



OVERVIEW

DataMover Storage is a native graphical host-based application (no Java or .NET) that generates I/O to storage interfaces to validate and characterize subsystems. It operates through standard Microsoft and vendor drivers without bypassing in-box components. Available in 32-bit and 64-bit versions for Windows, DMS supports both functional testing (data integrity, bus triggers, event logging) and performance workloads designed around three core patterns: CACHE-only, SEQUENTIAL-only, and RANDOM-only.

KEY CAPABILITIES

- **Dual Dialog Interface** — Basic Dialog for simple synchronous I/O; Advanced Dialog for full feature set
- **Logical & Physical Targets** — Drive letters, file shares, and raw SCSI block devices
- **Synchronous & Asynchronous I/O** — Configurable per workload; async I/O depth 1–64 per thread
- **Multi-threaded Operation** — Up to 50 threads per target per I/O direction (standard); extended tests support higher configurable thread counts
- **Data Integrity & Error Checking** — Full buffer verification, API status checks, timeout monitoring, bus triggers, error injection
- **Performance Metrics** — Real-time throughput (MiB/s), IOPS, latency (read/write), with history graphs
- **Transfer & Buffer Sizes** — 512 B to 4 MiB selectable; independent transfer and buffer sizing
- **Advanced Patterns** — User hex patterns, RANDOM, CRPAT/CSPAT/CJTPAT (FC-MJSQ derived)
- **T10 Protection Information** — PI Type 1, 2, and 3 validation on physical targets
- **Automation & Scripting** — Headless mode, custom profiles (.moj), PowerShell/batch orchestration, configuration import/export

WORKLOAD & PARAMETER BOUNDARIES

Parameter	Range / Options	Notes
Threads (per target / direction)	1 – 50 Configurable higher for Extended Perf Tests	Default 5; BOTH direction doubles threads
I/O Depth (async only)	1 – 64 per thread	Outstanding I/Os per thread; disabled in sync mode
Transfer Size	512 B – 4 MiB	Must be ≤ buffer size; supports variable transfer sizes aligned to logical block size
Buffer Size	512 B – 4 MiB	Determines contiguous exchange count
I/O Direction	READ / WRITE / BOTH	BOTH spawns independent read + write threads
I/O Mode	Synchronous or Asynchronous	Selectable; some tests auto-configure
Access Pattern	Sequential or Random	Atomizer option for random LBA selection
Performance Workloads	CACHE / SEQUENTIAL (WALK) / RANDOM	Default + Extended Performance Tests (EPT)

FUNCTIONAL TESTS & ADVANCED FEATURES

- Target Tests — Standalone, Cluster, Random, Variable Transfer Size, Verify Live / Cold Storage
- Custom Tests — Mercury, Venus, Earth, Jupiter, Saturn, Uranus + Custom Profiles
- Random I/O Test with hourly parameter randomization
- SCSI Persistent Reserve / Release for multi-initiator cluster emulation
- Windows Event Logging
- Bus Trigger on data mismatch / miscompare
- 4Kn and 512e Advanced Format alignment support
- Global configuration save/import; Performance Workload Monitor

PLATFORMS, TARGETS & LICENSING

Platform: Windows (32-bit and 64-bit) | **Interfaces:** SAS / SATA / NVMe / Fibre Channel / NVMe-oF / iSCSI / FCoE | **Targets:** Logical drives / shares and physical SCSI-compliant block devices (I/O blocked on physical targets mapped to logical volumes) | **Licensing:** Thales HASP USB key or license server (import / register / unregister) | **Download:** www.storagewerks.net