RedData CSfC Storage: A CSfC-Ready High-Speed Storage Solution

RedData's CSfC Storage combines the RedData high-speed storage hardware with our partner's software into a Commercial Solutions for Classified (CSfC) ready end-to-end data-at-rest solution. CSfC is an NSA program that enables commercial security products for classified national security systems. NSA CSfC listed products are used in layered solutions to meet requirements defined in one or more Capability Packages (CPs). For data-at-rest security, a CSfC Data-at-Rest CP 5.0 compliant Dual-DAR solution can protect up to Top Secret classified information.

CipherDriveOne
by KLC Group

RedData's high-speed storage platform combines is a 2U Multi-Node Storage Server hardware platform that can hold up to 24 hot-pluggable CSfC listed Self-Encrypting Drives. It has 24 U.2 PCIe Gen 4 NVMe drive bays and is powered by an AMD EPYC Milan CPU. Each server module provides 8 DIMM slots and four x16 PCIe Gen 4 slots for flexible expansion.

The server's non-blocking architecture ensures optimal performance by directly connecting 12 NVMe SSDs to each CPU via x4 PCIe Gen 4 lanes. This design, combined with a total of 96 PCIe lanes for drives and networking, makes the hardware platform an ideal choice for high-performance applications, such as hyper-converged, virtualization, edge computing storage, analytics, machine learning, AI, OLTP databases, and other high performance use cases.

The RedData high-speed storage platform is tested and certified for KLC's CipherDriveOne Plus software, providing a single layer of CSfC data-at-rest security. CipherDriveOne Plus is a NIAP compliant pre-boot authentication software for SED key management and user authentication. It is an operating system agnostic solution that supports single, two-factor, and multi-factor user authentication credentials. CipherDriveOne Plus enforces authentication before the system is fully booted, to ensure only authorized users can access the stored data. This way all data, including OS binaries, applications, and other system data is secure, not just individual user files.

Hardware - RedData High-Speed Storage Platform

- AMD's CPU technology provides 128 PCIe Gen4 lanes per CPU and 24 PCIe Gen4 NVMe SSDs.
- Highest performance – each SSD interfaces via x4 lane PCIe Gen4 link.
- Hot-pluggable servers, power supplies, fans, and drives.
- Up to 24 U.2 (SFF-8639) formfactor SSD slots, 25W max. per drive.
- Environmental operation up to 35°C ambient inlet.
- Optional rail kit with CMA (cable management assembly).
- Optional TPM (trusted platform module).
- Enclosure size 3.43 in. H x 17.2 in. W x 27.44 in. D (87 mm H x 438 mm W x 697 mm D), weight with drives, CMA, and rail kit is 58.7lbs (26.7 kg) max.
- Power: nominal input range 200-240V AC 50-60 Hz, dual redundant 1600W, input current 4A max @180V AC per PSU, 40A peak per PSU, maximum system output power rating: 2200W.
- Hot-swap: two server modules, six fans for redundancy, two AC to DC 1600W power modules, two independent AC power inputs, U.2 SSDs.
- Firmware: IPMI and Redfish® management, CLI and GUI control for management.
- Drives: RedData Self-Encrypting SSDs, Common Criteria NIAP cPP for FDE 2.0 EE evaluation and CSfC listing in-progress.

Partner Software - KLC CipherDriveOne Plus

- Pre-boot authentication software for multi-drive storage systems.
- Provides one layer of CSfC complaint data-at-rest security when combined with CSfC listed Self-Encrypting Drives.
- Uses the server boot drive and runs ahead of the main OS.
- OS agnostics, supports Windows, Linux, Hypervisors like VMWare and Secureview.
- Integrated multi-drive SED key management.
- Local GUI-based console to manage user credentials, including username/password, smartcards for 2-factor authentication (PIV, CIV, CAC, and SIPRNET cards), and multi-factor authentication.
- Supports multiple user roles and policies.
- Administrators to view audit logs and authentication reports.
- Common Criteria NIAP cPP for FDE 2.0 AA evaluated, CSfC listed.

Available Configurations

For more information about our configurations, please contact us at: inquiries@rpics.com.

An RPI-CS, Inc. division
(866) 938-7775
6747 Katella Avenue, Cypress, CA 90630
https://reddata.us