Owl Computing Technologies

OCDS-FT01
UCDSMO BASELINE SOLUTION

UCDSMO Baseline Listed Cross Domain File Transfer

In intelligence and defense operations, files must frequently flow from networks of lower security levels to networks of higher security. Specifically, files often must be transferred low-to-high (L2H), from unclassified networks into Secret networks. In these cases, a reliable and accredited cross domain solution (CDS) must be utilized to ensure validation of the files and the protection of the higher security network.

The Owl Solution

The OCDS-FT01 is a validated enterprise-scale CDS listed on the Unified Cross Domain Solution Management Office (UCDSMO) Baseline. The Baseline list includes those CDSs that have been evaluated against a set of UCDSMO-defined security-related criteria, and have received endorsement for re-use in prescribed configurations.

Owl Uses a Pair of Dell PowerEdge Servers

The Owl OCDS-FT01 is a two-server, enterprise solution primarily designed to transfer a variety of file types from low-to-high security network enclaves. It uses a dedicated send-only server and a dedicated receive only server, both running on policy-hardened Linux operating systems following the Security Technical Implementation Guide (STIG) generated by the Defense Information Systems Agency (DISA). Candidate files are vetted with ClamAV and ASCII filters before transfer to the receive server, and customer-specific filters may also be deployed. With a configurable architecture, OCDS-FT01 provides a certifiable one-way solution with a base set of capabilities that can be enabled or disabled, as dictated by changing mission and security requirements; leading to re-use among programs that require similar capabilities.

Features

The UCDSMO Baseline-listed OCDS-FT01 employs Owl V4 DualDiode® Communication Cards connected via fiber-optic cable to assure absolute data confidentiality in the CDS one-way transfer. The primary application of the OCDS-FT01 is the transfer of a variety of file types, with the deployed version rated at an aggregate link speed of 155 megabits per second. It is equipped with antivirus scanning software and file type checking to block the transfer of malware and executable code.

- **UCDSMO Baseline-listed and approved for re-use**
- **Up to 10 Gbps throughput capacity**
- **Supports separate, yet concurrent, availability to wide-ranging user apps & security policies**
- **Channelized support enforces disparate user needs & security policies**
- **Send & Receive content management**
- **Scanned & filtered file transfer with built-in antivirus and file type checking**

What is DualDiode Technology®

Owl DualDiode products are engineered to segment and isolate networks that simply cannot afford to be compromised. This patented hardware design only allows data to flow in one direction. Utilizing a true protocol break, DualDiode Technology conceals all IP and MAC address information and prevents network probes. The compact, all-in-one design of Owl products, their high bandwidth throughput, and the range of data types supported provide unrivaled flexibility, reliability, and security to easily support nearly any CDS application.

Highly Secure Configuration

The OCDS-FT01 is configured solely for a single mission: to provide certifiable, hardware-enforced one-way file transfer.

The OCDS-FT01 features a closed hardware and software architecture, which trusts no outside connection and does not permit any backchannel communication. It is deployed with SE Linux in enforcing mode, a STIG-compliant operating system based on the Certifiable Linux Integration Platform (CLIP).

Certifiable, Modular & Configurable

In addition to satisfying site-specific requirements, OCDS-FT01 is designed to provide a non-site-specific one-way CDS architecture with a base set of security features that is certifiable, modular, and configurable. Owl DualDiode® Technology – in this instance, Owl V4 Communication Cards with Owl ScanFile Management software (OSMS) -- enforces an unconditional one-way data transfer security policy that maintains confidentiality of data on the destination domain. Modular data filters integrated into the OSMS file transfer software, ensure integrity of data passing onto the destination domain. OCDS-FT01 employs Owl Remote File Transfer Service (RFTS) for efficient and authenticated transport of files as TCP/IP streams – from the source to the OCDS, and from the OCDS to the user destination.

Since data type and data filter requirements are largely determined by program and site, OCDS-FT01 contains a modular application programming interface (API) designed to accommodate third party data filter software applications. By default, it is equipped with antivirus scanning software and a file type checking method that are designed to block transfer of malware and executable code, respectively.

Technical Specifications

DualDiode® Technology Hardware:
Server-mounted custom-designed communication cards – one Send-Only, one Receive-Only

Owl V4 Communication Cards:
Fiber-optic multimode, 62.5/125 ST-ST – 155.52 Mbps link speed; 15 Mbps user throughput

Owl V6 Communication Cards:
Fiber-optic single mode, LC-LC 2.488 Gbps link speed

Clear-channel 2500 – 270+ Mbps user throughput

Channelized 2500 – Supports up to 8 discrete application connections across 1 physical link; User throughput 65+ Mbps per connection

Owl V7 Communication Cards:
DualDiode® Technology OCCs, and drivers enable one-way-only data transfer with upgradeable bandwidth up to 10 Gbps

DualDiode Communication Card Software:
Secure Transfer System Send/Receive drivers & Send/Receive install software

User Application Software:
A wide range of Owl applications for file/ directory, TCP/IP, UDP, and UNIX syslog message & SNMP TRAP one-way transfer

Compatibility:
Dell PowerEdge

Operating Systems:
RHEL 6, SE Linux

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About Owl

With over 2000 deployments globally, Owl Computing Technologies is the leader in data diode cybersecurity solutions, enabling hardware-enforced network segmentation and deterministic, one-way transfer of all data types and file sizes. USA owned and operated, Owl offers validated and accredited products, servicing the intelligence, military, government, and critical infrastructure communities.

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