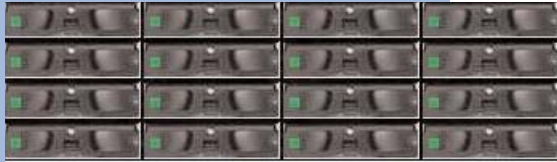


FlashView™



FlashView provide intuitive graphical display to depict system status. It also provides real time system monitoring and call home alert services via e-mail.

FlashView Advantages

- Embedded GUI for ease of use
- Intuitive and logical menus
- Event logging to non-volatile memory
- Remote access to FlashDisk RAID arrays
- E-mail notification speeds troubleshooting
- FlashAlert™ automated “call home” support service to eliminate downtime
- No host software needed
- Increase data availability by reducing downtime.
- Web-based interface for easy set up and configuration
- Supports all standard network protocols
- Vivid and intuitive graphics

Centralized FlashDisk® Management Utility *Embedded Graphical User Interface*

FlashView is a powerful and flexible management utility for monitoring high-performance FlashDisk storage products. Whether you are a corporate IT manager or system administrator, you can keep a close eye on all your storage from anywhere on the network with an easy to use embedded GUI utility.

FlashDisk storage systems can be configured from one central location, saving you precious storage management time. Optimum system performance and data availability is maintained with FlashView features like remote management over the Internet, event logging and notification, and constant FlashDisk monitoring.

Remote Management

Using your existing IP network, FlashView provides unlimited remote access to your storage system via an easy-to-use web-based browser interface. FlashView allows you to centrally control FlashDisk parameters for each RAID array such as partition size, mapping, and drive rebuilds.

Constant FlashDisk Monitoring

FlashView is constantly checking the FlashDisk for connectivity loss. It also checks the FlashDisk heartbeat to ensure that the controller is working properly. If a connectivity problem is detected or if FlashDisk detects a component failure, an e-mail notification is automatically sent. The failure information is captured in an

event log in non-volatile memory that persists through array reboots. FlashView keeps constant vigil over your valuable information when you're not around, saving you time for more productive tasks.

Event Logging & Notification

FlashView provides an event log with the time and date. Each FlashView instance can be individually configured to store messages and to alert a network manager or system administrator of a potential problem. If a problem occurs, FlashView sends an e-mail notification to “e-mail enabled” cell phones, pagers, or PDAs based on specific user-defined criteria to multiple recipients per FlashDisk. For example, one FlashDisk could be configured to e-mail only the technician on call while another e-mails to a list of multiple recipients. This alert notification system eliminates threats to your data availability by allowing the right individuals to react to potential problems immediately.

FlashAlert™ “Call Home” Service

As part of our continuing effort to provide the best customer service, Winchester Systems includes a 24x7 “FlashAlert” monitoring service that is included in the warranty and service contracts at no additional cost that captures the “call home” e-mail alerts. These e-mail alerts automatically open up a job ticket in our call center and set a plan in motion immediately to eliminate costly downtime.

FlashView Menu



Top level view of FlashView menu system also shows example of secondary menu level under Logical Drive.

FlashView Front Panel Display



ID: 55FF4D15
RAID Level: RAID 6
Size(MB): 2000
Stripe Size(KB): 128
Status: Drive Failed,Rebuilding,
Name:
Write Policy: Default

This LD is in Rebuilding...
 36%

This visually explicit display graphically shows the status of an logical drive rebuild. The relevant drives are vividly depicted in green and the rebuild progress is shown in red while the degree of completion is shown numerically.

FlashView Rear Panel Display



PSU0 status is function normally
 PSU1 status is function normally
 Cooling fan0 is function normally
 Cooling fan1 is function normally
 Cooling fan2 is function normally
 Cooling fan3 is function normally
 BBU is present
 Battery-Backup Battery is charging off (fully charged)

FlashView graphically displays the rear panel of the monitored unit with status indicators clearly shown with text rollover explanations for visual and textual clarity.

FlashView Typical Status Report

Available Logical Drives

ID	RAID Level	Size (MB)	Status
56E9A192	RAID 6	11432	Good,
11524C97	RAID 6	11432	Good,

Logical drive status display example depicts two RAID 6 arrays and their ID, size and status.

FlashView Typical Alert E-Mail

This example shows an e-mail failure notification for a bad power supply at 10:47 on June 7, 2007.



-----Original Message-----
From: sfcalert@winsys.com [mailto:sfcalert@winsys.com]
Sent: 7 Jun 2007 10:46:20
Subject: FlashDisk Alert!,Name:20102,UID 14E0, IP 192.168.150.62,mail date/time: Thu Jun 7 10:47:28 2007

To: support@winsys.com
Return-Path: sfcalert@winsys.com
Message-ID: <WSIDC1hvqgStMVhEUse0000021a@user234.winsys.com>
X-OriginalArrivalTime: 07 Jun 2007 14:47:28.0594 (UTC) FILETIME=[C52D6320:01C7A912]
Date: 7 Jun 2007 10:47:28 -0400

2007/06/07 10:47:27, [Critical][3F21]Peripheral Set 0 Device ALERT:PSU0 status Failure Detected



FlashView Event Log

Index	Date	Time	Severity	Event Messages	Clear
108	2007-6-7	13:25:51		[0192]NOTICE: Controller Default Write Policy Restore (A)	Clear Before 108
107	2007-6-7	13:25:49		[01A5]NOTICE: Controller BBU Present ! (A)	Clear Before 107
106	2007-6-7	13:25:27		[0112]NOTICE:Force Controller Write-Through on Trigger Cause (A)	Clear Before 106
105	2007-6-7	13:25:25		[0125]ALERT:Controller BBU Absent or Failed ! (A)	Clear Before 105
104	2007-6-7	10:47:32		[3FA1]Peripheral Set 0 Device NOTICE: PSU0 status Back On-Line (A)	Clear Before 104
103	2007-6-7	10:47:27		[3F21]Peripheral Set 0 Device ALERT:PSU0 status Failure Detected (A)	Clear Before 103
102	2002-4-28	11:6:36		[3FA1]Peripheral Set 0 Device NOTICE: PSU0 status Back On-Line (A)	Clear Before 102
101	2002-4-28	11:6:32		[3F21]Peripheral Set 0 Device ALERT:PSU0 status Failure Detected (A)	Clear Before 101
100	2002-4-28	10:56:48		[3FA1]Peripheral Set 0 Device NOTICE: PSU0 status Back On-Line (A)	Clear Before 100
99	2002-4-28	10:56:43		[3F21]Peripheral Set 0 Device ALERT:PSU0 status Failure Detected (A)	Clear Before 99

At the same time, the failure information is placed in a time-stamped event log. Each FlashDisk can be individually configured to store messages and alert system administrators of a potential problem.