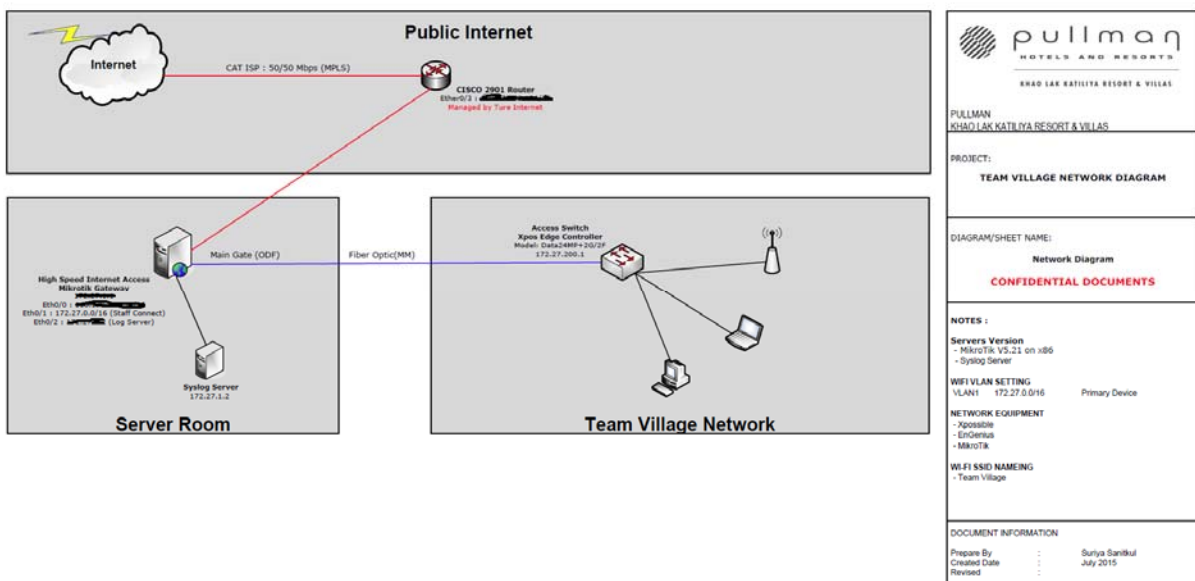# MikroTik System on PC

1. WAN configuration
2. LAN configuration
3. DHCP Server
4. Hotspot system
5. Firewall configuration (Protect router, Protect LAN, Bit torrent, P2P and Web Content blocked)
6. User man

Network Diagram

```
           Welcome to MikroTik Router Software installation

Move around menu using 'p' and 'n' or arrow keys, select with 'spacebar'.
Select all with 'a', minimum with 'm'. Press 'i' to install locally or 'q' to
cancel and reboot.

   [X] system           [X] ipv6            [X] routerboard
   [X] ppp              [X] isdn            [X] routing
   [X] dhcp             [X] kvm             [X] security
   [X] advanced-tools   [X] lcd             [X] ups
   [X] calea            [X] mpls            [X] user-manager
   [X] gps              [X] multicast       [X] wireless
   [X] hotspot          [X] ntp




ppp (depends on system):
Provides support for PPP, PPTP, L2TP, PPPoE and ISDN PPP.


Do you want to keep old configuration?  [y/n]:_
```

```
WARNING: couldn't keep config - current license does not allow that
Creating partition........
Formatting disk...

installed system-5.20
installed wireless-5.20
installed user-manager-5.20
installed ups-5.20
installed security-5.20
installed routing-5.20
installed routerboard-5.20
installed ntp-5.20
installed multicast-5.20
installed mpls-5.20
installed lcd-5.20
installed kvm-5.20
installed isdn-5.20
installed ipv6-5.20
installed hotspot-5.20
installed gps-5.20
installed calea-5.20
installed advanced-tools-5.20
installed dhcp-5.20
installed ppp-5.20

_
```

```
installed system-5.20
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installed ipv6-5.20
installed hotspot-5.20
installed gps-5.20
installed calea-5.20
installed advanced-tools-5.20
installed dhcp-5.20
installed ppp-5.20

Software installed.
Press ENTER to reboot
_
```

Make IP address for LAN

1. Login MikroTik system:
   a. User: admin
   b. Password:
2. Input "setup" and Enter
   a. Select "a" and Enter
   b. Enable interface: **ether1** and **Enter**
   c. Input "**172.27.0.1/16**" and Enter
   d. Ipput "**x**" and Enter
3. Login **winbox** program
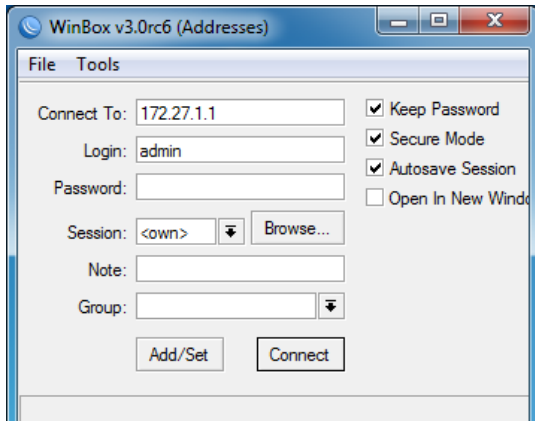
4. Services Disable
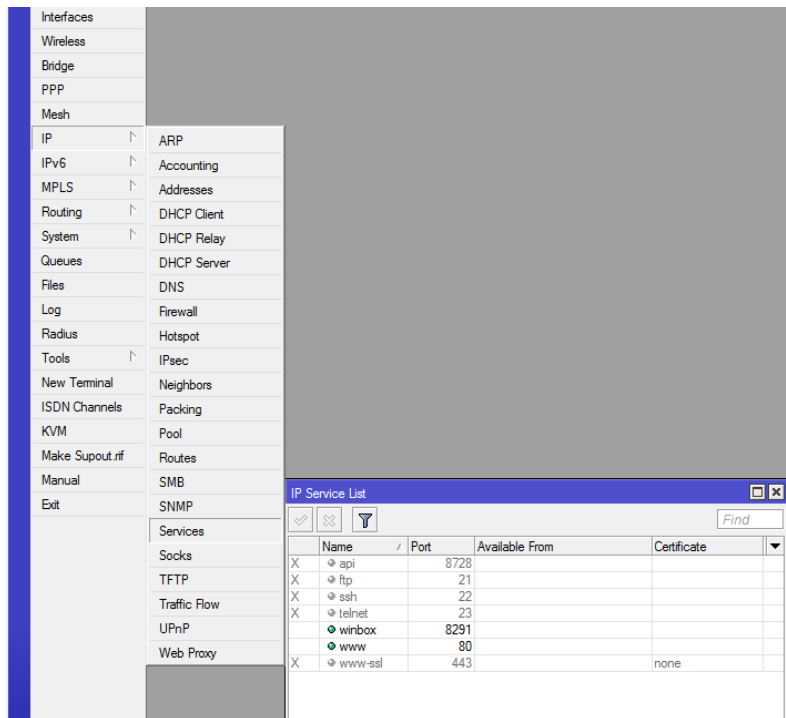
5. Change password for Admin
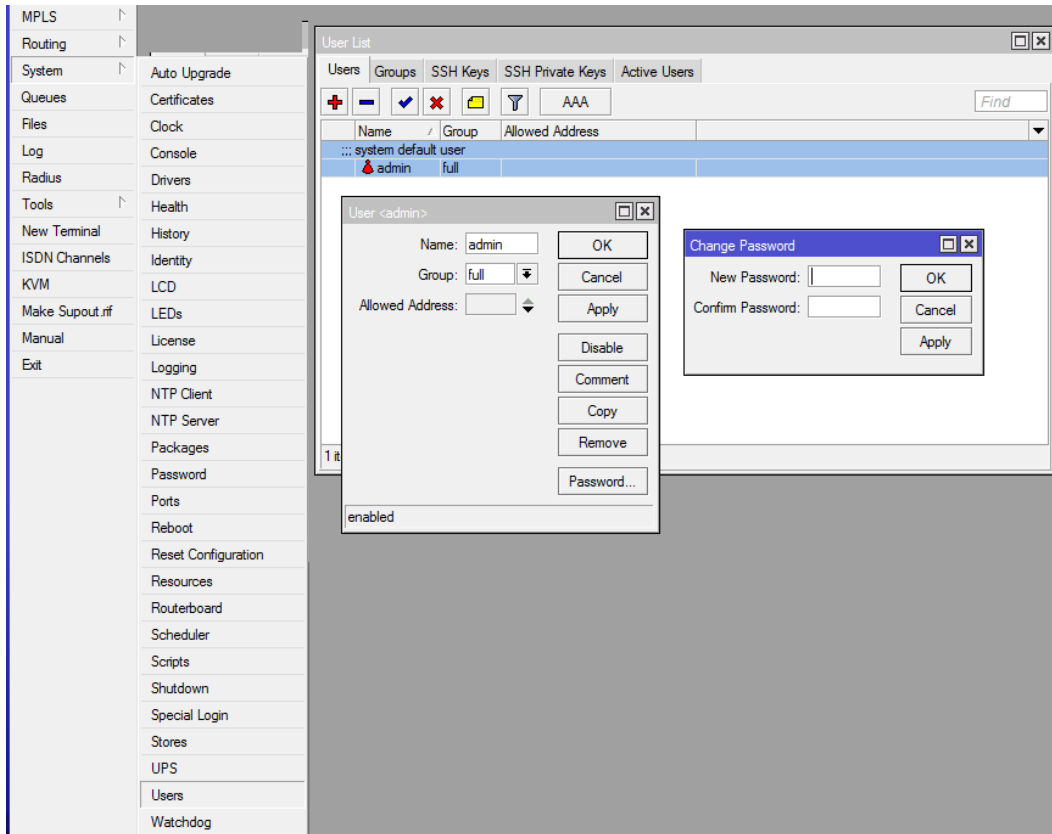
6. rename LAN card name in "**Interfaces**" menu
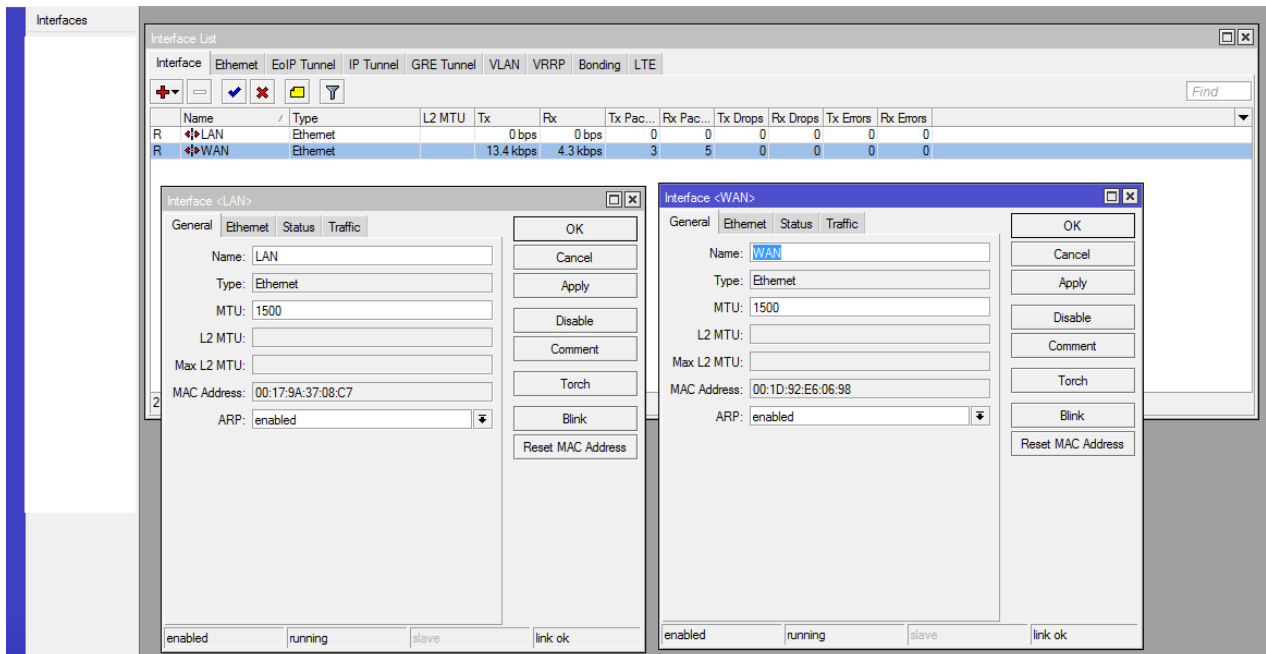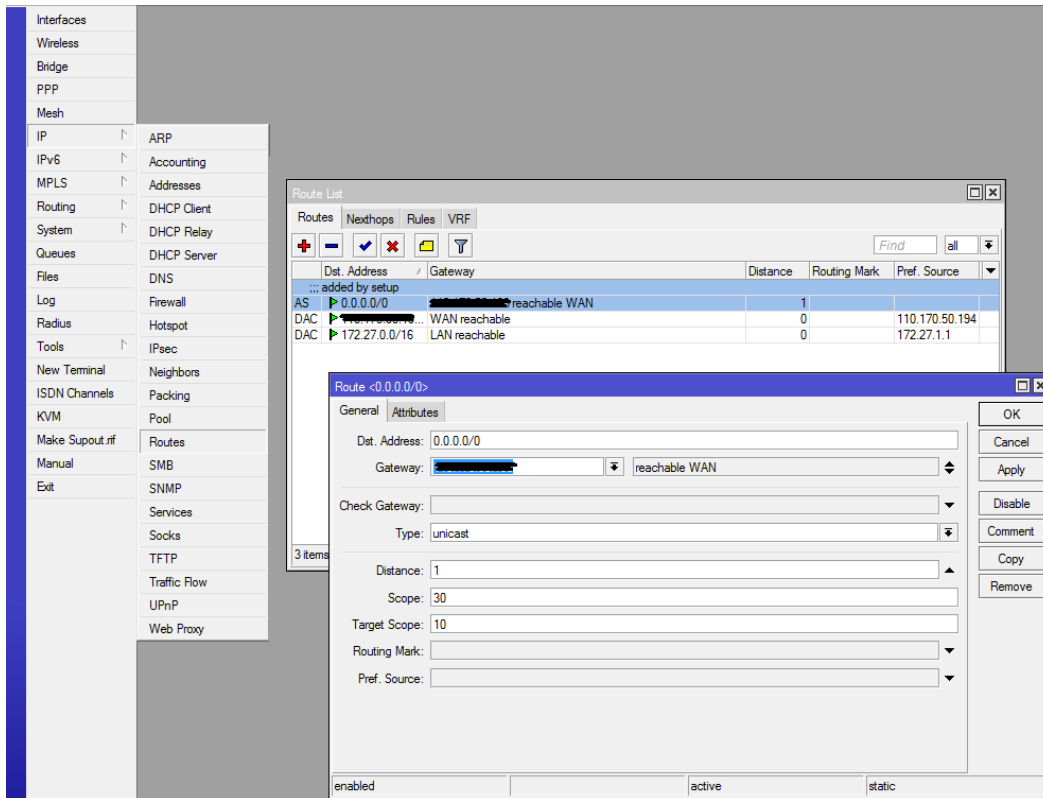

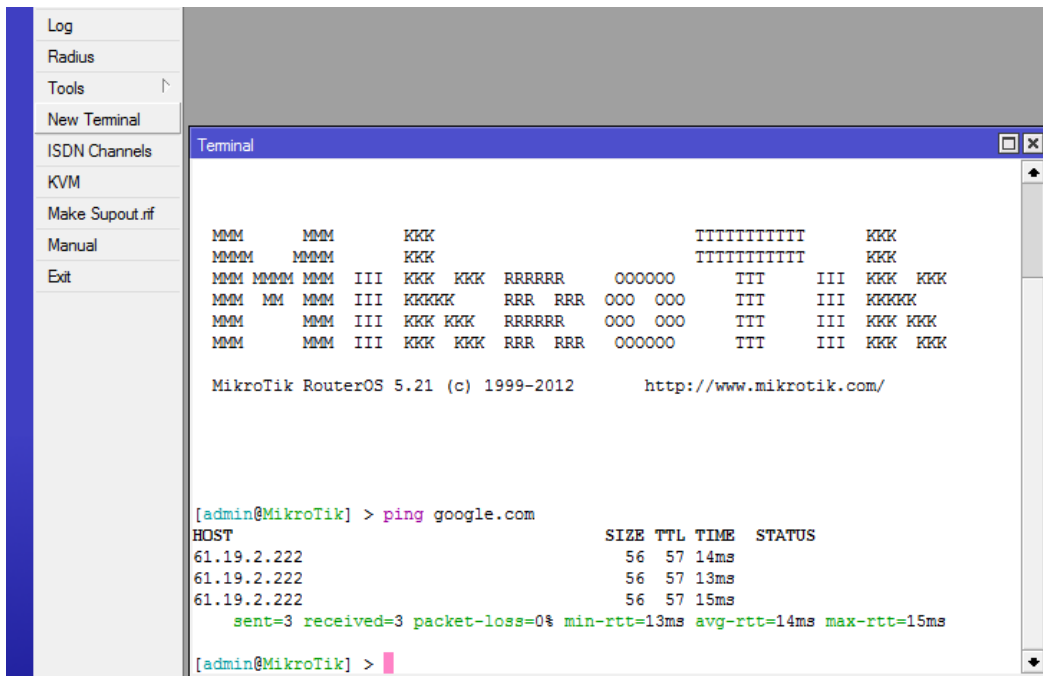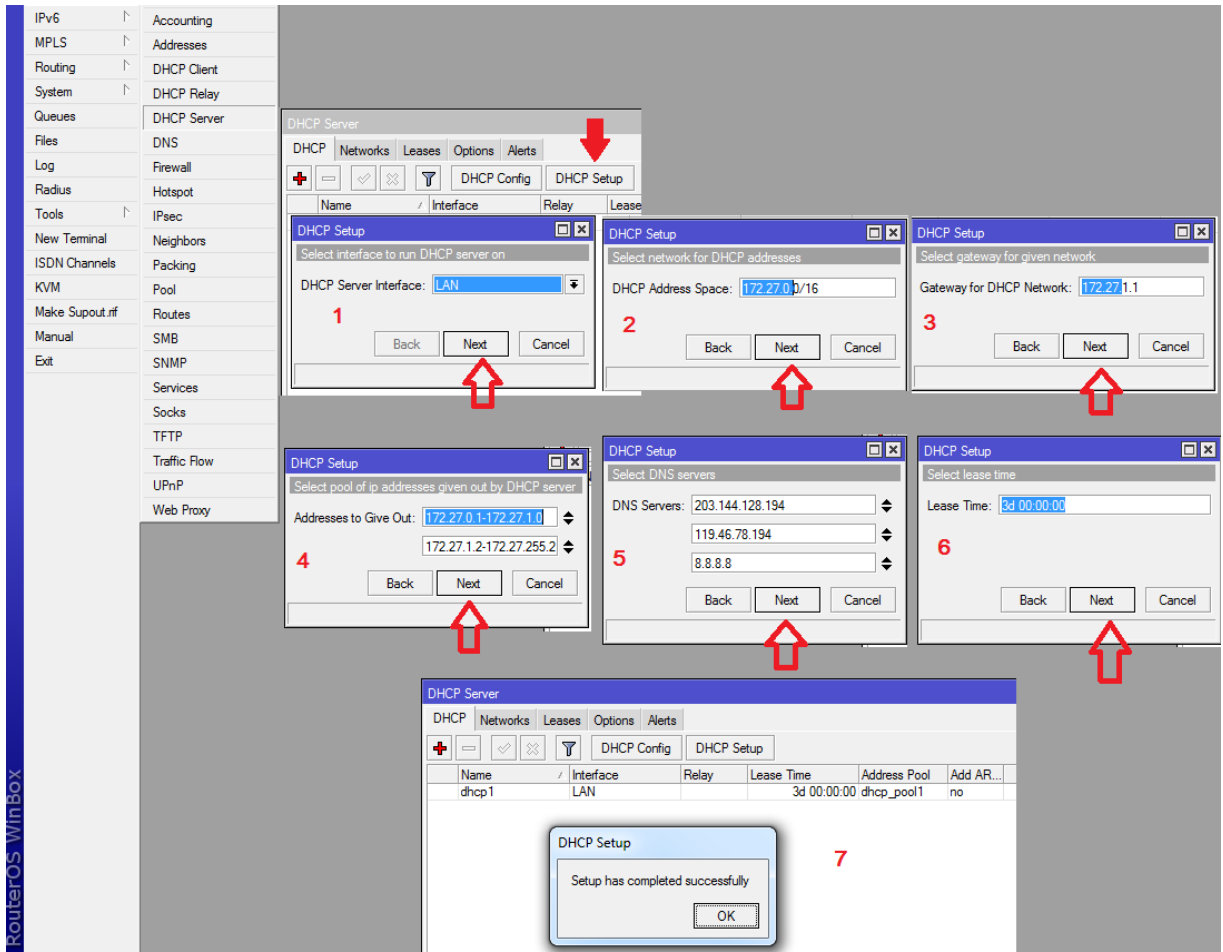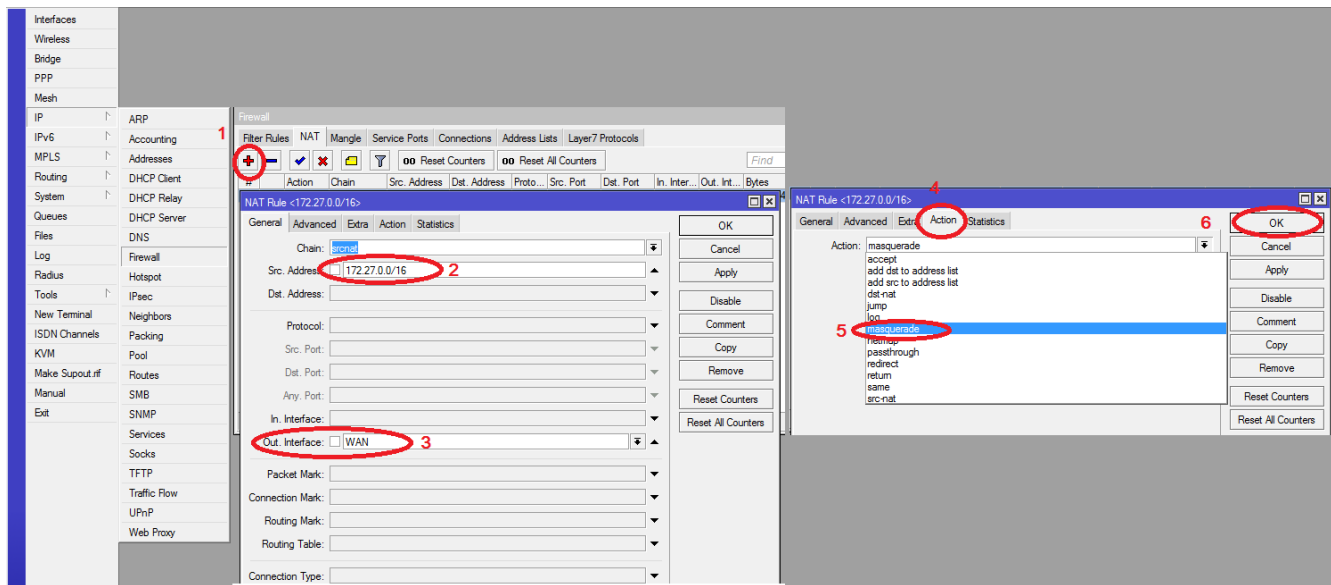7. Create WAN and LAN IP in Address List
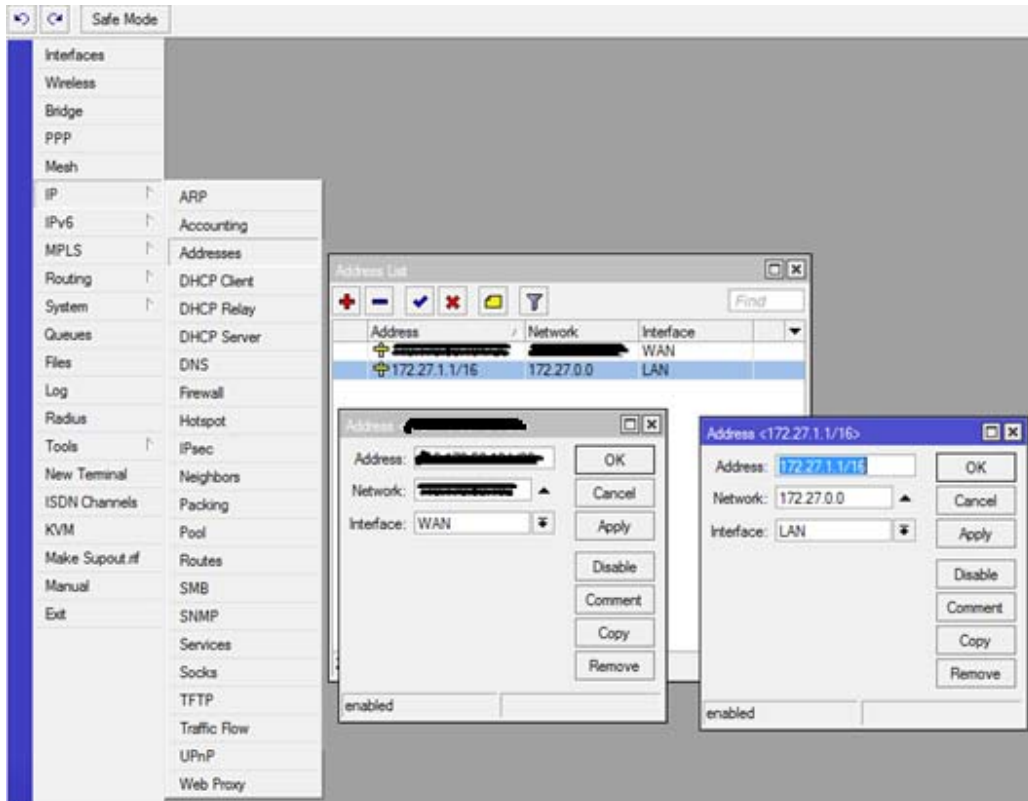
8. Create DNS
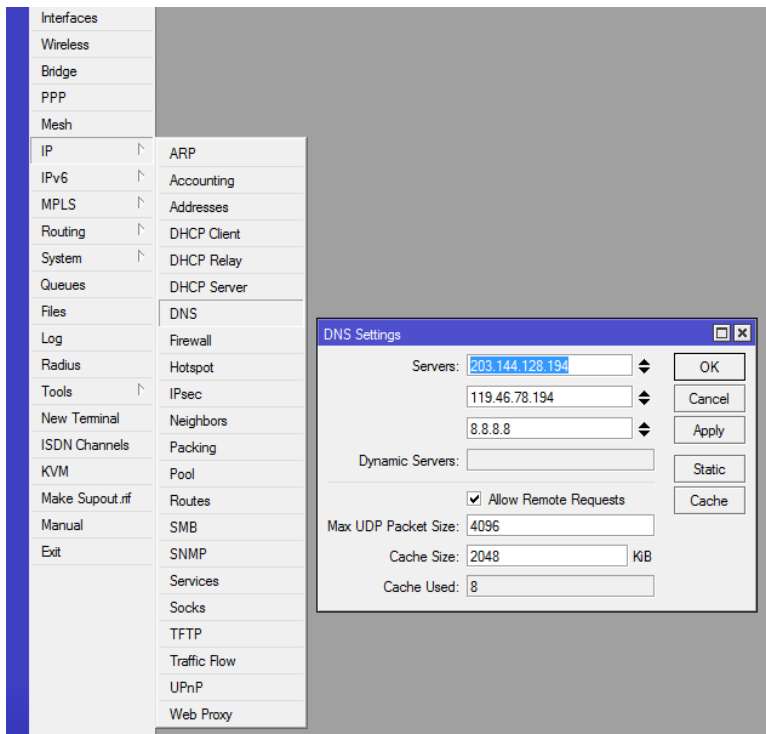
9. Create "Routes"

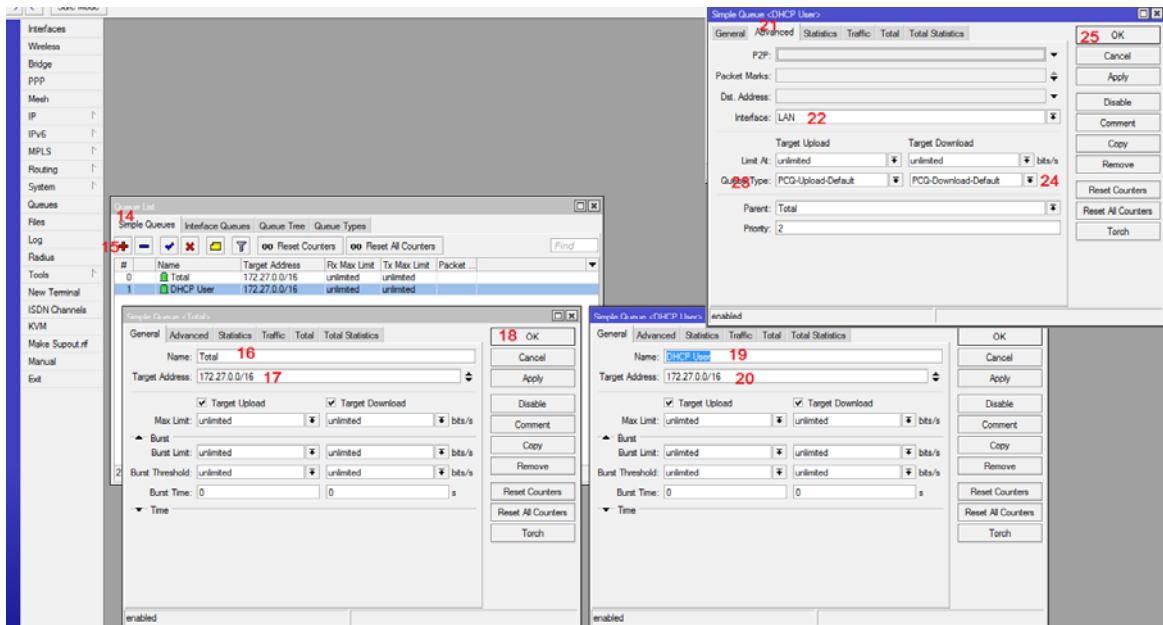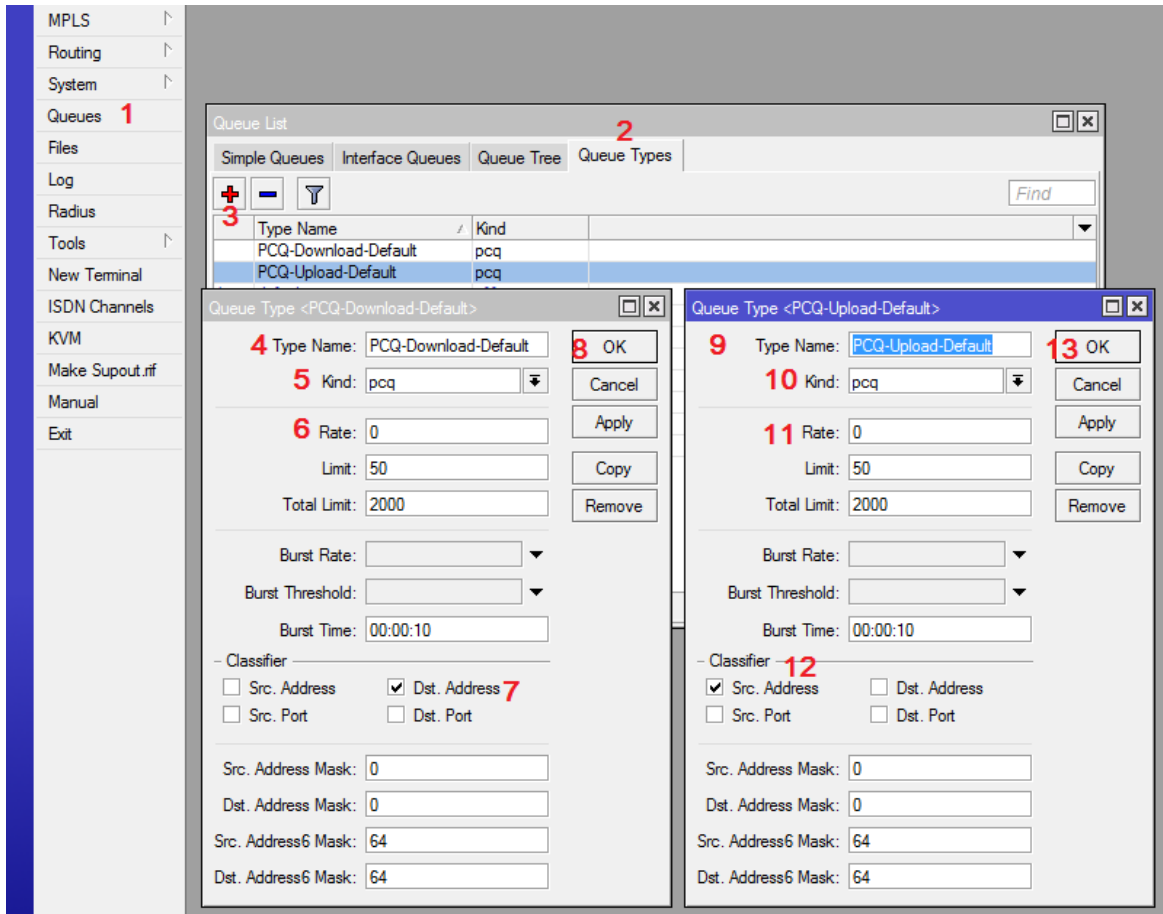10. Open "**New Terminal**" and Test ping "**google.com**"
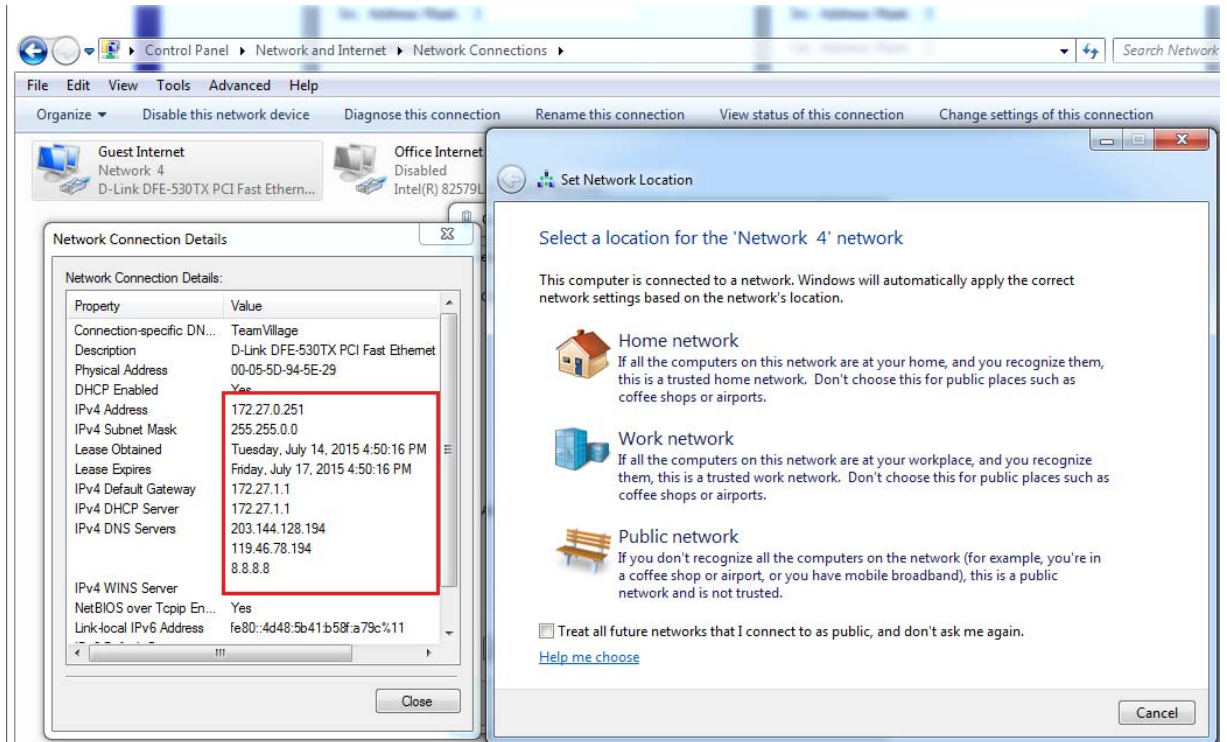

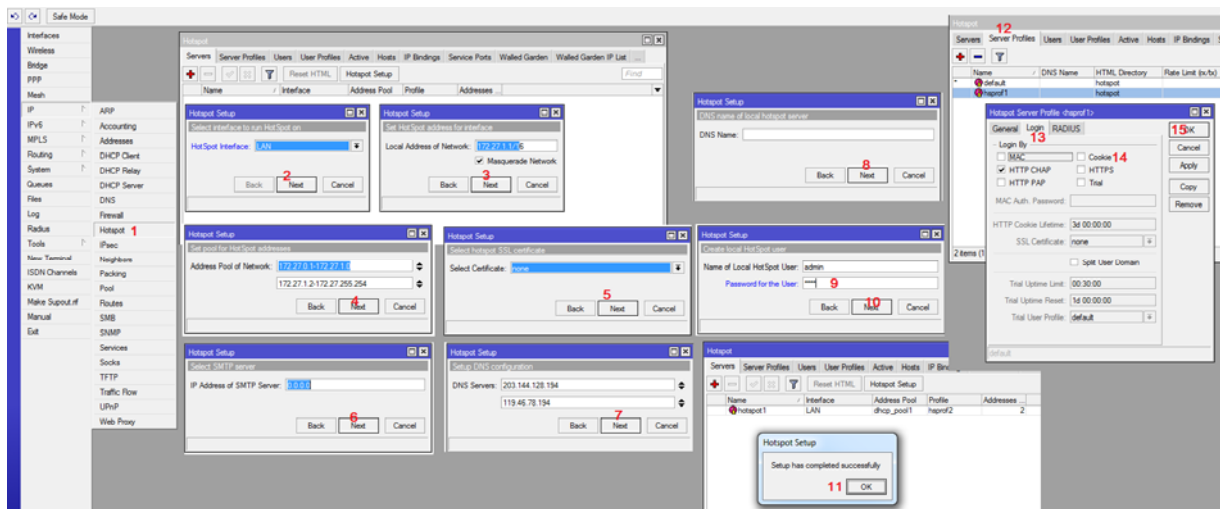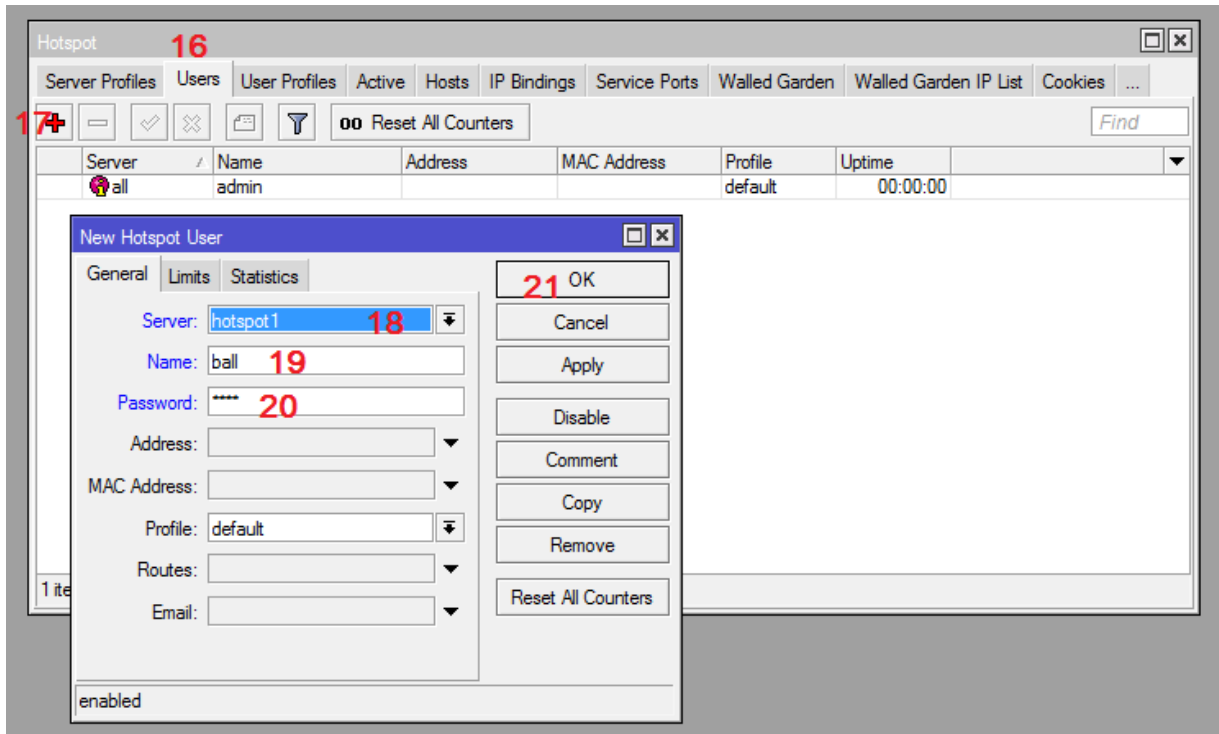11. DHCP server Configuration

12. NAT configuration
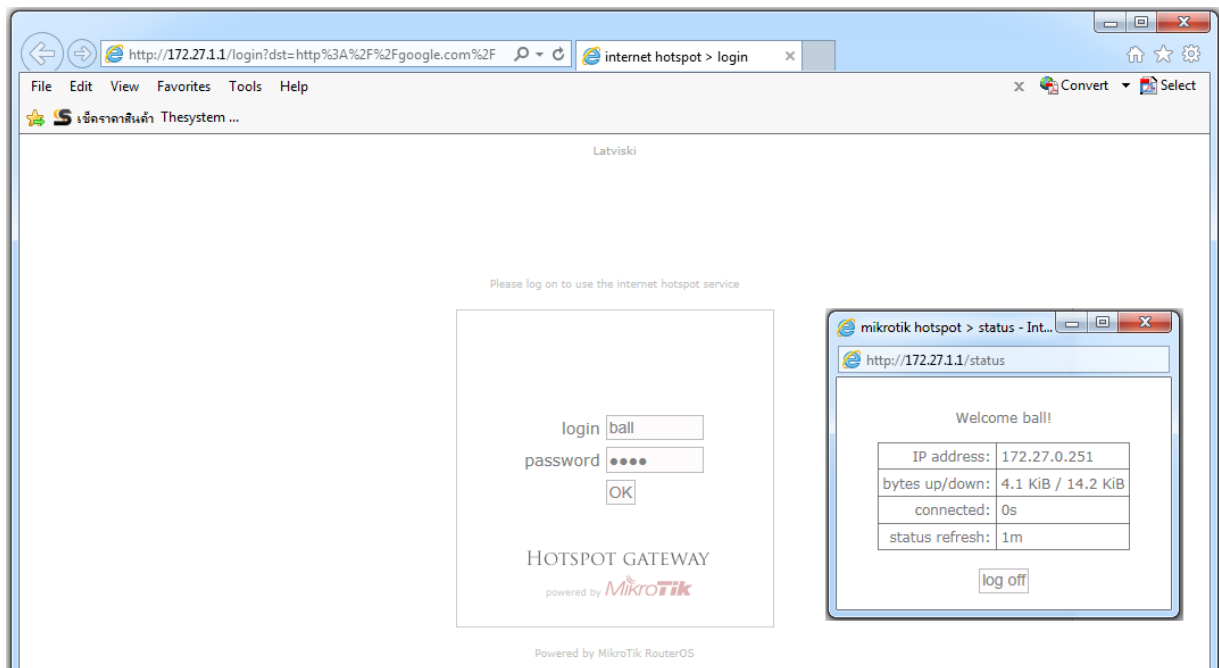

13. Queue List configuration

14. Internet access testing

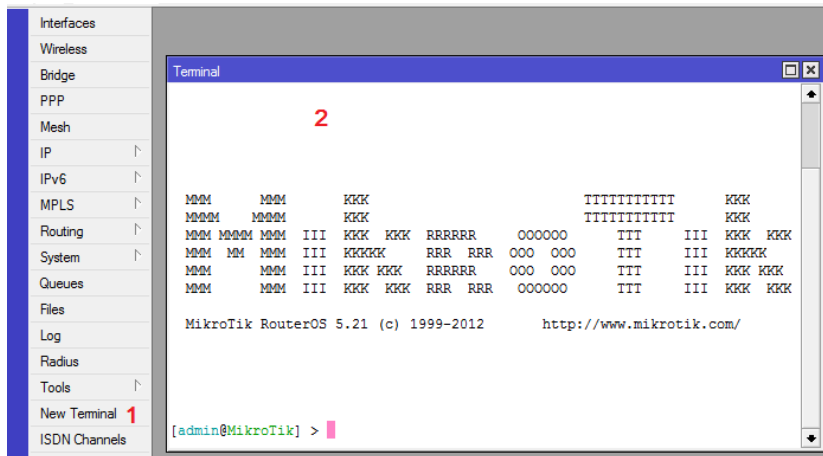15. Hotspot Configuration

16. Create profile & First Hotspot User

17. Internet access testing for hotspot

18. Firewall configuration (Protect router, Protect LAN)
   - Go to internet web browser
   - Input IP: 172.27.1.1/cfg
   - Input user name & password

- Automatic create new filter rules in firewall.

19. Firewall configuration (Bit torrent, P2P and Web Content blocked)
   - Open new terminal

   - input as below and Enter

   /ip firewall layer7-protocol

   add name=.Bittorrent regexp="^(\\x13bittorrent protocol|azver\\x01\$|get /scra\
       pe\\\?info_hash=get /announce\\\?info_hash=|get /client/bitcomet/|GET /dat\
       a\\\?fid=)|d1:ad2:id20:|\\x08'7P\\)[RP]"

   - Automatic create new Layer7 Protocols in firewall.
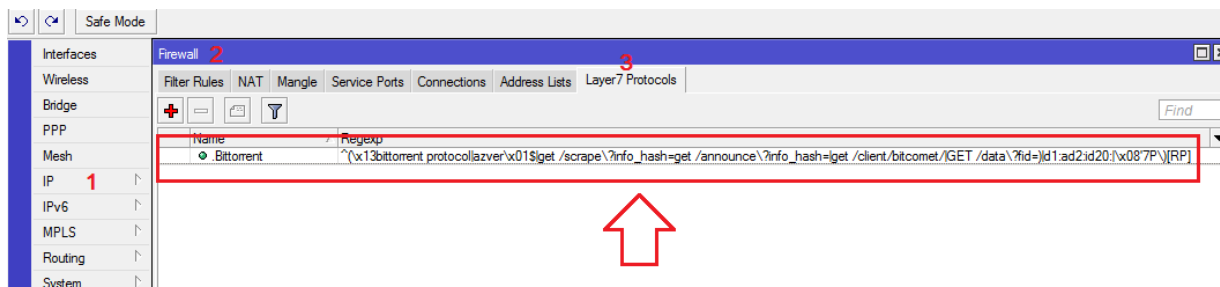
   - Input new filter rules in "Terminal program" and change IP address for your system

   /ip firewall filter

   add action=add-src-to-address-list address-list=-Bit-Addr \
       address-list-timeout=1m chain=forward disabled=no dst-address-list=\
       !-Bit-Addr-Unblock hotspot="" p2p=bit-torrent src-address=172.27.0.0/16 \
       src-address-list=!-Bit-Addr-Unblock

add action=add-src-to-address-list address-list=-Bit-Addr \
  address-list-timeout=1m chain=forward disabled=no dst-address-list=\
  !-Bit-Addr-Unblock dst-address-type="" layer7-protocol=.Bittorrent \
  src-address=172.27.0.0/16 src-address-list=!-Bit-Addr-Unblock \
  src-address-type=local

add action=drop chain=forward disabled=no dst-port=!80,443 protocol=tcp \
  src-address-list=-Bit-Addr

add action=drop chain=forward disabled=no protocol=udp src-address-list=\
  -Bit-Addr

add chain=forward src-address=172.27.0.0/16 p2p=all-p2p action=drop comment=p2p_drop

- Automatic create new filter rules in firewall.

- Bit torrent access testing.

- Web content blocked

20. User man

- Change port number for WWW service
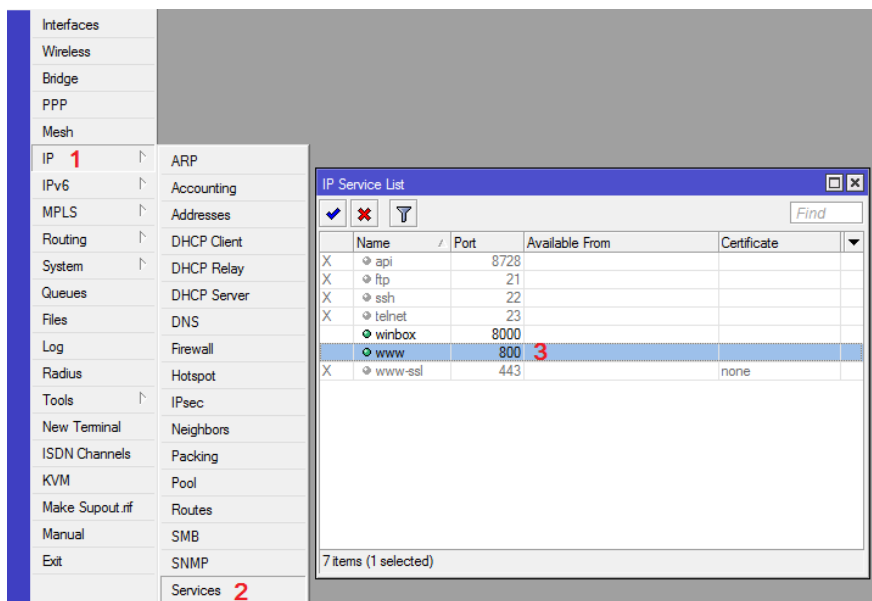
- Go to web browser
- Input url: 172.27.1.1:800/userman
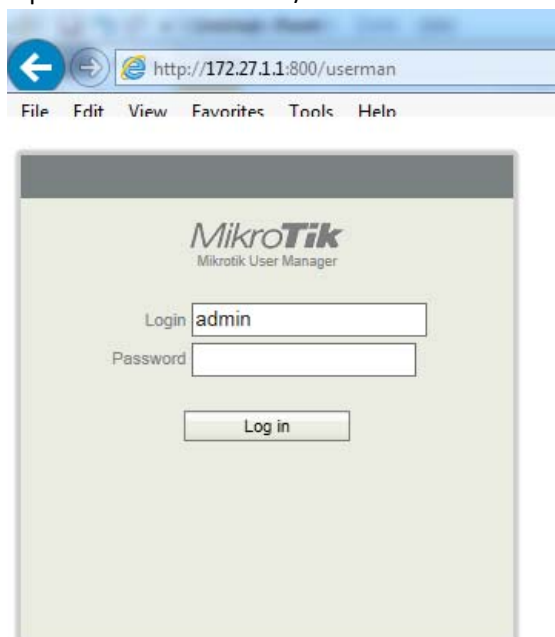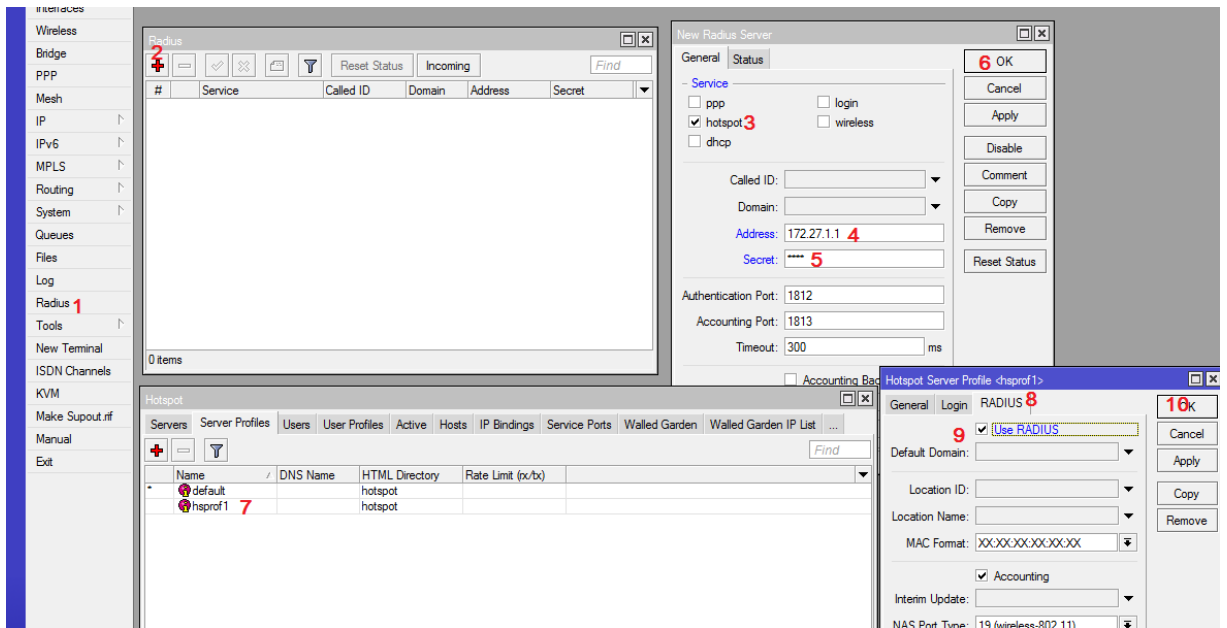
- ติดตั้ง userman และเชื่อมต่อเข้ากับ Radius

  ที่เมนู Routers กำหนดค่า

  Name : hotspot
  IP address : 127.27.1.1
  share secret : 1234 (ให้ตรงกับที่กำหนดไว้ตอนสร้าง Radius)