Uncompromising Data-at-Rest Security

RedData NAS: A Scale-Out Secure Storage Solution

RedData's NAS combines the RedData Self-Encrypting Drives (SEDs) and RedData storage hardware with Racktop's BrickStor Security Platform (SP) software into an end-to-end cyberstorage solution. This solution provides active security to detect and stop live ransomware attacks, insider threats, and data breaches in real-time. A data security platform for unstructured data, the solution supports presenting data to clients using standard NAS based protocols. The solution is configurable to ensure it meets the customer's need, ranging from fast direct attached to cheap large capacity storage.

The RedData 2U Multi-Node Storage Server platform can be combined with or substituted by the RedData 4U high-capacity SAS enclosure. The 2U Multi-Node Storage Server is offered in both PCIe Gen4 with up to 24 hot-pluggable 2.5" SEDs or a PCIe Gen5 with up to 32 hot-pluggable E3.S SEDs. Depending on selected drive capacity these platforms can support up to 1,440TBs of raw storage, with room to grow in the future. The hardware platforms come with the AMD EPYC™ CPUs, supports up to 6TB of DDR5 DRAM, basic 10Gb and networking upgrade capabilities using the available PCIe slots.

The RedData High-Capacity Storage platform is a high-density cost-effective SAS-4 enclosure, supporting up to 102 3.5" drives running at 12 Gb/s SAS using two active 24 Gb/s I/O modules. The enclosure offers best in-class performance and capacity, space-saving density, energy efficiency, and high-availability of all active components. The enclosure was designed to enable vertical scaling of secure storage capacity to match the needs of a wide range of storage applications requiring full redundancy. It can hold up to 102 SEDs managed by the Brickstor SP to enforce data-at-rest security.

The RedData NAS solution ships with RedData qualified SEDs and the RackTop's BrickStor SP software, delivering high-throughput, low-latency performance for security-sensitive workloads. BrickStor SP safeguards file shares through continuous user-behavior analytics and automated security orchestration, defending against sabotage, ransomware, and malicious insiders. Real-time analysis engines observe every operation, producing actionable intelligence that cuts risk, streamlines compliance, and surfaces threats traditional tools miss — all without human intervention.

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All data is encrypted twice — once at the drive level and again at the file level — each with its own independent key, maintaining confidentiality without compromising performance. Standards-based, KMIP-compliant key management enables seamless integration with external key managers and supports policy-driven key rotation and comprehensive auditing.

Hardware - RedData High-Speed Storage Platform

- Two -server modules each AMD EPYC™ CPUs provide 128 PCIe lanes per CPU.
- PCIe Gen5 Platform with up to 32 PCIe Gen5 dual-ported NVMe SSDs in EDSFF E3.S slots, each 25W max.
- PCIe Gen4 Platform supports up to 24 PCIe Gen4 dual-ported NVMe SSDs in U.2 slots, each 25W max.
- Highest performance – each SSD interfaces via x4 lane PCIe links.
- 10G/1GbE Shared Host / Management Port and 1GbE Dedicated Management Port.
- Network expansion with 4x PCIe x16 Add-In-Cards
- Hot-pluggable servers, power supplies, fans, and drives.
- Environmental operation up to 35°C ambient inlet.
- Hot-swap: two server modules, six fans, two AC to DC 2600W power modules, two independent AC power inputs, SSDs.
- Firmware: IPMI and Redfish® management, CLI and GUI control for management & enclosure status.

Hardware - RedData High-Capacity Storage Platform

- Dual SAS-4 JBOD I/O modules for fail-over, each with 4-wide SFF-8674 24Gb/s mini-SAS HD expansion ports.
- 102-drive capacity per 4U enclosure, drive slots compatible with LFF or SFF drives, 12Gb/s support.
- Drive array can be zoned in four pre-defined zoning configurations.
- Hot-swap: two IO modules, two AC to DC 1600W power modules, two +5V regulators, two independent AC power inputs, 102 drives.
- Firmware: SCSI enclosure services (SES).

Partner Software - Racktop BrickStor SP

- Supports one or two layers of data-at-rest security with AES256-bit NIST FIPS 140 certified encryption.
- Integrated KIMIP key management, supporting both local and networked key managers.
- Active defense that stops ransomware and data theft in real-time.
- User behavior file analysis for inside threat detection and prevention.
- Protect data to the client with AES-256 encryption via encrypted SMB or NFS krb5p.
- Supports SMB 2 /3/3.1.1, NFS 3/4/4.1/4.2, and S3 file protocols.
- Supports Microsoft DFS and NFS 4.1 single namespaces.
- Integrated compliance reporting for CMMC, GDPR, HIPAA, NIST, SEC 17-A, and SOX.
- Transparent Data Movement (TDM) for movement of data between file and object storage.
- Expand capacity with SSDs or HDDs for diverse workloads and secure data transport.
- Simple deployment with a graphical user interface; operational proficiency in under 15 minutes.
- Includes a self-paced manual for seamless onboarding.

Available Configurations

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

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