

RAIDWatch™ Manager

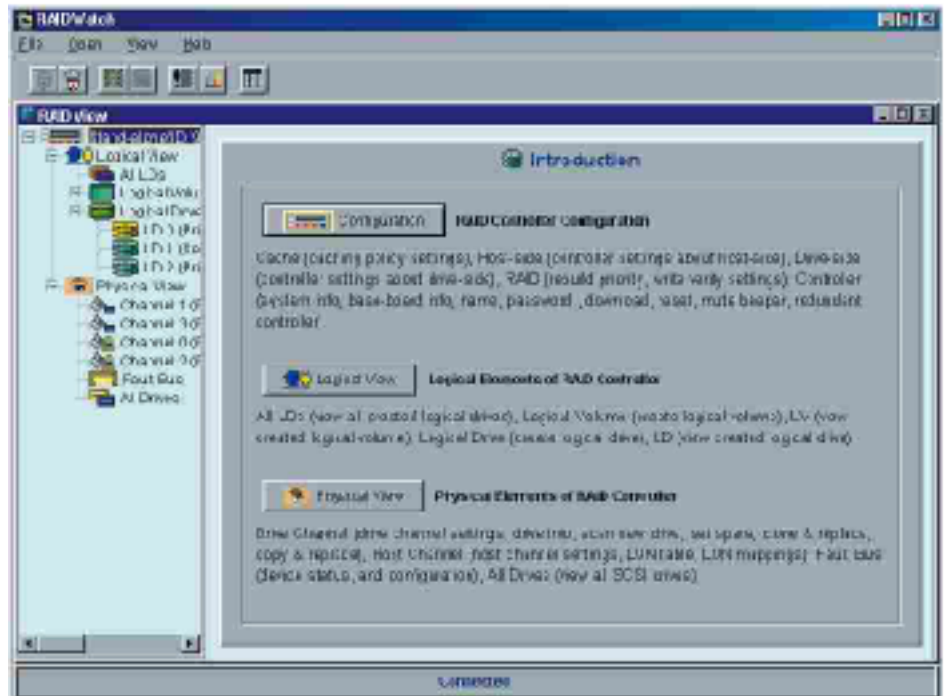
OVERVIEW

RAIDWatch Manager provides a user-friendly graphical interface for configuring and monitoring RAID systems using stand-alone controllers. The manager's graphical presentation makes array configuration convenient by allowing monitoring of the entire array "At-a-Glance."

In addition to all of the standard functions RAIDWatch Manager also offers throughput and operational statistics, enclosure monitoring functions, event monitor, and powerful event notification functions.

FEATURES

- User-friendly graphical interface
- Modular software "agent" design provides installation flexibility
- Supports any platform that is compatible with Java 2.0 or higher
- Runs in stand-alone mode or remotely over a LAN/WAN using any standard web browser via a hybrid TCP/IP agent running on the host
- Communicates with controllers via out-of-band transmission over Ethernet port or in-band over host SCSI/Fibre channels
- Interactive display of enclosure components for "At-a-Glance" monitoring of the entire array status
- Supports concurrent management of unlimited multiple RAID controllers
- SAF-TE, S.E.S., Fault-bus, and ISEMS supported



- Event Monitor runs independently, displaying event description, severity and time of occurrence
- Issues SNMP traps in response to events that are posted by the controller

RAID Controller Management

- Examine and modify controller configuration settings
- Create, view, delete and monitor physical drive and logical configurations
- Capacity online expansion
- Rebuild logical arrays
- Spare drive assignment
- Host ID/LUNs mapping

Enclosure Management

- Real-time display of multiple custom enclosures status, array configurations, number of drives
- Monitor physical drive, power supply, fan, and temperature status
- Display failed drive location

Event Notification

- Full-featured notification capability; notifier modules can be installed redundantly to avoid blind time
- Notification via e-mail, LAN broadcast, fax, SNMP traps, or pager (using a fax/modem)
- NPC runs as a background DAEMON, independent from RAIDWatch Manager

OPERATION

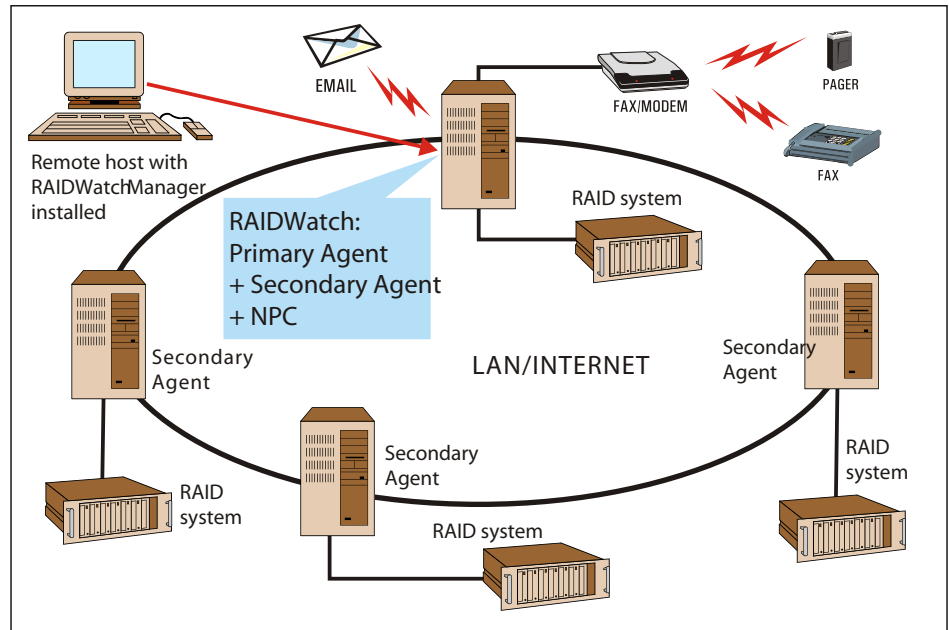
Remote Management

RAIDWatch supports remote array management over a LAN or the Internet using hybrid TCP/IP agents. The RAID controller installed in a host with the hybrid agent will accept requests from a remote station running RAIDWatch Manager. Responses from the RAID controller are forwarded to the manager via the same path. The manager can also connect remotely using any standard web browser via the internet, providing "install once, run anywhere" convenience. With Internet support, an operations center in Seattle can manage company RAID's in San Francisco, Hong Kong, and London, all from a single desktop.

Enclosure Management

RAIDWatch Manager includes highly flexible enclosure monitoring. RAID enclosure displays can be customized to reflect various configurations. Once an enclosure is graphically defined, drive icons can be pasted into the bays that correspond to their physical locations, including horizontal and vertical orientation. Drive status can then be monitored in an enclosure-relative context. The image of a failed drive displays in the location of the corresponding physical drive. This function reduces the possibility of unplugging the wrong drive during a drive failure.

USAGE DIAGRAM



Powerful Event Notification

RAIDWatch supports a variety of notification options when an event occurs. Events are classified into three severity levels: notifications, warnings, and alerts. Several notification methods are available: e-mail, LAN broadcast, fax, and pager. The program issues notifications in response to events posted by the RAID controllers. Notifications are then sent out via all configured methods. The notification program is associated with the primary agent module of the software and can be launched automatically on boot-up, allowing for hands-free operation.

Event Monitor

The Event Monitor runs independently as an all-time monitor of the events reported

from one or multiple RAID systems. The program can help, along with NPC (Notification Processing Center) a system administrator to quickly locate and respond to system alerts.

SYSTEM REQUIREMENTS RAIDWatch Running on RAID Hosts

- Pentium or above compatible (or equivalent PC) running Windows NT 4/Windows 2000; Solaris 7 & 8 (SPARC, x86); AIX 4.3; Red Hat Linux 6.1 (kernel v2.2.xx) and 7; SUSE 7
- Fax/Modem (if using fax or pager event notification; fax command class 2.0 support only)

RAIDWatch Manager Running on a Remote Station

- Pentium or above compatible (or equivalent PC or workstation) running Windows NT/Windows 2000; Solaris 7 & 8 (SPARC, x86); AIX 4.3; or Red Hat Linux 6.1 (kernel v2.2.xx) and 7; SUSE 7, WIN95/98, Windows Me
- Java Runtime 1.2 (installed locally)
- Netscape v 4.5 or IE 4.0 (or above), Java 1.2 Plug-In (platform specific version)