Intelligent Management Subsystem

Today's computing enterprise is a set of heterogeneous hardware and software interacting to contribute to the bottom line of businesses. This enterprise network is complex and it provides services that are critical to day-to-day operations. The more services the network offers and users it supports, the greater the cost of downtime. A robust server management solution is a critical component that a server must offer to ensure the highest possible system uptime and provide tools to manage day-to-day operations and future growth.

Tricord's Intelligent Management Subsystem (IMS) is a total server management solution for Tricord's PowerFrame Enterprise Server (ES) Series. It has comprehensive fault management, configuration management and performance management with integrated hardware and software. Modeled after the management and performance-tuning tools found on mainframe systems, the IMS delivers the tools necessary for day-to-day system administration, as well as interactive performance management so that you can tune an ES Series server, measure the impact of new software on the system and plan for future growth. With its SNMP agent, the IMS not only provides server management, it participates in your enterprise-management solution.

Robust server management solution managing day-to-day operations and future growth to ensure the highest system uptime

Benefits:

- Integrated management hardware, firmware and software within an independent, intelligent subsystem provide server monitoring without impacting system performance.
- Advanced fault management contributes to overall system availability through fault prevention and recovery techniques.
- Dynamic configuration management allows you to manage your hardware easily with detailed configuration windows and on-line local or remote flash update utilities.
- Server performance is always at its peak with sophisticated tools for system tuning, trend analysis and capacity planning.
- Flexible notification services allow you to stay on top of potential problems and critical situations through local and remote consoles, pagers and SNMP managers.

Integrated Management Hardware and Software

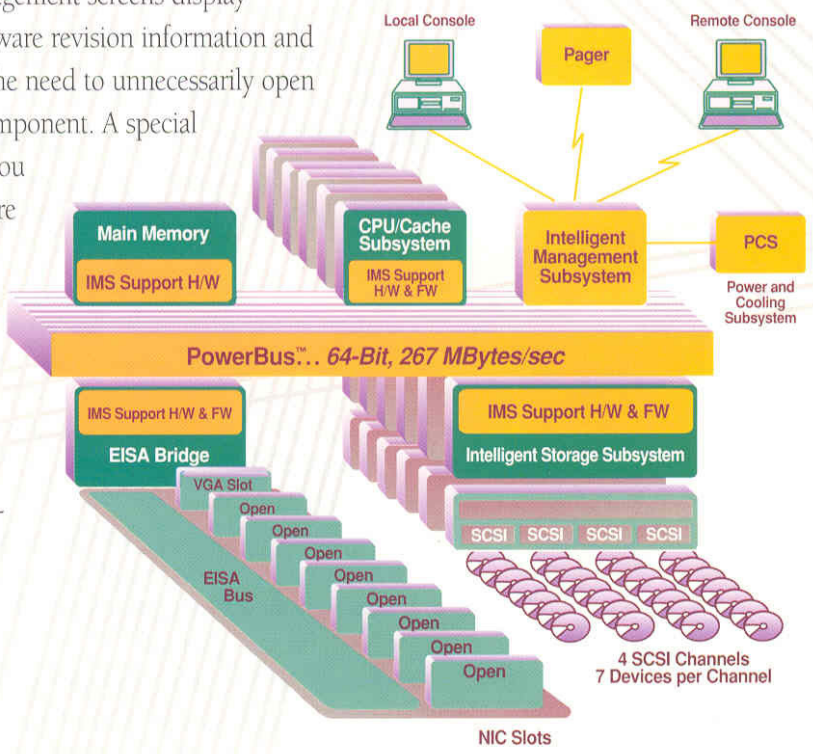
The IMS is a set of management hardware, firmware and software fully integrated into the PowerFrame ES Series. The IMS's independent, microprocessor-based subsystem, dedicated to server management, monitors all components of the ES Series through an extension to the high-speed PowerBus and embedded hardware and firmware residing on each of the ES Series' subsystems. Directly connected to the IMS is the Power and Cooling Subsystem, which monitors the status of all power supplies and fans in the ES Series system chassis and up to six attached disk cabinets. Battery backup provides power to the IMS for up to three days, giving alert notification even during a power outage.

Fault Management

The fault management features of the IMS go beyond those found in other server management packages. To prevent faults, the IMS proactively reports abnormalities so that the network administrator can take action before a fault occurs. Many high-availability features within the PowerFrame ES Series complement the IMS, including RAID, disk hot sparing and redundant power supplies to ensure that the most-common faults are recoverable without operator intervention, system degradation or impact to the network users. If the event is critical, the IMS will attempt to isolate the fault to the specific module and, if possible, recover the system. For example, when an ES Series server is configured with more than one CPU, if one CPU fails, the IMS's dedicated fault-isolation hardware automatically disables the failing CPU and reboots the system with one less CPU.

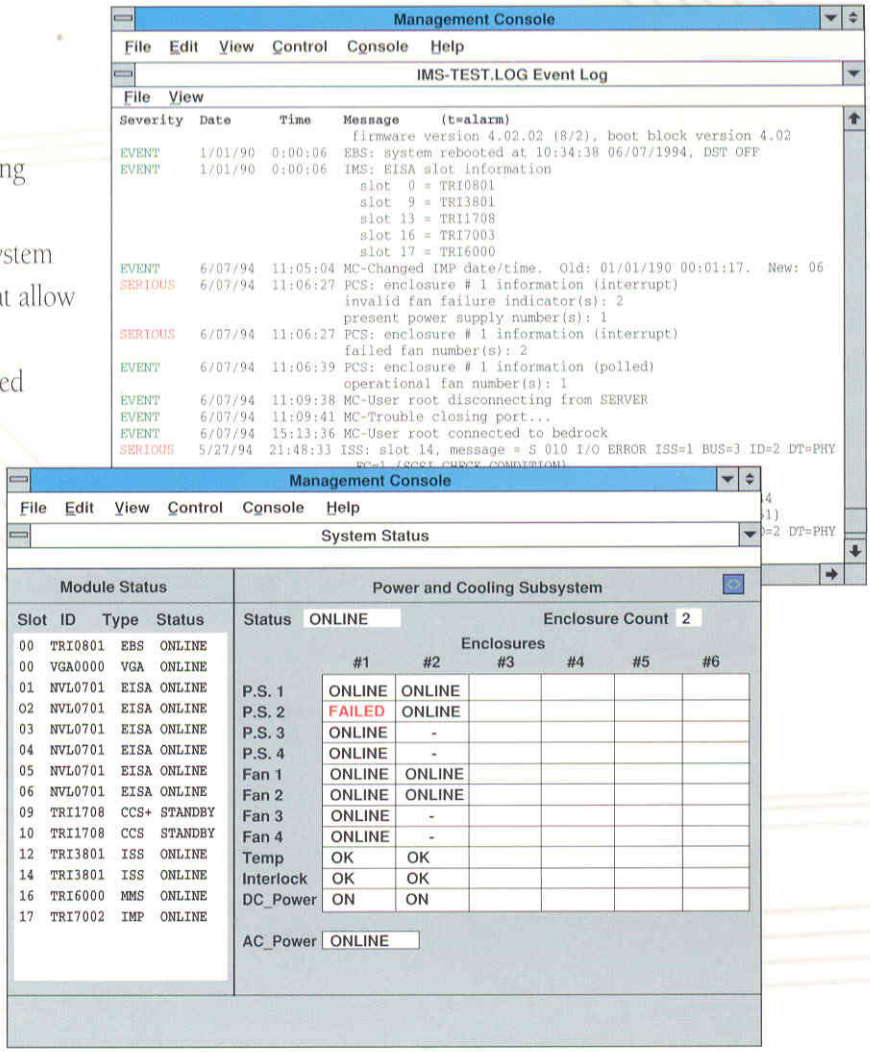
Configuration Management

For configuration management, the IMS provides information about all installed hardware components in your system including CPU, memory, disks, disk cabinets, network interface cards and firmware. Easy-to-read management screens display component IDs, status, firmware revision information and other data. This eliminates the need to unnecessarily open the system and remove a component. A special flash update feature allows you to update subsystem firmware without disabling the system. In addition to helping you keep your system up to date, the configuration manager streamlines information collection for critical trouble-shooting situations.



Performance Management

When it comes to managing performance, the IMS provides sophisticated analysis tools for system tuning and capacity planning that allow you to optimize your computing resources. The IMS graphs detailed performance information in each PowerFrame ES Series subsystem for interactive analysis, providing the data necessary to allocate resources to eliminate bottlenecks. To ensure your ES Series system will perform well into the future, baseline examinations can be stored for future growth analysis.



Access and Notification

Whether in the next room or the next country, management information is easy to access and understand with the IMS's Windows-based management console utility. Remote dial-in means all server management functions, including remote restart, are available to you off-site using the same management console interface.

The management console also keeps you informed of all events. The IMS has an advanced notification system that allows you to customize event notification according to your organization's procedures. User-definable parameters let you select who should receive event information and at what times and days they should receive it. You can also set the type of alerts (event, warning, serious or fatal) and how they should be sent.

In addition to logging all event information and reporting through the console, the IMS always keeps you apprised of the situation with a variety of event-notification services. The IMS will page you if a problem occurs. It can also call a PC running the IMS console application or notify an SNMP manager such as Novell's NetWare Management System or Hewlett Packard's HP OpenView using IMS's SNMP.

IMS Features

Hardware

Intelligent Management Processor:

80386 Processor
Flash Memory
Diagnostic LEDs
2 Serial Ports (DB-9)
PCMCIA Port
2400 Baud PCMCIA Internal Modem (U.S. and Canada only)
Lithium Battery Pack (for 85 hours after DC power loss)

Management Console System:

User-supplied PC-compatible 80386 or 80486 system
Null modem cable (local connection)
Modem (remote connection)

Software:

Server Hardware Monitor:

Power and Cooling Monitoring	Monitors all power supplies and cooling fans
System Bus Utilization	Monitors bus utilization across the EBS and all installed ISS and CCS modules
ISS Profile	Monitors activity across selected SCSI buses
Server Reset	Remotely reboots server
Alert Levels	Event, warning, serious and fatal

Management Console:

Operating System	DOS 3.1 or higher
User Interface	Windows 3.1 GUI standard
Access Method	Local and remote
Configuration Support	Local and remote
Multiple Server Access	Monitors multiple servers
Remote Console	Provides interface for remote console
Display Format	User configurable
Security	Password protected

Pager Access Agent:

Alert Notification	Supports delivery of monitor alerts to pager
Protocol	Telocater Alphanumeric Input Protocol (TAP)
Pager Support	Alphanumeric

Alert Logging:

Alert Capture	Provides long-term storage of alerts in a log file
Log File	Maintained by Management Console system
Log File Format	ASCII

Functions

- Gives alerts according to user-defined parameters including alert level, person, time and day.
- Provides comprehensive information for one or more ES Series servers at one or more local or remote consoles.
- Monitors Power and Cooling Subsystems for the main cabinet and all attached disk cabinets.
- Provides alert notification during a power outage with three-day battery backup.
- Shows status, activity and firmware revision levels of installed hardware modules.
- Provides immediate notification of critical alerts including failed server through pagers, remote consoles and SNMP management packages.
- Allows local or remote firmware updates.
- Provides comprehensive performance statistics for the ES Series and its subsystems.
- Automatically reboots and reconfigures your system if a redundant CPU fails.
- Stores event log for on-line or off-line analysis.

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yes It runs with NetWare

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