

SNMP Traces

Para realizar las pruebas y capturar trazas del protocolo SNMP se dispuso de un **Router Cisco**, cuya IP Address es **192.168.202.1**, y de una **plataforma Linux**, cuya IP Address es **192.168.202.2**, ambos interconectados vía una red Ethernet.



En el Router se configuró el **agente snmp** para que responda a todos los snmpget y snmpgetnext con **community name** "public".

En la plataforma Linux se utilizó el comando **snmpget** para generar snmpgets y el comando **snmpwalk** para generar snmpgetnexts. Para capturar los mensajes del protocolo SNMP se empleó la aplicación **Ethereal**.

1) Operación Read de la variable MIB sysName

```
# snmpget 192.168.202.1 public system.sysname.0
```

```
system.sysName.0 = R02.Edenor.com
```

```
Frame 1 (93 on wire, 93 captured)
```

```
Arrival Time: Feb 6, 1998 13:50:14.5747
```

```
Time delta from previous packet: 0.000000 seconds
```

```
Frame Number: 1
```

```
Packet Length: 93 bytes
```

```
Capture Length: 93 bytes
```

```
Ethernet II
```

```
Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
```

```
Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
```

```
Type: IP (0x0800)
```

```
Internet Protocol
```

```
Version: 4
```

```
Header length: 20 bytes
```

```
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
```

```
0000 00.. = Differentiated Services Codepoint: Default (0x00)
```

```
.... ..00 = Currently Unused: 0
```

```
Total Length: 79
```

```
Identification: 0x0205
```

```
Flags: 0x00
```

```
.0.. = Don't fragment: Not set
```

```
..0. = More fragments: Not set
```

```
Fragment offset: 0
```

```
Time to live: 64
```

```
Protocol: UDP (0x11)
```

```
Header checksum: 0x6344 (correct)
```

```
Source: 192.168.202.2 (192.168.202.2)
```

```

Destination: 192.168.202.1 (192.168.202.1)
User Datagram Protocol
Source port: 1025 (1025)
Destination port: 161 (161)
Length: 59
Checksum: 0xae78
Simple Network Management Protocol
Version: 1
Community: public
PDU type: GET
Request Id: 0x868c975
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.1.5.0 (SNMPv2-MIB::sysName.0)
Value: NULL

```

```

0  0050 7343 bbf0 004f 4e00 13c9 0800 4500  .PsC...ON.....E.
10 004f 0205 0000 4011 6344 c0a8 ca02 c0a8  .O....@.cD.....
20 ca01 0401 00a1 003b ae78 3082 002f 0201  .....;.x0../..
30 0004 0670 7562 6c69 63a0 8200 2002 0408  ...public... ..
40 68c9 7502 0100 0201 0030 8200 1030 8200  h.u.....0...0..
50 0c06 082b 0601 0201 0105 0005 00      ...+.....

```

```

Frame 2 (103 on wire, 103 captured)
Arrival Time: Feb 6, 1998 13:50:14.5870
Time delta from previous packet: 0.012260 seconds
Frame Number: 2
Packet Length: 103 bytes
Capture Length: 103 bytes
Ethernet II
Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Type: IP (0x0800)
Internet Protocol
Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
Total Length: 85
Identification: 0x01e7
Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 255
Protocol: UDP (0x11)
Header checksum: 0xa45b (correct)
Source: 192.168.202.1 (192.168.202.1)
Destination: 192.168.202.2 (192.168.202.2)
User Datagram Protocol
Source port: 161 (161)
Destination port: 1025 (1025)
Length: 65

```

```

Checksum: 0x8eaa
Simple Network Management Protocol
Version: 1
Community: public
PDU type: RESPONSE
Request Id: 0x868c975
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.1.5.0 (SNMPv2-MIB::sysName.0)
Value: R02.Edenor.com

```

```

 0  004f 4e00 13c9 0050 7343 bbf0 0800 4500   .ON....PsC....E.
10  0055 01e7 0000 ff11 a45b c0a8 ca01 c0a8   .U.....[.....
20  ca02 00a1 0401 0041 8eaa 3037 0201 0004   .....A..07....
30  0670 7562 6c69 63a2 2a02 0408 68c9 7502   .public.*...h.u.
40  0100 0201 0030 1c30 1a06 082b 0601 0201   .....0.0...+....
50  0105 0004 0e52 3032 2e45 6465 6e6f 722e   .....R02.Edenor.
60  636f 6d02 0000 06                                com....

```

2) Operación Traversal de todas las variables MIB debajo de ifType

```
# snmpwalk 192.168.202.1 public interfaces.ifTable.ifEntry.ifType
```

```

interfaces.ifTable.ifEntry.ifType.1 = ethernetCsmacd(6)
interfaces.ifTable.ifEntry.ifType.2 = propPointToPointSerial(22)
interfaces.ifTable.ifEntry.ifType.3 = other(1)
interfaces.ifTable.ifEntry.ifType.5 = softwareLoopback(24)

```

Frame 1 (95 on wire, 95 captured)

```

Arrival Time: Feb  6, 1998 13:53:05.3952
Time delta from previous packet: 0.000372 seconds
Frame Number: 17
Packet Length: 95 bytes
Capture Length: 95 bytes

```

Ethernet II

```

Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Type: IP (0x0800)

```

Internet Protocol

```

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
Total Length: 81
Identification: 0x020e
Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
Fragment offset: 0

```

Time to live: 64
Protocol: UDP (0x11)
Header checksum: 0x6339 (correct)
Source: 192.168.202.2 (192.168.202.2)
Destination: 192.168.202.1 (192.168.202.1)

User Datagram Protocol
Source port: 1025 (1025)
Destination port: 161 (161)
Length: 61
Checksum: 0x3abb

Simple Network Management Protocol

Version: 1
Community: public
PDU type: GET-NEXT
Request Id: 0x290f6033
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3 (IF-MIB::ifType)
Value: NULL

```
0 0050 7343 bbf0 004f 4e00 13c9 0800 4500 .PsC...ON.....E.
10 0051 020e 0000 4011 6339 c0a8 ca02 c0a8 .Q....@.c9.....
20 ca01 0401 00a1 003d 3abb 3082 0031 0201 .....=:0..1..
30 0004 0670 7562 6c69 63a1 8200 2202 0429 ...public..."..
40 0f60 3302 0100 0201 0030 8200 1230 8200 .`3.....0...0..
50 0e06 0a2b 0601 0201 0202 0102 0505 00 ...+.....
```

Frame 2 (92 on wire, 92 captured)

Arrival Time: Feb 6, 1998 13:53:05.4075
Time delta from previous packet: 0.012331 seconds
Frame Number: 18
Packet Length: 92 bytes
Capture Length: 92 bytes

Ethernet II

Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Type: IP (0x0800)

Internet Protocol

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
0000 00.. = Differentiated Services Codepoint: Default (0x00)
.... ..00 = Currently Unused: 0
Total Length: 74
Identification: 0x01f0
Flags: 0x00
.0.. = Don't fragment: Not set
..0. = More fragments: Not set
Fragment offset: 0
Time to live: 255
Protocol: UDP (0x11)
Header checksum: 0xa45d (correct)
Source: 192.168.202.1 (192.168.202.1)
Destination: 192.168.202.2 (192.168.202.2)

```

User Datagram Protocol
  Source port: 161 (161)
  Destination port: 1025 (1025)
  Length: 54
  Checksum: 0xc74c
Simple Network Management Protocol
  Version: 1
  Community: public
  PDU type: RESPONSE
  Request Id: 0x290f6033
  Error Status: NO ERROR
  Error Index: 0
  Object identifier 1: 1.3.6.1.2.1.2.2.1.3.1 (IF-MIB::ifType.1)
  Value: ethernetCsmacd(6)

```

```

  0  004f 4e00 13c9 0050 7343 bbf0 0800 4500  .ON....PsC....E.
 10  004a 01f0 0000 ff11 a45d c0a8 ca01 c0a8  .J.....].....
 20  ca02 00a1 0401 0036 c74c 302c 0201 0004  .....6.L0,....
 30  0670 7562 6c69 63a2 1f02 0429 0f60 3302  .public....).`3.
 40  0100 0201 0030 1130 0f06 0a2b 0601 0201  .....0.0...+....
 50  0202 0103 0102 0106 7465 7200  .....ter.

```

```

Frame 3 (95 on wire, 95 captured)
  Arrival Time: Feb 6, 1998 13:53:05.4079
  Time delta from previous packet: 0.000378 seconds
  Frame Number: 19
  Packet Length: 95 bytes
  Capture Length: 95 bytes

```

```

Ethernet II
  Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
  Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
  Type: IP (0x0800)

```

```

Internet Protocol
  Version: 4
  Header length: 20 bytes
  Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
  Total Length: 81
  Identification: 0x020f
  Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
  Fragment offset: 0
  Time to live: 64
  Protocol: UDP (0x11)
  Header checksum: 0x6338 (correct)
  Source: 192.168.202.2 (192.168.202.2)
  Destination: 192.168.202.1 (192.168.202.1)

```

```

User Datagram Protocol
  Source port: 1025 (1025)
  Destination port: 161 (161)
  Length: 61
  Checksum: 0x3dba

```

Simple Network Management Protocol

Version: 1
Community: public
PDU type: GET-NEXT
Request Id: 0x290f6034
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.1 (IF-MIB::ifType.1)
Value: NULL

```
0 0050 7343 bbf0 004f 4e00 13c9 0800 4500 .PsC...ON.....E.
10 0051 020f 0000 4011 6338 c0a8 ca02 c0a8 .Q....@.c8.....
20 ca01 0401 00a1 003d 3dba 3082 0031 0201 .....==.0..1..
30 0004 0670 7562 6c69 63a1 8200 2202 0429 ...public..."..
40 0f60 3402 0100 0201 0030 8200 1230 8200 .`4.....0...0..
50 0e06 0a2b 0601 0201 0202 0103 0105 00 ...+.....
```

Frame 4 (92 on wire, 92 captured)

Arrival Time: Feb 6, 1998 13:53:05.4199
Time delta from previous packet: 0.011996 seconds
Frame Number: 20
Packet Length: 92 bytes
Capture Length: 92 bytes

Ethernet II

Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Type: IP (0x0800)

Internet Protocol

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
0000 00.. = Differentiated Services Codepoint: Default (0x00)
.... ..00 = Currently Unused: 0
Total Length: 74
Identification: 0x01f1
Flags: 0x00
.0.. = Don't fragment: Not set
..0. = More fragments: Not set
Fragment offset: 0
Time to live: 255
Protocol: UDP (0x11)
Header checksum: 0xa45c (correct)
Source: 192.168.202.1 (192.168.202.1)
Destination: 192.168.202.2 (192.168.202.2)

User Datagram Protocol

Source port: 161 (161)
Destination port: 1025 (1025)
Length: 54
Checksum: 0xc53c

Simple Network Management Protocol

Version: 1
Community: public
PDU type: RESPONSE
Request Id: 0x290f6034

Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.2 (IF-MIB::ifType.2)
Value: propPointToPointSerial(22)

```
0  004f 4e00 13c9 0050 7343 bbf0 0800 4500  .ON....PsC....E.
10 004a 01f1 0000 ff11 a45c c0a8 ca01 c0a8  .J.....\.....
20 ca02 00a1 0401 0036 c53c 302c 0201 0004  .....6.<0,....
30 0670 7562 6c69 63a2 1f02 0429 0f60 3402  .public....).`4.
40 0100 0201 0030 1130 0f06 0a2b 0601 0201  .....0.0...+....
50 0202 0103 0202 0116 7465 7200  .....ter.
```

Frame 5 (95 on wire, 95 captured)

Arrival Time: Feb 6, 1998 13:53:05.4203
Time delta from previous packet: 0.000444 seconds
Frame Number: 21
Packet Length: 95 bytes
Capture Length: 95 bytes

Ethernet II

Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Type: IP (0x0800)

Internet Protocol

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
 0000 00.. = Differentiated Services Codepoint: Default (0x00)
 00 = Currently Unused: 0
Total Length: 81
Identification: 0x0210
Flags: 0x00
 .0.. = Don't fragment: Not set
 ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 64
Protocol: UDP (0x11)
Header checksum: 0x6337 (correct)
Source: 192.168.202.2 (192.168.202.2)
Destination: 192.168.202.1 (192.168.202.1)

User Datagram Protocol

Source port: 1025 (1025)
Destination port: 161 (161)
Length: 61
Checksum: 0x3bba

Simple Network Management Protocol

Version: 1
Community: public
PDU type: GET-NEXT
Request Id: 0x290f6035
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.2 (IF-MIB::ifType.2)
Value: NULL

```

 0 0050 7343 bbf0 004f 4e00 13c9 0800 4500 .PsC...ON.....E.
10 0051 0210 0000 4011 6337 c0a8 ca02 c0a8 .Q....@.c7.....
20 ca01 0401 00a1 003d 3bba 3082 0031 0201 .....=;.0..1..
30 0004 0670 7562 6c69 63a1 8200 2202 0429 ...public..."..)
40 0f60 3502 0100 0201 0030 8200 1230 8200 .`5.....0...0..
50 0e06 0a2b 0601 0201 0202 0103 0205 00 ...+.....

```

Frame 6 (92 on wire, 92 captured)

```

Arrival Time: Feb 6, 1998 13:53:05.4323
Time delta from previous packet: 0.011991 seconds
Frame Number: 22
Packet Length: 92 bytes
Capture Length: 92 bytes

```

Ethernet II

```

Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Type: IP (0x0800)

```

Internet Protocol

```

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
Total Length: 74
Identification: 0x01f2
Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 255
Protocol: UDP (0x11)
Header checksum: 0xa45b (correct)
Source: 192.168.202.1 (192.168.202.1)
Destination: 192.168.202.2 (192.168.202.2)

```

User Datagram Protocol

```

Source port: 161 (161)
Destination port: 1025 (1025)
Length: 54
Checksum: 0xc351

```

Simple Network Management Protocol

```

Version: 1
Community: public
PDU type: RESPONSE
Request Id: 0x290f6035
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.3 (IF-MIB::ifType.3)
Value: other(1)

```

```

 0 004f 4e00 13c9 0050 7343 bbf0 0800 4500 .ON....PsC....E.
10 004a 01f2 0000 ff11 a45b c0a8 ca01 c0a8 .J.....[.....
20 ca02 00a1 0401 0036 c351 302c 0201 0004 .....6.Q0,....
30 0670 7562 6c69 63a2 1f02 0429 0f60 3502 .public....).`5.
40 0100 0201 0030 1130 0f06 0a2b 0601 0201 .....0.0...+....

```

50 0202 0103 0302 0101 7465 7200ter.

Frame 7 (95 on wire, 95 captured)

Arrival Time: Feb 6, 1998 13:53:05.4327
Time delta from previous packet: 0.000376 seconds
Frame Number: 23
Packet Length: 95 bytes
Capture Length: 95 bytes

Ethernet II

Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Type: IP (0x0800)

Internet Protocol

Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
 0000 00.. = Differentiated Services Codepoint: Default (0x00)
 00 = Currently Unused: 0
Total Length: 81
Identification: 0x0211
Flags: 0x00
 .0.. = Don't fragment: Not set
 ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 64
Protocol: UDP (0x11)
Header checksum: 0x6336 (correct)
Source: 192.168.202.2 (192.168.202.2)
Destination: 192.168.202.1 (192.168.202.1)

User Datagram Protocol

Source port: 1025 (1025)
Destination port: 161 (161)
Length: 61
Checksum: 0x39ba

Simple Network Management Protocol

Version: 1
Community: public
PDU type: GET-NEXT
Request Id: 0x290f6036
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.3 (IF-MIB::ifType.3)
Value: NULL

0 0050 7343 bbf0 004f 4e00 13c9 0800 4500 .PsC...ON.....E.
10 0051 0211 0000 4011 6336 c0a8 ca02 c0a8 .Q....@.c6.....
20 ca01 0401 00a1 003d 39ba 3082 0031 0201=9.0..1..
30 0004 0670 7562 6c69 63a1 8200 2202 0429 ...public..."..
40 0f60 3602 0100 0201 0030 8200 1230 8200 .`6.....0...0..
50 0e06 0a2b 0601 0201 0202 0103 0305 00 ...+.....

Frame 8 (92 on wire, 92 captured)

Arrival Time: Feb 6, 1998 13:53:05.4447
Time delta from previous packet: 0.012030 seconds

```

Frame Number: 24
Packet Length: 92 bytes
Capture Length: 92 bytes
Ethernet II
  Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
  Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
  Type: IP (0x0800)
Internet Protocol
  Version: 4
  Header length: 20 bytes
  Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
  Total Length: 74
  Identification: 0x01f3
  Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
  Fragment offset: 0
  Time to live: 255
  Protocol: UDP (0x11)
  Header checksum: 0xa45a (correct)
  Source: 192.168.202.1 (192.168.202.1)
  Destination: 192.168.202.2 (192.168.202.2)

```

```

User Datagram Protocol
  Source port: 161 (161)
  Destination port: 1025 (1025)
  Length: 54
  Checksum: 0xc03a

```

Simple Network Management Protocol

```

Version: 1
Community: public
PDU type: RESPONSE
Request Id: 0x290f6036
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.5 (IF-MIB::ifType.5)
Value: softwareLoopback(24)

```

```

 0  004f 4e00 13c9 0050 7343 bbf0 0800 4500  .ON....PsC....E.
10 004a 01f3 0000 ff11 a45a c0a8 ca01 c0a8  .J.....Z.....
20 ca02 00a1 0401 0036 c03a 302c 0201 0004  .....6.:0,....
30 0670 7562 6c69 63a2 1f02 0429 0f60 3602  .public....).`6.
40 0100 0201 0030 1130 0f06 0a2b 0601 0201  .....0.0...+....
50 0202 0103 0502 0118 7465 7200  .....ter.

```

```

Frame 25 (95 on wire, 95 captured)
  Arrival Time: Feb 6, 1998 13:53:05.4451
  Time delta from previous packet: 0.000382 seconds
  Frame Number: 25
  Packet Length: 95 bytes
  Capture Length: 95 bytes
Ethernet II
  Destination: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)

```

```

Source: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Type: IP (0x0800)
Internet Protocol
Version: 4
Header length: 20 bytes
Differentiated Services Field: 0x00 (DSCP 0x00: Default)
    0000 00.. = Differentiated Services Codepoint: Default (0x00)
    .... ..00 = Currently Unused: 0
Total Length: 81
Identification: 0x0212
Flags: 0x00
    .0.. = Don't fragment: Not set
    ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 64
Protocol: UDP (0x11)
Header checksum: 0x6335 (correct)
Source: 192.168.202.2 (192.168.202.2)
Destination: 192.168.202.1 (192.168.202.1)

```

```

User Datagram Protocol
Source port: 1025 (1025)
Destination port: 161 (161)
Length: 61
Checksum: 0x36ba

```

Simple Network Management Protocol

```

Version: 1
Community: public
PDU type: GET-NEXT
Request Id: 0x290f6037
Error Status: NO ERROR
Error Index: 0
Object identifier 1: 1.3.6.1.2.1.2.2.1.3.5 (IF-MIB::ifType.5)
Value: NULL

```

```

0  0050 7343 bbf0 004f 4e00 13c9 0800 4500  .PsC...ON.....E.
10 0051 0212 0000 4011 6335 c0a8 ca02 c0a8  .Q....@.c5.....
20 ca01 0401 00a1 003d 36ba 3082 0031 0201  .....=6.0..1..
30 0004 0670 7562 6c69 63a1 8200 2202 0429  ...public..."..
40 0f60 3702 0100 0201 0030 8200 1230 8200  .`7.....0...0..
50 0e06 0a2b 0601 0201 0202 0103 0505 00    ...+.....

```

Frame 9 (93 on wire, 93 captured)

```

Arrival Time: Feb 6, 1998 13:53:05.4573
Time delta from previous packet: 0.012218 seconds
Frame Number: 26
Packet Length: 93 bytes
Capture Length: 93 bytes

```

Ethernet II

```

Destination: 00:4f:4e:00:13:c9 (00:4f:4e:00:13:c9)
Source: 00:50:73:43:bb:f0 (00:50:73:43:bb:f0)
Type: IP (0x0800)

```

Internet Protocol

```

Version: 4
Header length: 20 bytes

```

```

Differentiated Services Field: 0x00 (DSCP 0x00: Default)
  0000 00.. = Differentiated Services Codepoint: Default (0x00)
  .... ..00 = Currently Unused: 0
Total Length: 75
Identification: 0x01f4
Flags: 0x00
  .0.. = Don't fragment: Not set
  ..0. = More fragments: Not set
Fragment offset: 0
Time to live: 255
Protocol: UDP (0x11)
Header checksum: 0xa458 (correct)
Source: 192.168.202.1 (192.168.202.1)
Destination: 192.168.202.2 (192.168.202.2)
User Datagram Protocol
  Source port: 161 (161)
  Destination port: 1025 (1025)
  Length: 55
  Checksum: 0xe348
Simple Network Management Protocol
  Version: 1
  Community: public
  PDU type: RESPONSE
  Request Id: 0x290f6037
  Error Status: NO ERROR
  Error Index: 0
  Object identifier 1: 1.3.6.1.2.1.2.2.1.4.1 (IF-MIB::ifMtu.1)
  Value: 1500

  0  004f 4e00 13c9 0050 7343 bbf0 0800 4500  .ON....PsC....E.
 10 004b 01f4 0000 ff11 a458 c0a8 ca01 c0a8  .K.....X.....
 20 ca02 00a1 0401 0037 e348 302d 0201 0004  ....7.H0-....
 30 0670 7562 6c69 63a2 2002 0429 0f60 3702  .public. ..).`7.
 40 0100 0201 0030 1230 1006 0a2b 0601 0201  ....0.0...+....
 50 0202 0104 0102 0205 dc65 7200 43      .....er.C

```

3) Operación Traversal de todas las variables MIB debajo de system

```
# snmpwalk 192.168.202.1 public system
```

```
system.sysDescr.0 = Cisco Internetwork Operating System Software
```

```
IOS (tm) 1600 Software (C1600-NOSY-M), Version 12.0(4)T,  RELEASE SOFTWARE (fc1)
```

```
Copyright (c) 1986-1999 by cisco Systems, Inc.
```

```
Compiled Wed 28-Apr-99 17:40 by kpma
```

```
system.sysObjectID.0 = OID: enterprises.9.1.113
```

```
system.sysUpTime.0 = Timeticks: (356574) 0:59:25.74
```

```
system.sysContact.0 =
system.sysName.0 = R02.Edenor.com
system.sysLocation.0 =
system.sysServices.0 = 78
system.sysORLastChange.0 = Timeticks: (0) 0:00:00.00
```

4) Operación Traversal de todas las variables MIB debajo de interfaces

```
# snmpwalk 192.168.202.1 public interfaces
```

```
interfaces.ifNumber.0 = 4

interfaces.ifTable.ifEntry.ifIndex.1 = 1
interfaces.ifTable.ifEntry.ifIndex.2 = 2
interfaces.ifTable.ifEntry.ifIndex.3 = 3
interfaces.ifTable.ifEntry.ifIndex.5 = 5
interfaces.ifTable.ifEntry.ifDescr.1 = Ethernet0
interfaces.ifTable.ifEntry.ifDescr.2 = Serial0
interfaces.ifTable.ifEntry.ifDescr.3 = Null0
interfaces.ifTable.ifEntry.ifDescr.5 = Loopback0
interfaces.ifTable.ifEntry.ifType.1 = ethernetCsmacd(6)
interfaces.ifTable.ifEntry.ifType.2 = propPointToPointSerial(22)
interfaces.ifTable.ifEntry.ifType.3 = other(1)
interfaces.ifTable.ifEntry.ifType.5 = softwareLoopback(24)
interfaces.ifTable.ifEntry.ifMtu.1 = 1500
interfaces.ifTable.ifEntry.ifMtu.2 = 1500
interfaces.ifTable.ifEntry.ifMtu.3 = 1500
interfaces.ifTable.ifEntry.ifMtu.5 = 1514
interfaces.ifTable.ifEntry.ifSpeed.1 = Gauge: 10000000
interfaces.ifTable.ifEntry.ifSpeed.2 = Gauge: 1544000
interfaces.ifTable.ifEntry.ifSpeed.3 = Gauge: 4294967295
interfaces.ifTable.ifEntry.ifSpeed.5 = Gauge: 4294967295
interfaces.ifTable.ifEntry.ifPhysAddress.1 = 0:50:73:43:bb:f0
interfaces.ifTable.ifEntry.ifPhysAddress.2 =
interfaces.ifTable.ifEntry.ifPhysAddress.3 =
interfaces.ifTable.ifEntry.ifPhysAddress.5 =
interfaces.ifTable.ifEntry.ifAdminStatus.1 = up(1)
interfaces.ifTable.ifEntry.ifAdminStatus.2 = up(1)
interfaces.ifTable.ifEntry.ifAdminStatus.3 = up(1)
interfaces.ifTable.ifEntry.ifAdminStatus.5 = up(1)
interfaces.ifTable.ifEntry.ifOperStatus.1 = up(1)
interfaces.ifTable.ifEntry.ifOperStatus.2 = up(1)
interfaces.ifTable.ifEntry.ifOperStatus.3 = up(1)
interfaces.ifTable.ifEntry.ifOperStatus.5 = up(1)
interfaces.ifTable.ifEntry.ifLastChange.1 = Timeticks: (3373) 0:00:33.73
interfaces.ifTable.ifEntry.ifLastChange.2 = Timeticks: (3373) 0:00:33.73
interfaces.ifTable.ifEntry.ifLastChange.3 = Timeticks: (0) 0:00:00.00
interfaces.ifTable.ifEntry.ifLastChange.5 = Timeticks: (0) 0:00:00.00
interfaces.ifTable.ifEntry.ifInOctets.1 = 21682
interfaces.ifTable.ifEntry.ifInOctets.2 = 75196
interfaces.ifTable.ifEntry.ifInOctets.3 = 0
```

```
interfaces.ifTable.ifEntry.ifInOctets.5 = 0
interfaces.ifTable.ifEntry.ifInUcastPkts.1 = 222
interfaces.ifTable.ifEntry.ifInUcastPkts.2 = 765
interfaces.ifTable.ifEntry.ifInUcastPkts.3 = 0
interfaces.ifTable.ifEntry.ifInUcastPkts.5 = 0
interfaces.ifTable.ifEntry.ifInNUcastPkts.1 = 7
interfaces.ifTable.ifEntry.ifInNUcastPkts.2 = 416
interfaces.ifTable.ifEntry.ifInNUcastPkts.3 = 0
interfaces.ifTable.ifEntry.ifInNUcastPkts.5 = 0
interfaces.ifTable.ifEntry.ifInDiscards.1 = 0
interfaces.ifTable.ifEntry.ifInDiscards.2 = 0
interfaces.ifTable.ifEntry.ifInDiscards.3 = 0
interfaces.ifTable.ifEntry.ifInDiscards.5 = 0
interfaces.ifTable.ifEntry.ifInErrors.1 = 0
interfaces.ifTable.ifEntry.ifInErrors.2 = 3
interfaces.ifTable.ifEntry.ifInErrors.3 = 0
interfaces.ifTable.ifEntry.ifInErrors.5 = 0
interfaces.ifTable.ifEntry.ifInUnknownProtos.1 = 0
interfaces.ifTable.ifEntry.ifInUnknownProtos.2 = 0
interfaces.ifTable.ifEntry.ifInUnknownProtos.3 = 0
interfaces.ifTable.ifEntry.ifInUnknownProtos.5 = 0
interfaces.ifTable.ifEntry.ifOutOctets.1 = 65775
interfaces.ifTable.ifEntry.ifOutOctets.2 = 77184
interfaces.ifTable.ifEntry.ifOutOctets.3 = 0
interfaces.ifTable.ifEntry.ifOutOctets.5 = 0
interfaces.ifTable.ifEntry.ifOutUcastPkts.1 = 602
interfaces.ifTable.ifEntry.ifOutUcastPkts.2 = 770
interfaces.ifTable.ifEntry.ifOutUcastPkts.3 = 0
interfaces.ifTable.ifEntry.ifOutUcastPkts.5 = 4
interfaces.ifTable.ifEntry.ifOutNUcastPkts.1 = 73
interfaces.ifTable.ifEntry.ifOutNUcastPkts.2 = 420
interfaces.ifTable.ifEntry.ifOutNUcastPkts.3 = 0
interfaces.ifTable.ifEntry.ifOutNUcastPkts.5 = 0
interfaces.ifTable.ifEntry.ifOutDiscards.1 = 0
interfaces.ifTable.ifEntry.ifOutDiscards.2 = 0
interfaces.ifTable.ifEntry.ifOutDiscards.3 = 0
interfaces.ifTable.ifEntry.ifOutDiscards.5 = 0
interfaces.ifTable.ifEntry.ifOutErrors.1 = 0
interfaces.ifTable.ifEntry.ifOutErrors.2 = 0
interfaces.ifTable.ifEntry.ifOutErrors.3 = 0
interfaces.ifTable.ifEntry.ifOutErrors.5 = 0
interfaces.ifTable.ifEntry.ifOutQLen.1 = Gauge: 0
interfaces.ifTable.ifEntry.ifOutQLen.2 = Gauge: 0
interfaces.ifTable.ifEntry.ifOutQLen.3 = Gauge: 0
interfaces.ifTable.ifEntry.ifOutQLen.5 = Gauge: 0
interfaces.ifTable.ifEntry.ifSpecific.1 = OID: .ccitt.nullOID
interfaces.ifTable.ifEntry.ifSpecific.2 = OID: .ccitt.nullOID
interfaces.ifTable.ifEntry.ifSpecific.3 = OID: .ccitt.nullOID
interfaces.ifTable.ifEntry.ifSpecific.5 = OID: .ccitt.nullOID
```

5) Operación Traversal de todas las variables MIB debajo de ip

```

# snmpwalk 192.168.202.1 public ip
ip.ipForwarding.0 = forwarding(1)
ip.ipDefaultTTL.0 = 255
ip.ipInReceives.0 = 1044
ip.ipInHdrErrors.0 = 0
ip.ipInAddrErrors.0 = 0
ip.ipForwDatagrams.0 = 0
ip.ipInUnknownProtos.0 = 0
ip.ipInDiscards.0 = 0
ip.ipInDelivers.0 = 1046
ip.ipOutRequests.0 = 1063
ip.ipOutDiscards.0 = 16
ip.ipOutNoRoutes.0 = 4
ip.ipReasmTimeout.0 = 30
ip.ipReasmReqds.0 = 0
ip.ipReasmOKs.0 = 0
ip.ipReasmFails.0 = 0
ip.ipFragOKs.0 = 0
ip.ipFragFails.0 = 0
ip.ipFragCreates.0 = 0
ip.ipAddrTable.ipAddrEntry.ipAdEntAddr.10.2.0.1 = IPAddress: 10.2.0.1
ip.ipAddrTable.ipAddrEntry.ipAdEntAddr.192.168.202.1 = IPAddress: 192.168.202.1
ip.ipAddrTable.ipAddrEntry.ipAdEntAddr.192.168.212.2 = IPAddress: 192.168.212.2
ip.ipAddrTable.ipAddrEntry.ipAdEntIfIndex.10.2.0.1 = 5
ip.ipAddrTable.ipAddrEntry.ipAdEntIfIndex.192.168.202.1 = 1
ip.ipAddrTable.ipAddrEntry.ipAdEntIfIndex.192.168.212.2 = 2
ip.ipAddrTable.ipAddrEntry.ipAdEntNetMask.10.2.0.1 = IPAddress: 255.255.0.0
ip.ipAddrTable.ipAddrEntry.ipAdEntNetMask.192.168.202.1 = IPAddress: 255.255.255.0
ip.ipAddrTable.ipAddrEntry.ipAdEntNetMask.192.168.212.2 = IPAddress: 255.255.255.0
ip.ipAddrTable.ipAddrEntry.ipAdEntBcastAddr.10.2.0.1 = 1
ip.ipAddrTable.ipAddrEntry.ipAdEntBcastAddr.192.168.202.1 = 1
ip.ipAddrTable.ipAddrEntry.ipAdEntBcastAddr.192.168.212.2 = 1
ip.ipAddrTable.ipAddrEntry.ipAdEntReasmMaxSize.10.2.0.1 = 18024
ip.ipAddrTable.ipAddrEntry.ipAdEntReasmMaxSize.192.168.202.1 = 18024
ip.ipAddrTable.ipAddrEntry.ipAdEntReasmMaxSize.192.168.212.2 = 18024
ip.ipRouteTable.ipRouteEntry.ipRouteDest.0.0.0.0 = IPAddress: 0.0.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.10.1.0.0 = IPAddress: 10.1.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.10.2.0.0 = IPAddress: 10.2.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.10.3.0.0 = IPAddress: 10.3.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.192.168.201.0 = IPAddress: 192.168.201.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.192.168.202.0 = IPAddress: 192.168.202.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.192.168.203.0 = IPAddress: 192.168.203.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.192.168.211.0 = IPAddress: 192.168.211.0
ip.ipRouteTable.ipRouteEntry.ipRouteDest.192.168.212.0 = IPAddress: 192.168.212.0
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.0.0.0.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.10.1.0.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.10.2.0.0 = 5
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.10.3.0.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.192.168.201.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.192.168.202.0 = 1
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.192.168.203.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.192.168.211.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteIfIndex.192.168.212.0 = 2
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.0.0.0.0 = 0

```

```
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.10.1.0.0 = 2297856
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.10.2.0.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.10.3.0.0 = 2809856
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.192.168.201.0 = 2195456
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.192.168.202.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.192.168.203.0 = 2707456
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.192.168.211.0 = 2681856
ip.ipRouteTable.ipRouteEntry.ipRouteMetric1.192.168.212.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.0.0.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.10.1.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.10.2.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.10.3.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.192.168.201.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.192.168.202.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.192.168.203.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.192.168.211.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric2.192.168.212.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.0.0.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.10.1.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.10.2.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.10.3.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.192.168.201.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.192.168.202.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.192.168.203.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.192.168.211.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric3.192.168.212.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.0.0.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.10.1.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.10.2.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.10.3.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.192.168.201.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.192.168.202.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.192.168.203.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.192.168.211.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric4.192.168.212.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.0.0.0.0 = IPAddress: 192.168.202.3
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.10.1.0.0 = IPAddress: 192.168.212.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.10.2.0.0 = IPAddress: 10.2.0.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.10.3.0.0 = IPAddress: 192.168.212.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.192.168.201.0 = IPAddress:
192.168.212.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.192.168.202.0 = IPAddress:
192.168.202.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.192.168.203.0 = IPAddress:
192.168.212.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.192.168.211.0 = IPAddress:
192.168.212.1
ip.ipRouteTable.ipRouteEntry.ipRouteNextHop.192.168.212.0 = IPAddress:
192.168.212.2
ip.ipRouteTable.ipRouteEntry.ipRouteType.0.0.0.0 = indirect(4)
ip.ipRouteTable.ipRouteEntry.ipRouteType.10.1.0.0 = indirect(4)
ip.ipRouteTable.ipRouteEntry.ipRouteType.10.2.0.0 = direct(3)
ip.ipRouteTable.ipRouteEntry.ipRouteType.10.3.0.0 = indirect(4)
ip.ipRouteTable.ipRouteEntry.ipRouteType.192.168.201.0 = indirect(4)
```

```

ip.ipRouteTable.ipRouteEntry.ipRouteType.192.168.202.0 = direct(3)
ip.ipRouteTable.ipRouteEntry.ipRouteType.192.168.203.0 = indirect(4)
ip.ipRouteTable.ipRouteEntry.ipRouteType.192.168.211.0 = indirect(4)
ip.ipRouteTable.ipRouteEntry.ipRouteType.192.168.212.0 = direct(3)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.0.0.0.0 = local(2)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.10.1.0.0 = ciscoIgrp(11)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.10.2.0.0 = local(2)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.10.3.0.0 = ciscoIgrp(11)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.192.168.201.0 = ciscoIgrp(11)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.192.168.202.0 = local(2)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.192.168.203.0 = ciscoIgrp(11)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.192.168.211.0 = ciscoIgrp(11)
ip.ipRouteTable.ipRouteEntry.ipRouteProto.192.168.212.0 = local(2)
ip.ipRouteTable.ipRouteEntry.ipRouteAge.0.0.0.0 = 22
ip.ipRouteTable.ipRouteEntry.ipRouteAge.10.1.0.0 = 3561
ip.ipRouteTable.ipRouteEntry.ipRouteAge.10.2.0.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteAge.10.3.0.0 = 3561
ip.ipRouteTable.ipRouteEntry.ipRouteAge.192.168.201.0 = 3562
ip.ipRouteTable.ipRouteEntry.ipRouteAge.192.168.202.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteAge.192.168.203.0 = 3562
ip.ipRouteTable.ipRouteEntry.ipRouteAge.192.168.211.0 = 3562
ip.ipRouteTable.ipRouteEntry.ipRouteAge.192.168.212.0 = 0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.0.0.0.0 = IPAddress: 0.0.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.10.1.0.0 = IPAddress: 255.255.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.10.2.0.0 = IPAddress: 255.255.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.10.3.0.0 = IPAddress: 255.255.0.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.192.168.201.0 = IPAddress: 255.255.255.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.192.168.202.0 = IPAddress: 255.255.255.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.192.168.203.0 = IPAddress: 255.255.255.0
ip.ipRouteTable.ipRouteEntry.ipRouteMask.192.168.211.0 = IPAddress: 255.255.255.252
ip.ipRouteTable.ipRouteEntry.ipRouteMask.192.168.212.0 = IPAddress: 255.255.255.0
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.0.0.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.10.1.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.10.2.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.10.3.0.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.192.168.201.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.192.168.202.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.192.168.203.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.192.168.211.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteMetric5.192.168.212.0 = -1
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.0.0.0.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.10.1.0.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.10.2.0.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.10.3.0.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.192.168.201.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.192.168.202.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.192.168.203.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.192.168.211.0 = OID: .ccitt.nullOID
ip.ipRouteTable.ipRouteEntry.ipRouteInfo.192.168.212.0 = OID: .ccitt.nullOID
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaIfIndex.1.192.168.202.1 = 1
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaIfIndex.1.192.168.202.2 = 1
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaPhysAddress.1.192.168.202.1 =
0:50:73:43:bb:f0

```

```

ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaPhysAddress.1.192.168.202.2 =
0:4f:4e:0:13:c9
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaNetAddress.1.192.168.202.1 =
IpAddress: 192.168.202.1
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaNetAddress.1.192.168.202.2 =
IpAddress: 192.168.202.2
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaType.1.192.168.202.1 = other(1)
ip.ipNetToMediaTable.ipNetToMediaEntry.ipNetToMediaType.1.192.168.202.2 =
dynamic(3)
ip.ipRoutingDiscards.0 = 0

```

6) Operación Traversal de todas las variables MIB debajo de tcp

```

# snmpwalk 192.168.202.1 public tcp
tcp.tcpRtoAlgorithm.0 = vanj(4)
tcp.tcpRtoMin.0 = 300 milliseconds
tcp.tcpRtoMax.0 = 60000 milliseconds
tcp.tcpMaxConn.0 = -1
tcp.tcpActiveOpens.0 = 0
tcp.tcpPassiveOpens.0 = 0
tcp.tcpAttemptFails.0 = 0
tcp.tcpEstabResets.0 = 0
tcp.tcpCurrEstab.0 = Gauge: 0
tcp.tcpInSegs.0 = 0
tcp.tcpOutSegs.0 = 0
tcp.tcpRetransSegs.0 = 0
tcp.tcpInErrs.0 = 0
tcp.tcpOutRsts.0 = 0

```

7) Operación Traversal de todas las variables MIB debajo de udp

```

# snmpwalk 192.168.202.1 public udp
udp.udpInDatagrams.0 = 446
udp.udpNoPorts.0 = 0
udp.udpInErrors.0 = 0
udp.udpOutDatagrams.0 = 460
udp.udpTable.udpEntry.udpLocalAddress.10.2.0.1.67 = IpAddress: 10.2.0.1
udp.udpTable.udpEntry.udpLocalAddress.192.168.202.1.161 = IpAddress: 192.168.202.1
udp.udpTable.udpEntry.udpLocalAddress.192.168.202.1.3170 = IpAddress: 192.168.202.1
udp.udpTable.udpEntry.udpLocalPort.10.2.0.1.67 = 67
udp.udpTable.udpEntry.udpLocalPort.192.168.202.1.161 = 161
udp.udpTable.udpEntry.udpLocalPort.192.168.202.1.3170 = 3170

```

8) Operación Traversal de todas las variables MIB debajo de snmp

```

# snmpwalk 192.168.202.1 public snmp
snmp.snmpInPkts.0 = 457

```

```
snmp.snmpOutPkts.0 = 457
snmp.snmpInBadVersions.0 = 0
snmp.snmpInBadCommunityNames.0 = 0
snmp.snmpInBadCommunityUses.0 = 0
snmp.snmpInASNParseErrs.0 = 0
snmp.snmpInTooBigs.0 = 0
snmp.snmpInNoSuchNames.0 = 0
snmp.snmpInBadValues.0 = 0
snmp.snmpInReadOnlys.0 = 0
snmp.snmpInGenErrs.0 = 0
snmp.snmpInTotalReqVars.0 = 0
snmp.snmpInTotalSetVars.0 = 0
snmp.snmpInGetRequests.0 = 0
snmp.snmpInGetNexts.0 = 471
snmp.snmpInSetRequests.0 = 0
snmp.snmpInGetResponses.0 = 0
snmp.snmpInTraps.0 = 0
snmp.snmpOutTooBigs.0 = 0
snmp.snmpOutNoSuchNames.0 = 0
snmp.snmpOutBadValues.0 = 0
snmp.snmpOutGenErrs.0 = 0
snmp.snmpOutGetRequests.0 = 0
snmp.snmpOutGetNexts.0 = 0
snmp.snmpOutSetRequests.0 = 0
snmp.snmpOutGetResponses.0 = 481
snmp.snmpOutTraps.0 = 0
snmp.snmpEnableAuthenTraps.0 = disabled(2)
snmp.snmpSilentDrops.0 = 0
snmp.snmpProxyDrops.0 = 0
```