



## 3.0 Network Operations

**3.1** Given a scenario, use appropriate documentation and diagrams to manage the network.

- Diagram symbols
- Standard operating procedures/work instructions
- Logical vs. physical diagrams
- Rack diagrams
- Change management documentation
- Wiring and port locations
- IDF/MDF documentation
- Labeling
- Network configuration and performance baselines
- Inventory management

**3.2** Compare and contrast business continuity and disaster recovery concepts.

- **Availability concepts**
  - Fault tolerance
  - High availability
  - Load balancing
  - NIC teaming
  - Port aggregation
  - Clustering
- **Power management**
  - Battery backups/UPS
  - Power generators
  - Dual power supplies
  - Redundant circuits
- **Recovery**
  - Cold sites
  - Warm sites
  - Hot sites
- **Backups**
  - Full
  - Differential
  - Incremental
  - Snapshots
- **MTTR**
- **MTBF**
- **SLA requirements**

**3.3** Explain common scanning, monitoring and patching processes and summarize their expected outputs.

- **Processes**
  - Log reviewing
  - Port scanning
  - Vulnerability scanning
  - Patch management
    - Rollback
  - Reviewing baselines
  - Packet/traffic analysis
- **Event management**
  - Notifications
  - Alerts
  - SIEM
- **SNMP monitors**
  - MIB
- **Metrics**
  - Error rate
  - Utilization
  - Packet drops
  - Bandwidth/throughput

### 3.4 Given a scenario, use remote access methods.

- VPN
    - IPSec
    - SSL/TLS/DTLS
    - Site-to-site
    - Client-to-site
  - RDP
  - SSH
  - VNC
  - Telnet
  - HTTPS/management URL
  - Remote file access
    - FTP/FTPS
    - SFTP
    - TFTP
  - Out-of-band management
    - Modem
    - Console router
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### 3.5 Identify policies and best practices.

- Privileged user agreement
- Password policy
- On-boarding/off-boarding procedures
- Licensing restrictions
- International export controls
- Data loss prevention
- Remote access policies
- Incident response policies
- BYOD
- AUP
- NDA
- System life cycle
  - Asset disposal
- Safety procedures and policies