

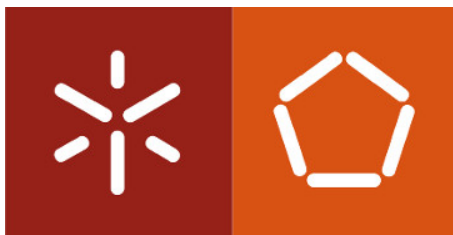
Gestão de Redes

Trabalho Prático 1

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a85367 Luís Lopes

Instalação e Configuração do Net-SNMP



Mestrado Integrado em Engenharia Informática
Universidade do Minho

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1 Introdução

Este trabalho foi proposto para a consolidação e familiarização dos alunos com o conteúdo leccionado nas aulas tanto teóricas com práticas, nomeadamente SNMP e MIBs.

2 Questões

2.1 Questão 1

Qual o valor e significado da instância do objecto com o OID lexicalmente a seguir a mib-2.2.2.1.1 da sua estação de trabalho?

As mibs, formadas por tabelas, contêm informações importantes do sistema. Com recurso ao pacote de software **SNMP** conseguimos percorrer os OIDs e encontrar valores interessantes. Para percorrer utilizamos o comando *snmpwalk*. Na seguinte figura podemos visualizar as interfaces do sistema como resposta do software ao percorrer a mib referida.

```
chico@chico-G551VW:~$ snmpwalk localhost mib-2.2.2.1.1
IF-MIB::ifIndex.1 = INTEGER: 1
IF-MIB::ifIndex.2 = INTEGER: 2
IF-MIB::ifIndex.3 = INTEGER: 3
```

Figura 1: Resposta ao comando *snmpwalk*

De forma a obtermos o valor seguinte ao indicado podemos utilizar o comando *snmpgetnext*. Na figura seguinte visualizamos o resultado do comando que corresponde ao index da coluna da interface 1.

```
chico@chico-G551VW:~$ snmpgetnext localhost mib-2.2.2.1.1
IF-MIB::ifIndex.1 = INTEGER: 1
```

Figura 2: Resposta ao comando *snmpgetnext*

2.2 Questão 2

Usando o SNMP é possível calcular o número de pacotes IP com algum tipo de erro e que eram destinados ao seu sistema?

Como referido na questão anterior, as mibs guardam informações e valores de importância sobre o sistema. Com o comando *snmpwalk* podemos aceder à tabela *ipInAddrErrors* com o OID **1.3.6.1.2.1.4.4**, descrita como [Global OID reference database] 'The number of input datagrams discarded due to errors in their IP headers, including bad checksums, version number mismatch, other format errors, time-to-live exceeded, errors discovered in processing their IP options, etc.'. Sucintamente podemos dizer que é possível.

```
chico@chico-G551VW:~$ snmpwalk localhost 1.3.6.1.2.1.4.4
IP-MIB::ipInHdrErrors.0 = Counter32: 0
```

Figura 3: Resposta ao comando *snmpwalk 1.3.6.1.2.1.4.4*

2.3 Questão 3

Quais os processos que estão a correr no seu sistema (utilize o SNMP para obter a resposta)?

A resposta a esta questão encontra-se no Anexo A. Este anexo corresponde à resposta do comando *snmpwalk* ao OID **1.3.6.1.2.1.25.4.2.1.1** que corresponde à tabela **hrSWRunTable**, que contém informação de todos os processos que estão a correr no momento de **refresh** do SNMP.

3 Conclusão

Este trabalho e toda a pesquisa envolvida para a realização do mesmo ajudaram na consolidação e melhor percepção do funcionamento do SNMP, da estruturação das mibs e como estas duas ferramentas aliadas se tornam em algo tão poderoso que nos pode informar à cerca de todos detalhes, processos e outros aspetos tanto interessantes e importante sobre os sistemas que utilizamos diariamente.

A Resposta ao comando *snmpwalk localhost* *.1.3.6.1.2.1.25.4.2.1.1*

```
HOST-RESOURCES-MIB::hrSWRunIndex.1 = INTEGER: 1
HOST-RESOURCES-MIB::hrSWRunIndex.2 = INTEGER: 2
HOST-RESOURCES-MIB::hrSWRunIndex.3 = INTEGER: 3
HOST-RESOURCES-MIB::hrSWRunIndex.4 = INTEGER: 4
HOST-RESOURCES-MIB::hrSWRunIndex.6 = INTEGER: 6
HOST-RESOURCES-MIB::hrSWRunIndex.7 = INTEGER: 7
HOST-RESOURCES-MIB::hrSWRunIndex.8 = INTEGER: 8
HOST-RESOURCES-MIB::hrSWRunIndex.9 = INTEGER: 9
HOST-RESOURCES-MIB::hrSWRunIndex.10 = INTEGER: 10
HOST-RESOURCES-MIB::hrSWRunIndex.11 = INTEGER: 11
HOST-RESOURCES-MIB::hrSWRunIndex.12 = INTEGER: 12
HOST-RESOURCES-MIB::hrSWRunIndex.13 = INTEGER: 13
HOST-RESOURCES-MIB::hrSWRunIndex.14 = INTEGER: 14
HOST-RESOURCES-MIB::hrSWRunIndex.15 = INTEGER: 15
HOST-RESOURCES-MIB::hrSWRunIndex.16 = INTEGER: 16
HOST-RESOURCES-MIB::hrSWRunIndex.17 = INTEGER: 17
HOST-RESOURCES-MIB::hrSWRunIndex.18 = INTEGER: 18
HOST-RESOURCES-MIB::hrSWRunIndex.20 = INTEGER: 20
HOST-RESOURCES-MIB::hrSWRunIndex.21 = INTEGER: 21
HOST-RESOURCES-MIB::hrSWRunIndex.22 = INTEGER: 22
HOST-RESOURCES-MIB::hrSWRunIndex.23 = INTEGER: 23
HOST-RESOURCES-MIB::hrSWRunIndex.24 = INTEGER: 24
HOST-RESOURCES-MIB::hrSWRunIndex.26 = INTEGER: 26
HOST-RESOURCES-MIB::hrSWRunIndex.27 = INTEGER: 27
HOST-RESOURCES-MIB::hrSWRunIndex.28 = INTEGER: 28
HOST-RESOURCES-MIB::hrSWRunIndex.29 = INTEGER: 29
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HOST-RESOURCES-MIB::hrSWRunIndex.34 = INTEGER: 34
HOST-RESOURCES-MIB::hrSWRunIndex.35 = INTEGER: 35
HOST-RESOURCES-MIB::hrSWRunIndex.36 = INTEGER: 36
HOST-RESOURCES-MIB::hrSWRunIndex.38 = INTEGER: 38
HOST-RESOURCES-MIB::hrSWRunIndex.39 = INTEGER: 39
HOST-RESOURCES-MIB::hrSWRunIndex.40 = INTEGER: 40
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HOST-RESOURCES-MIB::hrSWRunIndex.42 = INTEGER: 42
```

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 HOST-RESOURCES-MIB::hrSWRunIndex.235 = INTEGER: 235
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HOST-RESOURCES-MIB::hrSWRunIndex.1699 = INTEGER: 1699
HOST-RESOURCES-MIB::hrSWRunIndex.1705 = INTEGER: 1705
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HOST-RESOURCES-MIB::hrSWRunIndex.1748 = INTEGER: 1748
HOST-RESOURCES-MIB::hrSWRunIndex.1760 = INTEGER: 1760
HOST-RESOURCES-MIB::hrSWRunIndex.1768 = INTEGER: 1768
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HOST-RESOURCES-MIB::hrSWRunIndex.1774 = INTEGER: 1774
HOST-RESOURCES-MIB::hrSWRunIndex.1777 = INTEGER: 1777
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HOST-RESOURCES-MIB::hrSWRunIndex.1781 = INTEGER: 1781
HOST-RESOURCES-MIB::hrSWRunIndex.1782 = INTEGER: 1782
HOST-RESOURCES-MIB::hrSWRunIndex.1784 = INTEGER: 1784

```
HOST-RESOURCES-MIB::hrSWRunIndex.1786 = INTEGER: 1786
HOST-RESOURCES-MIB::hrSWRunIndex.1787 = INTEGER: 1787
HOST-RESOURCES-MIB::hrSWRunIndex.1795 = INTEGER: 1795
HOST-RESOURCES-MIB::hrSWRunIndex.1799 = INTEGER: 1799
HOST-RESOURCES-MIB::hrSWRunIndex.1800 = INTEGER: 1800
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HOST-RESOURCES-MIB::hrSWRunIndex.1811 = INTEGER: 1811
HOST-RESOURCES-MIB::hrSWRunIndex.1824 = INTEGER: 1824
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HOST-RESOURCES-MIB::hrSWRunIndex.1905 = INTEGER: 1905
HOST-RESOURCES-MIB::hrSWRunIndex.1909 = INTEGER: 1909
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HOST-RESOURCES-MIB::hrSWRunIndex.2989 = INTEGER: 2989
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HOST-RESOURCES-MIB::hrSWRunIndex.4075 = INTEGER: 4075
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```