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Assignment-5

Functions of SNMP, MIB, RMON

SNMP

- Simple Network Management protocol
- protocol used to manage and monitor devices on a network, such as router, printer

Functions

Data collection: SNMP collects information from network devices like device performance & network usage and error rates

Device control: It allows administrator to send commands to network devices, enabling them to change configuration, reset devices or address errors

Notifications: SNMP can send alert to inform network administration of unusual or critical issue like high CPU usage.

Benefit: helps keep network running smoothly by allowing realtime monitoring & quick response to issue.

MIB

- Management Information Base
- It is a database or collection of information used by SNMP to manage network devices

Functions

- Structured Data Storage: Organises data about each network device from various vendors into standardised format
- Data definition: It defines each piece of information that can be moved/monitored - such as uptime / traffic level
- Interoperability: MIBs enable different devices from various vendors to communicate with SNMP system.
- Benefit: MIBs ensure that network management data is organised accessible & interpretable by any SNMP-compliant system

RMON

→ Remote Monitoring

→ is an extension of SNMP that enhances its monitoring capability, especially for larger network or remote segment

function

→ Extended Data Collection : RMON can monitor traffic pattern, errors & performance over time, providing more in-depth data

→ Event & Alarm management : It allows the automated threshold & alert based on network behaviour helping admin

→ Historical data : RMON stores historic performance data, enabling trend analysis to predict potential

→ Benefits - provide more detailed & proactive monitoring, especially helpful for maintaining stable network.