

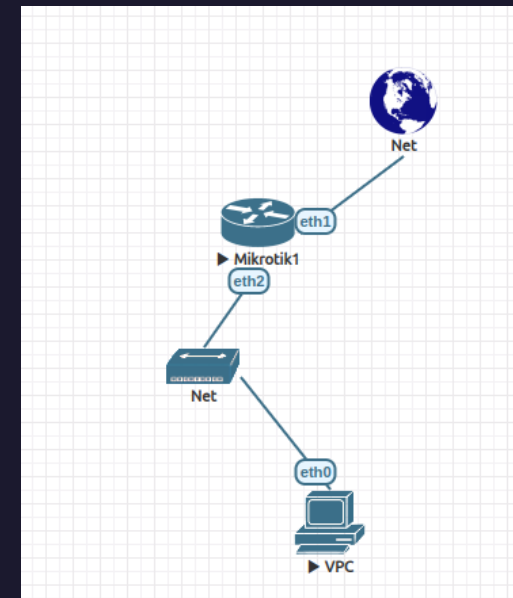
Laboratoare Administarea Retelelor de Calculatoare

Monitorizarea rețelei cu SNMP
și Dede.



Setarea Routerului

- Incepem printr-o configuratie de baza cu o retea locala (192.168.1.0/24) si cu acces la internet
- Dupa care face o comunitate privata a serviciului de SNMP in IP→SNMP→Comunities
- Setam comunitatea ca privata cu drept doar de citire si setam parola de autentificare si de criptare (se recomanda parole diferite si puternice).
- In setarile de SNMP alegem comunitate facuta de noi si trap version 3 apoi salvam.



The 'SNMP Settings' window is shown with the following configuration:

- ☒ Enabled
- Contact Info:
- Location:
- Engine ID:
- Trap Target:
- Trap Community: v3-private
- Trap Version: 3
- Trap Generators: temp-exception
- Trap Interfaces:
- Src. Address: ::
- VRF: main

Buttons: OK, Cancel, Apply, Communities

The 'SNMP Communities' window is shown with the following configuration:

- ☒ Enabled
- Contact Info:
- Location:
- Engine ID:
- Trap Target:
- Trap Community: v3-private
- Trap Version: 3
- Trap Generators: temp-exception
- Trap Interfaces:
- Src. Address: ::
- VRF: main

Buttons: OK, Cancel, Apply, Communities

The 'New SNMP Community' dialog box is shown with the following configuration:

- Name: v3-private
- Addresses:
- Security: private
- ☒ Read Access
- ☐ Write Access
- Authentication Protocol: MD5
- Encryption Protocol: DES
- Authentication Password: test123
- Encryption Password: test111

Buttons: OK, Cancel, Apply, Disable, Comment, Copy, Remove

Setarea Routerului

- Acum putem instala serverul de dude asemanator cu User Manager in care punem pachetul fie prin Winbox fie prin ftp si repornim routerul.
- Dupa care vom vedea o intrare noua in meniu numita “Dude” si primul lucru mergem la setari sa ii dam enable.
- Apoi mergem in Dude→SNMP Profiles pentru a face profilul de comunitate.
- Acest profil template trebuie sa fie identic cu cel pe care il vom face pe toate dispozitivele pe care vrem sa le monitorizam prin SNMP.
- Acum putem descarca clientul dude de pe site-ul mikrotik.

New SNMP Profile

Name: v3-private

Version: ☐ 1 ☐ 2c ☒ 3 ☐ none

Port: 161

Community: v3-private

Security: ☐ none ☐ authorize ☒ private

Auth Method: ☒ md5 ☐ sha1

Auth Password: test123

Crypt Method: ☒ des ☐ aes

Crypt Password: test111

Tries: 3

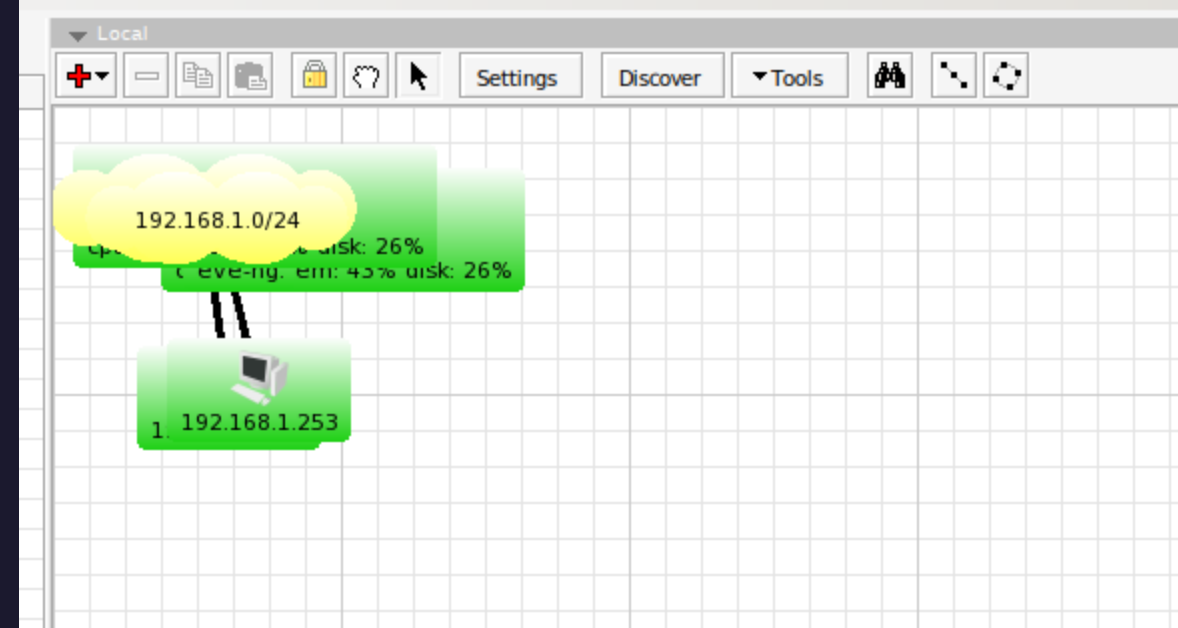
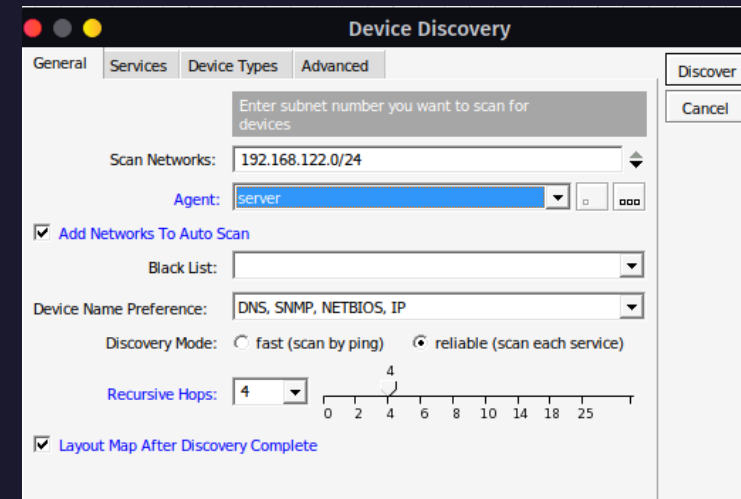
Try Timeout: 3000 ms

OK Cancel Apply Copy Remove

Software		Downloads	Changelogs	Download archive	RouterOS	The Dude	Mobile apps
Extra packages							
X86							
Main package							
Extra packages							
CD Image							
Install image							
GENERAL							
Netinstall (Windows)							
Netinstall (Windows 64bit)							
Netinstall (CLI Linux)							
The Dude client							
Bandwidth test							
Mikrotik.mib							
FlashFig							
Changelog							
Checksum							

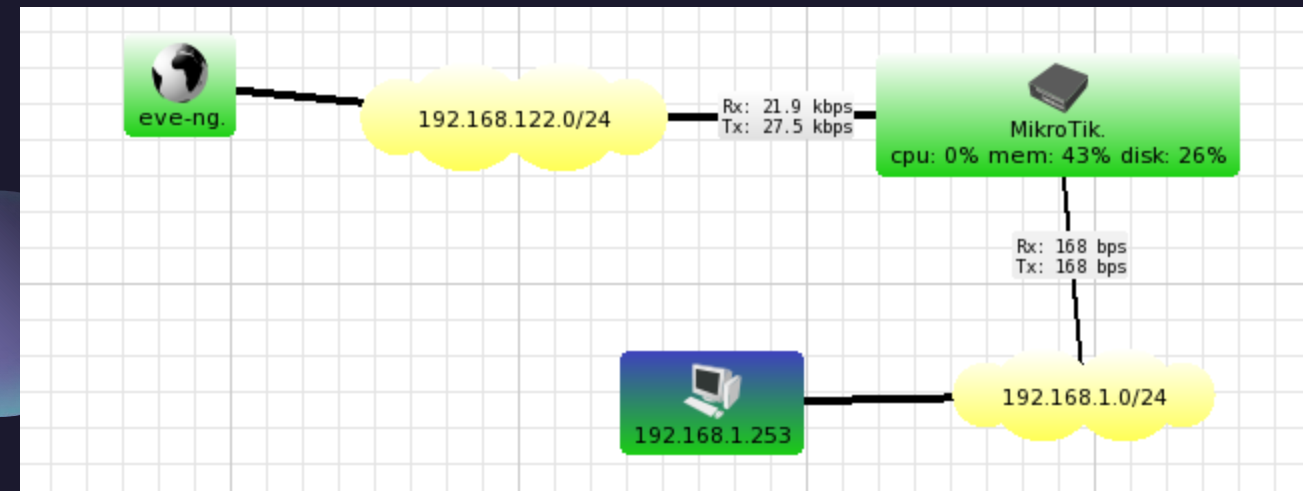
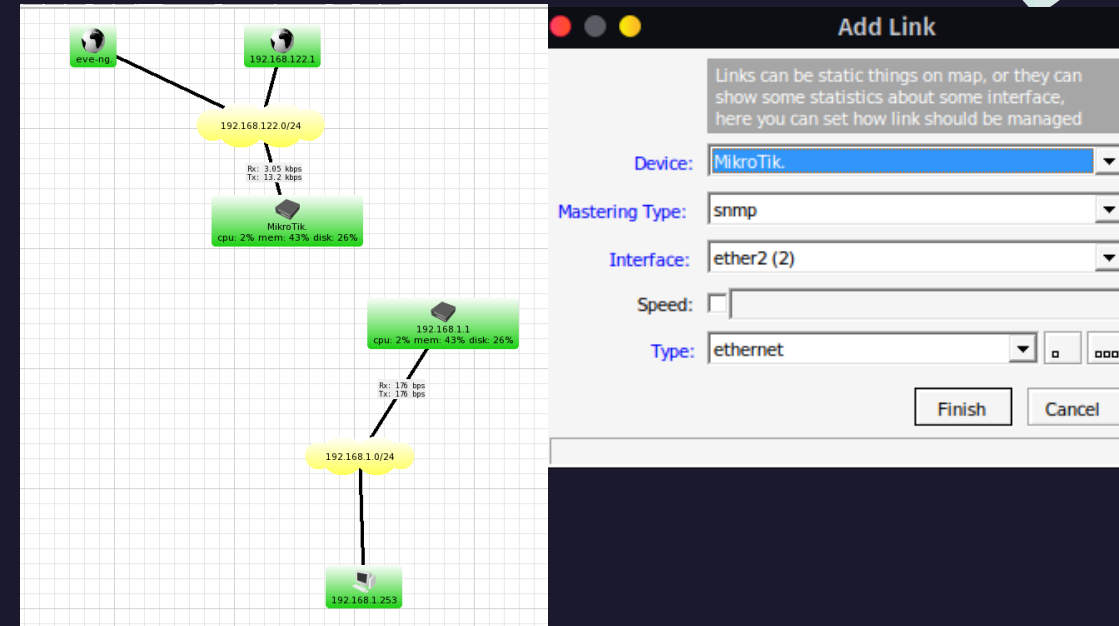
Conectarea si administrarea sistemului de monitorizare

- Dupa instalare putem porni clientul Dude si ne conectam cu utilizatorul si parola routerului. La conectare este posibil sa stea putin pana aduna informatiile si se poate vedea in bara de stare de jos.
- Vom vedea o plansa goala pe care trebuie sa o populam cu elemente asa ca mergem la butonul de “Discover”.
- Si setam cativa parametrii cum ar fi Agent: server, Add Networks To Auto Scan, Recursive Hops si Layout Map After Discovery. Apasam de discover si asteptam sa termine procesul.
- Dupa terminarea procesului vedem ca sunt toate puse mai mult sau mai putin in coltul grafului.



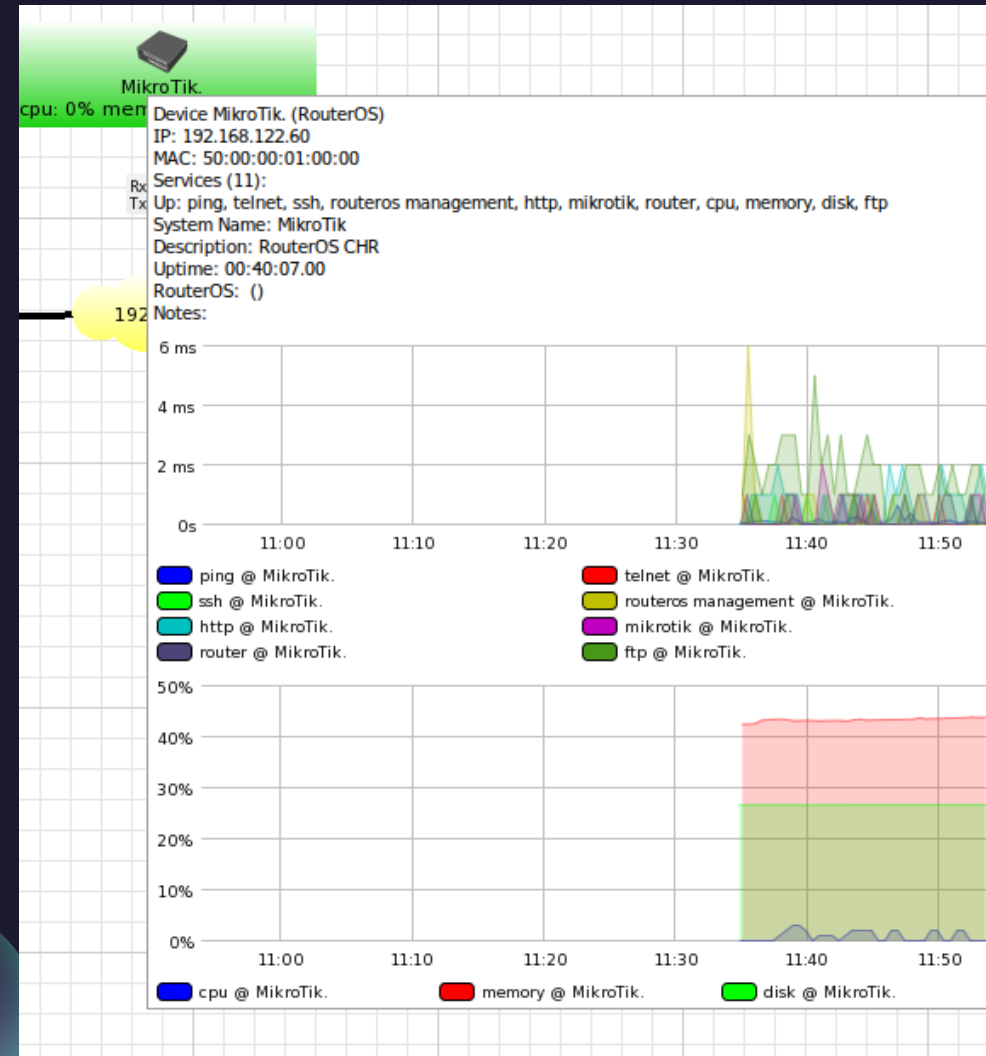
Conectarea si administrarea sistemului de monitorizare

- Dupa defacerea grafului putem vedea o oarecare asemanare cu ce avem in topologia reala. Dar mai avem nevoie de ceva ajustari pentru ca routerul nostru este dublat.
- Adaugam un link intre router si retea (192.168.1.0/24) prin click dreapta pe canvas si add link tragand o legatura intre ele.
- Dupa cateva asjutari avem o copie fidela a designului original.



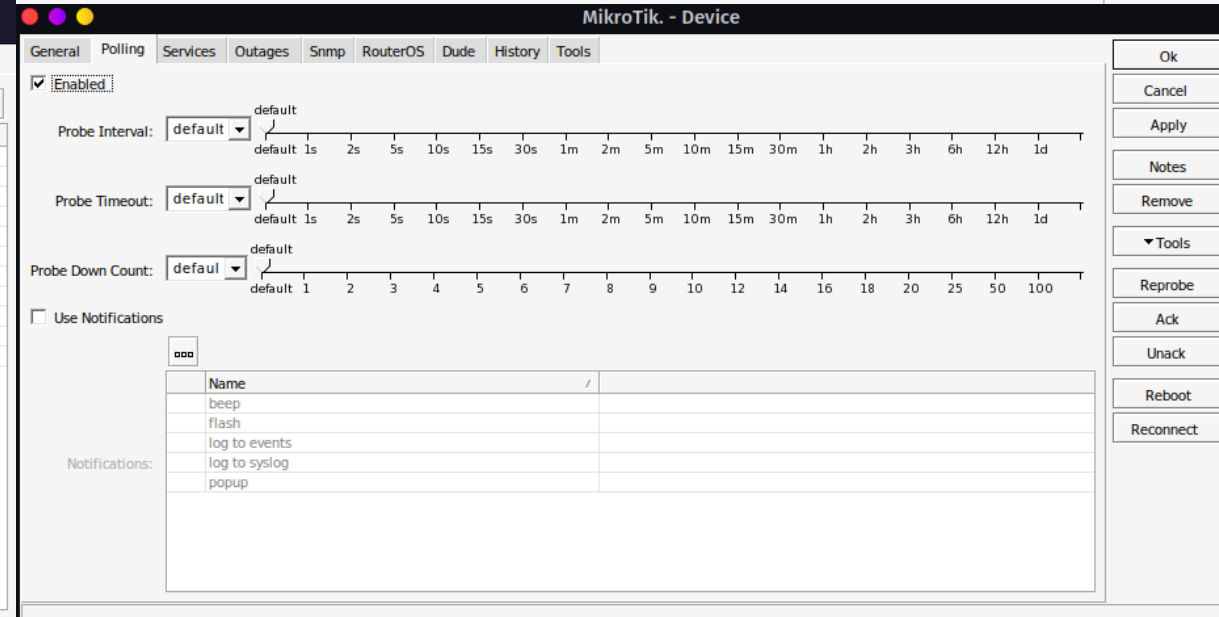
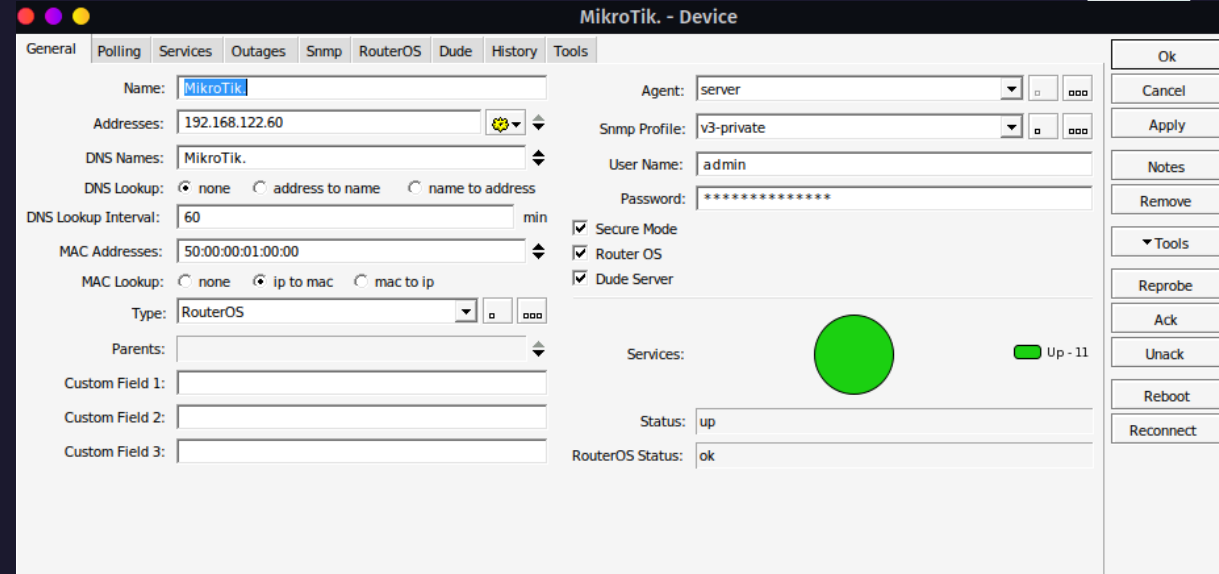
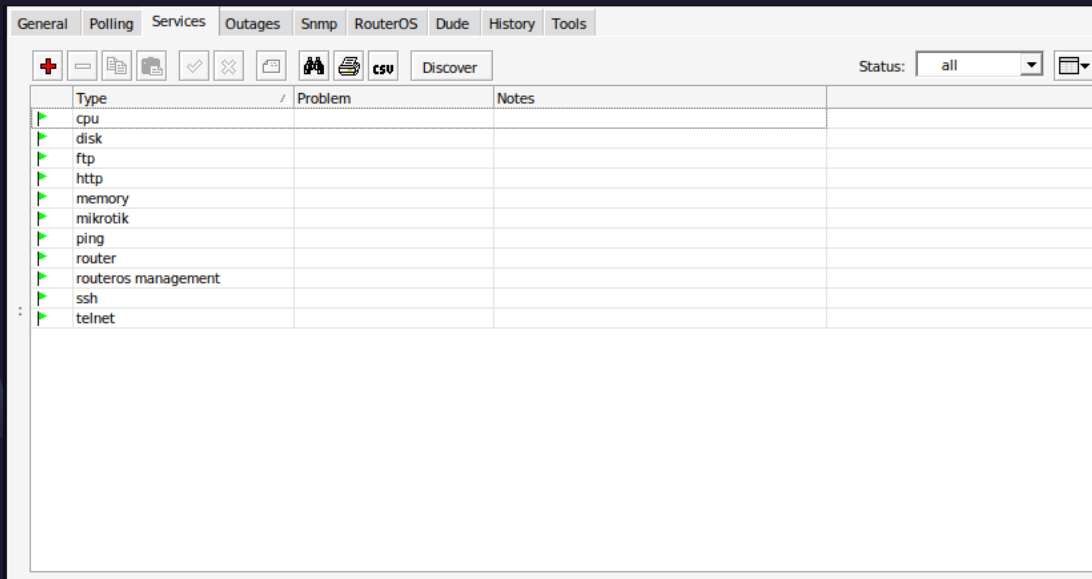
Conectarea si administrarea sistemului de monitorizare

- Cu un simplu hover peste un element putem vedea ce monitorizeaza automat prin SNMP
- Avem doua grafice unul grupeaza serviciile care ruleaza pe acesta si unul care grupeaza resursele dispozitivului.



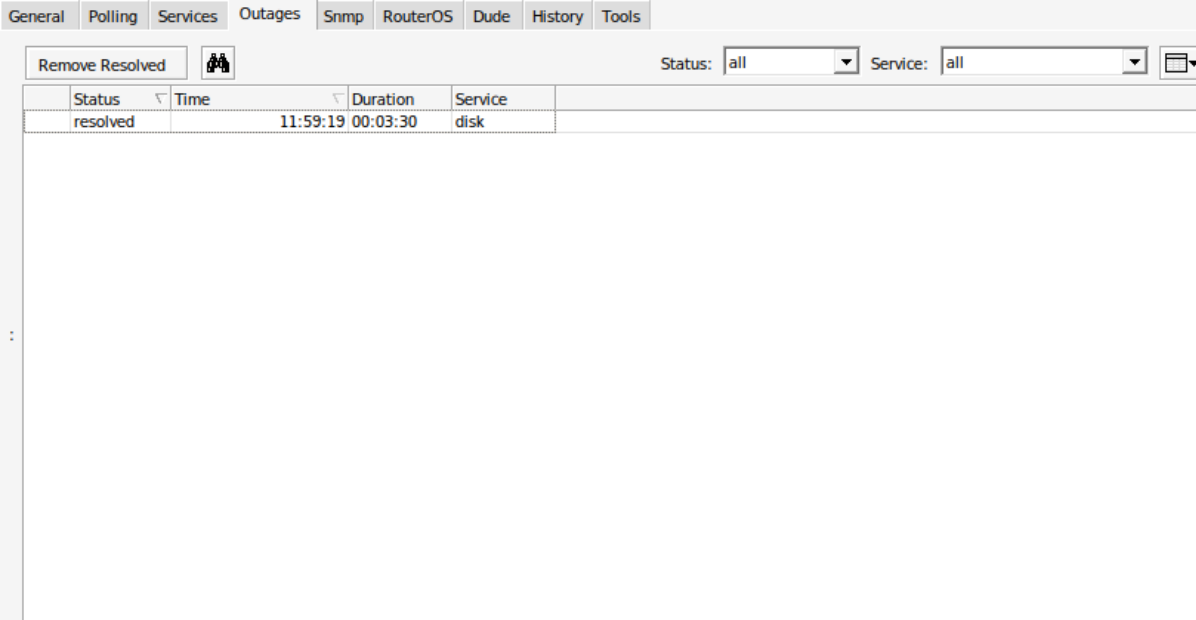
Conectarea si administrarea sistemului de monitorizare

- Cu un dublu click pe router putem seta un cont de administrator oferind accesul la cateva setari de baza.
- In meniul Polling putem seta intervalul in care probam dispozitivul si activarea unor notificari.
- Services arata ce servicii sunt monitorizate si putem adauga servicii noi.




Conectarea si administrarea sistemului de monitorizare

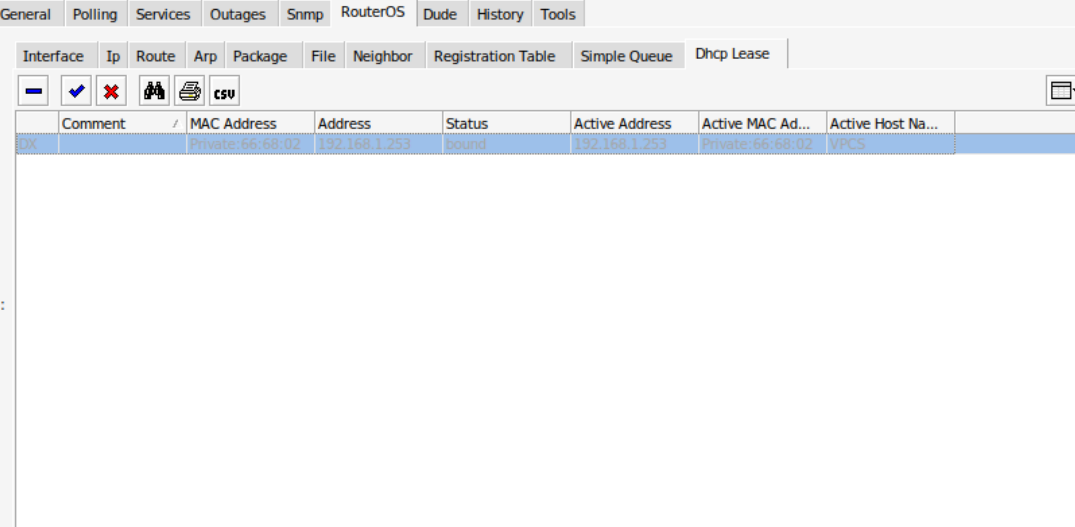
- In meniul Outages putem vedea problemele care au aparut si in ce stadiu sunt.
- SNMP informatii colectate din stringurile de comunitate si afisate ca infomatii grupate logic.
- RouterOS permite la fel ca in cazul SNMP monitorizarea routerului dar acesta este exclusiv routerelor Mikrotik.



General Polling Services Outages Snmp RouterOS Dude History Tools






Remove Resolved  Status: Service:

Status	Time	Duration	Service
resolved	11:59:19	00:03:30	disk

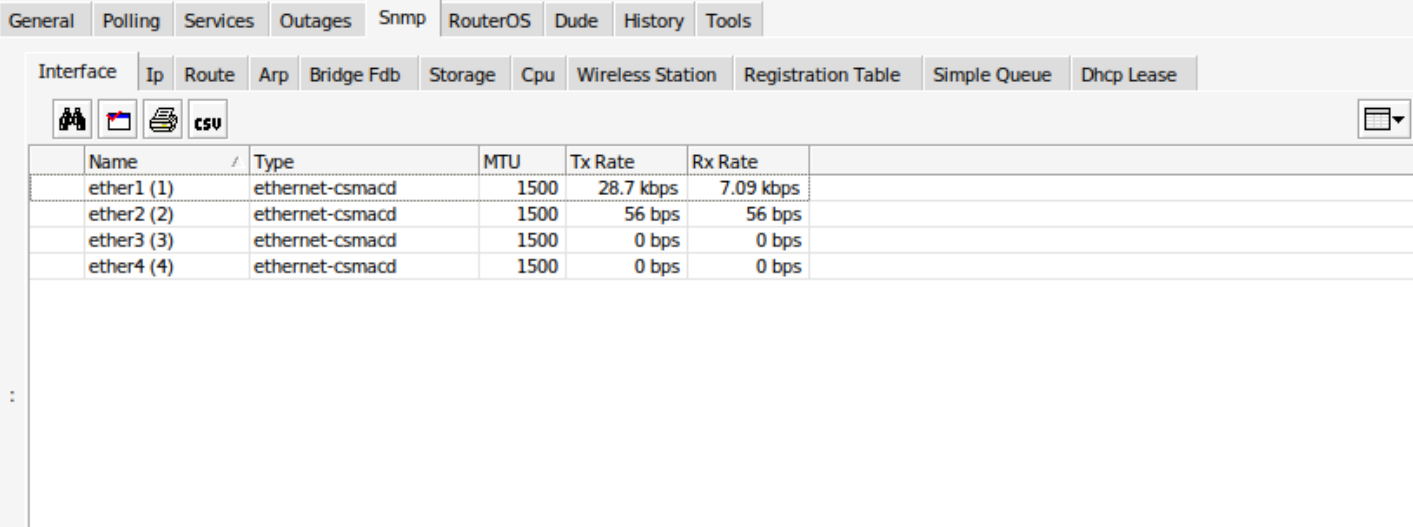


General Polling Services Outages Snmp RouterOS Dude History Tools

Interface Ip Route Arp Package File Neighbor Registration Table Simple Queue Dhcp Lease





    

Comment	MAC Address	Address	Status	Active Address	Active MAC Ad...	Active Host Na...
OK	Private:66:6d:02	192.168.1.253	bound	192.168.1.253	Private:66:6d:02	VPCS



General Polling Services Outages Snmp RouterOS Dude History Tools

Interface Ip Route Arp Bridge Fdb Storage Cpu Wireless Station Registration Table Simple Queue Dhcp Lease

Name	Type	MTU	Tx Rate	Rx Rate
ether1 (1)	ethernet-csmacd	1500	28.7 kbps	7.09 kbps
ether2 (2)	ethernet-csmacd	1500	56 bps	56 bps
ether3 (3)	ethernet-csmacd	1500	0 bps	0 bps
ether4 (4)	ethernet-csmacd	1500	0 bps	0 bps

Conectarea si administrarea sistemului de monitorizare

- History putem vedea grafice pe un anumit timp cu evenimentele si resursele monitorizate
- Am mai adauga doua dispozitive in retea un alt router si un server web avand astfel urmatoarea topologie:

