WSN

by

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NETWORK MANAGEMENT REQUIREMENTS

1. Computer communication network consists of 3 components
   - physical devices: links, network nodes, terminals and servers
   - protocol: used to transport information efficiently
   - information

1. Reasons for management functions are manifold
   1. Many heterogeneous devices software entities that comprise the network
      - NM responsibility: determine when, where, and why the fault had occurred and how to restore these entities
   2. Optimization of system performance as a distributed system require NM to collaborate in the process
      - Example: congestion control through admission control
   3. NM functions can be used to gather and analyze the behavior of user interaction during network interface

TRADITIONAL NETWORK MANAGEMENT MODELS

1. Simple Network Management Protocol
   1. 3 Components: a network management system(NMS), managed elements, and agents
   2. NMS: Set of applications that monitor and/or control managed elements
   3. Agent
      - It can also set attributes within the agent
      - Collect store the state of the managed elements and translate this information into a form compatible with SNMP MIB
   4. Managed elements
      - Network devices that are managed
      - Collect and store management information in the MIB and provide access through SNMP to the MIBs
      - Examples: routers, switches, servers, and hosts.

- 5 types of messages or PDUs: Two deal with the reading terminal, another two handle terminal configuration, and the fifth is Trap, used to monitor events in the managed elements.
- Advantage of SNMP: simplicity and wide deployment