

Práctica 10 Redes

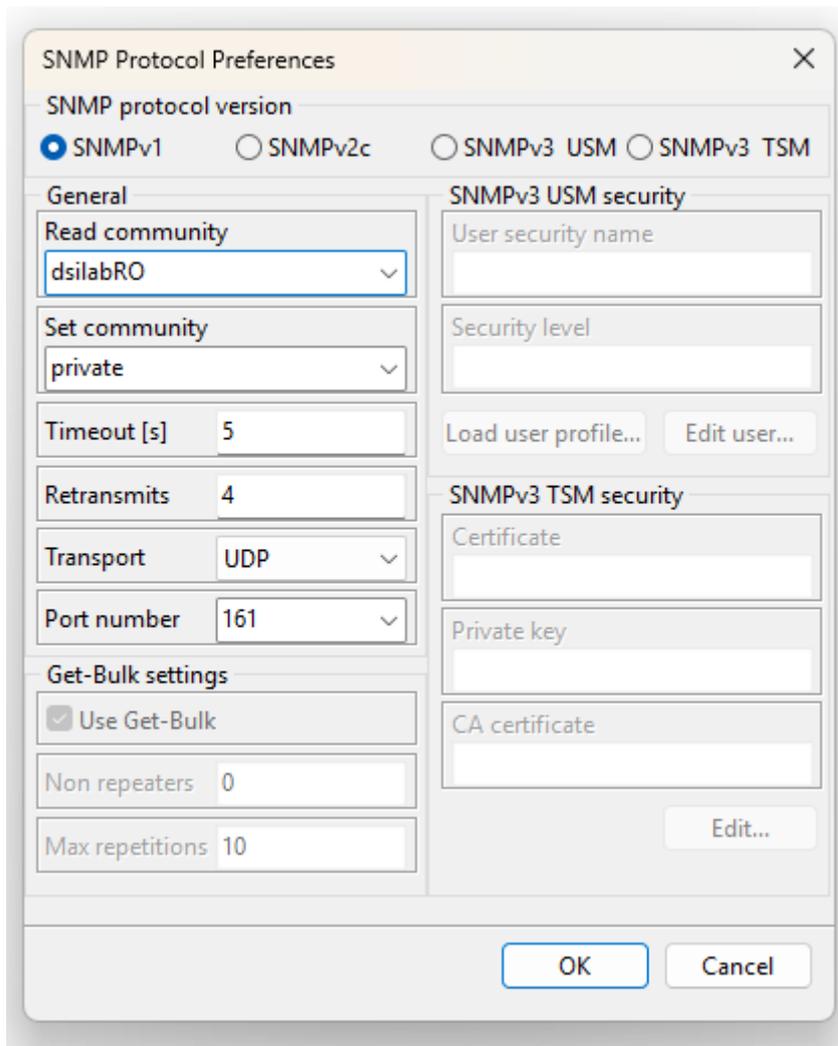
Descargamos del aula virtual, descomprimos, usamos el .exe y en la carpeta que creamos abrimos el MIB Browser

Ejercicio 2

a)

Le ponemos la IP del switch, .34

Le damos al martillo y configuramos así



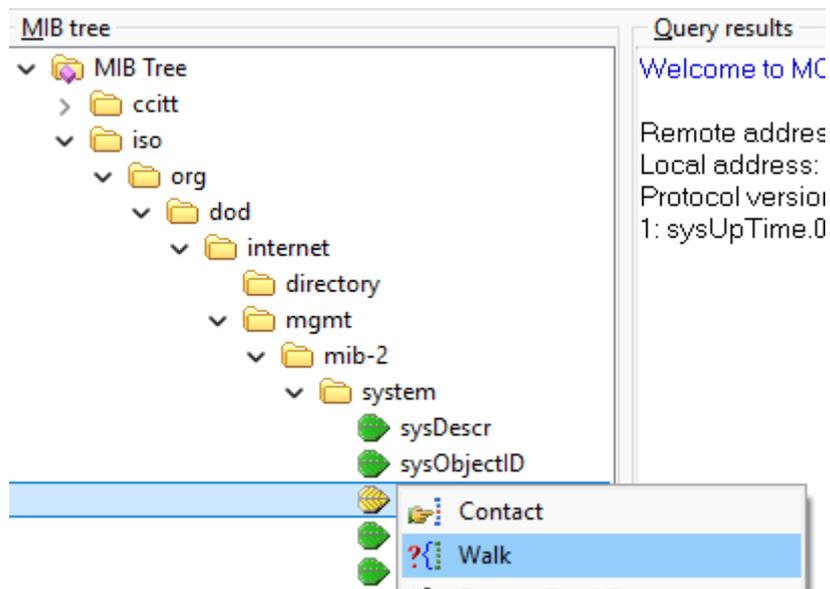
Hemos puesto la comunidad dsilabRO

Nos devuelve esto

[Welcome to MG-SOFT MIB Browser 2024 Professional](#)

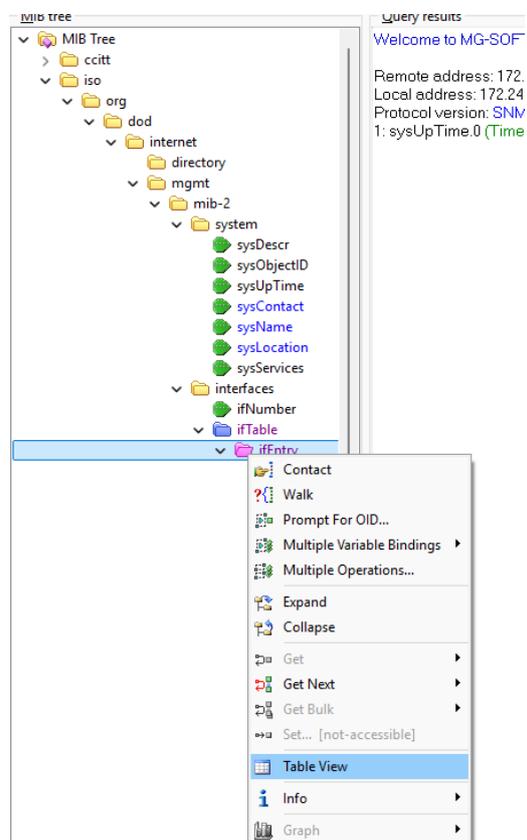
Remote address: 172.24.196.34 port: 161 transport: IP/UDP
Local address: 172.24.196.222 port: random-high transport: IP/UDP
Protocol version: **SNMPv1**
1: sysUpTime.0 (TimeTicks) 28 days 06h:33m:56s.84th (244283684)

Si hacemos lo siguiente nos lo pone directamente también



b)

Para ver la tabla más “amigable”



Instance	ifIndex(IDX)	ifDescr	ifType	ifMtu	ifSpeed	ifPhysAddress	ifAdminStatus	ifOperStatus	ifLastChange	ifInOctets	ifInUcastPkts
1	1	FastEt...	ethern...	1500	100000...	00:0F:24:ED:0F...	up(1)	up(1)	0 days 00h:00...	677514543	284085
2	2	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
3	3	FastEt...	ethern...	1500	100000...	00:0F:24:ED:0F...	up(1)	up(1)	0 days 00h:00...	3234552	28267
4	4	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
5	5	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
6	6	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
7	7	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
8	8	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
9	9	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
10	10	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
11	11	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
12	12	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
13	13	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
14	14	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
15	15	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
16	16	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
17	17	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
18	18	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
19	19	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
20	20	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
21	21	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
22	22	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
23	23	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
24	24	FastEt...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
25	25	Gigabi...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
26	26	Gigabi...	ethern...	1500	10000000	00:0F:24:ED:0F...	up(1)	down(2)	0 days 00h:00...	64	1
27	27	Null0	other(1)	1500	429496...	(zero-length)	up(1)	up(1)	0 days 00h:00...	0	0

Click en al lado de mirror para ver los datos

Buscar ahí los resultados de los que pregunte

Ejercicio 3

a)

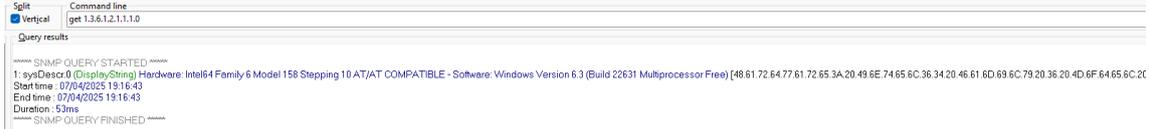
Si todo va bien, abajo a la derecha se verá verde, hay que poner la .238

```

***** SNMP QUERY STARTED *****
1: sysUpTime.0 (TimeTicks) 5 days 10h:28m:34s.07th (46971407)
Start time : 07/04/2025 19:17:11
End time : 07/04/2025 19:17:11
Duration : 13ms
***** SNMP QUERY FINISHED *****

```

b)



Intel64 Family 6 Model 158 Stepping 10

c)

sysServices

```

***** SNMP QUERY STARTED *****
1: sysServices.0 (INTEGER) 76
Start time : 07/04/2025 19:17:48
End time : 07/04/2025 19:17:48
Duration : 31ms
***** SNMP QUERY FINISHED *****

```

d)

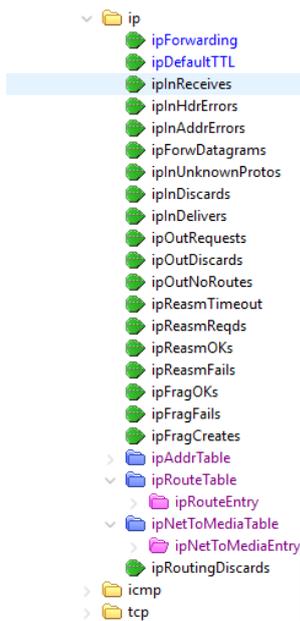
- interfases
- ifNumber
- ifTable
- at
- ip
 - ipForwarding
 - ipDefaultTTL
 - ipInReceives
 - ipInHdrErrors
 - ipInAddrErrors
 - ipForwDatagrams
 - ipInUnknownProtos
 - ipInDiscards
 - ipInDelivers
 - ipOutRequests
 - ipOutDiscards
 - ipOutNoRoutes
 - ipReasmTimeout
 - ipReasmReqds
 - ipReasmOKs
 - ipReasmFails
 - ipFragOKs
 - ipFragFails
 - ipFragCreates
 - ipAddrTable
 - ipRouteTable
 - ipRouteEntry
 - ipNetToMediaTable
 - ipRoutingDiscards
- icmp

Instance	ipRouteDe...	ipRouteIndex	ipRouteMetric1	ipRouteMetric2	ipRouteMetric3	ipRouteMetric4
0.0.0.0	0.0.0.0	13	25	0	0	0
127....	127.0.0.0	1	331	0	0	0
127....	127.0.0.1	1	331	0	0	0
127....	127.255.25...	1	331	0	0	0
172....	172.17.48.0	49	5256	0	0	0
172....	172.17.48.1	49	5256	0	0	0
172....	172.17.63.2...	49	5256	0	0	0
172....	172.24.196.0	13	281	0	0	0
172....	172.24.196....	13	281	0	0	0
172....	172.24.197....	13	281	0	0	0
224....	224.0.0.0	1	331	0	0	0
255....	255.255.25...	1	331	0	0	0

ipRouteEntry, ver como table. Si tiene entradas es que sí, se usa como Router

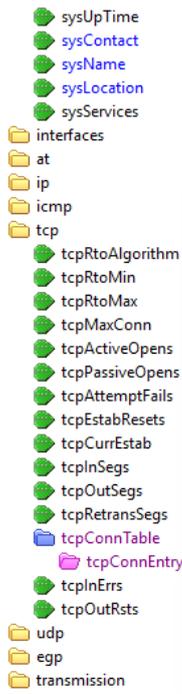
e)

La ARP es la de ipNetMediaToEntry



Instance	ipNetToMediaInde...	ipNetToMediaPhysAddress	ipNetToMediaNetAdres...	ipNet...
1.22...	1	(zero-length)	224.0.0.22	stati...
1.22...	1	(zero-length)	224.0.0.252	stati...
1.22...	1	(zero-length)	224.0.0.253	stati...
1.23...	1	(zero-length)	239.255.255.250	stati...
13.1...	13	00:00:00:00:00:00	169.254.255.255	inval...
13.1...	13	00:00:5E:00:03:00	172.24.196.1	dyna...
13.1...	13	D0:67:26:49:17:50	172.24.196.2	dyna...
13.1...	13	D0:67:26:49:66:54	172.24.196.3	dyna...
13.1...	13	00:00:00:00:00:00	172.24.196.8	inval...
13.1...	13	AC:15:A2:9F:26:C7	172.24.196.20	dyna...
13.1...	13	00:00:00:00:00:00	172.24.196.22	inval...
13.1...	13	00:00:00:00:00:00	172.24.196.23	inval...
13.1...	13	00:00:00:00:00:00	172.24.196.127	inval...
13.1...	13	00:00:00:00:00:00	172.24.196.147	inval...
13.1...	13	00:00:00:00:00:00	172.24.196.150	inval...
13.1...	13	E0:D5:5E:0E:73:18	172.24.196.163	dyna...
13.1...	13	E0:D5:5E:0B:7D:B4	172.24.196.174	dyna...
13.1...	13	40:B0:76:0D:D6:87	172.24.196.188	dyna...
13.1...	13	40:B0:76:0D:D6:86	172.24.196.205	dyna...

f)



Instance	tcpConnState	tcpConnLocalAdress...	tcpConnLocalPo...	tcpConnRemAdres...	tcpC...
0.0.0...	listen(2)	0.0.0.0	80	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	135	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	445	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1536	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1537	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1538	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1539	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1542	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	1746	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	2179	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	5040	0.0.0.0	0
0.0.0...	listen(2)	0.0.0.0	7680	0.0.0.0	0
127....	listen(2)	127.0.0.1	4767	0.0.0.0	0
127....	established(5)	127.0.0.1	4767	127.0.0.1	6890
127....	listen(2)	127.0.0.1	5939	0.0.0.0	0
127....	established(5)	127.0.0.1	6890	127.0.0.1	4767
127....	listen(2)	127.0.0.1	6913	0.0.0.0	0
127....	listen(2)	127.0.0.1	8888	0.0.0.0	0
127....	listen(2)	127.0.0.1	27182	0.0.0.0	0

Tcp, tcpConnEntry, cada fila es una entrada y una conexión

Ejercicio 4

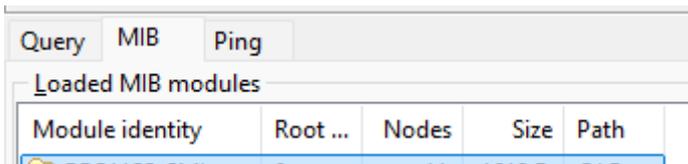
a)

Abrimos la descarga de la 4100 desde el compilador MIB Compiler. Ejecutar como administrador y cargamos la MIB.

Luego en la misma app, Tools, compile, si no hay errores, guardar. Save All y aceptar.

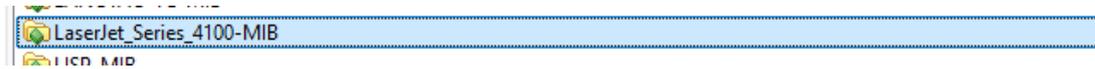
Ahora queremos que MIB browser la lea, vamos a esa app.

Vamos a MIB

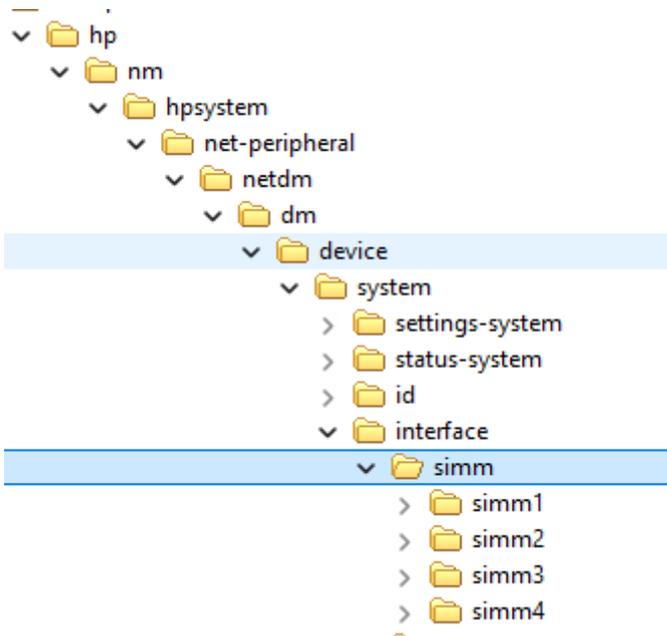
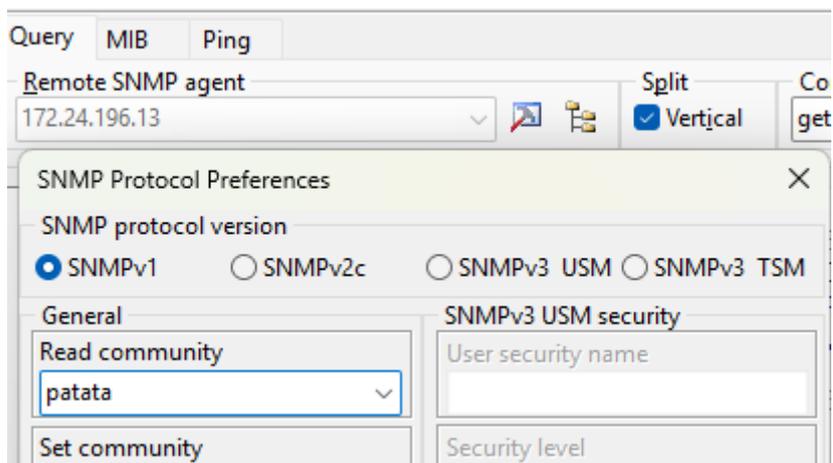


Como no hay licencia solo caben 3, quitamos una. Flecha para abajo verde.

Buscamos la que hemos añadido y flecha para arriba.



Ponemos la IP de la impresora y la comunidad



4 grupos de Simm, consultamos 1 por 1 a ver qué nos dice

```
***** SNMP QUERY STARTED *****
1: simm1-type.0 (INTEGER) eVolatileRandomAccessMemory(5)
Start time : 07/04/2025 19:34:38
End time : 07/04/2025 19:34:38
Duration : 32ms
***** SNMP QUERY FINISHED *****
```

Grupo 1 es la RAM

```
***** SNMP QUERY STARTED *****
1: simm2-type.0 (INTEGER) eEmpty(1)
Start time : 07/04/2025 19:34:56
End time : 07/04/2025 19:34:56
Duration : 63ms
***** SNMP QUERY FINISHED *****
```

Zócalo 2 está vacío

```
***** SNMP QUERY STARTED *****
1: simm2-type.0 (INTEGER) eEmpty(1)
Start time : 07/04/2025 19:34:56
End time : 07/04/2025 19:34:56
Duration : 63ms
***** SNMP QUERY FINISHED *****
```

El 3 y 4 no tiene nada

b)

```
***** SNMP QUERY STARTED *****
1: energy-star.0 (INTEGER) 7200
Start time : 07/04/2025 19:37:13
End time : 07/04/2025 19:37:14
Duration : 39ms
***** SNMP QUERY FINISHED *****
```

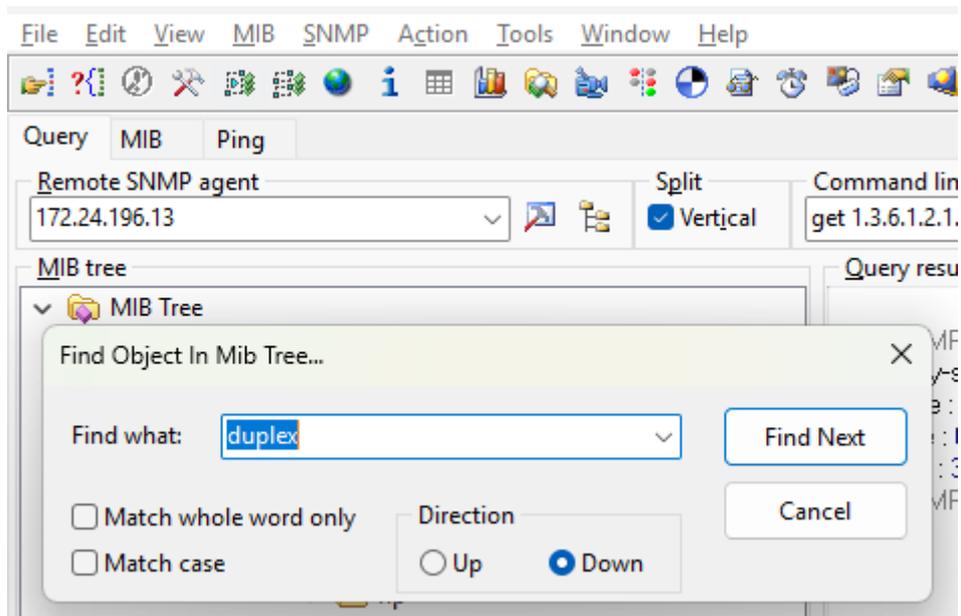
7200 (ver propiedades) significa que se activa a las 2 horas

The values are as follow:

```
<=0 snap to 0
>=1 and <= 479 snap to 60 (1 minute)
>=480 and <= 1349 snap to 900 (15 minutes)
>=1350 and <= 2699 snap to 1800 (30 minutes)
>=2700 and <= 5399 snap to 3600 (1 hour)
>=5400 and <= 10799 snap to 7200 (2 hours)
>=10800 snap to 14400 (4 hours).
```

c)

Para buscarlo, edit, find y busco valor



```
***** SNMP QUERY STARTED *****
1: printed-media-duplex-count.1.0 (INTEGER) 0
2: printed-media-duplex-count.2.0 (INTEGER) 0
3: printed-media-duplex-count.3.0 (INTEGER) 0
4: printed-media-duplex-count.10.0 (INTEGER) 0
5: printed-media-duplex-count.18.0 (INTEGER) 0
6: printed-media-duplex-count.25.0 (INTEGER) 383
7: printed-media-duplex-count.26.0 (INTEGER) 231122
8: printed-media-duplex-count.45.0 (INTEGER) 0
9: printed-media-duplex-count.101.0 (INTEGER) 15
Start time : 07/04/2025 19:39:11
End time : 07/04/2025 19:39:12
Duration : 144ms
***** SNMP QUERY FINISHED *****
```

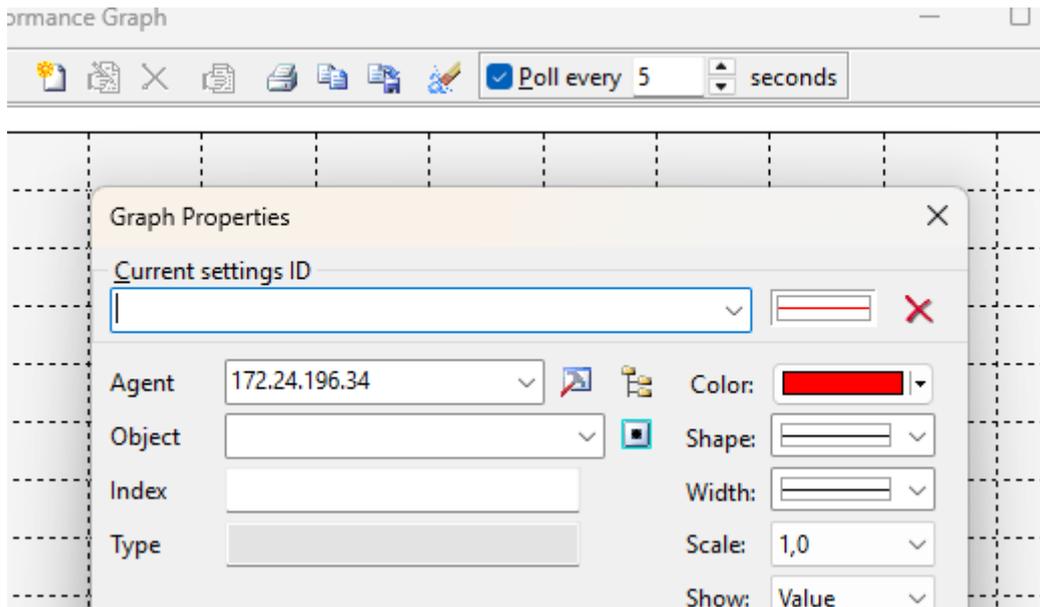
Printed media dúplex count, podemos ver propiedades

Ejercicio 5

Volvemos al switch Ip y su comunidad



Gráfico

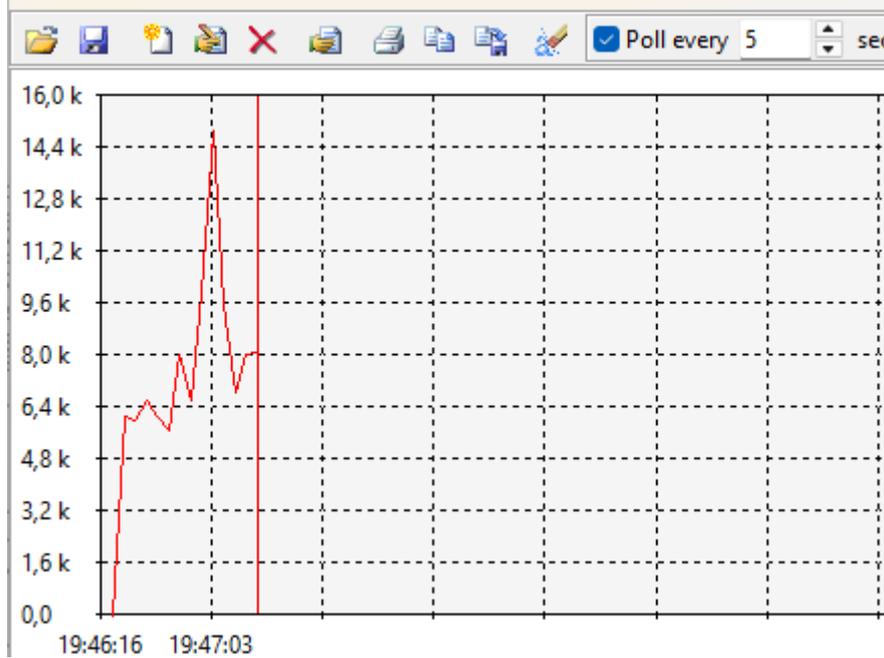


Nuevo, botón señalado

-  ifLastChange
-  ifInOctets
-  ifInUcastPkts

Selecciono este, cojo la primera, pulso dos veces, el show en Delta/s

Luego salida outOctets 2



Ejercicio 6

Igual que este

Ejercicio 7

Una instantánea es un volcado completo de la MIB

Volvemos al ordenador con la ip 238 y la comunidad public25.

Le damos al botón de la cámara 

MIB Tree	Syntax	Value
iso		
org		
dod		
internet		
mgmt		
mib-2		
system		
sysDescr		
sysDescr.0	Displ...	Hardware: Intel64 Family 6 Model 158 Steppin...
sysObjectID		
sysObjectID.0	OBJE...	enterprises.311.1.1.3.1.1
sysUpTime		
sysUpTime.0	Time...	5 days 11h:01m:29s.90th (47168990)
sysContact		
sysContact.0	Displ...	(zero-length)
sysName		
sysName.0	Displ...	HARD02PROF
sysLocation		
sysLocation.0	Displ...	(zero-length)
sysServices		
sysServices.0	INTE...	76
interfaces		
ifNumber		
ifNumber.0	INTE...	49
ifTable		
ifEntry		
ifIndex		
ifIndex.1	INTE...	1
ifIndex.2	INTE...	2
ifIndex.3	INTE...	3

Y nos saca toda la información