

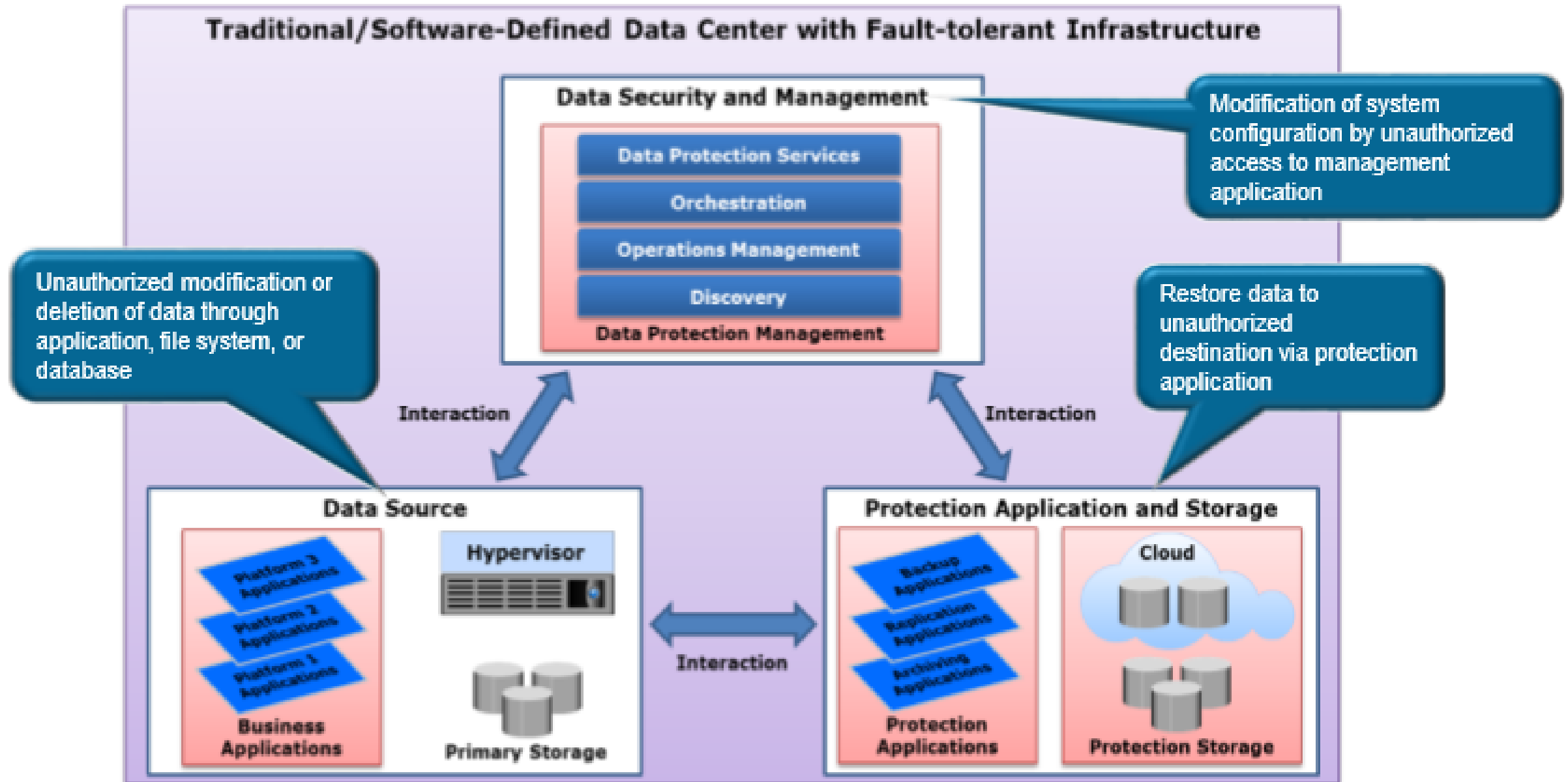
Data Protection and Management

Security

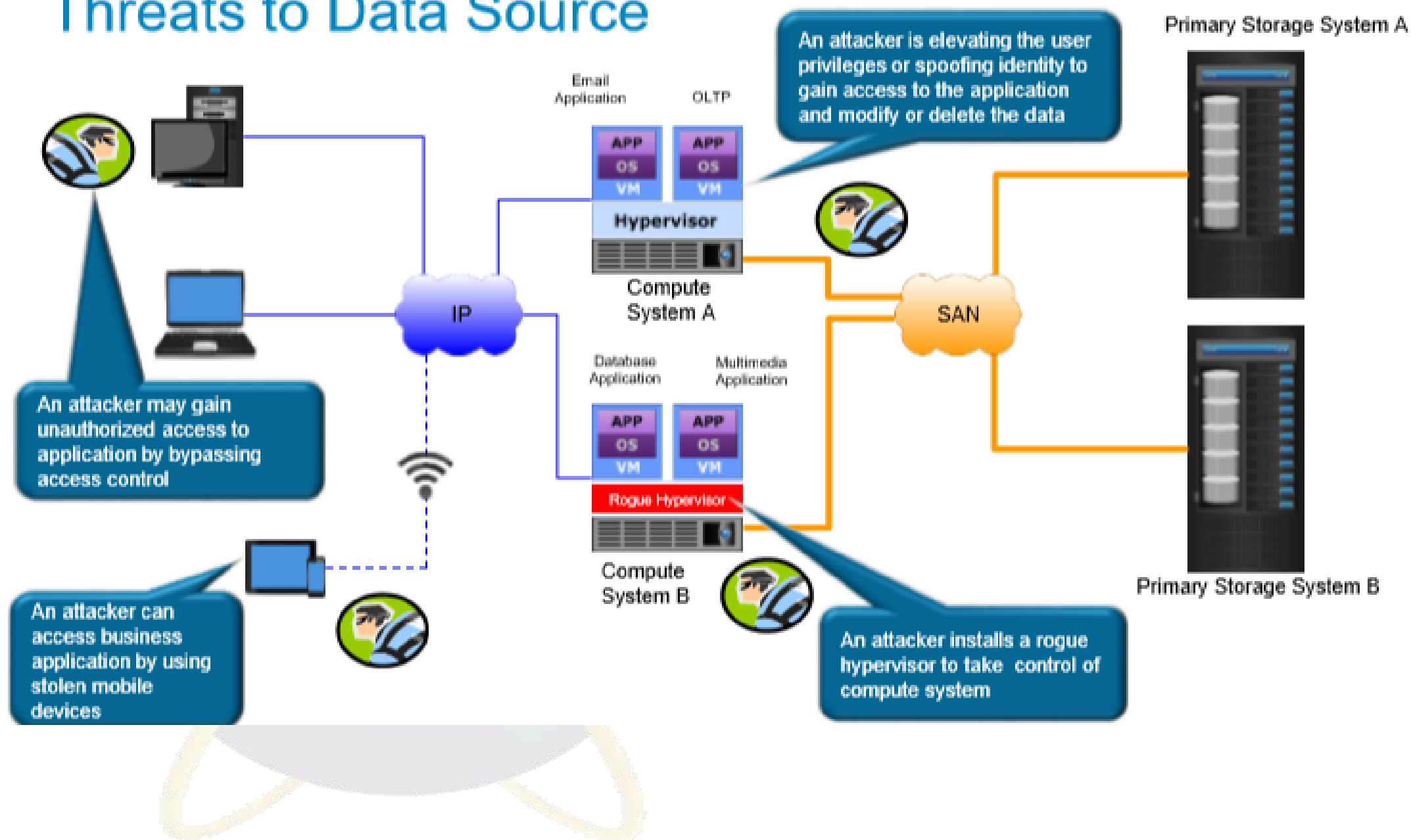


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Introduction to Security Threats

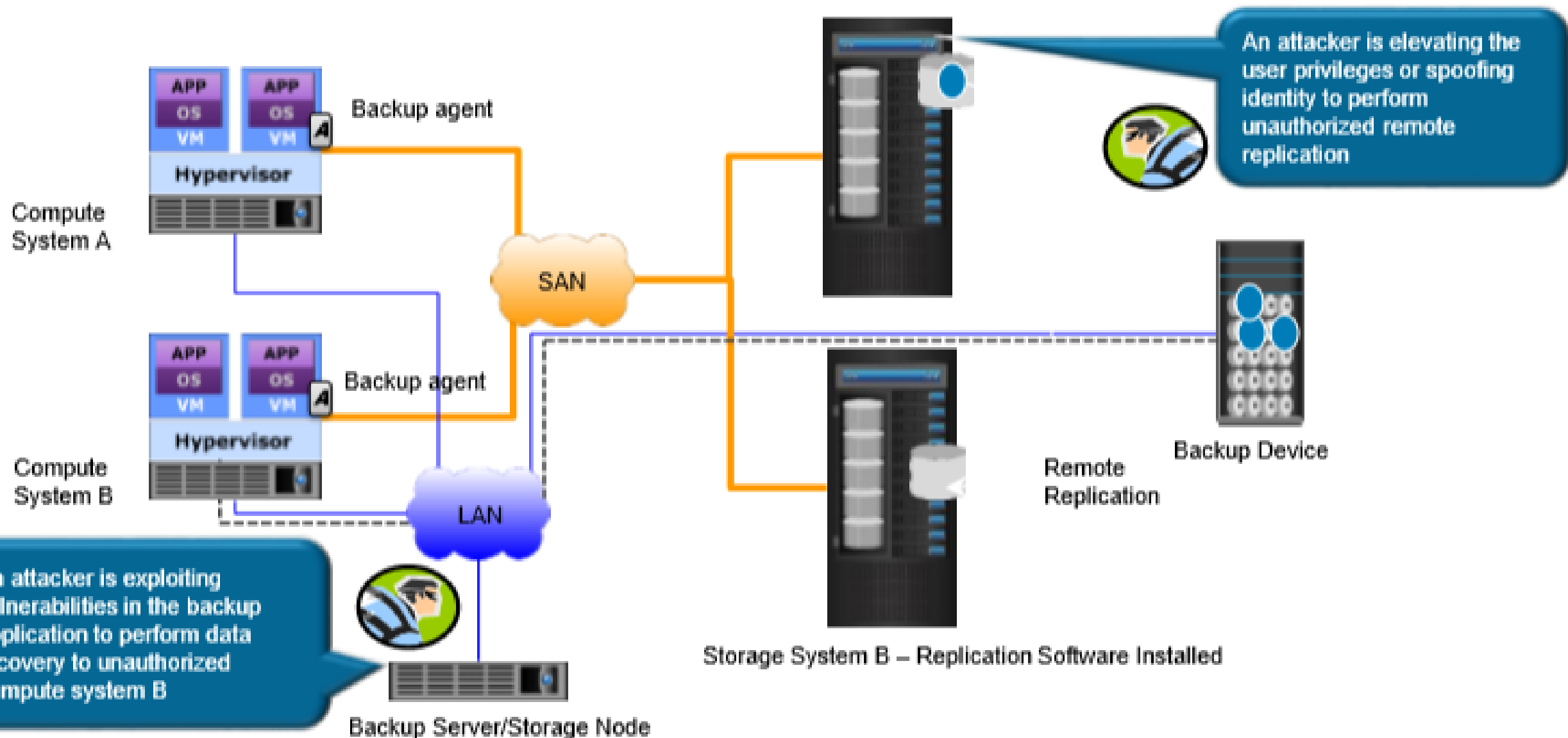


Threats to Data Source

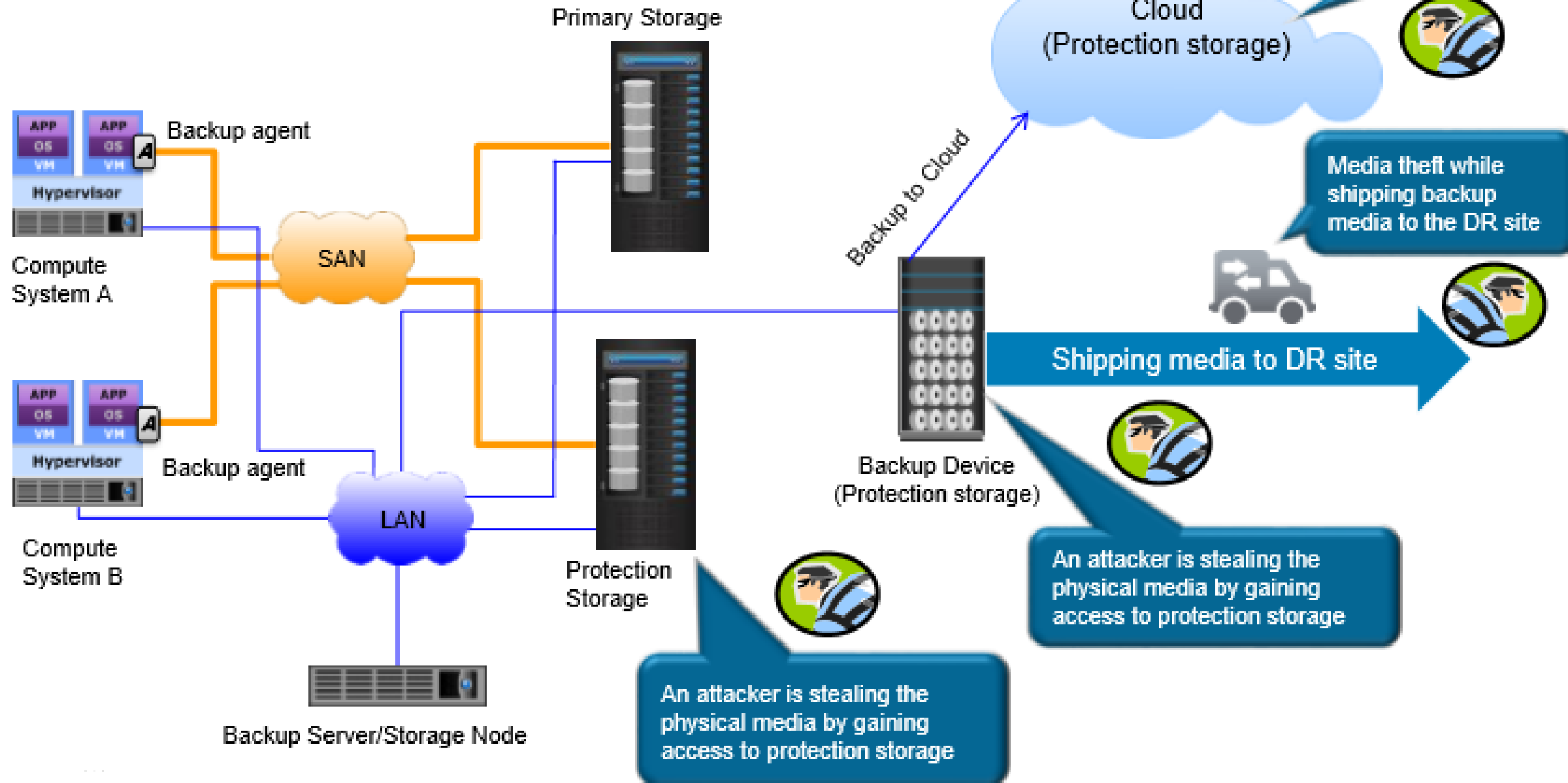


Threats to Protection Applications

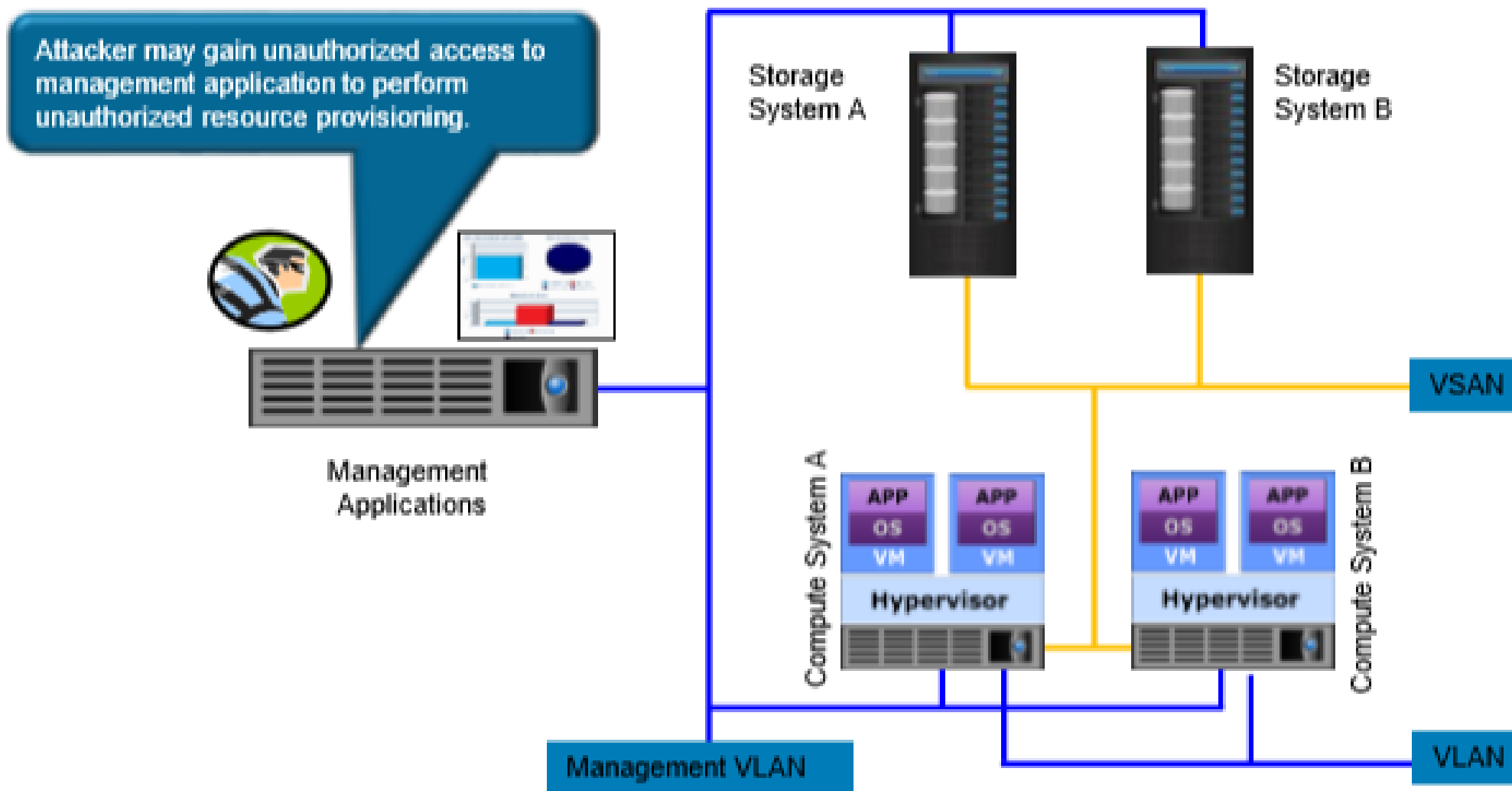
Storage System A – Replication Software Installed



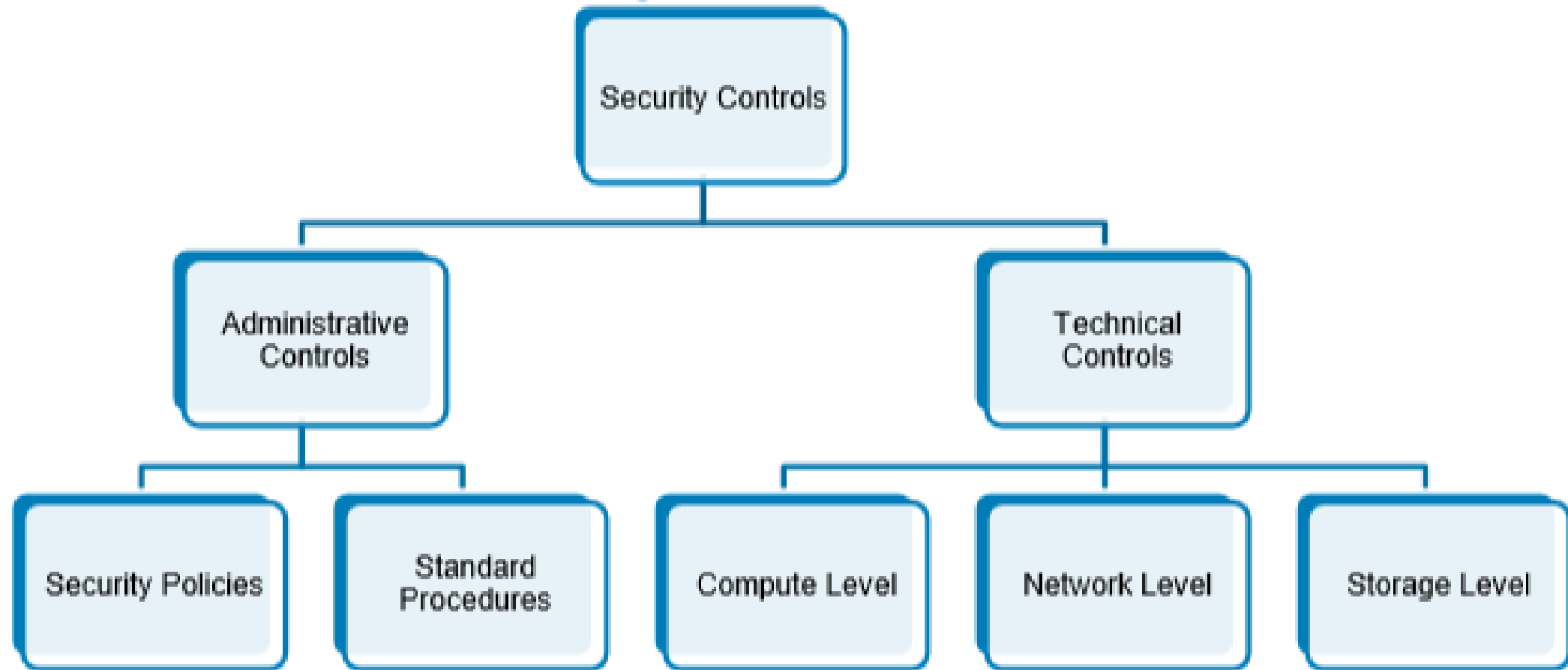
Threats to Protection Storage



Threats to Management Applications



Introduction to Security Controls



Security controls can be classified as preventive, detective, and corrective



Key Security Controls

Physical security

Identity and access management

Role-based access control

Firewall

Intrusion detection and prevention system

Virtual private network

Virtual LAN and virtual SAN

Zoning

LUN Masking

Discovery domain

Securing hypervisor

Securing management server

VM, OS, and application hardening

Malware protection software

Mobile device management

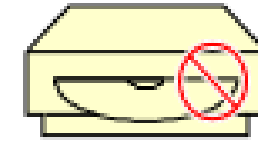
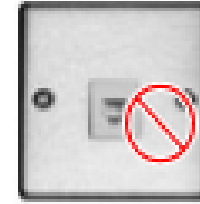
Data encryption

Data shredding

Physical Security

Physical security controls

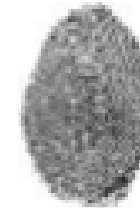
Disable all unused devices and ports



Provide 24x7x365 onsite security guard



Implement biometric or security badge-based authentication



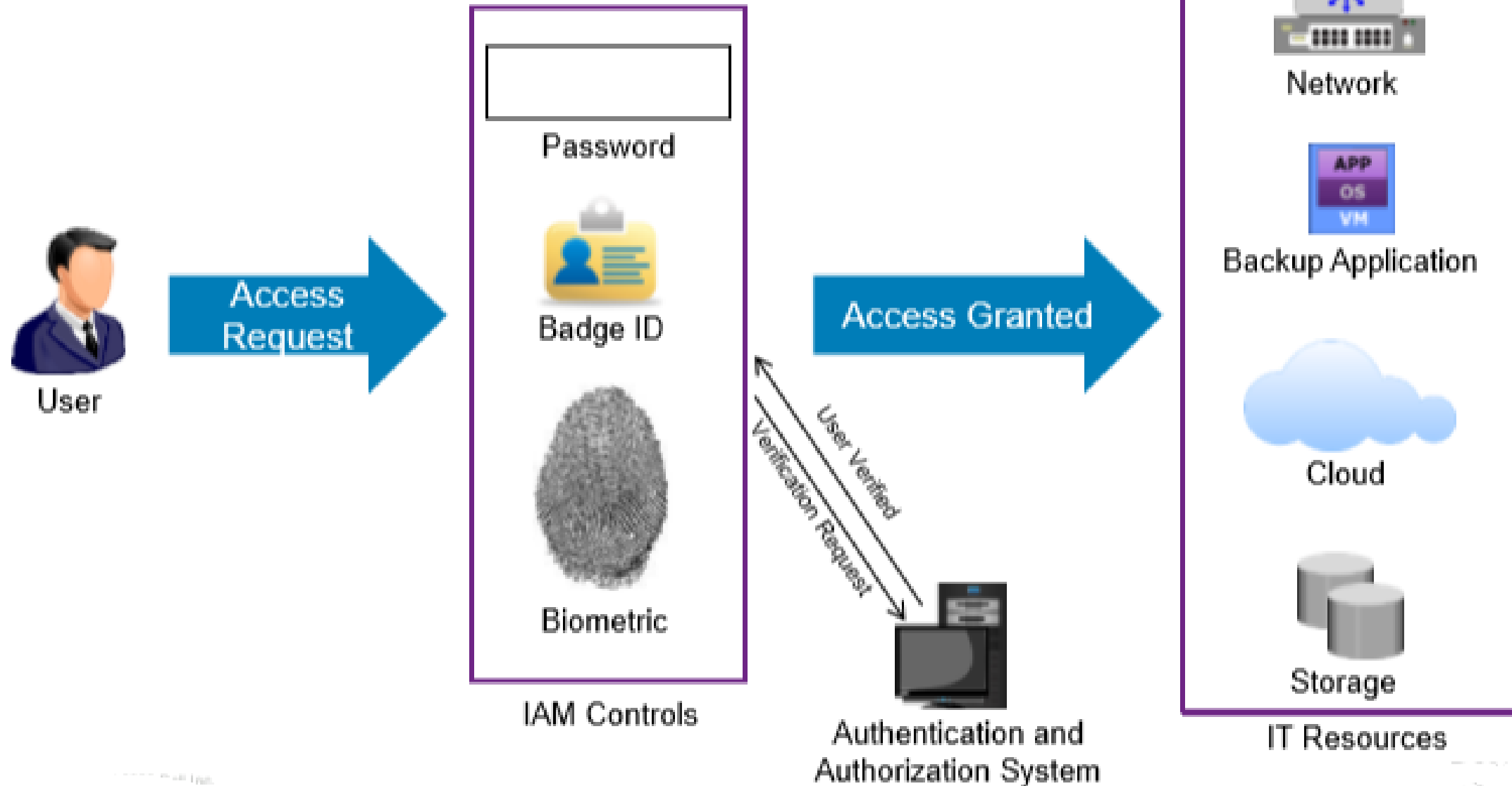
Install surveillance cameras



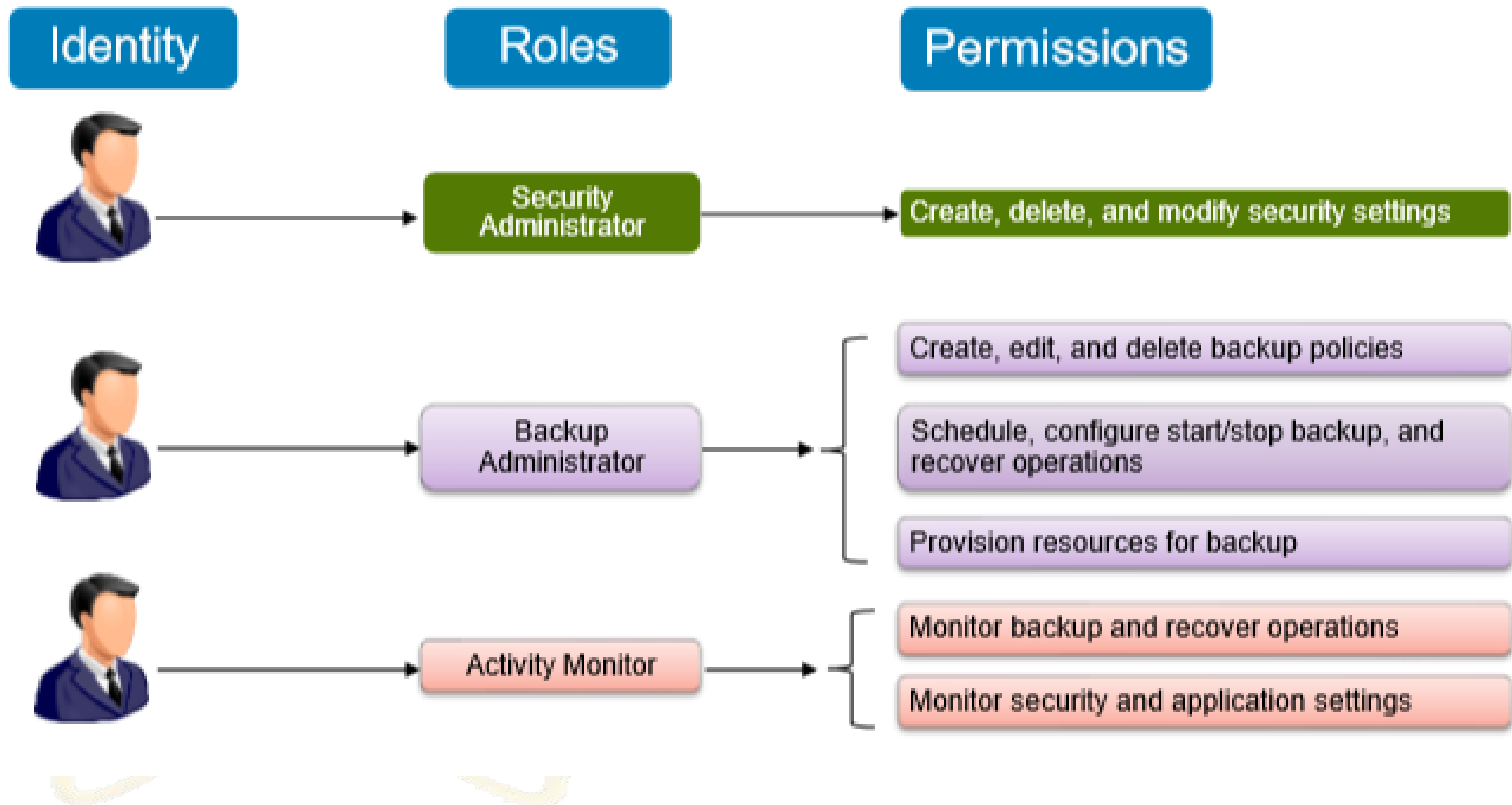
Install sensors and alarms



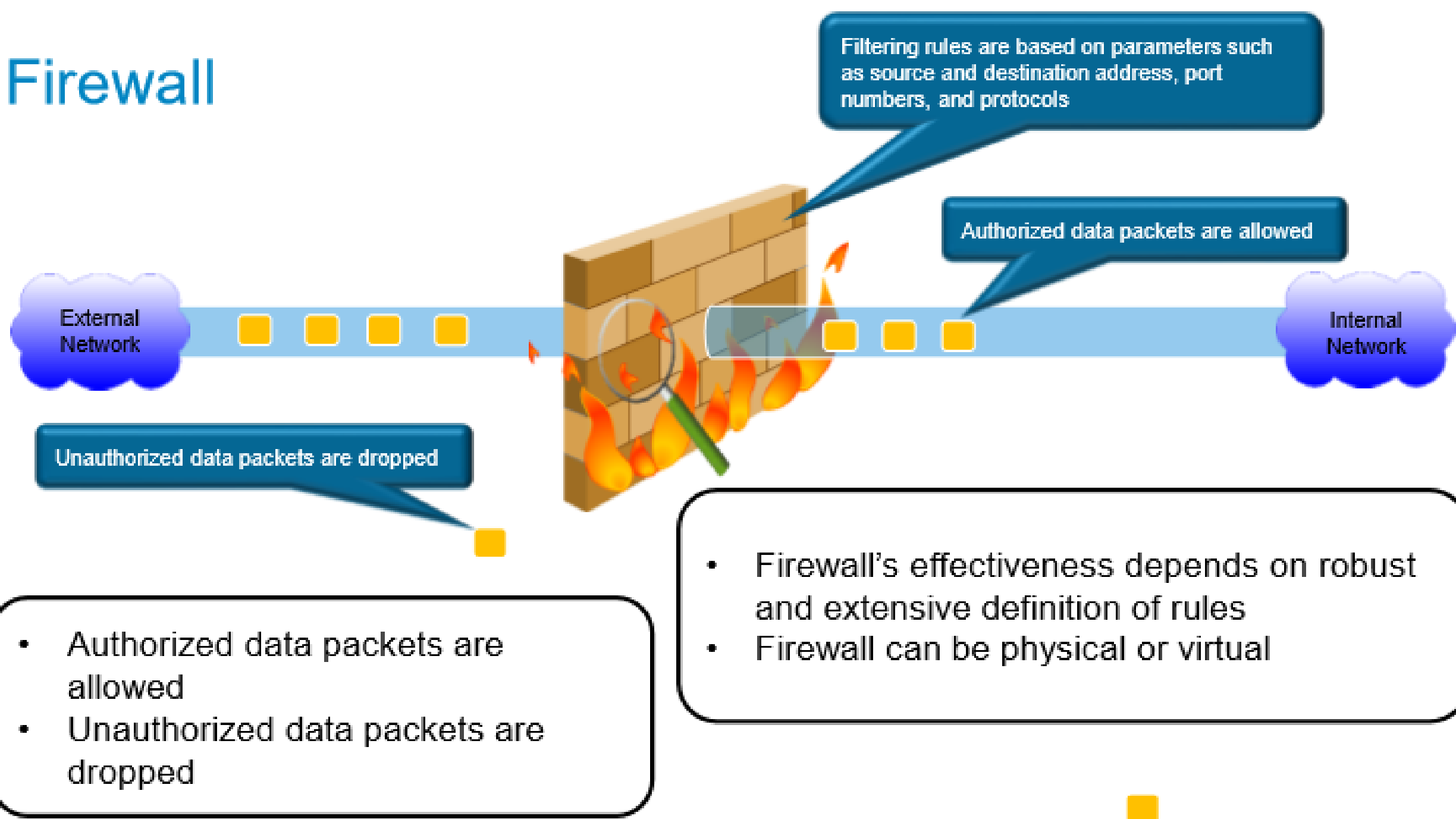
Identity and Access Management



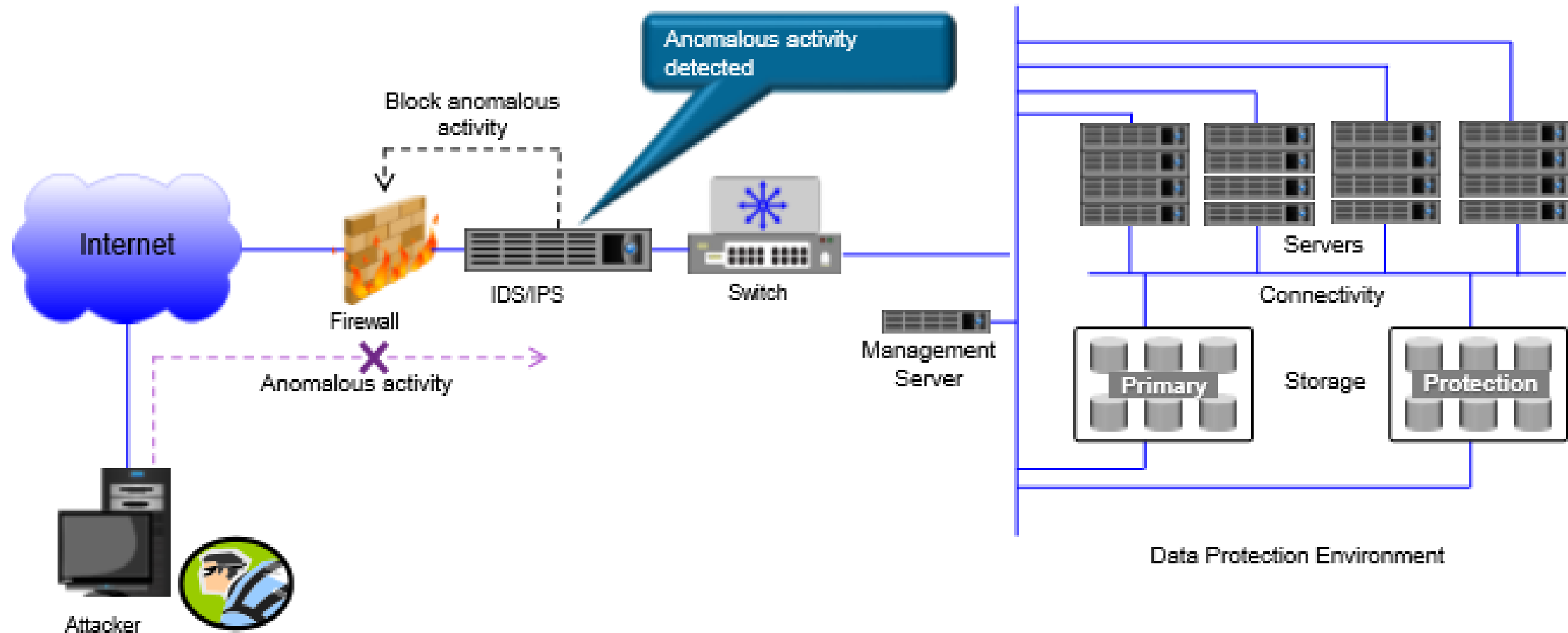
Role-based Access Control



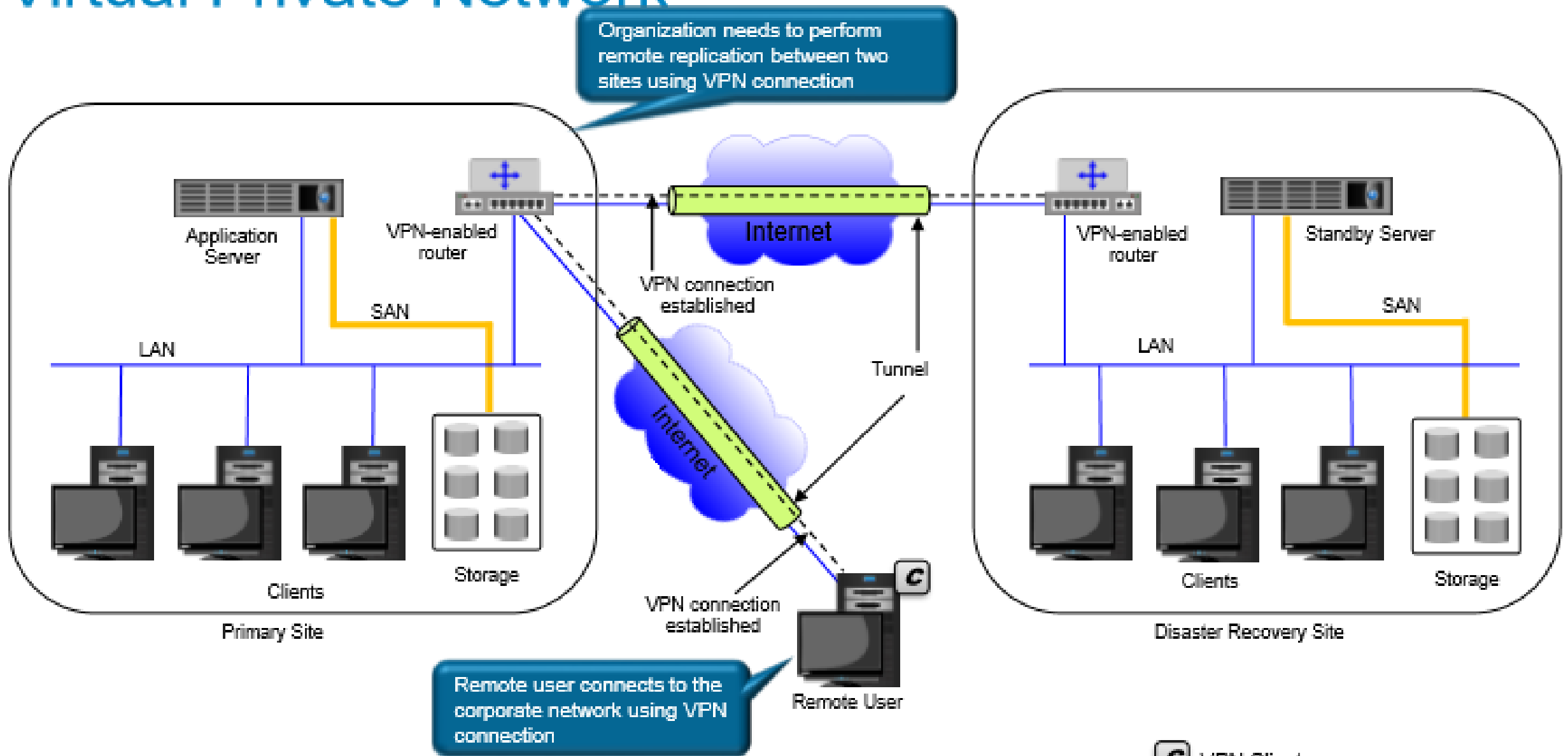
Firewall



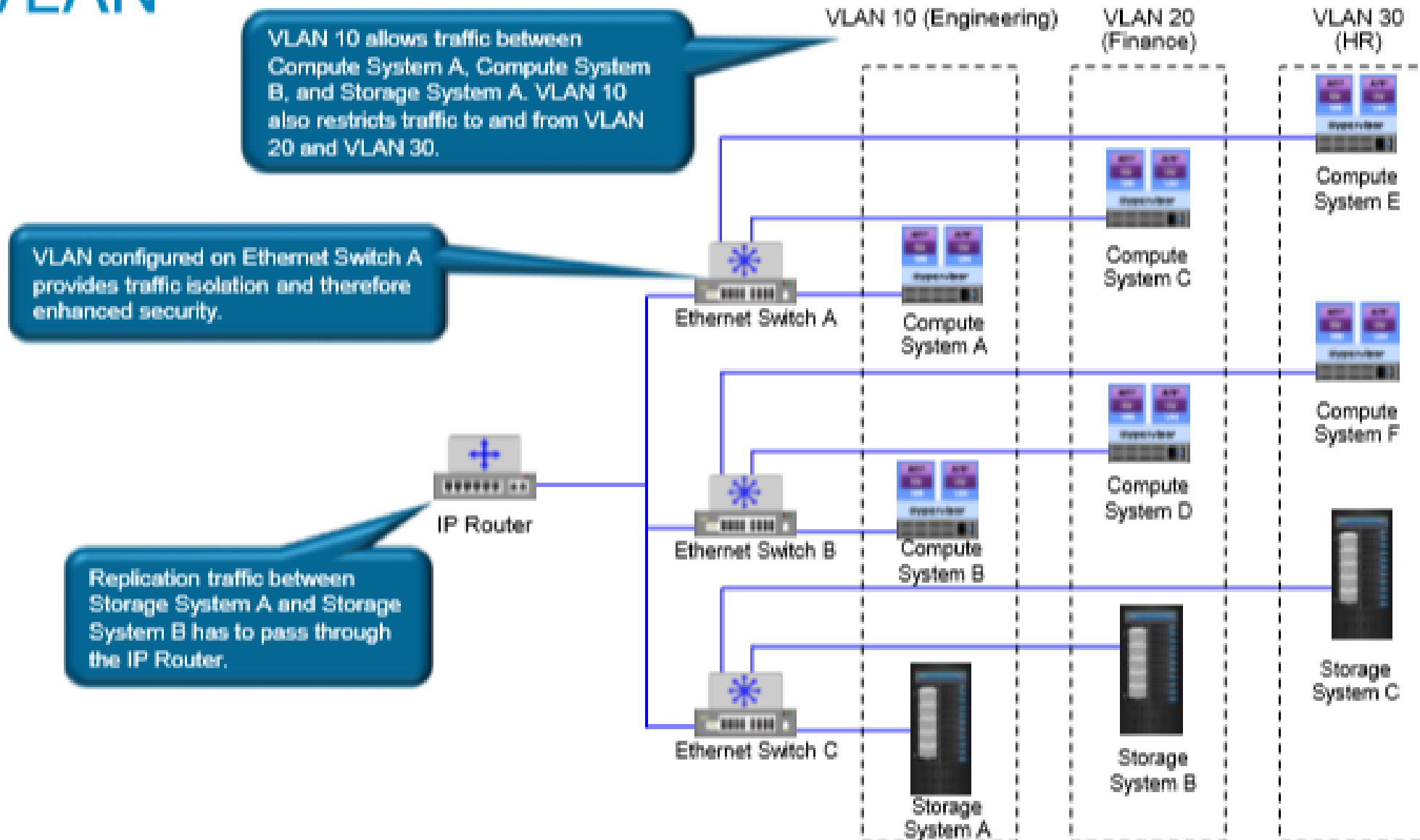
Intrusion Detection and Prevention System



Virtual Private Network



VLAN

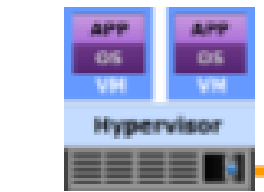


VSAN

VSAN 10 allows traffic between Compute System A and Storage System A. VSAN 10 also restricts traffic from VSAN 20.

VSAN 10 (Engineering)

VSAN 20 (Finance)



Compute System A

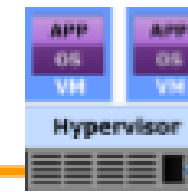
FC Switch A



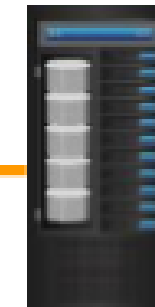
VSAN configured on FC Switch A provides traffic isolation and therefore enhanced security.



FC Switch B



Compute System B



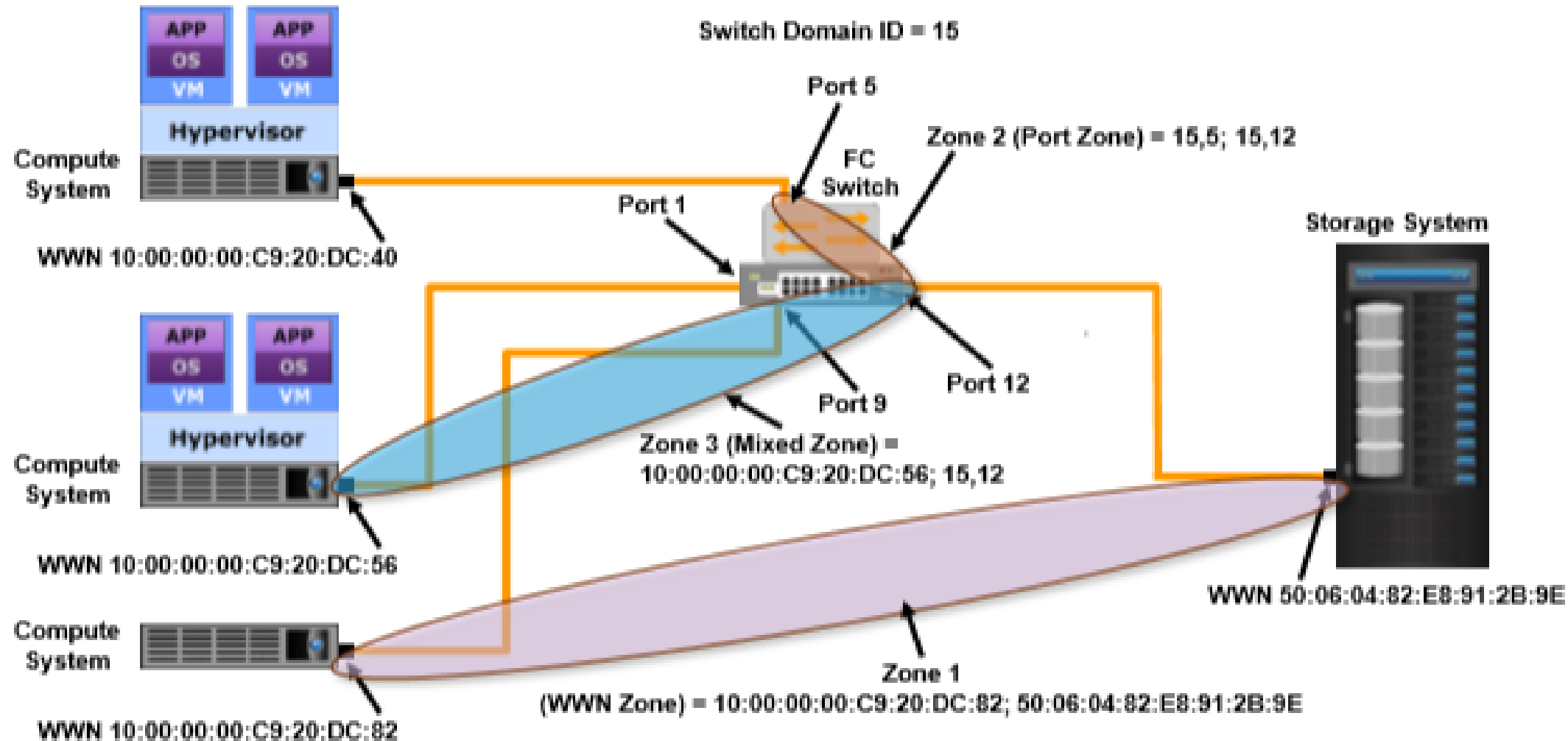
Storage System B



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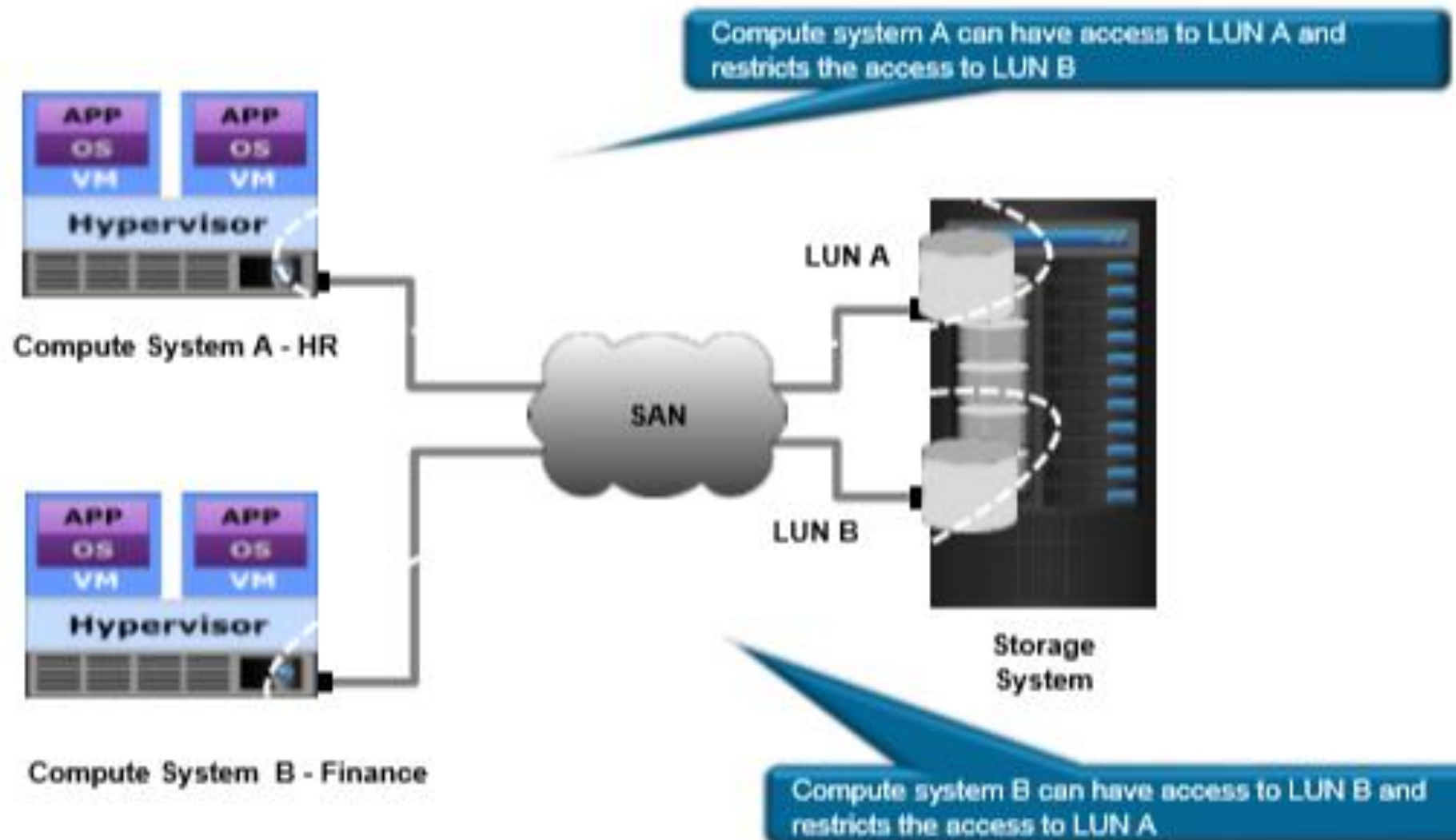
Zoning

An FC switch-based control that enables node ports connected to an FC SAN to be logically segmented into groups and communicate with each other within the group

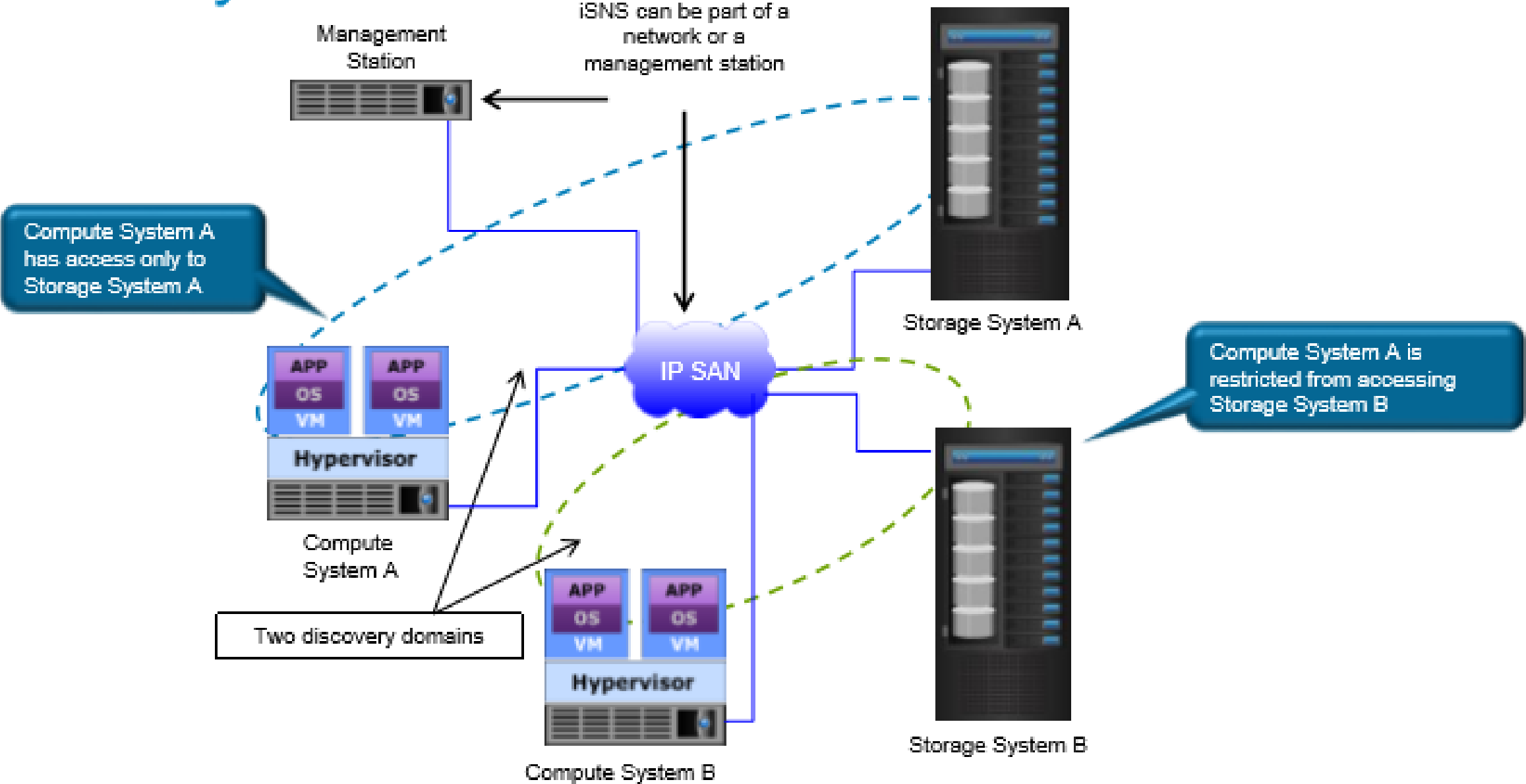


LUN Masking

Refers to the assignment of LUNs to specific host bus adapter worldwide names



Discovery Domain



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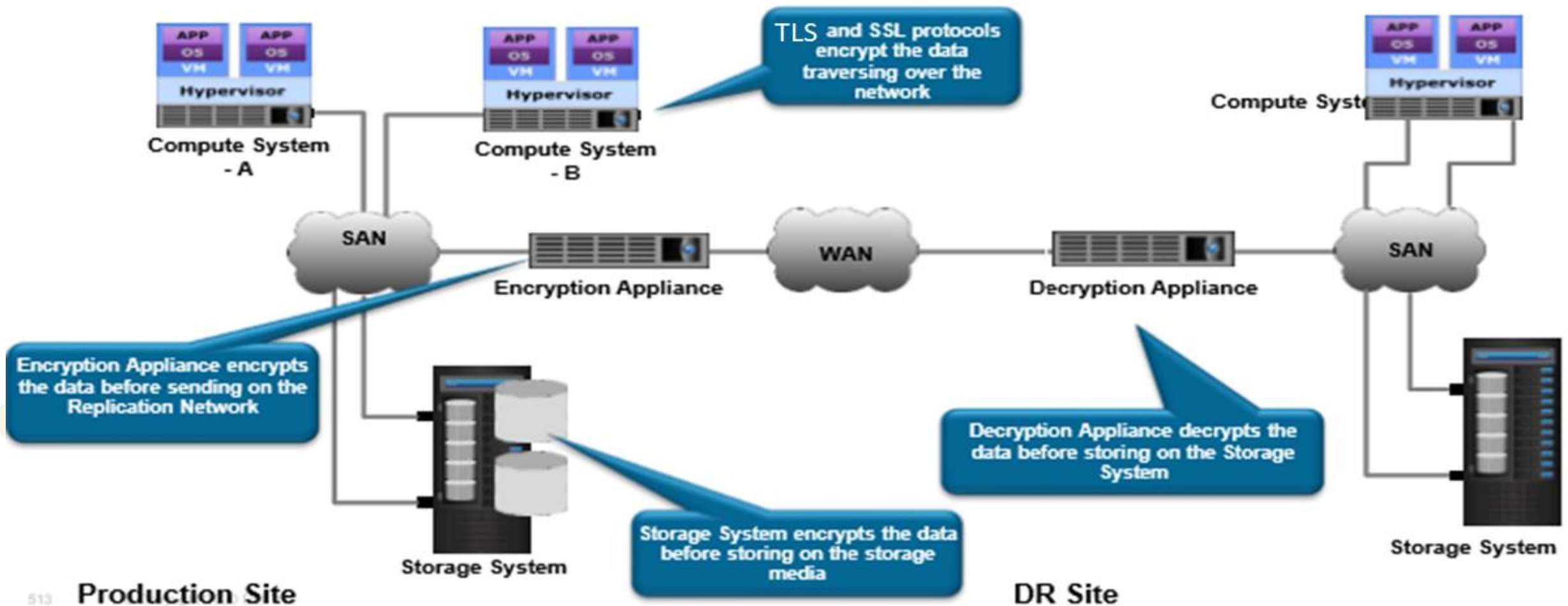
Mobile device management

Data encryption

Data shredding

Data Encryption

A cryptographic technique in which data is encoded and made indecipherable to eavesdroppers or hackers.



Discussion

Do a google search and explain in detail the following big data security technologies

1. Encryption
2. Use access control
3. Physical Security
4. Centralized Key Management
5. Intrusion Detection and Prevention System
6. Zoning
7. LUN Masking

Question and answer session

Q & A