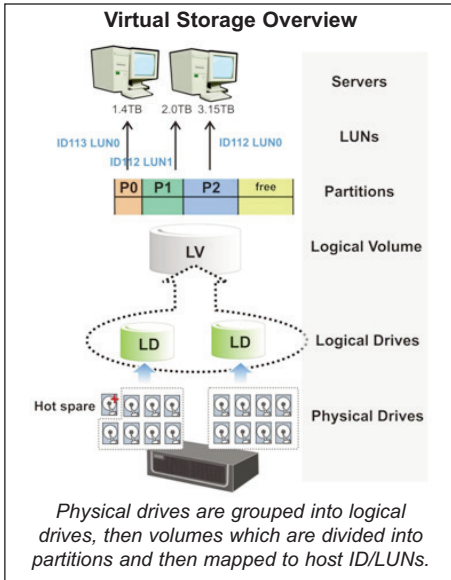# FlashDisk® Global Manager™ 3

Simple, Powerful Management for FlashDisk Storage Systems
Automated Storage Tiers, Snapshots, Replication, and more...

Virtual Storage Overview

Physical drives are grouped into logical drives, then volumes which are divided into partitions and then mapped to host ID/LUNs.

RAID Storage Expansion

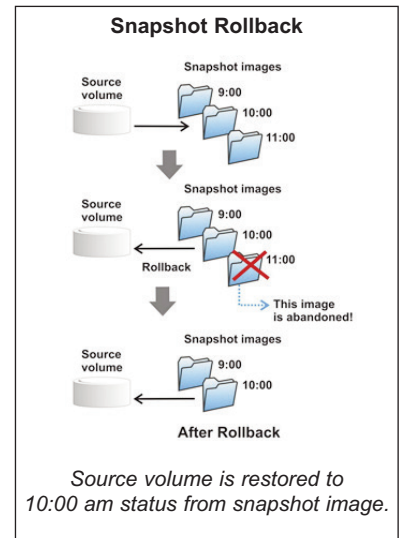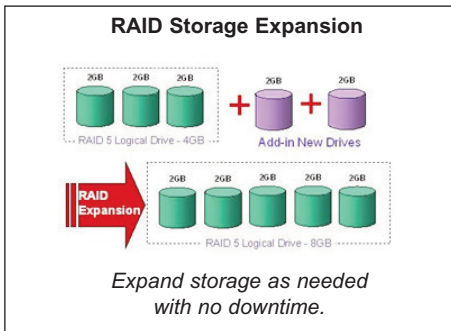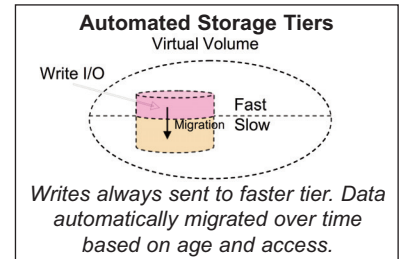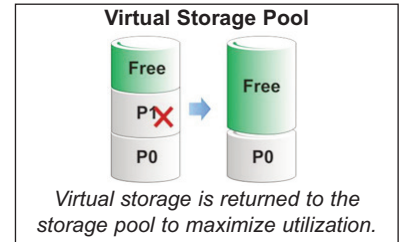*Expand storage as needed with no downtime.*

FlashDisk Global Manager 3 provides centralized management and event notification for installed Winchester Systems FlashDisk FX and VX commercial storage systems, and FlashDisk RF and RV ruggedized storage arrays. This new version has been completely redesigned to make it easier than ever to configure and deploy FlashDisk storage systems; and to monitor their health, availability, capacity, and data-protection status.

FlashDisk Global Manager 3 is installed on a computer with network connectivity to the FlashDisk storage arrays being managed. This new management server provides a foundation for improved responsiveness, availability, scalability and security. Administrators access FlashDisk Global Manager 3 using any device (desktop, laptop, tablet, etc.) with a web browser installed.

An updated graphical user interface enhances the overall IT-administrator experience. Graphical representations of array elements and real-time status make it easier to see and understand what's happening.

All mirror, copy and replication functions have been consolidated in a new "Replication Manager" function, making it easier to manage data-protection relationships and status.

A new Network Diagnostic Tool checks the quality, bandwidth and latency of connections between FlashDisk systems, enabling administrators to troubleshoot—or prevent—data-protection issues.

Virtual Storage Pool

Virtual storage is returned to the storage pool to maximize utilization.

Automated Storage Tiers

Writes always sent to faster tier. Data automatically migrated over time based on age and access.

Snapshot Rollback

Source volume is restored to 10:00 am status from snapshot image.

Mirroring, Split & Resync

Source volume is mirrored, split for backup and resynchronized.

Manage FlashDisk Capacity, Availability, Health and Data Protection

Virtual Storage Pools
Create, expand, and delete storage volumes as requirements change to maximize storage utilization.

Automated Storage Tiers
Automatic, policy-driven data migration between two tiers of storage, enabling "hybrid" SSD/HDD arrays while optimizing performance and cost.

Snapshots
Schedule up to 1024 snapshots as often as every 10 minutes. Mount and read snapshots, restore files and databases. Rollback to selected time. Server agent integrates with Microsoft Volume Shadow Services (VSS).

Volume Copy
Reconstitute full volumes from snapshots, create multiple full versions to avoid taxing production.

Mirroring
Create mirror volumes, split mirrors, fast resync for data redundancy, backup, data mining and analysis.

FlashD2D Backup
Scheduled zero-downtime tiered primary to secondary disk-to-disk backup. Enables off-line copy to tape.

Global Management
Manage multiple FlashDisk systems via a single, easy to use GUI from any device with an installed web browser.

Network Diagnostic Tool
Test bandwidth, latency and packet loss of network connections between FlashDisk systems. Enables easy prevention and troubleshooting of data-protection network problems.
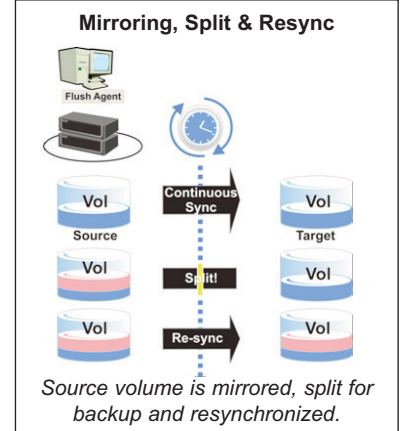
FlashDisk Global Manager Home Page

FlashDisk Global Manager 3 scans designated IP ranges in a network and displays all detected FlashDisk systems, with a summary status for each.

Convenient shortcuts to functions available for the currently selected item appear in the lower-right "Tasks" pane.

Name ▾	Status ▾	System Performance	Capacity
FX2U12R0	OK	CPU: 0% / Memory: 0% — Read: 0.00 MB/s / Write: 0.00 MB/s	Free: 0 MB / Total: 36.38 TB / Usage: 100%
FX2U12R1	OK	CPU: 0% / Memory: 0% — Read: 0.00 MB/s / Write: 0.00 MB/s	Free: 21.83 TB / Total: 43.66 TB / Usage: 50%
FX2U24R2	OK	CPU: 0% / Memory: 0% — Read: 0.00 MB/s / Write: 0.00 MB/s	Free: 7.36 TB / Total: 19.36 TB / Usage: 62%
FX3U16R2	OK	CPU: 1% / Memory: 0% — Read: 0.00 MB/s / Write: 0.00 MB/s	Free: 0 MB / Total: 66.94 TB / Usage: 100%
FX2U12S1_SAS	OK	CPU: 0% / Memory: 0% — Read: 0.00 MB/s / Write: 0.00 MB/s	Free: 14.55 TB / Total: 43.66 TB / Usage: 66%

Device List — Default Group
- FX2U12R0(iSCSI 10G SFP+)
- FX2U12R1(FC 16G)
- FX2U24R2(iSCSI 10G RJ45)
- FX3U16R2(FC 8G)
- FX2U12S1_SAS(SAS 6G)
New Group

Replication Manager · Data Reload

Tasks
Add Device — Add a device using its IP address or host name.

Auto Discovery — Discover all devices that are connected to this server via in-band or out-of-band connections.

Edit Group — Group devices together to simplify device management.

Remove Device — Remove a device from the list.

Quick Setup for New Device — Discover and configure a new device through this step-by-step setup wizard.

Configuration Options

System   Settings   Language

Device List — Default Group
- FX2U12R0(iSCSI 10G SFP+)
- FX2U12R1(FC 16G)
- FX2U24R2(iSCSI 10G RJ45)
- FX3U16R2(FC 8G)
  - Logical Volumes
    - Logical Volume 1
      - Logical Drives
        - Logical Drive 1
        - Logical Drive 2
        - Logical Drive 3
        - Logical Drive 4
      - Partitions
        - Partition 1
  - Drives
  - Channels
  - Data Hosts
  - Schedules
- FX2U12S1_SAS(SAS 6G)
New Group

Menu enables control of drives, volumes, channels, LUNs and more . . .

Backup Scheduler

Configure the schedule parameters.

Schedule Name: New Schedule 1
Source: Partition 1 (49CE7F8733E237EA)
Start Date: 12/27/2012   End Date: 12/27/2012   ☐ Repeat
- ● Daily
- ○ Recurring Days of Week   ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat
- ○ Recurring Days of fortnight   ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat
- ○ Recurring Days of Month   [Set Days]
Start Time: 2 : 6
Priority: Normal

FlashD2D automates disk-to-disk backups.

Performance Charts

☑ Enable Performance Monitoring

CPU   Memory   ● Throughput   ○ IOPS

0%   15%

Read: 1.3   Write: 0.9 (MB/s)

Drive Slot 1 Channel8(9)   Drive Slot 2 Channel8(9)
Drive Slot 4 Channel8(9)   Drive Slot 5 Channel8(9)

Real-time performance metrics at array, controller, port, and drive level enable analysis, load balancing and problem disgnosis.

LUN Mapping

○ Create a host LUN mapping set automatically.
  ● Fibre 8 Gbps   ○ iSCSI 1.0 Gbps
● Customize the host LUN mapping configurations.
  ● Fibre 8 Gbps   ○ iSCSI 1.0 Gbps

Slot A
☑ Channel 4   ☐ Channel 5   ☑ Channel 6   ☐ Channel 7

Slot B
☑ Channel 4   ☐ Channel 5   ☑ Channel 6   ☐ Channel 7

☐ Customize the LUN Number: 1
☑ Use Extended Host LUN Functionality:
Host ID/Alias: 10000090FA08A114
Host ID Mask: FFFFFFFFFFFFFFFF
Filter Type: Include
Access Mode: Read/Write
[Configure Host ID/WWN Alias]

LUN mapping assigns Logical Units to hosts.

Creating a Logical Volume

Logical Volume Name: Logical Volume 2

RAID

Slot	Size	type
☑ 7	3.63 TB	SAS
☑ 8	3.63 TB	SAS
☑ 9	3.63 TB	SAS
☑ 10	3.63 TB	SAS
☑ 11	3.63 TB	SAS
☑ 12	3.63 TB	SAS

Number of Member Drives: 6   RAID Level: RAID6
Write Policy: Default   Assignment: Slot B
Stripe Size: 128K

Wizards ease configuration tasks, and include visualization of components