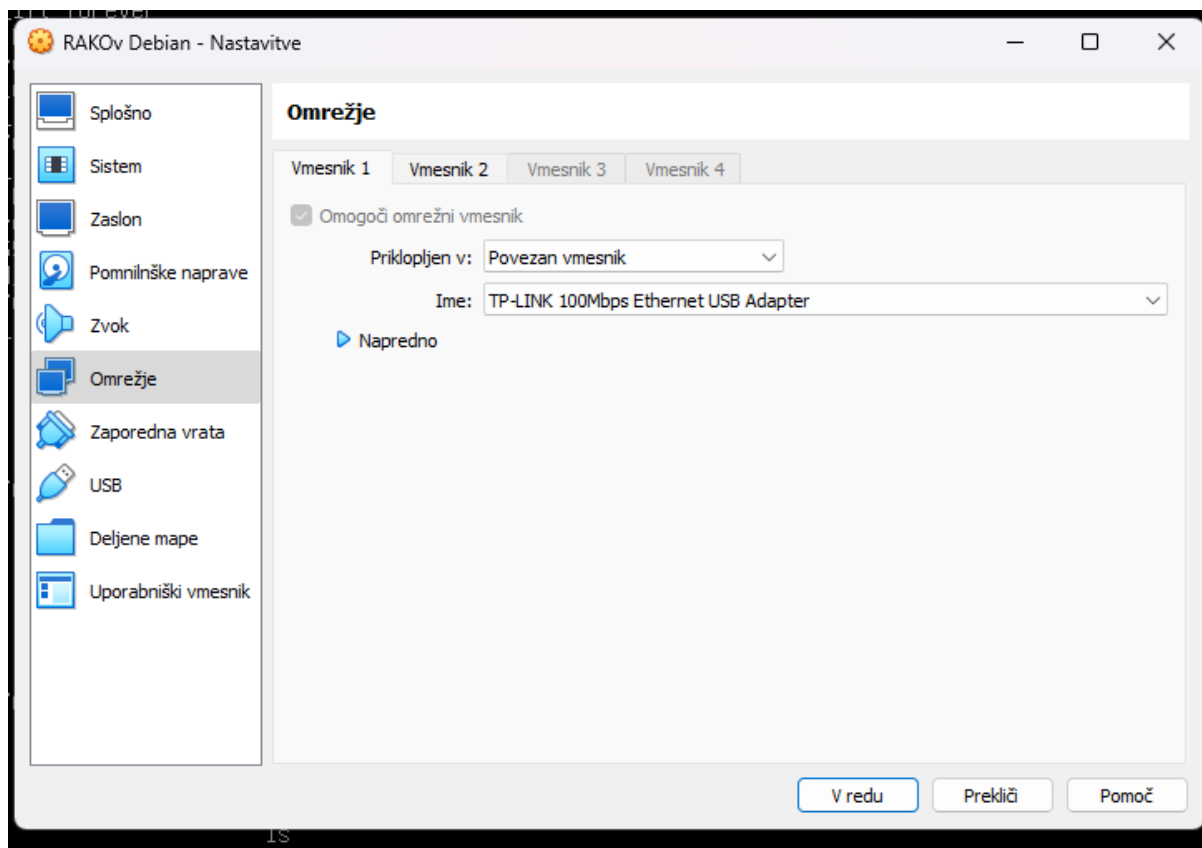
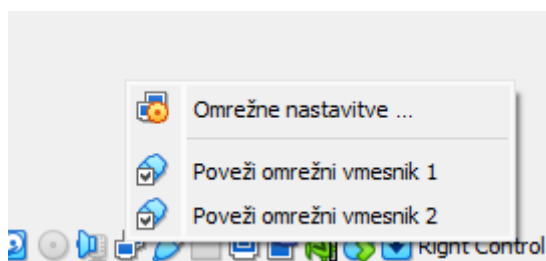
Guest Network

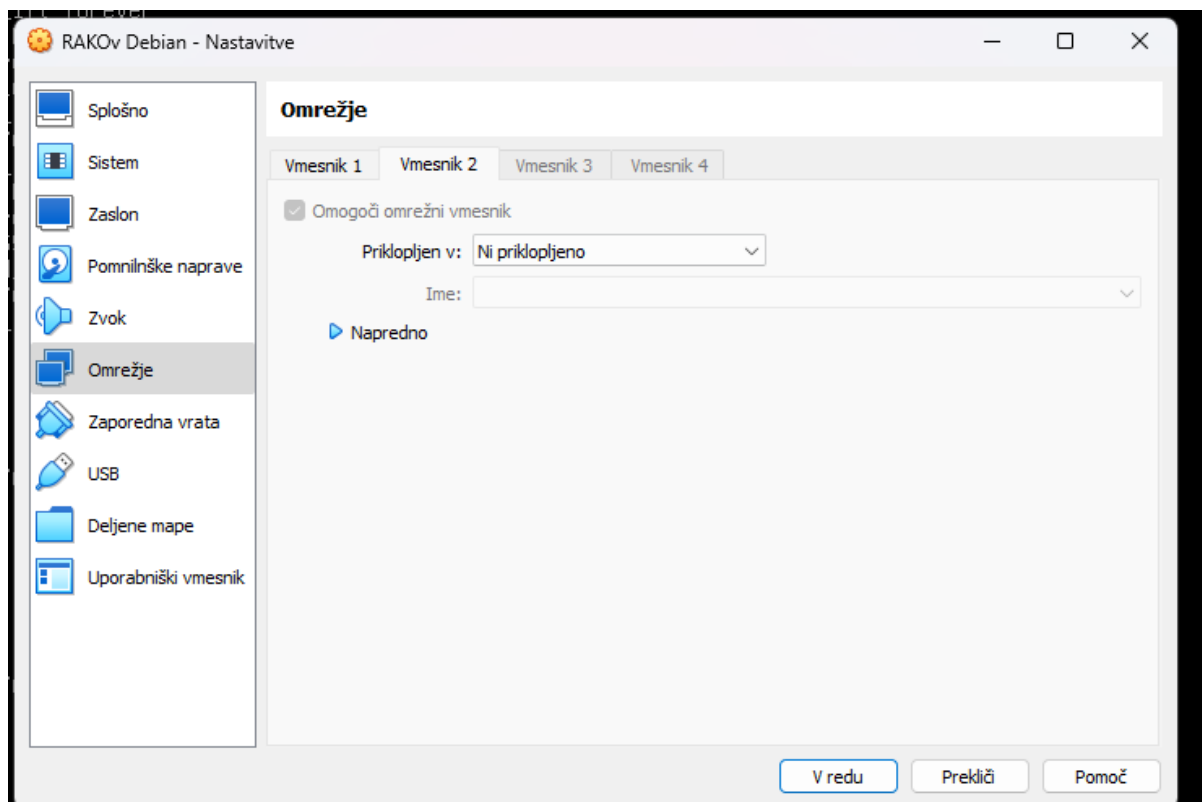
+

Povežemo se gor s telefonom



V virtualki debian:





Nano /etc/network/interfaces

```
GNU nano 7.2
# This file describes the network interfaces available on
# and how to activate them. For more information, see inte

source /etc/network/interfaces.d/*

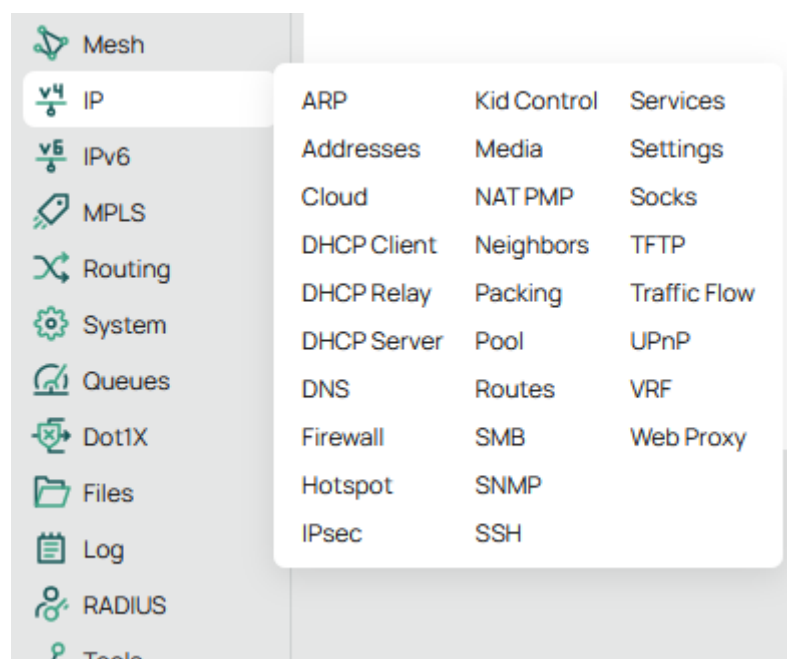
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
allow-hotplug enp0s8
iface enp0s8 inet dhcp

auto enp0s3

iface enp0s3 inet static
    address 192.168.1.10/24
    gateway 192.168.1.1
    dns-nameservers 100.64.0.126
```


sudo reboot




dns – flush cache


## BROWSER

port mapping -> new

 Enega ali več nameščenih dodatkov ni bilo mogoče potrditi, zato so bili onemogočeni. [Več o tem](#)

 MikroTik

### New Port Mapping



Description

HTTP

Protocol

☒ tcp ☐ udp

Port

80

To Address

192.168.1.10


To Port


80

Cancel

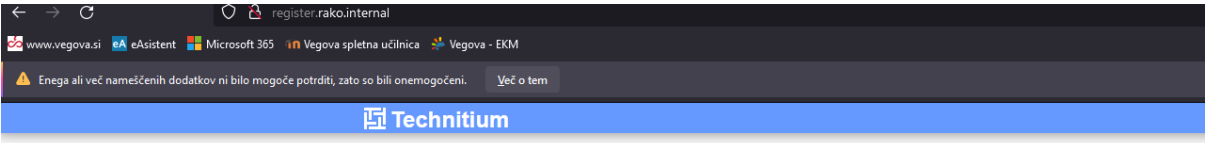
Apply

OK

 Actions

 Configuration

testiramo tako da v browser vpišemo static ip sosedu. Če naloži stran s krompirjem, je ok.



DNS Server

Username

username

Password

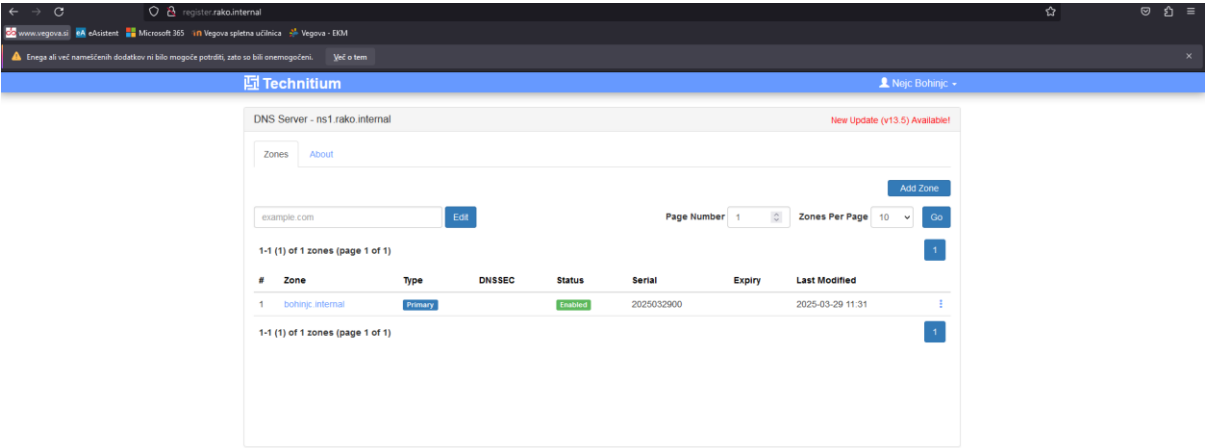
password

Login

[Forgot Password?](#)

nejc.bohinjc

20081111

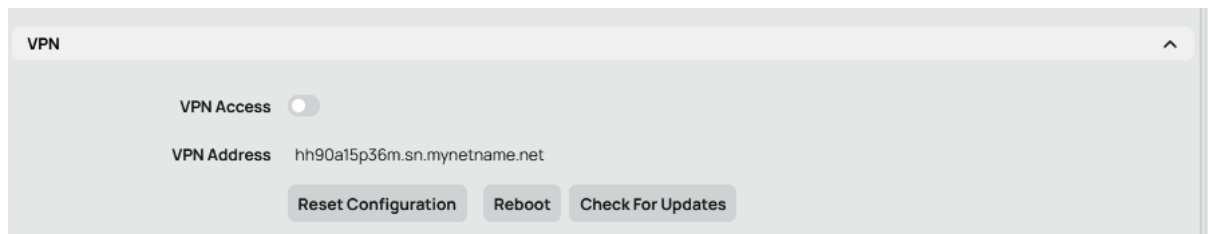


add record

name: nejc

cname

ttd 3600



Reset config

Postavljanje strani brez domene, povezovanje omrežja