Laboratório 1 - Gerência de redes

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Instalação

Instalando o pacote

```
root@xxxx-370E4K:/home/xxxx# apt-get install snmp snmpd libsnmp-base libsnmp-base libsnmp-dev snmp-mibs-downloader tkmib -y
Lendo listas de pacotes... Pronto
Construindo árvore de dependências
Lendo informação de estado... Pronto
```

Iniciando o snmpconf

```
root@xxxx-370E4K:/home/xxxx# snmpconf

The following installed configuration files were found:

    1:  /etc/snmp/snmp.conf
    2:  /etc/snmp/snmpd.conf

Would you like me to read them in?  Their content will be merged with the
output files created by this session.

Valid answer examples: "all", "none","3","1,2,5"

Read in which (default = all): none
```

Criando arquivo de configuração do agente

```
I can create the following types of configuration files for you.
Select the file type you wish to create:
(you can create more than one as you run this program)

    1:  snmpd.conf
    2:  snmp.conf

Other options: quit

Select File: 1
```

Configurando o agente snmp
Configuração da opção system

```
Select from:

   1:  The [typically physical] location of the system.
   2:  The contact information for the administrator
   3:  The proper value for the sysServices object.

Other options: finished, list

Select section: 1

Configuring: syslocation
Description:
  The [typically physical] location of the system.
    Note that setting this value here means that when trying to
    perform an snmp SET operation to the sysLocation.0 variable will make
    the agent return the "notWritable" error code.  IE, including
    this token in the snmpd.conf file will disable write access to
    the variable.
    arguments:  location_string

The location of the system: teste

Finished Output: syslocation  teste
```

```
Select section: 2

Configuring: syscontact
Description:
  The contact information for the administrator
    Note that setting this value here means that when trying to
    perform an snmp SET operation to the sysContact.0 variable will make
    the agent return the "notWritable" error code.  IE, including
    this token in the snmpd.conf file will disable write access to
    the variable.
    arguments:  contact_string

The contact information: Roberto Coutinho

Finished Output: syscontact  "Roberto Coutinho"
```

```
Select section: 3

Configuring: sysservices
Description:
  The proper value for the sysServices object.
    arguments:  sysservices_number

does this host offer physical services (eg, like a repeater) [answer 0 or 1]: 0
does this host offer datalink/subnetwork services (eg, like a bridge): 0
does this host offer internet services (eg, supports IP): 1
does this host offer end-to-end services (eg, supports TCP): 1
does this host offer application services (eg, supports SMTP): 0

Finished Output: sysservices 12
```

Configurando Access Control Setup

```
Select section: 5

Section: Access Control Setup
Description:
  This section defines who is allowed to talk to your running
  snmp agent.

Select from:

    1:  a SNMPv3 read-write user
    2:  a SNMPv3 read-only user
    3:  a SNMPv1/SNMPv2c read-only access community name
    4:  a SNMPv1/SNMPv2c read-write access community name

Other options: finished, list

Select section: 4

Configuring: rwcommunity
Description:
  a SNMPv1/SNMPv2c read-write access community name
    arguments:  community [default|hostname|network/bits] [oid]

Enter the community name to add read-write access for: testepublic
The hostname or network address to accept this community name from [RETURN for all]:
The OID that this community should be restricted to [RETURN for no-restriction]:

Finished Output: rwcommunity  testepublic
```

Protegendo o arquivo contra exclusão

```
root@xxxx-370E4K:/home/xxxx# mv /etc/snmp/snmpd.conf /etc/snmp/snmpd.conf.old
root@xxxx-370E4K:/home/xxxx# mv snmpd.conf /etc/snmp/
root@xxxx-370E4K:/home/xxxx# chmod 600 etc/snmp/snmpd.conf
chmod: não foi possível acessar 'etc/snmp/snmpd.conf': Arquivo ou diretório inexistente
root@xxxx-370E4K:/home/xxxx# chmod 600 /etc/snmp/snmpd.conf
root@xxxx-370E4K:/home/xxxx# chown root.root /etc/snmp/snmpd.conf
root@xxxx-370E4K:/home/xxxx# nano /etc/snmp/snmp.conf
```

Verificando a instalação

```
root@xxxx-370E4K:/home/xxxx# net-snmp-config --default-mibdirs
/root/.snmp/mibs:/usr/share/snmp/mibs:/usr/share/snmp/mibs/iana:/usr/share/snmp/mibs/ietf
root@xxxx-370E4K:/home/xxxx#
```

```
root@xxxx-370E4K:/home/xxxx# net-snmp-config --snmpconfpath
/etc/snmp:/usr/share/snmp:/usr/lib/x86_64-linux-gnu/snmp:/root/.snmp:/var/lib/snmp
```

```
root@xxxx-370E4K:/home/xxxx# snmpwalk -c testepublic -v 2c localhost | head
SNMPv2-MIB::sysDescr.0 = STRING: Linux xxxx-370E4K 5.15.0-60-generic #66~20.04.1-Ubuntu SMP Wed Jan 25 0
9:41:30 UTC 2023 x86_64
SNMPv2-MIB::sysObjectID.0 = OID: NET-SNMP-MIB::netSnmpAgentOIDs.10
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (21219) 0:03:32.19
SNMPv2-MIB::sysContact.0 = STRING: "Roberto Coutinho"
SNMPv2-MIB::sysName.0 = STRING: xxxx-370E4K
SNMPv2-MIB::sysLocation.0 = STRING: teste
SNMPv2-MIB::sysServices.0 = INTEGER: 12
SNMPv2-MIB::sysORLastChange.0 = Timeticks: (1) 0:00:00.01
SNMPv2-MIB::sysORID.1 = OID: SNMP-FRAMEWORK-MIB::snmpFrameworkMIBCompliance
SNMPv2-MIB::sysORID.2 = OID: SNMP-MPD-MIB::snmpMPDCompliance
root@xxxx-370E4K:/home/xxxx#
```

Atividade

Questão 1
valores de contato

```
SNMPv2-MIB::sysContact = No Such Instance currently exists at this OID
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost SNMPv2-MIB::sysContact.0
SNMPv2-MIB::sysContact.0 = STRING: "Roberto Coutinho"
```

Localização

```
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost SNMPv2-MIB::sysLocation
SNMPv2-MIB::sysLocation = No Such Instance currently exists at this OID
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost SNMPv2-MIB::sysLocation.0
SNMPv2-MIB::sysLocation.0 = STRING: teste
```

Número de interfaces de rede

```
snmpget: Unknown host (poste) (Resource temporarily unavailable)
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost IF-MIB::ifNumber
IF-MIB::ifNumber = No Such Instance currently exists at this OID
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost IF-MIB::ifNumber.0
IF-MIB::ifNumber.0 = INTEGER: 3
```

tempo de uso do equipamento

```
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost SNMPv2-MIB::sysUpTime
SNMPv2-MIB::sysUpTime = No Such Instance currently exists at this OID
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost SNMPv2-MIB::sysUpTime.0
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (156486) 0:26:04.86
```

descrição do sistema

```
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost system.sysDescr
SNMPv2-MIB::sysDescr = No Such Instance currently exists at this OID
root@xxxx-370E4K:/home/xxxx# snmpget -v 2c -c testepublic localhost system.sysDescr.0
SNMPv2-MIB::sysDescr.0 = STRING: Linux xxxx-370E4K 5.15.0-60-generic #66~20.04.1-Ubuntu SMP Wed Jan 25 09:41:30 UTC 2023 x86_64
```

Questão 2
Descrição

```
root@xxxx-370E4K:/home/xxxx# snmpgetnext -v 2c -c testepublic localhost IF-MIB::ifDescr.1
IF-MIB::ifDescr.2 = STRING: Realtek Semiconductor Co., Ltd. RTL810xE PCI Express Fast Ethernet controller
```

Tipo da interface

```
root@xxxx-370E4K:/home/xxxx# snmpgetnext -v 2c -c testepublic localhost IF-MIB::ifType.1
IF-MIB::ifType.2 = INTEGER: ethernetCsmacd(6)
```

Quantidade de bytes que entrou e saiu da interface

```
root@xxxx-370E4K:/home/xxxx# snmpgetnext -v 2c -c testepublic localhost IF-MIB::ifInOctets.1
IF-MIB::ifInOctets.2 = Counter32: 0
root@xxxx-370E4K:/home/xxxx# snmpgetnext -v 2c -c testepublic localhost IF-MIB::ifOutOctets.1
IF-MIB::ifOutOctets.2 = Counter32: 0
```

Questão 3

Tempo de uso

```
root@xxxx-370E4K:/home/xxxx# snmpwalk -v 2c -c testepublic localhost DISMAN-EVENT-MIB::sysUpTimeInstance
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (287273) 0:47:52.73
```

Descrição

```
root@xxxx-370E4K:/home/xxxx# snmpwalk -v 2c -c testepublic localhost IF-MIB::ifDescr
IF-MIB::ifDescr.1 = STRING: lo
IF-MIB::ifDescr.2 = STRING: Realtek Semiconductor Co., Ltd. RTL810xE PCI Express Fast Ethernet controller
IF-MIB::ifDescr.3 = STRING: Qualcomm Atheros QCA9565 / AR9565 Wireless Network Adapter
```

Tipo das interfaces

```
root@xxxx-370E4K:/home/xxxx# snmpwalk -v 2c -c testepublic localhost IF-MIB::ifType
IF-MIB::ifType.1 = INTEGER: softwareLoopback(24)
IF-MIB::ifType.2 = INTEGER: ethernetCsmacd(6)
IF-MIB::ifType.3 = INTEGER: ethernetCsmacd(6)
```

Status do administrador

```
root@xxxx-370E4K:/home/xxxx# snmpwalk -v 2c -c testepublic localhost IF-MIB::ifAdminStatus
IF-MIB::ifAdminStatus.1 = INTEGER: up(1)
IF-MIB::ifAdminStatus.2 = INTEGER: up(1)
IF-MIB::ifAdminStatus.3 = INTEGER: up(1)
```