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OceanProtect®
Secure Recovery Solution

Futurewei Intelligent Data Lab

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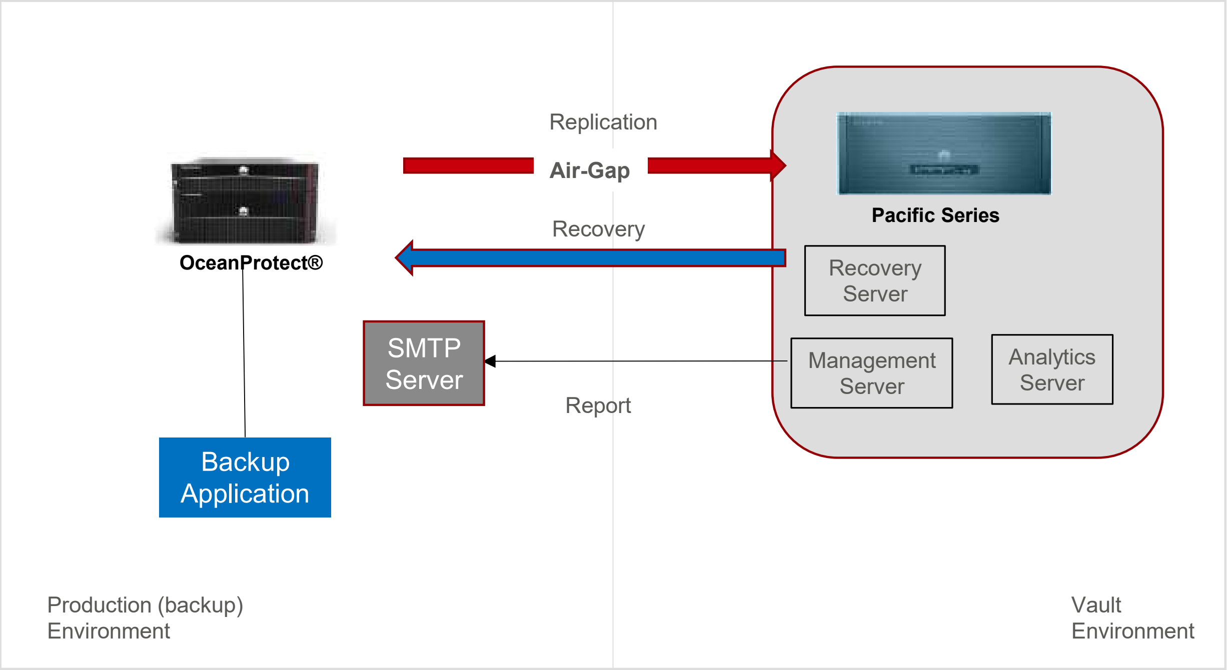
Objectives

For mission-critical applications/data, keep at least one copy at a secure location and protect data against:

- Cyber attacks & Ransomwares
- Insider attacks
- Production site data corruption

And mitigate cyber risks to a minimum level

Solution



Source: OceanProtect® X/A
Destination: OceanStor Pacific Series

Data-In path: Source -> Destination
Data-Out path: recovery Server -> Source
Event path: management host -> SMTP server

Production Environment

- OceanProtect ® A/X is used as source for application data backup
- Source sends copies of backup data to destination periodically
  - Use asynchronous replication software
  - Synchronization interval is determined by established RPO
- SMTP server (physical or logical) receives events from vault server
  - One way tunnel
  - Security should be designed in advance (dedicated link, VPN)
- (Optional) Recovery from vault to source
  - Physically (manually)
  - If via network, security should be designed in advance, such as dedicated link, VPN

Vault

- Physically isolation
  - Dedicated space with physical access requirements and access records
  - Management server /analytics server /recovery server inside vault
  - Strict security access (RBAC) & multifactor authentication for server access
- Network isolation
  - Network segmentation or other technologies to isolate vault from production network
  - Air-gap allows limited access only when replicating data from source
- FW and VPN for communication between production and vault environments
  - Data-in path: air-gap
  - Data-out path: optional
  - Event path

Data-In: Replication

- Use existing async replication software
- Air-gap
  - Link connects target directly
  - Management software enables replication interface on target only during replication, and disables it when replication is done
- FW to ensure only expected traffic can pass the link
- Encrypted traffic

Recovery Server

- In-vault data recovery
  - Using existing recovery software
  - Identify recovery point
  - Remediate backup files
  - Recover to recovery server inside vault
- (optional) Manually send data or backup files to source (OceanProtect® A/X) and source platform performs recovery
- (optional with secure dedicated link) Move data to the production environment for data recovery

Management Server

- Physical or logical server
- Management software runs on management server
  - Use existing device manager with additional functionality
  - Enable/disable replication interface and/or ethernet port on target
  - Performs system-level health check
  - Initiate data recovery jobs
  - Initiate analytical jobs with the help of analytical server
  - Send SMTP alerts to outside world

Analytical Server

- Physical or logical server
- Use third-party anti-virus software or home-developed software
  - Use anti-virus software to scan backups
  - Remove malwares
  - Send warnings and reports to management software
- System-level analytics (management software)
  - Health check for backup copies
  - System health issues such as network issues

Event Path

- Secure (one-way VPN) tunnel to production environment
- Send SMTP/SNMP alerts to SMTP server

Thank You.

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