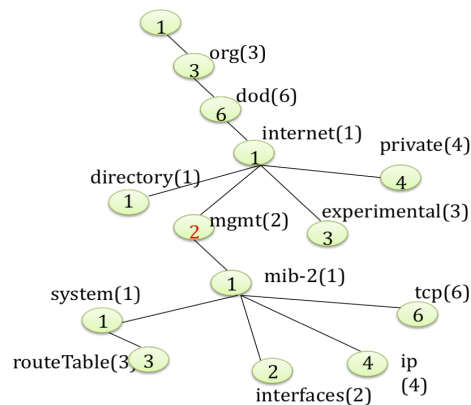


# Distributed Systems Unassessed Coursework: Management

Lecturer: M. Sloman

1. Explain why monitoring of the system is important for management
2. Explain functions of Get, Set, Trap and Inform messages in SNMP.  
How would you perform an operation to reset a device using SNMP?
3. Mib object naming



Dest(1)	NextAddr(2)
78.86.146.5	146.169.57.5
58.3.14.56	146.169.57.6
75.161.25.25	146.169.57.6
78.86.146.8	146.169.57.5
65.84.14.131	146.169.57.4
75.161.25.14	146.169.57.6

What object is named by 1.3.6.1.2.1.6

What is the OID for the ip mib

What is 1.3.6.1.2.1.1.3.2.58.3.14.56, 1.3.6.1.2.1.1.3.2.65.84.14.131,  
1.3.6.1.2.1.1.3.1.75.161.25.14

4. What is a policy and why is it useful for management
5. Why do policies reference domains

# Distributed Systems Unassessed Coursework Solution: Management

Lecturer: M. Sloman

1. In order to make management decisions, it is necessary to know the current state of the system which is determined by monitoring. Monitoring can determine if a component has failed, is likely to fail or if error thresholds have been exceeded. Monitored information may be reported to operators, logged for later analysis, used to generate events to indicate faults, new components arriving in the system or context changes etc.

2. Get Read a values of one or more named items

Set Write values to one or more items

Trap Notification from agent to manager

Inform Notification from agent to manager or manager to manager  
Acknowledged

The only way of performing an operation such as reset in SNMP is to use Set to write to a MIB value which effectively triggers the operation. Any required parameters must be prewritten.

3. 1.3.6.1.2.1.6 => tcp mib

ip mib => 1.3.6.1.2.1.4

1.3.6.1.2.1.1.3.2.58.3.14.56 => next address 146.169.57.6

1.3.6.1.2.1.1.3.2.65.84.14.131 => next address 146.169.57.4

1.3.6.1.2.1.1.3.1.75.161.25.14 => destination 75.161.25.14

4. A policy is a rule governing the choice in behaviour of the system. Authorisation policies define what a subject is permitted (or prohibited) to do a target and the condition which must evaluate to true for the policy to apply. Obligation policies are event-condition-action rules and specify actions to be performed on a target when the condition is true.

Policies are interpreted and can be changed dynamically without shutting down the system so can be used to define easily modified adaptation strategy for a system with reprogramming the system.

5. A domain groups a set of objects which have been explicitly grouped for management purposes eg to apply a common policy or partition management responsibility. A domain may contain nested subdomains. The members of the domain can be changed without modifying the policy

