

Secure Remote Access

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

Use Case Summary

CHALLENGE

Need for secure, remote access into a secure vault to adjust configurations, change settings, apply software patches, and perform routine maintenance and support

SOLUTION

ReCon - Owl's bidirectional data diode that consists of two, independent, one-way paths pointed in opposite directions

BENEFITS

Vault operators do not need to physically access the vault and can easily and remotely access the network when necessary to perform routine updates and maintenance as quickly as possible

Cybersecurity Challenge

Some organizations require remote access into their secure data vault. Software-based, bidirectional solutions, like firewalls, can pose risk to the air-gapped architecture of the vault and introduce new threat vectors to the environment. Software-based solutions can be configured for connections and protocols of any type, initiated from either side of the vault, increasing the risk of being hacked. Organizations need the highest level of security to assure that they can safely access the vault remotely in a timely manner while minimizing risk.

Secure Remote Access Solution

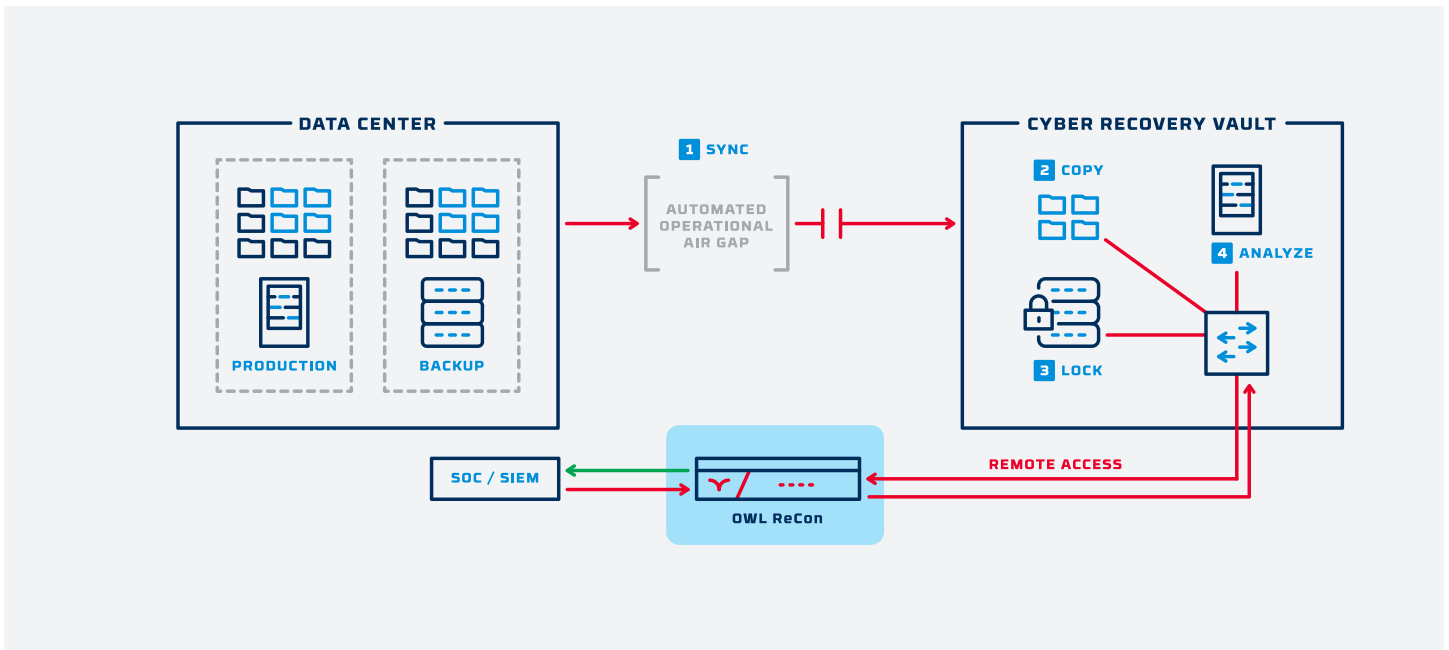
Dell has partnered with Owl Cyber Defense to provide organizations with a secure, hardware-enforced cybersecurity solution that enables organizations to remotely access a secure vault while minimizing risk.

ReCon, Owl's bidirectional data diode, is comprised of two, one-way data diodes pointed in opposite directions, all in a 1U rack-mountable device. No routable information crosses the security boundary and configuration is separated for the source and destination sides, providing an additional level of administrative segmentation. Connections can only be initiated from the source side and both sides need to agree on the configuration for a TCP session to work end-to-end. Vault operators can use ReCon to remote into the vault and take control of the Cyber Recovery interface to adjust configurations, apply software patches and perform routine maintenance and support.

Key Benefits

- One-way only architecture – two data diodes in one device pointed in opposite directions
- Non-routable protocol break - strips all source IP and MAC routing information to prevent unauthorized communications
- Vault operators do not need to physically enter the vault to make changes or updates – they can remotely access the vault when needed





How It Works

The Department of Homeland Security (DHS) states, “If bi-directional communication is necessary, then use a single open port over a restricted network path”. Designed to meet DHS guidance for securing bi-directional communications, ReCon enables vault operators to remotely access the vault securely through hardware-enforced data diode technology, providing more security than traditional firewalls. ReCon consists of two, individually isolated, one-way paths, all within a single 1U hardware appliance. ReCon restricts the use of TCP/IP ports and each side of Recon must be configured and managed separately.

The TCP/IP connection can only be initiated from the source side of ReCon. Administrators outside of the vault can use ReCon to remote into the vault to adjust configurations, apply software patches, and perform routine maintenance and support. Client authentication ensures that only authorized users can access ReCon securing the integrity of the device and data being transferred.

Technical Specifications

OPERATING CONDITIONS

- 32°F to +110°F / 0°C to 43.33°C
- 20% to 85% humidity non-condensing

POWER SUPPLY

- Input: 100-240V AC auto-ranging, min. 30W per side (fused at 1A at IEC connector)
- Output: 5V at 5A - EU & UK power cables on request

STORAGE

- -40°F to 158°F / -40°C to 70°C
- 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)

MOUNTING SIZE

- (1U) Rack mount, tabletop

NETWORK CONNECTIVITY

- Ethernet connections for network traffic and remote administration
- Physical connectors: 8P8C (RJ45)

SHOCK

- (IEC 60255-21-2) / Shock 10g 11ms (operational)
- Shock 30g 11ms (operational and non-operational)

COOLING SYSTEM

- Conductive cooling through enclosure side walls with high life expectancy/low noise fans

APPROVALS

- FCC Class B compliance
- CE Mark
- CB Certificate: 72130592
- UL 60950-1:2007 R12.11
- CAN/CSA-C22.2 No.60950-1-07+A1:2011
- International Common Criteria Certification - EAL 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

- 8.720 lbs./ 3.96 Kg

MEAN TIME BETWEEN FAILURE (MTBF)

- 14+ years

LOCAL ADMINISTRATION

- VGA connector for monitor
- USB connectors for keyboard and mouse