DELLTechnologies

OWL Cyber Defense

Time Synchronization in the Vault

Dell's PowerProtect Cyber Recovery Data Vault Paired with Owl Data Diodes

Use Case Summary

CHALLENGE

Need for time synchronization in the vault while minimizing risk to the vault's air-gapped architecture

SOLUTION

OPDS-1000 - Owl's one-way data diode cybersecurity solution that securely relays a source of time to the vault from the production network

BENEFITS

Vault operators can securely create a source of time in the vault for scenarios where time is critical to further reporting and analysis

Cybersecurity Challenge

Time is critical in a data vault. You may need to perform a recovery and collect historical data from a certain time period. Or in the event of an attack, you will need to analyze logs to identify and eradicate that attack, making time synchronization in the vault critical to those scenarios. The challenge is creating a source of time in the vault while minimizing new threat vectors to the air-gapped architecture of the vault.

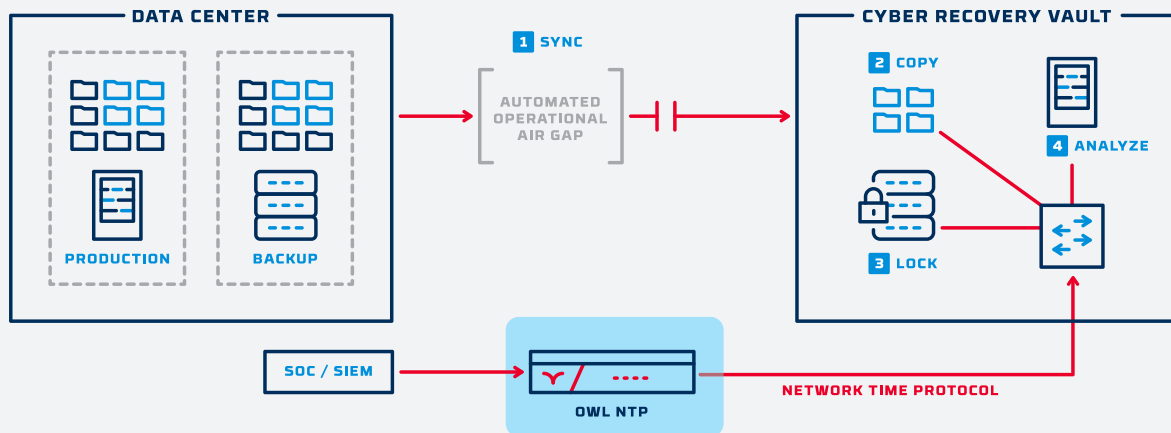## Secure Network Time Protocol (NTP) Solution

Dell has partnered with Owl Cyber Defense to provide organizations with a secure way to create a source of time in a data vault. Owl's Network Time Protocol (NTP) solution is a hardware-enforced data diode that points one-way into the vault. The OPDS-1000 data diode provides time synchronization in the vault by taking a trusted source of time from the production network (SOC, GPS device), and relaying that time to a node sitting on the vault side. That node inside of the vault then becomes the NTP server and can be used as a source of time within the vault.

Key Benefits

- Secure solution to create a source of time in a data vault

- Hardware-enforced solution that prevents two-way command and control

- Creates the ability to pull historical data from the vault from a specific timeframe

- Creates the ability to timestamp logs for further analysis

- Non-routable protocol break - strips all source IP and MAC routing information to prevent unauthorized communications

Solution Architecture

DATA CENTER

PRODUCTION   BACKUP

1 SYNC

AUTOMATED OPERATIONAL AIR GAP

CYBER RECOVERY VAULT

2 COPY

4 ANALYZE

3 LOCK

SOC / SIEM

OWL NTP

NETWORK TIME PROTOCOL

Technical Specifications

OPERATING CONDITIONS:
- 32ºF TO +110ºF
- 0ºC TO +43.33ºC
- 5% TO 90% HUMIDITY NON-CONDENSING

POWER SUPPLY:
- Input: 75-230 VAC,
- Estimated Normal operating Usage 10-16 W/side
- Max. 20W per side

STORAGE:
- -40ºF to 158ºF
- -40ºC to 70ºC
- 5% to 90% humidity non-condensing

VIBRATION:
- Vibration: (IEC 60255-21-1)
- Vibration 1g(10-500Hz) (Operational)
- Vibration 2g(10-500Hz) (Operational and Non-Operational)

CHASSIS:
- Black Anodized aluminum with Locking Top

MOUNTING SYSTEM:
- (1U) Rack Mount, tabletop

NETWORK CONNECTIVITY:
- 1000 base-T copper
- Separate Ethernet connections for network traffic and remote administration
- Physical connectors: 8P8C (RJ45)

THROUGHPUT:
- Supports three configurations: standard capacity (26 Mbps), mid capacity (155 Mbps), and high capacity (1,000 Mbps)

SHOCK:
- Shock: (IEC 60255-21-2)
- Shock 10g 11ms (Operational)
- Shock 30g 11ms (Operational and Non-Operational)

COOLING:
- Conductive cooling through enclosure side walls with High Life Expectancy/Low Noise Fans

APPROVALS:
- FCC Class A compliance
- CE Mark
- CB Certificate: DE 2-034658
- EN 62368-1:2014/AC:2015
- International Common Criteria Certification – EAL4+ Certified
- VCCI

ISO:
- Manufactured using ISO 9001:2015 certified quality program

CHASSIS SIZE:
- 16.5" W x 1.75" H x 13" D
- 41.91 cm x 4.5 cm x 33 cm

UNIT WEIGHT:
- 7.92 lbs./3.6 kg.

MEAN TIME BETWEEN FAILURE (MTBF):
- 11+ years

LOCAL ADMINISTRATION:
- VGA connector for monitor
- USB connectors for keyboard and mouse

OWL Cyber Defense

Owl Cyber Defense Solutions, LLC leads the world in data diode and cross domain network cybersecurity. With a constant focus on customers in the military, government, critical infrastructure, and commercial communities, Owl develops market-first, one-way data transfer products to meet a variety of operational needs, from entry level to enterprise.

For more information on Owl, or to schedule a demo, visit www.owlcyberdefense.com