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# İNTERNETTEN TEKNOLOJİ LTD. ŞTİ.

- Mikrotik Master Distributor
- Linux /Os Specialist
- Network Specialist
- Mikrotik Specialist

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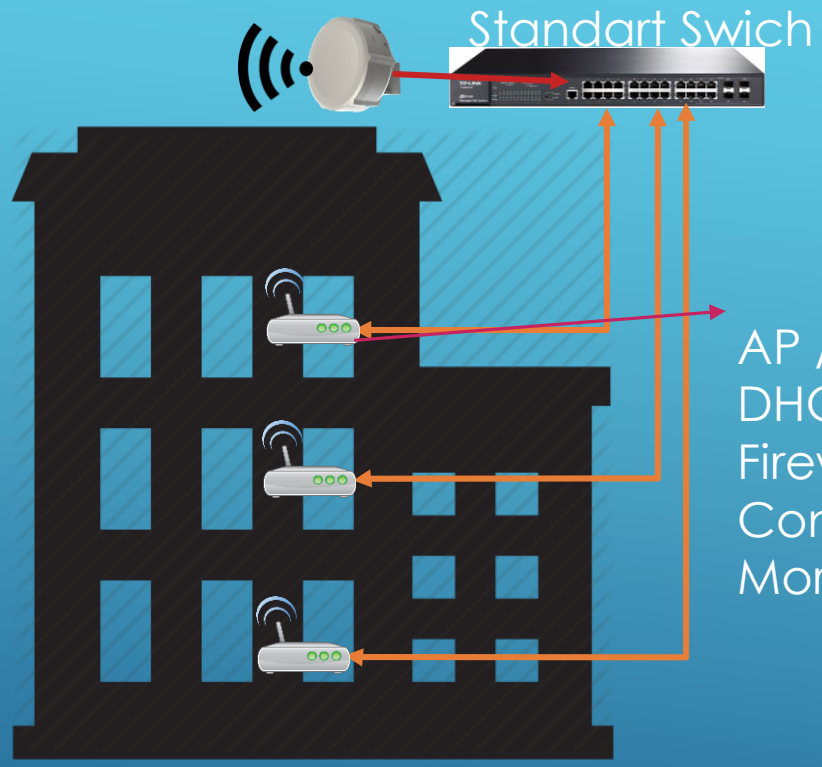
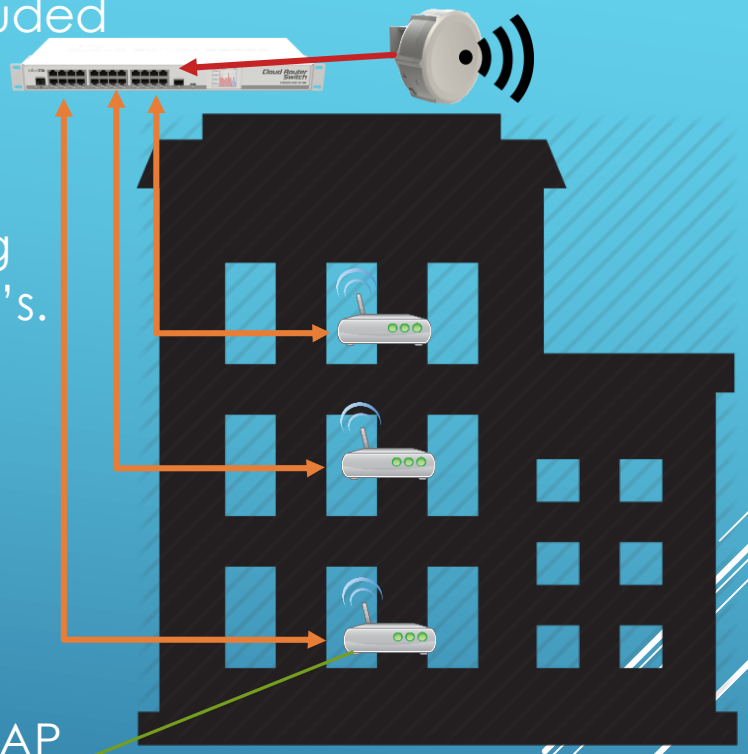
# BUILDING NETWORK PLAN




AP / Router
DHCP , PPPOE Client
Firewall and Remote
Control Enabled
More Cost Product's

RouterOS Included
PPPOE Client
Firewall ,Vlan
Content Filter
Traffic Shaping
Inside Product's.



Standart AP
Don't Need DHCP
or PPPOE Client
Cost Effectly



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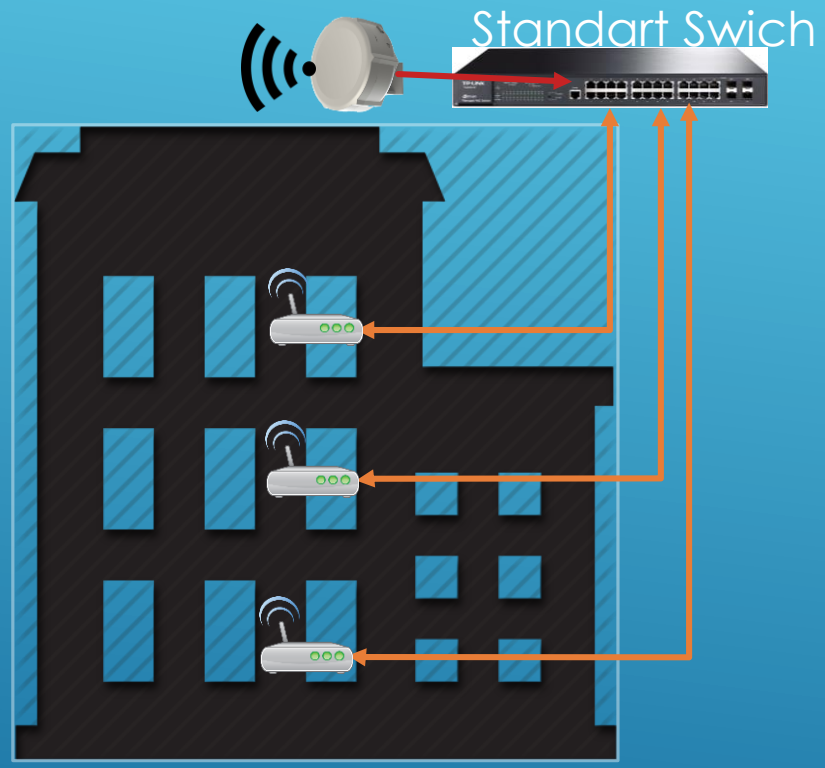
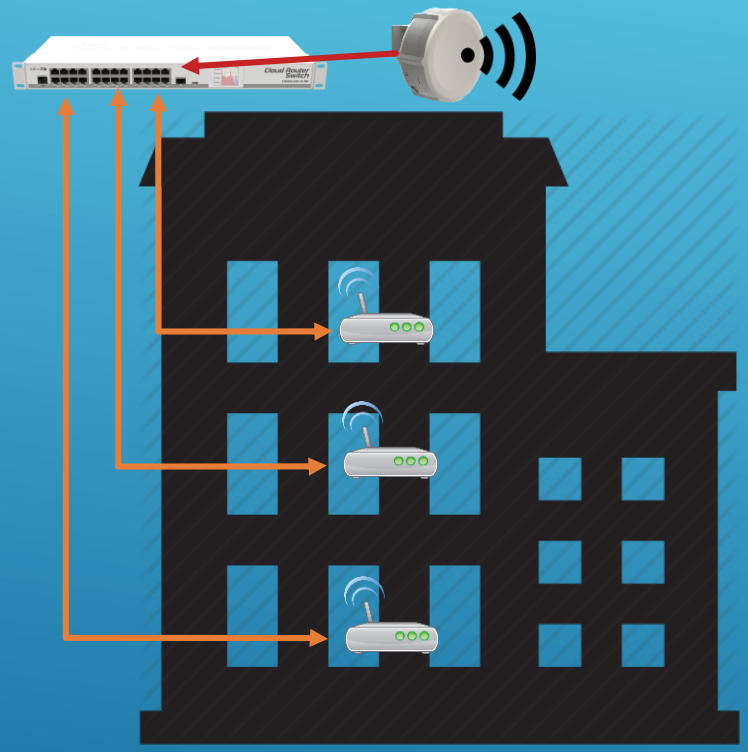



## CLIENT SIDE CABLE UNTRUSTED USAGE

- ARP attack problem
- DHCP Broadcast management problem
- Network Sniff Problem
- Unmanaged Network , Hacking Problem
- More cost for device ,management's .



# ROUTEROS INCLUDED SWICH ADVANTAGE

- Manage One device all build customers
- All Traffic control one device (Per 24 customer)
- Firewall Management's
- Content Filtering , DNS Blocking
- DHCP Management All Customer One Side
- PPPOE Client's One Device and Management Far Side
- Performans Monitoring and Trusted Metered Network.
- Proactive Managed Professional WİSP Solutions..



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# Configuration SXT 5ndr2 ( SXT Lite 5 )

CPE devices basic configuration.

- Wireless Mode  - Station Bridge
- Create Bridge  => WISP_BRIDGE
- Add Ether1  & Wlan1 => WISP_BRIDGE
- Dhcp Client  interface = WISP_BRIDGE

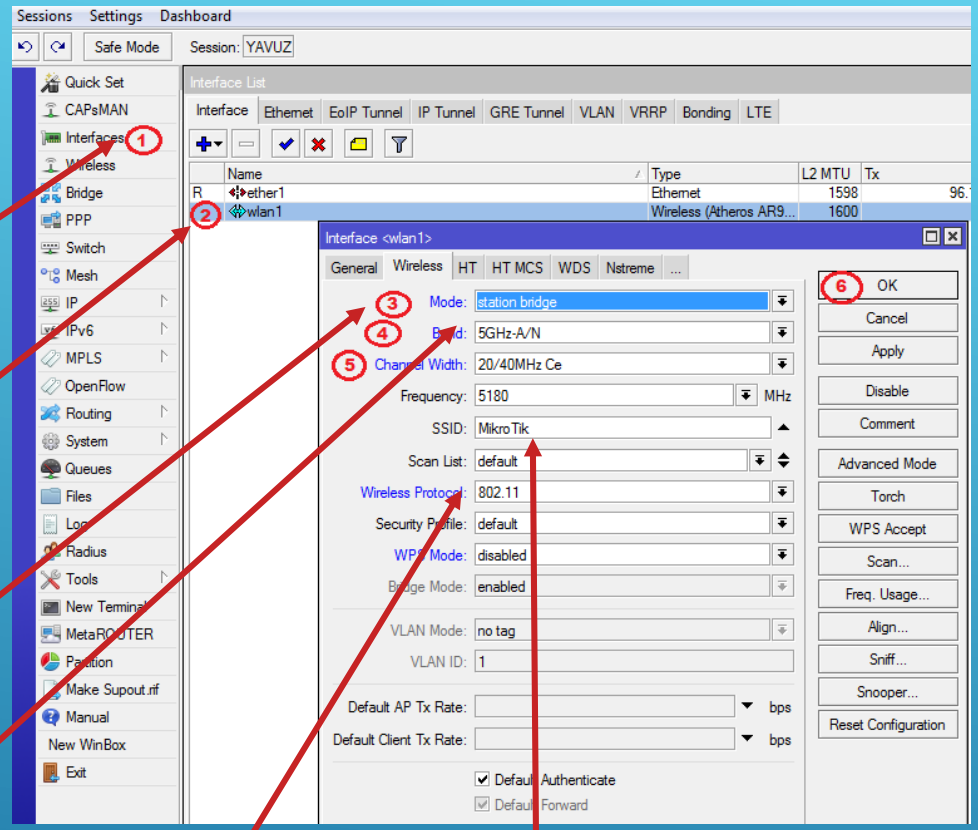
# Configuration SXT 5ndr2 ( SXT Lite 5 )

## Wireless Mode - Station Bridge

Create Bridge => WISP_BRIDGE

Add Ether1 & Wlan1 => WISP_BRIDGE

Dhcp Client interface = WISP_BRIDGE




***Terminal Command***

/interface wireless

set [ find default-name=wlan1 ] mode=station-bridge band=5Ghz/a/n wireless-protocol=802.11 disabled=no ssid=Mikrotik rx-chains=0,1 tx-chains=0,1



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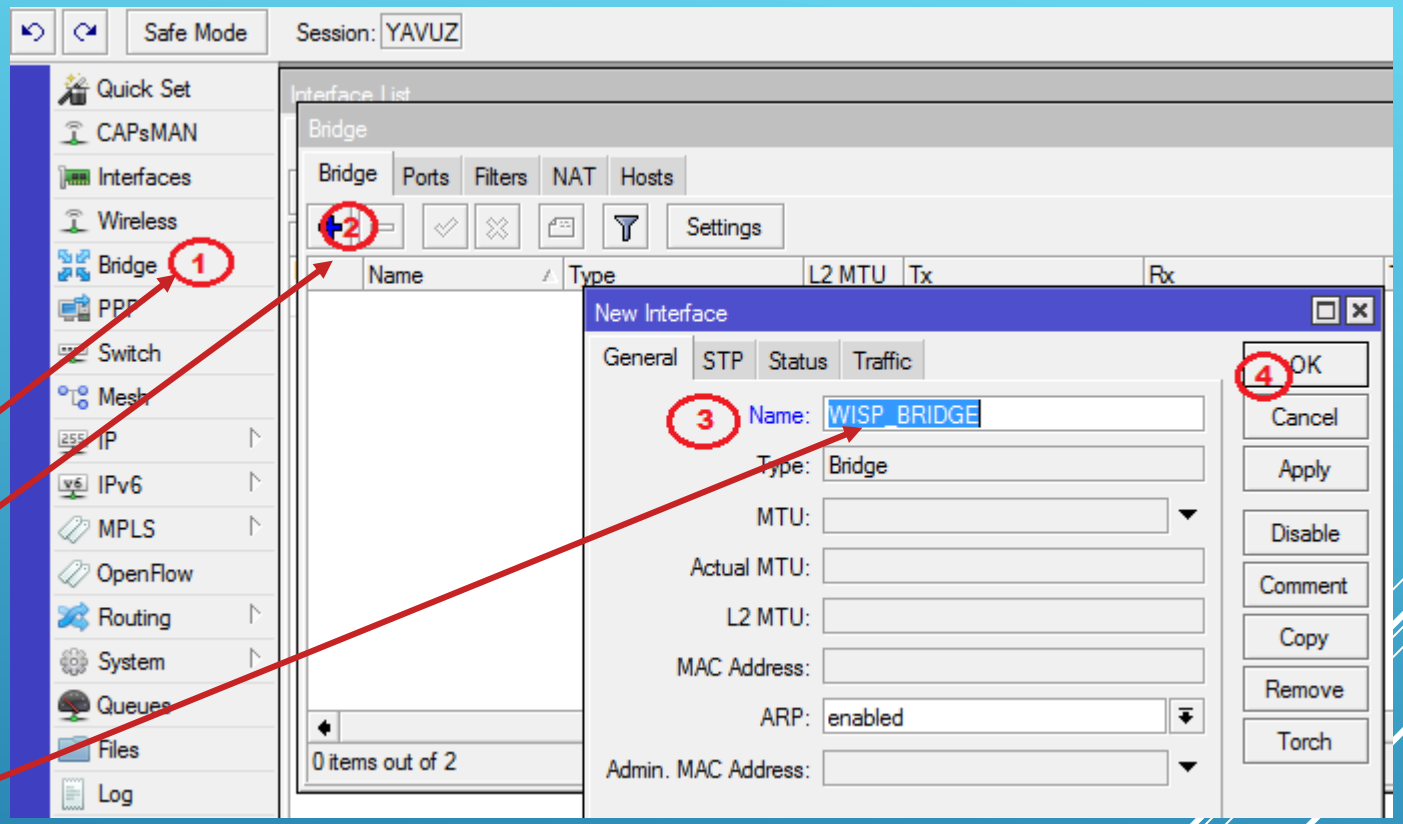
# Configuration SXT 5ndr2 ( SXT Lite 5 )

Wireless Mode - Station Bridge

**Create Bridge => WISP_BRIDGE**

Add Ether1 & Wlan1 => WISP_BRIDGE

Dhcp Client interface = WISP_BRIDGE




***Terminal Command***

/interface bridge add name=WISP_BRIDGE



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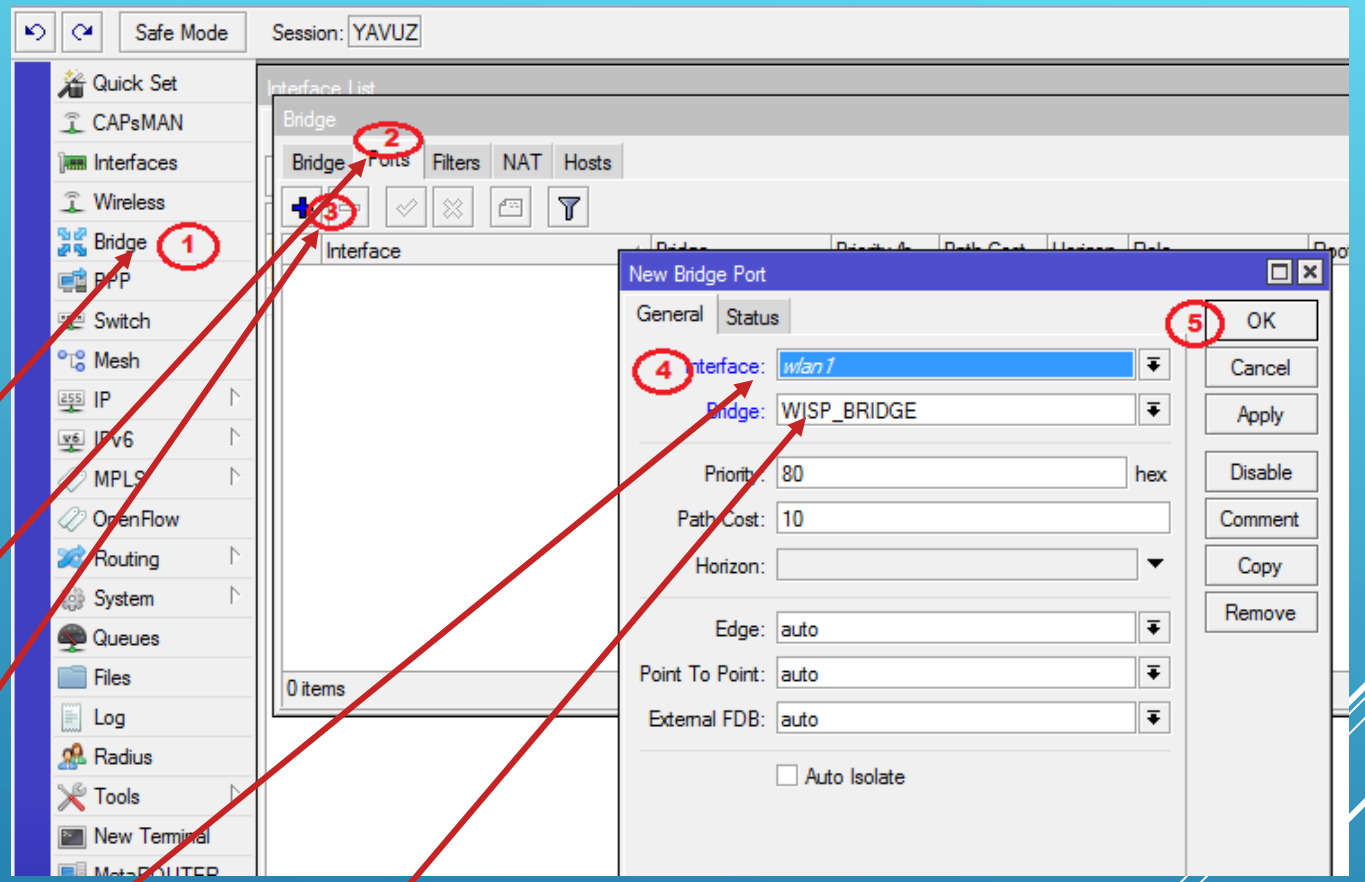
# Configuration SXT 5ndr2 ( SXT Lite 5 )

Wireless Mode - Station Bridge
Create Bridge => WISP_BRIDGE
**Add Ether1 & Wlan1 => WISP_BRIDGE**
Dhcp Client interface = WISP_BRIDGE




***Terminal Command***
/interface bridge port add interface=wlan1 bridge=WISP_BRIDGE



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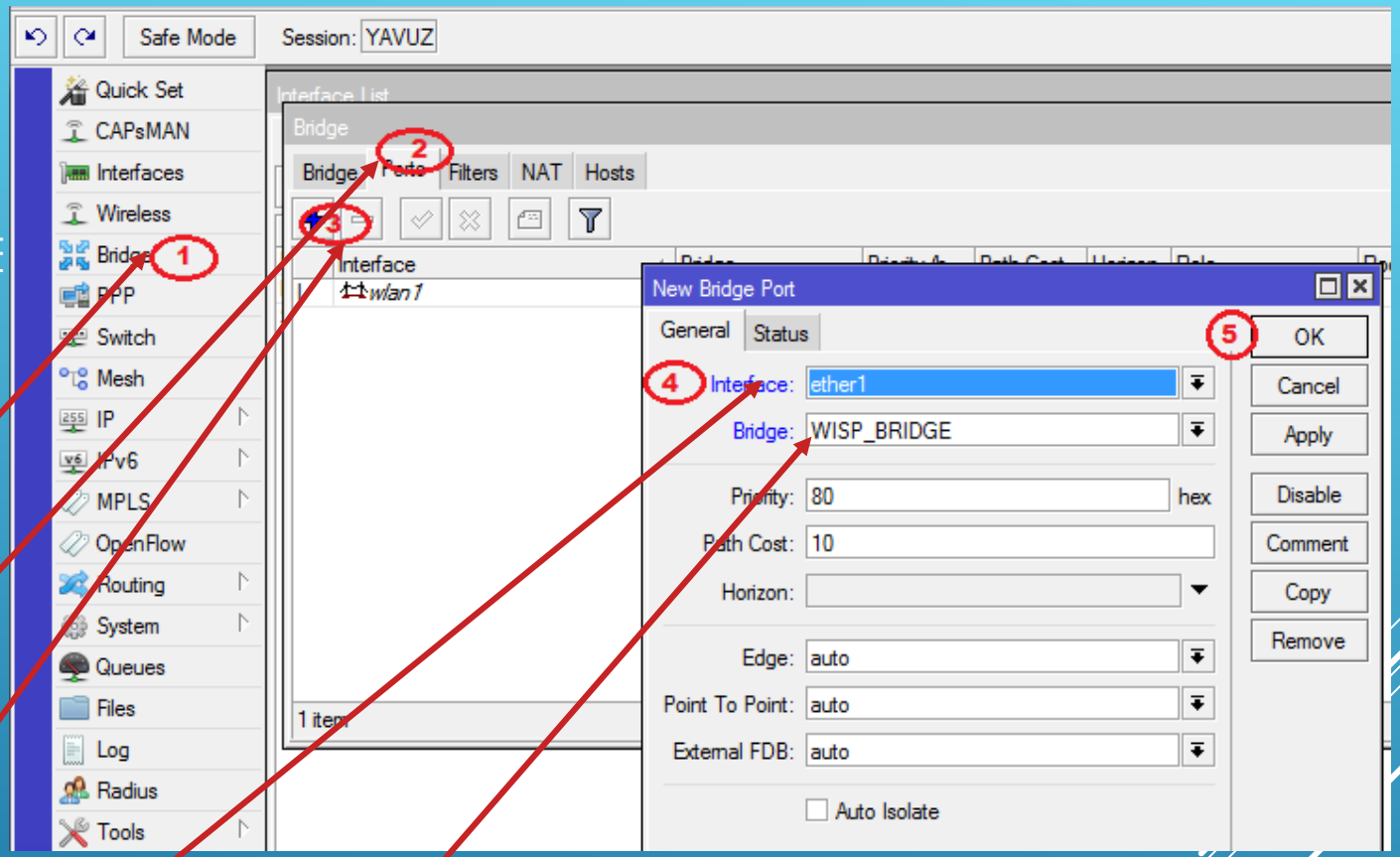
# Configuration SXT 5ndr2 ( SXT Lite 5 )

Wireless Mode - Station Bridge
Create Bridge => WISP_BRIDGE
**Add Ether1 & Wlan1 => WISP_BRIDGE**
Dhcp Client interface = WISP_BRIDGE




***Terminal Command***
/interface bridge port add interface=ether1 bridge=WISP_BRIDGE



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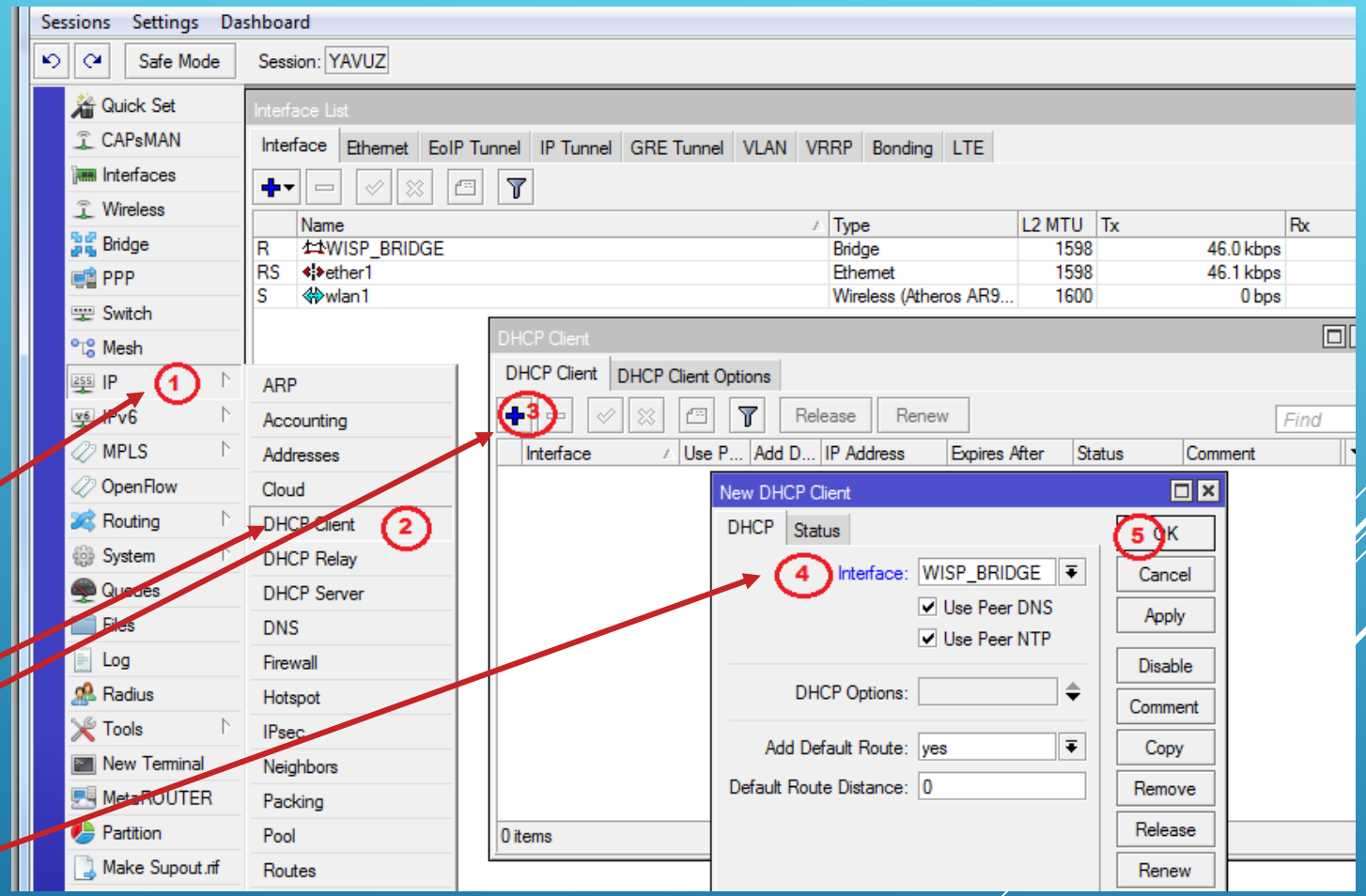
# Configuration SXT 5ndr2 ( SXT Lite 5 )

Wireless Mode - Station Bridge
Create Bridge => WISP_BRIDGE
Add Ether1 & Wlan1 => WISP_BRIDGE
**Dhcp Client interface = WISP_BRIDGE**




***Terminal Command***

/ip dhcp-client add interface=WISP_BRIDGE disabled=no



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# Configuration SXT 5ndr2 ( SXT Lite 5 )

## CPE devices configuration Complated.

SXT Configuration Total Script's

***Terminal Command***

```
/interface bridge add name=WISP_BRIDGE
/interface wireless set [ find default-name=wlan1 ] disabled=no

/interface bridge port
add bridge=WISP_BRIDGE interface=wlan1
add bridge=WISP_BRIDGE interface=ether1

/ip dhcp-client  add default-route-distance=0 dhcp-options=hostname,clientid disabled=no interface=WISP_BRIDGE
```



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# Configuration SXT 5ndr2 ( SXT Lite 5 )

CRS devices basic configuration steps.

- Assign  one port ( Uplink -  ether24 )
- Add PPPoE Client  ether24 interface  for all floor  ( floor1 , floor2 , floor3 bla bla )
- Add ip address  all interface  ether1 – 192.168.1.1/24 … ether10 – 192.168.10.1/24
- Add dhcp server all interface  (  exclude ether24 )
- Add Optimal Mangle rule  one interface customer to use one pppoe client user accont’s
- Add route for  all Routing mark insided user to  assigned gateway ( pppoe )



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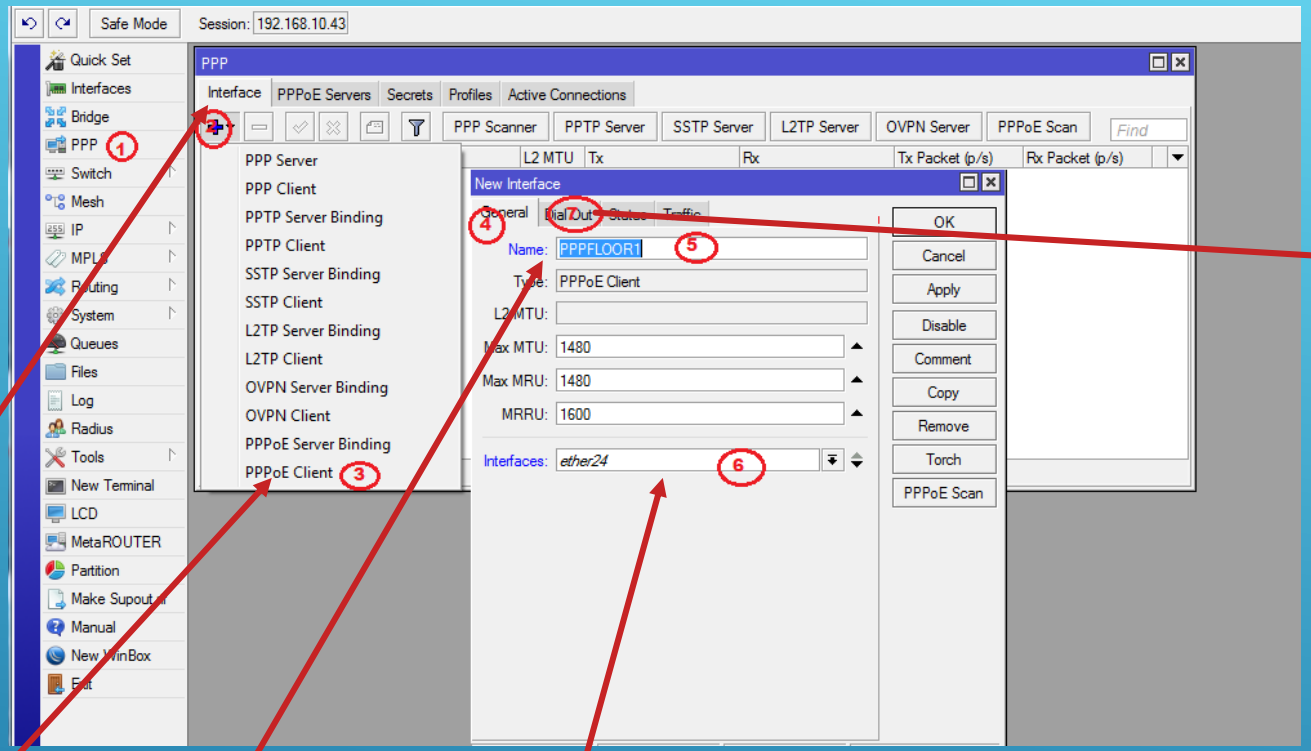
# Configuration RouterOS Swich / GW ( CRS125 or Another )




Next Settings

***Terminal Command***

/interface pppoe-client
add disabled=no name=PPPFLOOR1 interface=ether24 password=floor1 user=floor1
add disabled=no name=PPPFLOOR2 interface=ether24 password=floor2 user=floor2



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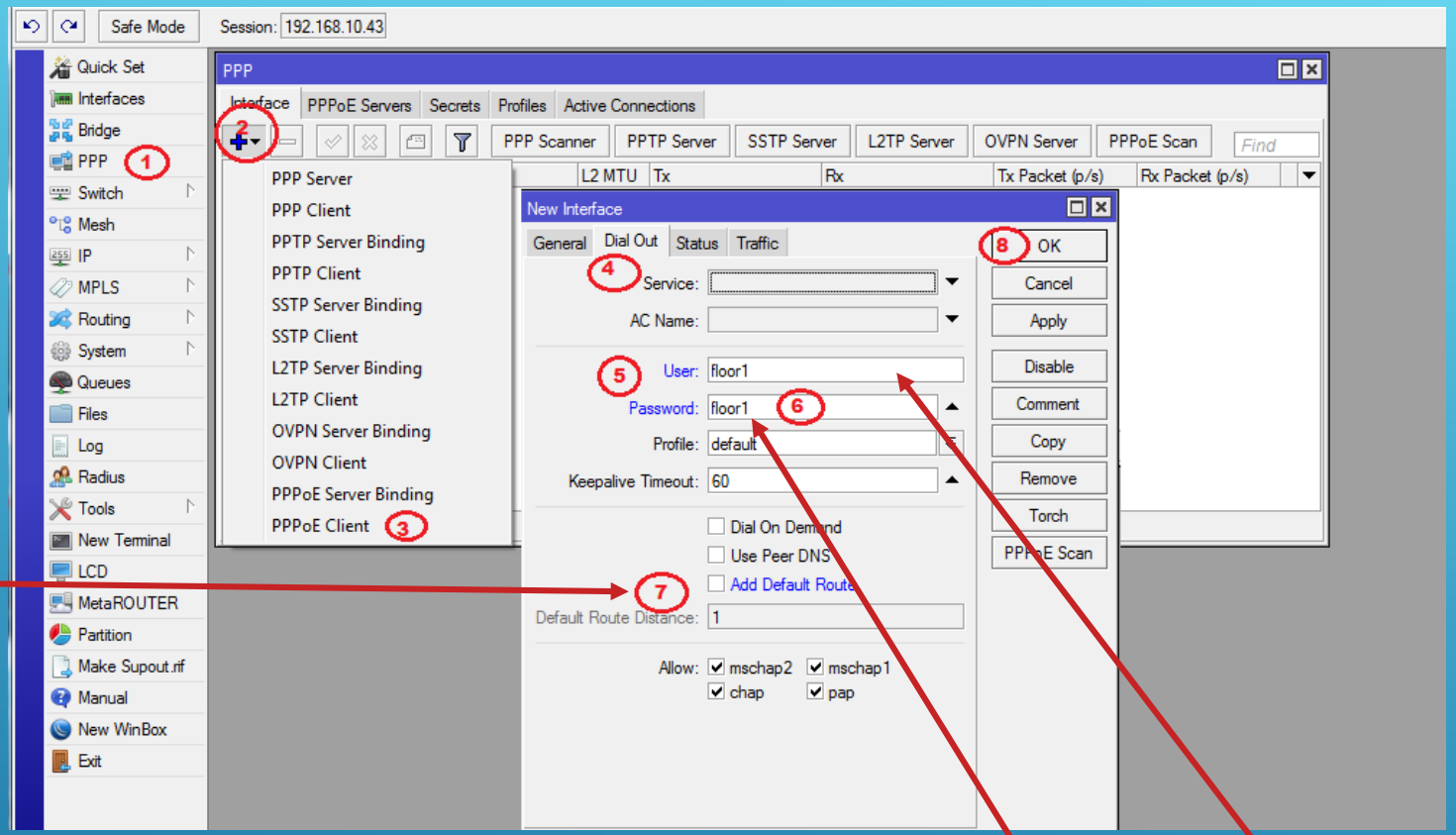
# Configuration RouterOS Swich / GW ( CRS125 or Another )




Uncheck
Add Default Route

***Terminal Command***

/interface pppoe-client
add disabled=no name=PPPFLOOR1 interface=ether24 password=floor1 user=floor1
add disabled=no name=PPPFLOOR2 interface=ether24 password=floor2 user=floor2



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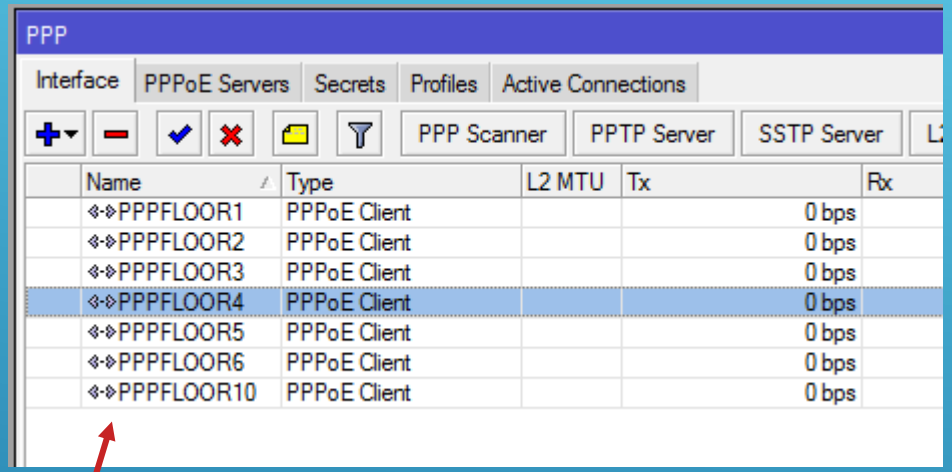
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Add PPPOE Client All Floor account's***



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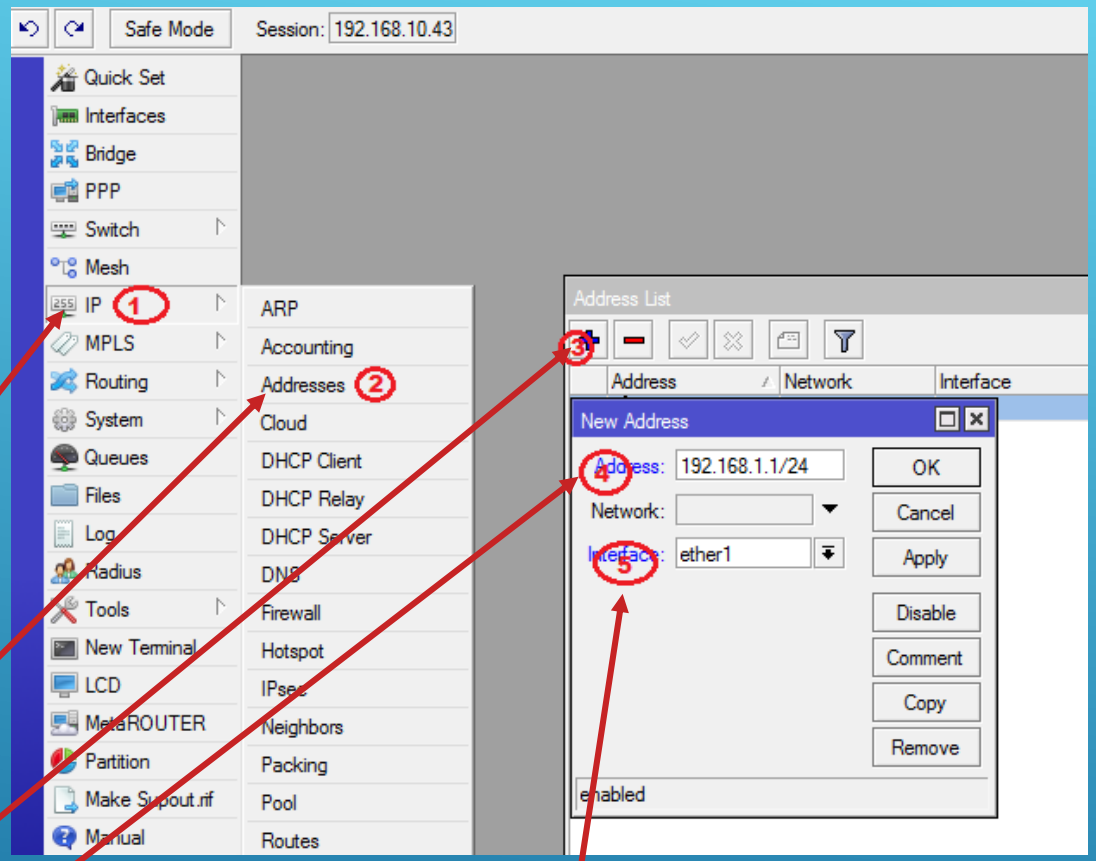
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Terminal Command***

```
/ip address  add address=192.168.1.1/24 interface=ether1 disabled=no
/ip address  add address=192.168.2.1/24 interface=ether2 disabled=no
//  //  //  //  //  // // //  //  // //  // // // //  //
/ip address add address=192.168.10.1/24 interface=ether10 disabled=no
```



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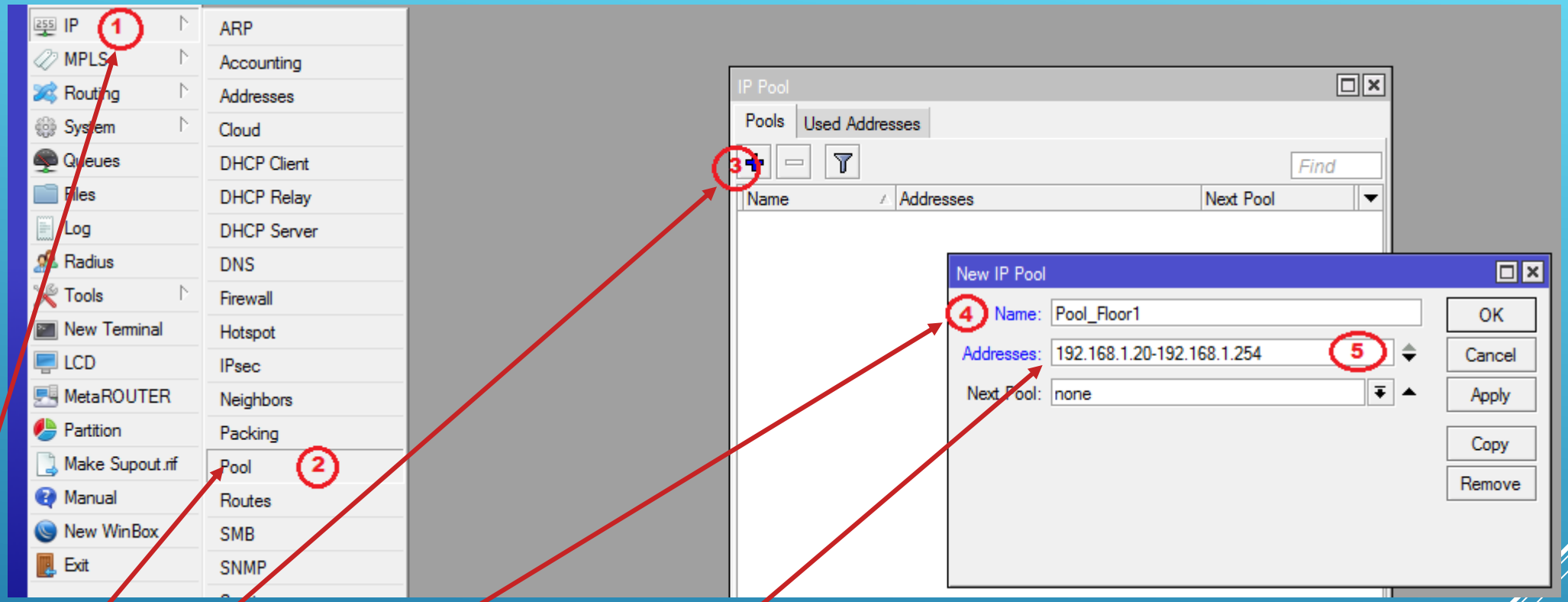
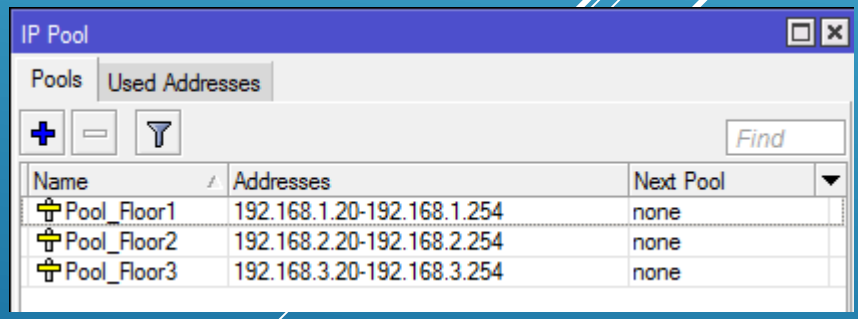
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Add Dhcp Server Pool All Interface***

***Terminal Command***

```
/ip pool add name=Pool_Floor1 ranges=192.168.1.20-192.168.1.254
/ip pool add name=Pool_Floor2 ranges=192.168.2.20-192.168.2.254
/ip pool add name=Pool_Floor3 ranges=192.168.3.20-192.168.3.254
```



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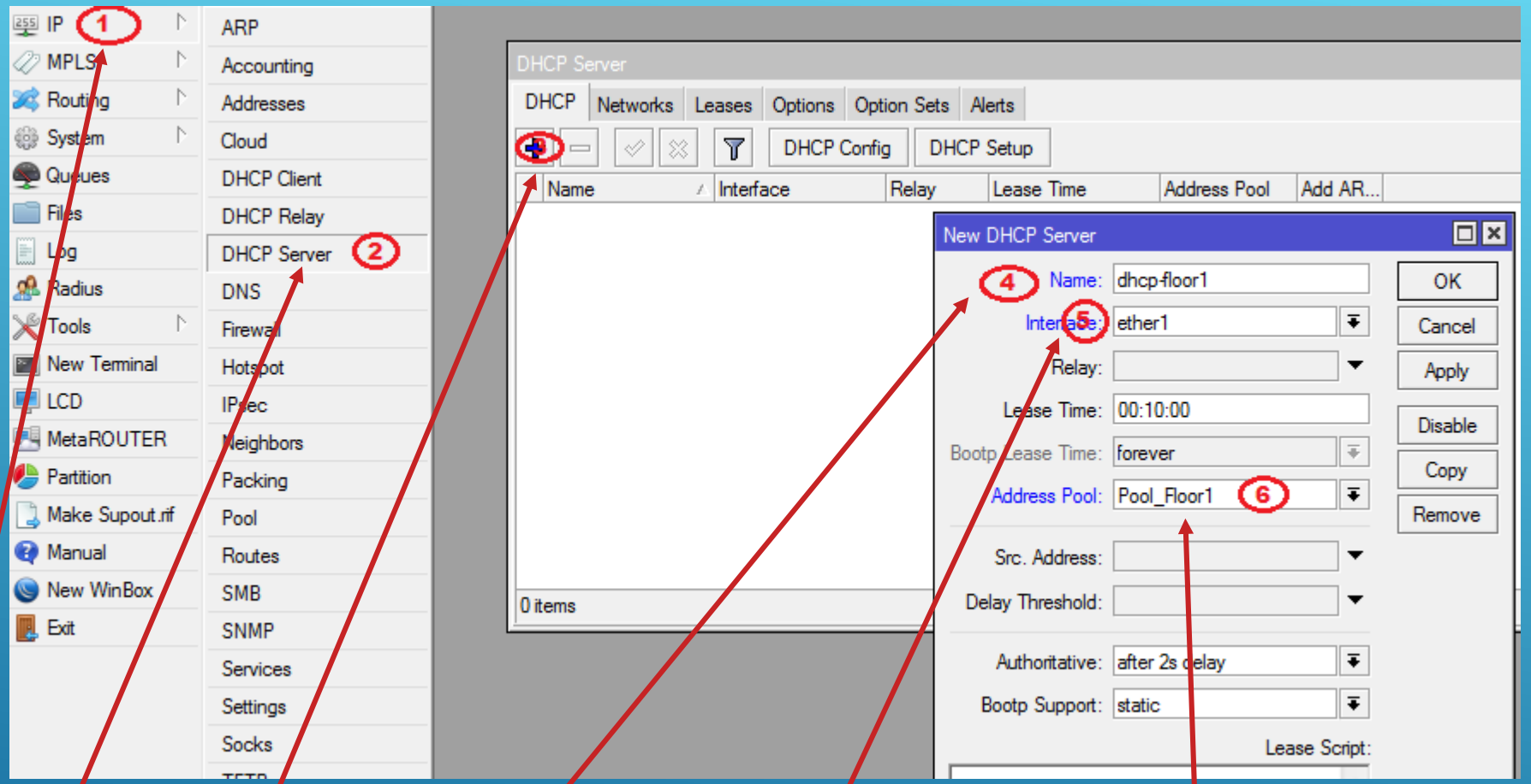
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Add Dhcp Server All Interface***

***Terminal Command***

/ip dhcp-server add name=dhcp-floor1 interface=ether1 address-pool=Pool_Floor1 disabled=no



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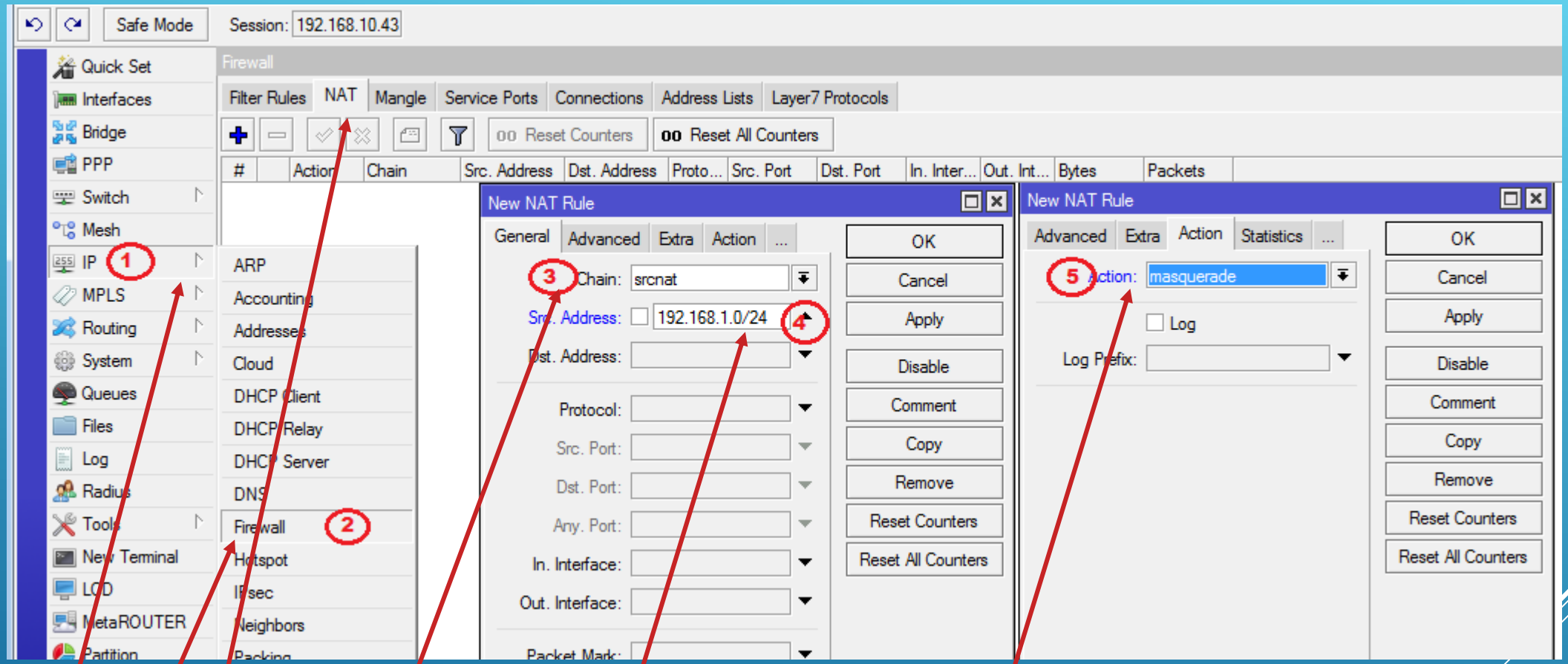
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Masquarade Local Network - ( all internal floor ip add masq )***

/ip firewall nat add chain=srcnat src-address=192.168.1.0/24 action=masquerade



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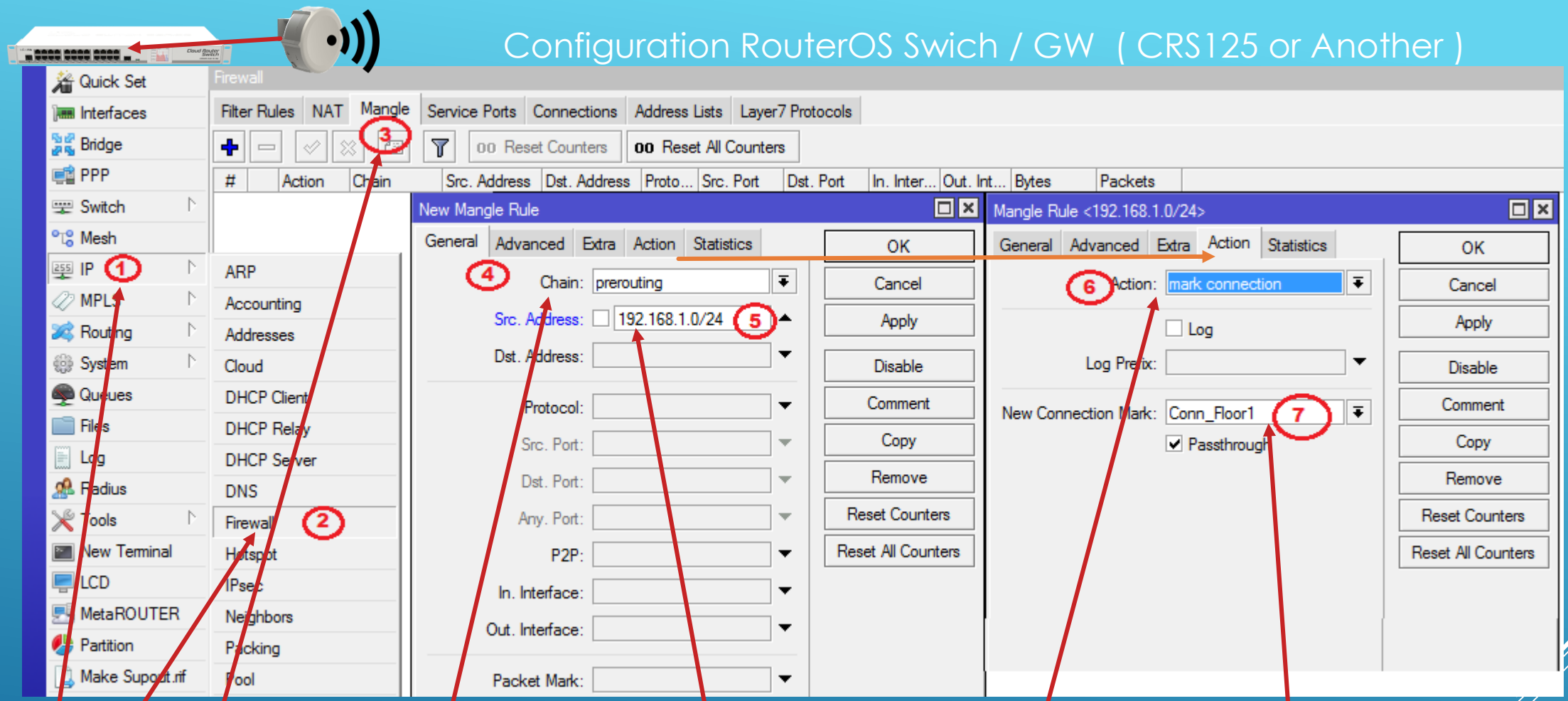
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Adding Mangle Rule for split customer and mark Connection***

/ip firewall mangle add chain=prerouting src-address=192.168.1.0/24 action=mark-connection new-connection-mark=Conn_Floor1



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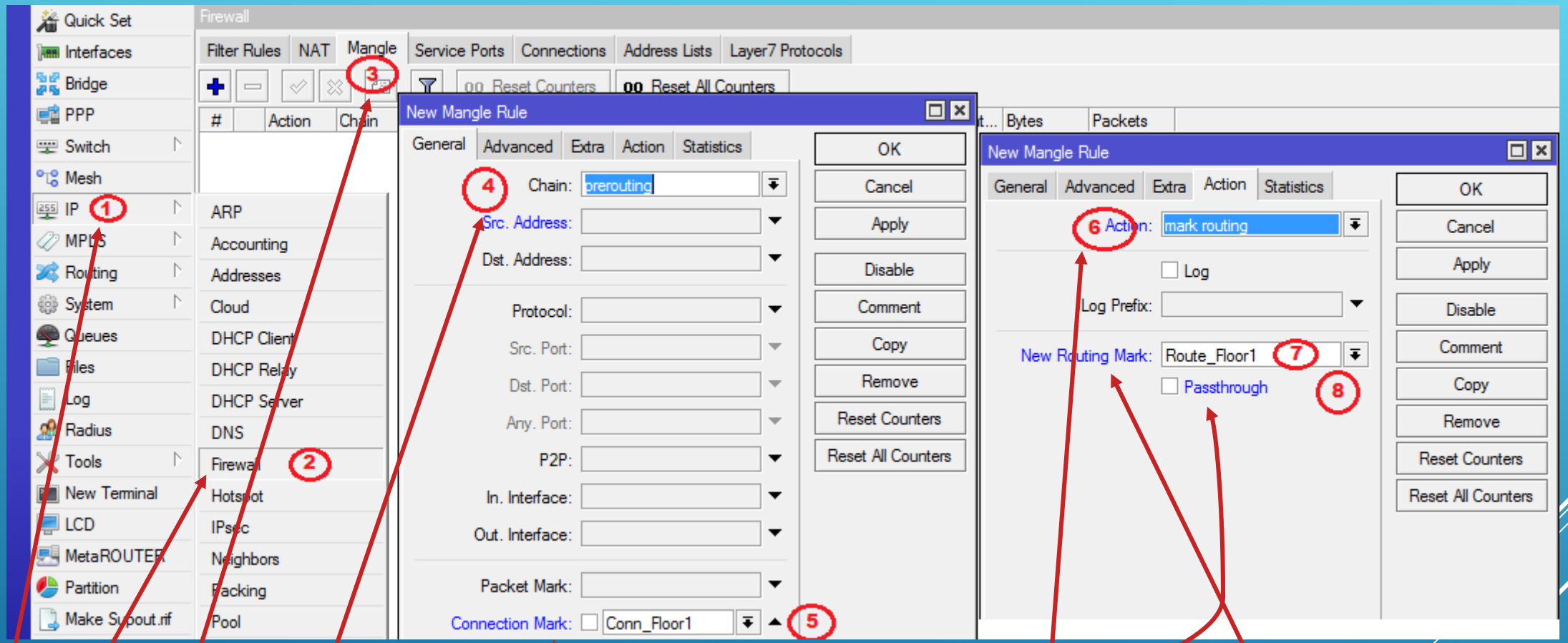
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Adding Mangle Rule for split customer and mark Connection***

/ip firewall mangle add chain=prerouting connection-mark=Conn_Floor1 action=mark-routing new-routing-mark=Route_Floor1 passthrough=no



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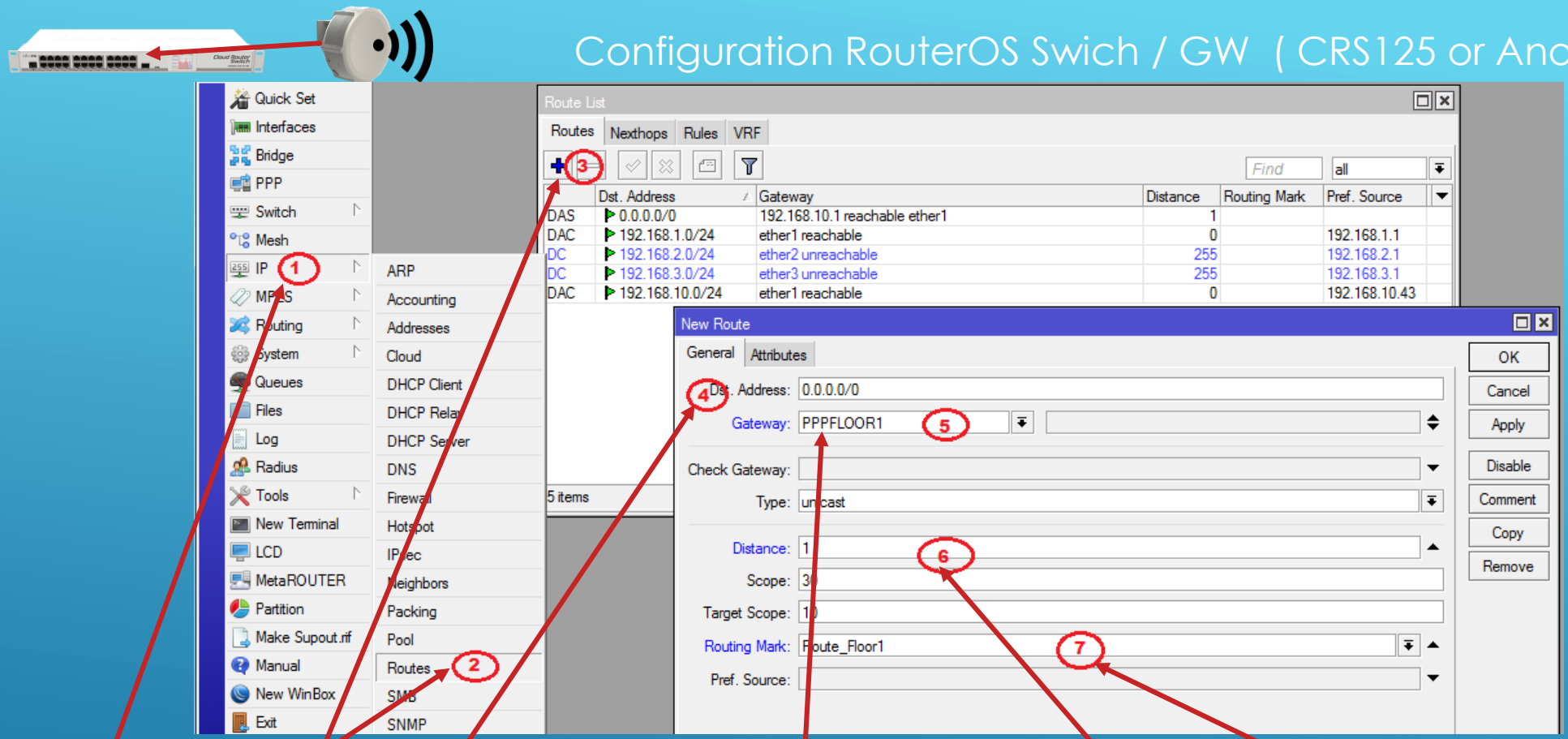
# Configuration RouterOS Swich / GW ( CRS125 or Another )




***Last Configuration – Routing mark use ip Route***

/ip route add dst-address=0.0.0.0/0 gateway= PPPFLOOR1 distance=1 routing-mark=Route_Floor1



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# Configuration RouterOS Swich / GW ( CRS125 or Another )

Route List

Routes | Nexthops | Rules | VRF

Find | all

| | Dst. Address | Gateway | Distance | Routing Mark | Pref. Sourc |
|---|---|---|---|---|---|
| AS | 0.0.0.0/0 | PPPFLOOR1 reachable | 1 | Route_Floor1 | |
| AS | 0.0.0.0/0 | PPPFLOOR2 reachable | 1 | Route_Floor2 | |
| AS | 0.0.0.0/0 | PPPFLOOR3 reachable | 1 | Route_Floor3 | |
| AS | 0.0.0.0/0 | PPPFLOOR4 reachable | 1 | Route_Floor4 | |

***All IP Routing Mark Set And All Customer's only use special PPPOE Client***

***Configuration Complated***

***This Configuration sample or***
***Any Special Network Configuration Sample's website http://bilgi.wi.com.tr***



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# Any Questions ?

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Thanks ;

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