

# HP Systems Insight Manager and HP OpenView

Working Better Together to Deliver End-to-End Management, from  
Hardware Infrastructure to Business Service Availability



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## Executive Summary

As an enterprise IT manager, you are responsible for delivering and maintaining the infrastructure and services that enable your business to compete effectively and respond quickly to changing market requirements. Keeping business services operating smoothly requires in-depth knowledge of your environment from end-to-end, an understanding of how IT affects the availability and operations of business processes, and an effective set of well-integrated management tools. It is also critical to set appropriate expectations on the type, quality, performance, and availability of the IT services to which users will have access. Even more challenging is the constant pressure placed upon IT operations and capital expense budgets, so getting the most out of your IT investments is another key consideration.

In this context, end-to-end management is defined as the ability to visualize and maintain the entire enterprise from the front-end customer view and client-based tools to the back-end servers and hardware infrastructure that hosts critical business applications, defines enterprise communications, and controls network security.

This document illustrates how HP Systems Insight Manager and HP OpenView can be used in a complementary manner to develop a well-integrated and highly manageable adaptive enterprise, helping IT organizations deliver consolidated end-to-end management and increased availability from the hardware infrastructure to the business service level.

## Challenges of Managing the Adaptive Enterprise

HP's vision for the adaptive enterprise synchronizes IT technology with business needs to ensure higher availability of critical IT services and more proactive management of the enterprise environment, while reducing the costs and complexity associated with maintaining these resources.

### Service Management Is the Key to Business Efficiency

Effective service management is a critical element in the development of an adaptive business enterprise. Service management is an approach that aligns the management of the IT infrastructure with business processes and priorities. Achieving the benefits of IT Service Management (ITSM) requires a comprehensive approach addressing people, processes and technology. It begins by cataloguing the available assets and resources, and understanding their relationships and interdependencies. This catalogue of data is used to define Service Level Agreements (SLAs) and Objectives (SLOs) that deliver performance and availability assurance for business-critical IT services and operations.

Service management software that does not optimize business processes cannot help you make the breakthroughs that are necessary to truly operate from a service-driven perspective. HP OpenView solutions are designed to address a broad range of business and IT needs, including networks, storage, and systems, as well as services like e-mail, enterprise resource planning and e-commerce. By linking people, processes, and technology, your organization will be positioned for success.

Together, HP OpenView and HP Systems Insight Manager lay a solid foundation upon which a broad IT service management solution can be developed. HP OpenView and HP Systems Insight Manager deliver a consolidated and centralized management platform for your entire enterprise, helping to reduce operation costs, increase availability, and ensure efficient management of critical business resources.

# Principles of an Adaptive Enterprise

The implementation of a truly adaptive enterprise relies upon the following key elements:

## **Stability**

- Create a stable IT foundation built on well instrumented industry-standard technology
- Implement tools that enable easy system deployment, proactively monitor the configuration, health and performance of IT resources, and can manage systems through their entire lifecycle

## **Efficiency**

- Simplify IT operations and reduce costs by using existing assets and resources more efficiently
- Manage the delivery of IT services more effectively, by detecting and monitoring the dependencies between servers, networking components, and applications

## **Real-time Business Agility**

- Synchronize IT resource availability with the needs of business
- Virtualize devices and resources across the enterprise
- Develop policies that predict capacity requirements, automate responses to common events and dynamically assign IT resources to rapidly meet changing business conditions

## HP Applications for Managing the Enterprise

### HP Systems Insight Manager

HP Systems Insight Manager delivers a new approach to HP hardware platform management. Bundled with HP ProLiant, HP Integrity, and HP9000 servers, Systems Insight Manager boasts a distinguished heritage. It combines the best capabilities of HP Insight Manager 7, HP Tootools and HP ServiceControl Manager, industry-leading tools that have been keeping IT running for over 10 years.

The result is the industry's first cross-platform hardware platform management solution hosted on Windows, Linux or HP-UX that manages the lifecycle of HP servers, storage, clients, printers, and other networked devices. Systems Insight Manager helps IT organizations proactively manage system faults, assets, and hardware configurations on servers and other HP devices from a single application.

HP Systems Insight Manager provides a choice of access modes; via an intuitive Web-based GUI or a command-line-interface. It can also manage the devices of third-party vendors through management standards and by automatically launching vendor-specific management tools. Systems Insight Manager can be easily extended to deliver enhanced server lifecycle management through plug-in components for specialized HP management tools, including partitioning, rapid deployment, performance management, and workload management. HP Systems Insight Manager can also be customized with off-the-shelf or internally developed scripts and applications.

### HP OpenView Operations

HP OpenView Operations provides a service and business-driven approach to achieve rapid control and availability of IT operations across the heterogeneous enterprise. Used to correlate the impact of IT infrastructure on business-critical services, such as e-mail and e-commerce, OpenView Operations builds on an extensive policy base to monitor operating system and application attributes and provide automated responses to common events.

Hosted on Windows (OVOW) or UNIX (OVOU) platforms, OpenView Operations delivers distributed large-scale management from a unique service management perspective to monitor, control, and report the health of IT environments across boundaries, improving the availability and reliability of all enterprise layers that includes multi-vendor systems, middleware, and applications.



## HP OpenView Network Node Manager

OpenView Network Node Manager (NNM) provides robust standards-based management for heterogeneous networks of all sizes that require advanced management of routers and switches, sophisticated root-cause analysis, and distributed management for large or complex networks.

NNM discovers and displays complex network configurations and monitors network infrastructure availability, helping organizations to meet usage demands and optimize the total cost of ownership. Out-of-the-box automation and systems intelligence identifies the resources that make up enterprise network services and their relationships with network devices in complex switched environments.

## HP OpenView Service Desk

HP OpenView Service Desk provides a unique solution to successfully manage service levels by indicating the relationships and dependencies between customers, business services, service level agreements (SLAs) and support level objectives. HP OpenView Service Desk provides a hierarchical service structure with multi-tiered SLA and trouble-ticketing capabilities, all presented through an intuitive and customizable user interface.

## Achieving End-to-End Management with HP Systems Insight Manager and HP OpenView

HP OpenView and Systems Insight Manager are highly complementary, enabling administrators to:

- Develop a consolidated management platform for the heterogeneous IT environment
- Link IT platform resource availability with service level requirements and business needs
- Simplify IT operations, increase resource availability and improve business agility



### HP OpenView

- Multi-vendor systems management
- Network topology discovery and monitoring
- OS and application events and performance
- Service-level availability
- Heterogeneous platform support

### HP Systems Insight Manager

- In-depth hardware lifecycle management
- Hardware status and fault management
- Systems configuration information
- System software version control
- Inventory data collection
- Hosted on Windows, HP-UX, and Linux



### Better Together: Complementary management delivering the best RoIT

- OpenView provides a common enterprise platform for hardware and service-level management
- Systems Insight Manager integration with OpenView via embedded policies and plug-in components

### Business Benefits

- Synchronize IT resources with changing business needs
- Maximize existing IT investments
- Simplify enterprise management
- Create more efficient, agile and available business operations

Figure 1: Better Together - HP OpenView and HP Systems Insight Manager

With HP OpenView as the primary interface to manage the availability and performance of critical business services, integration with HP Systems Insight Manager enables administrators to correlate HP hardware status with the availability of business service-levels, and obtain in-depth data for more accurate root cause analysis and faster problem resolution.

HP delivers tight integration between Systems Insight Manager and OpenView using HP-developed connector components for OpenView Network Node Manager (NNM), OpenView Operations (OVO) and OpenView Service Desk (OVSD). This enables users of NNM and OVO and OVSD to view in-depth hardware data from their existing OpenView consoles.

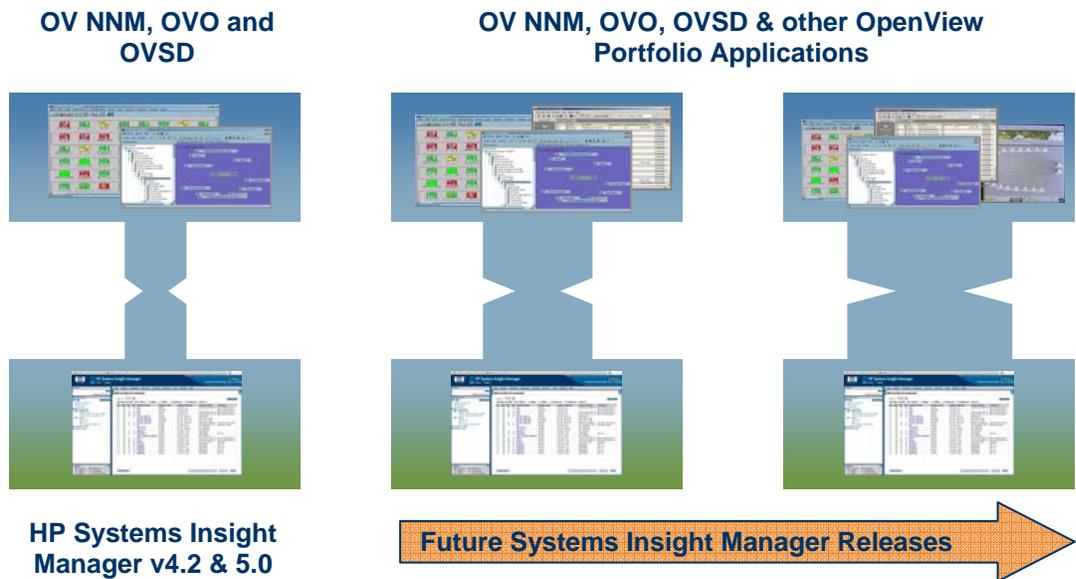
Key Benefits

Integration between HP Systems Insight Manager and HP OpenView provides the following benefits:

- Maximizes investments in HP hardware, HP Systems Insight Manager and HP OpenView
- Provides a common enterprise platform and management interface for hardware and service levels
- Synchronizes IT resource availability with business service needs
- Simplifies management operations and enables more efficient use of IT operations staff
- Increases systems and service availability, and reduces the time to analyze and resolve problems

**Integrating HP Systems Insight Manager and HP OpenView**

Today, integration between HP Systems Insight Manager and HP OpenView focuses on the NNM, OVO and OVSD platforms, and is delivered through plug-in components and embedded policies developed by HP. Subsequent revisions of Systems Insight Manager (HP SIM) will expand on the present solutions to provide a greater level of embedded, seamless integration, and increased sharing of common data across a broader range of OpenView applications.



- Agent based integration
- Detailed system discovery in the OpenView console
- Hardware status & events
- Embedded launch of HP hardware resource management tools

- Application-based integration
- Common tasks and bi-directional data sharing between HP SIM and HP OpenView
- Tighter integration of HP SIM and other HP mgmt tools across a broader OpenView portfolio

Figure 2: HP Systems Insight Manager and HP OpenView - Future Integration Strategy

The following sections provide further details on the present integration solutions between HP Systems Insight Manager and HP OpenView.

### HP Systems Insight Manager Integrated with HP OpenView Network Node Manager

The Insight Integration for HP OpenView Network Node Manager is a plug-in component that integrates hardware identification, status monitoring and event notification for HP ProLiant and Integrity servers, AlphaServers, HP storage configurations and client systems into an existing OpenView NNM management console.

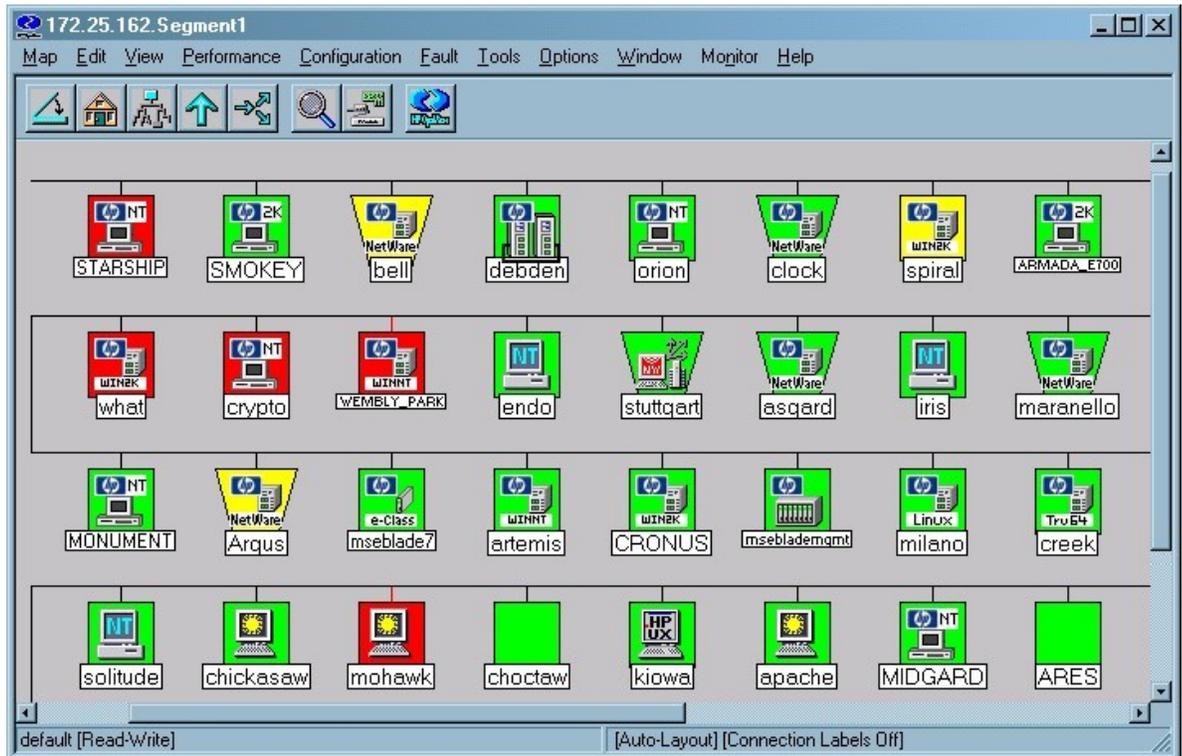


Figure 3: HP Hardware Discovered on the OpenView NNM Map Using Unique Icons

#### Key Features

- Automatically identifies and displays HP server and client status on the HP OpenView Network Node Manager map with unique color-coded icons
- Detailed HP SNMP events for servers, clients and storage configurations translated and displayed in the NNM event console using plain English
- Embedded menu items to launch the browser-based HP Systems Insight Manager, HP System Management Homepage, HP Remote Insight administration interface, and the HP OpenView Storage Management Appliance from the NNM event console
- Integrates into all major NNM host platforms, including HP-UX, Solaris, and Windows
- The HP Insight Integration for NNM is free to download from the following URL, <http://www.hp.com/servers/integration>

### HP Systems Insight Manager Integrated with HP OpenView Operations

The integration between HP Systems Insight Manager and HP OpenView Operations (OVO) for both Windows (OVOW) and Unix (OVOU), is delivered as part of the Windows OS Smart Plug-In (SPI).

For OVOW, SPI is available for free with the OVO agent license and is installed by default. For OVOU the SPI is available separately on the OVOU Application CD.

This solution enables IT administrators to associate hardware infrastructure status and events with the availability of enterprise operations and business services.

### Key Features

- Systems Insight Manager policies provided as part of the Windows OS SPI. Installed by default with OVOW since v7.1, and available on the OVOU Application CD since 1Q 2004
- Auto-discovery of HP servers running HP Insight Management Agents on the OVO service map
- Smart Plug-In policies for HP Systems Insight Manager automatically deployed
- Monitors availability of HP Insight Management Agent services as well as hardware status
- SNMP events instrumented by HP Insight Management Agents are translated and displayed in the OVO event browser using plain English
- Predefined rules automatically correlate and close HP hardware events in the OVO event browser
- Embedded menu items to administer and launch HP Systems Insight Manager, the HP System Management Homepage, and HP Remote Insight administration console from the OVO service map

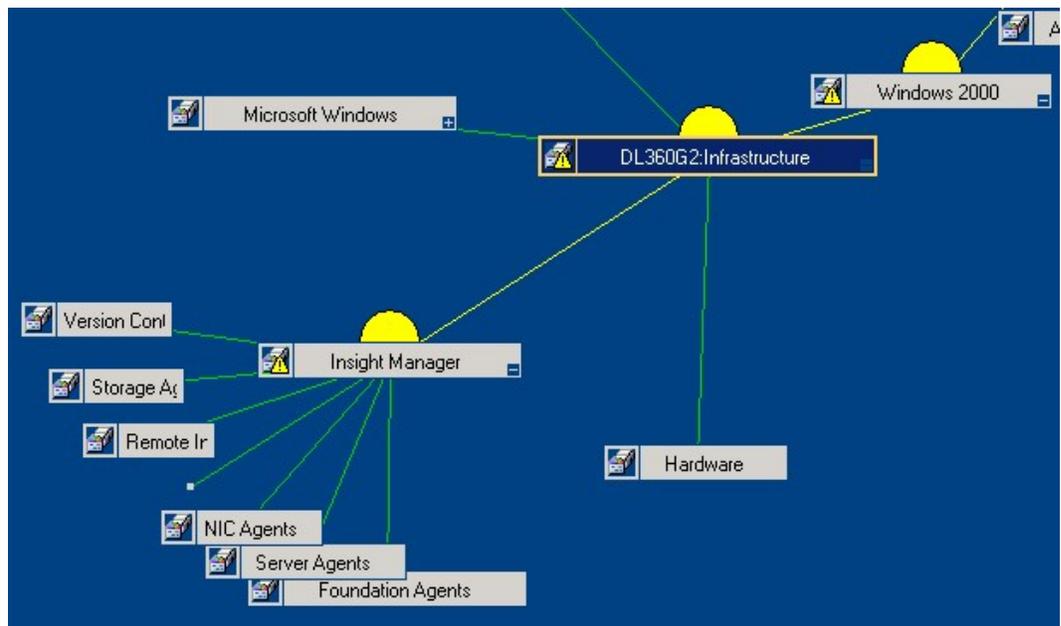


Figure 4: OVOW Policies Monitor HP Insight Manager Services and Provide Status

### **Integration Benefits**

The integration of HP Systems Insight Manager and HP OpenView enables IT organizations to develop a more consolidated and efficient platform for managing their end-to-end enterprise. This advanced management capability provides significant IT and business operations benefits:

- Use valuable IT and business resources more effectively, including skilled personnel, to increase productivity, reliability and availability of business services, and to reduce operating costs
- Streamline the tools, processes and lifecycles used to maintain enterprise operations
- Manage the heterogeneous end-to-end enterprise from a common OpenView console
- Automate common events and dynamically assign resources to meet changing business needs
- Quickly determine the impact of systems events on business operations by correlating hardware platform, operating system, application, and performance events with service-level availability

- Determine problem root-cause analysis quickly and accurately for all enterprise resources, from business service levels to the hardware infrastructure, for faster resolution.

### Integration Example

The following example summarizes how integration between HP Systems Insight Manager and HP OpenView Operations (OVO) enables fast root cause analysis and problem resolution to maintain the availability of a critical business service:

- A hard drive, part of a RAID array configuration, on an HP server hosting Microsoft Exchange has developed a problem
  - Insight Management Agents running on the server monitor hardware health and provide in-depth configuration, status and fault data. The Insight Management Agents detect the hard drive problem and generate a hardware event in the Windows Event Log
  - The OVO agent, communicating with the Insight Management Agent and monitoring the Windows Event Log, records the event and generates an update to the OVO console application
  - Based on prior discovery, the OVO policies automatically associate the hard drive problem with a possible degradation of the Exchange service
  - The OVO service map is updated with a failure-level status on both the physical server symbol and the Exchange service symbol. The OVO event browser is also updated with a similar level of hard drive and Exchange service entries
  - In this example, the Exchange service is a critical component for maintaining email communications for the business, therefore the IT administrator assigns a high priority for this event, even though other events for less critical services may have already been received
  - By launching the root cause analysis tool from the Exchange symbol on the OVO service map, all elements associated with the event are displayed, indicating that the change in Exchange status originated from an event generated by an HP Insight Management Agent
  - From the Insight Manager symbol in the root cause display, the administrator launches HP Systems Insight Manager to collect hardware details on drive size, configuration and overall server status
- NOTE:** In this example, the failed drive is part of a RAID array, so there is no server down time and no interruption to the Exchange service
- Once the drive is replaced the RAID array begins its automatic rebuild and the OVO service map is again updated to reflect only a minor problem status for both the server and the Exchange service

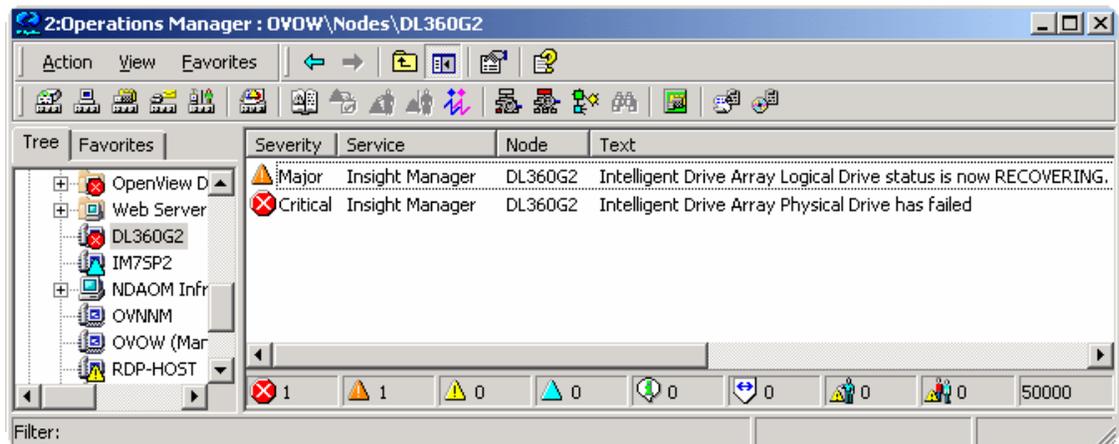


Figure 5: HP Hardware Events Translated and Displayed in the OVOW Event Browser

- In the OVO event browser, the critical and major events previously logged are automatically closed and replaced with minor level indications

- When the drive rebuild is complete, all events associated with the drive failure and replacement are automatically closed and the OVO service map symbols for the server and the Exchange service return to their normal condition

### Example Summary

The example above illustrates how, using default functionality of the Insight Manager policies shipped with HP OpenView Operations for Windows, the administrator was able to:

- Clearly see the relationship between the failed hard drive and the Exchange service
- Quickly prioritize, diagnose, and resolve the problem through easy access to service level, application, and in-depth hardware infrastructure data
- Maintain systems and service availability
- Provide resolution using a streamlined and efficient set of processes. Event closure was handled automatically using policy based definitions, removing the need to physically acknowledge and close each individual event (total of 4-6 events depending on the configuration).

### HP Systems Insight Manager Integrated with HP OpenView Service Desk

HP has developed a white paper and supporting files that enable the integration of HP hardware configuration and event data into an existing OpenView Service Desk console. Entitled "*Integrating HP OpenView Service Desk and HP Systems Insight Manager*", this paper outlines how administrators can extend Service Desk Pages and automate the population of Service Desk incidents based on events and asset data presented by Systems Insight Manager.

### Key Features

- Import Insight Manager tool and configuration definitions into the Service Desk database
- Automatically create Service Desk incidents following event reception by Systems Insight Manager
- Extend Service Desk Service Pages with HP server hardware event and asset data
- Integrate the launch of Service Desk Service Pages from the Systems Insight Manager tools menu

The white paper "*Integrating HP OpenView Service Desk and HP Systems Manager*" and associated installation files are is free to download from the following URL

<http://h18000.www1.hp.com/products/servers/management/hpsim/hpsim-openview.html>

ID	Configuration Item	Deadline	Description	Category	Status
Registered - 32 item(s)					
12,067	CCA15111		Printer Toner Low	Hardware	Registered
12,066	MIMIR		Performance Status Change	Hardware	Registered
12,061	CCA15111		Printer Output bin full	Hardware	Registered
12,038	IPBLADE16		Enclosure inserted (22004)	Hardware	Registered
12,035	IPBLADE6		Enclosure removed (22003)	Hardware	Registered
12,024	CCA155HP01		Printer Generic Error	Hardware	Registered
12,021	CCA155HP01		Printer Offline	Hardware	Registered
11,131	ATHENA		NIC Connectivity Restored Trap (18005)	Hardware	Registered
11,130	ATHENA		Virtual Machine Powered On	Hardware	Registered
11,129	ATHENA		ucdShutdown	Hardware	Registered
11,128	CALLISTO		LogicalDisk BusyTime Failed (19008)	Hardware	Registered
11,127	IPBLADE16		Critical Software update Notification Trap (11014)	Hardware	Registered
10,157	MSEBLADE10		OV SAM Device Event	Hardware	Registered
10,156	MSEBLADE10		OV SAM Device Event	Hardware	Registered
10,093	NIKE		Processor Time Degraded (19001)	Hardware	Registered
10,092	NIKE		Processor Time Failed (19002)	Hardware	Registered
9,048	ATHENA		Virtual Machine Detected Guest Heartbeat	Hardware	Registered
9,047	ATHENA		Virtual Machine Powered On	Hardware	Registered
9,038	SPIRAL		PagingFile Usage Degraded (19005)	Hardware	Registered

Figure 6: Service Desk incidents for hardware and services

## Usage Scenarios

The following table outlines a number of common IT administration roles and the combination of HP management applications used to address the requirements most effectively.

IT Administration Roles	HP Management Applications
<p><u>Hardware infrastructure focused on :</u></p> <ul style="list-style-type: none"> <li>☑ Maintaining availability of HP servers, and other IT hardware platforms</li> <li>☑ Deploying and managing hardware resources in local and remote offices</li> <li>☑ Ensuring server driver levels are in accordance with corporate baselines</li> <li>☑ Running hardware inventory reports</li> </ul>	<p>Use HP Systems Insight Manager for in-depth hardware lifecycle management</p>
<p><u>Network administration focused on :</u></p> <ul style="list-style-type: none"> <li>☑ Maintaining availability of hardware platforms across the network</li> <li>☑ Understanding layout and routing of the network infrastructure</li> <li>☑ Managing network communications across multiple business sites</li> </ul>	<p>Use HP OpenView Network Node Manager (NNM) for comprehensive network management</p> <p style="text-align: center;">+</p> <p>Extend and complement NNM with the HP Insight Integration module for NNM, for HP hardware discovery and fault management from within NNM</p> <p style="text-align: center;">+</p> <p>HP Systems Insight Manager, for hardware lifecycle management from the NNM console</p>
<p><u>Enterprise operations focused on:</u></p> <ul style="list-style-type: none"> <li>☑ Maintaining availability of hardware platforms across the enterprise</li> <li>☑ Preserving the performance and operations of operating systems and business applications in the enterprise</li> <li>☑ Identifying IT and business service relationships</li> </ul>	<p>Use HP OpenView Operations (OVO) for broad business operations and service availability management</p> <p style="text-align: center;">+</p> <p>Extend and complement OVO with the Insight Manager Smart Plug-In components, for hardware status and event translation</p> <p style="text-align: center;">+</p> <p>HP Systems Insight Manager, for hardware lifecycle management from the OVO console</p>
<p><u>Enterprise operations focused on:</u></p> <ul style="list-style-type: none"> <li>☑ Maintaining configurations and service levels to well-defined criteria (SLAs)</li> <li>☑ Understanding service ownership, dependencies and outage impacts</li> <li>☑ Creating, managing and rapidly resolving trouble-tickets for IT and business service availability</li> </ul>	<p>Use OpenView Service Desk (OVSD) for managing SLAs</p> <p style="text-align: center;">+</p> <p>HP Systems Insight Manager (HP SIM), for hardware lifecycle management</p> <p style="text-align: center;">+</p> <p>Extend OVSD with HP SIM definitions to automate service incident creation for hardware events</p>
<p><u>Enterprise operations covering all aspects of management listed above:</u></p> <ul style="list-style-type: none"> <li>☑ IT hardware platforms</li> <li>☑ Network infrastructure</li> <li>☑ Enterprise business operations</li> <li>☑ Configuration and service-level management</li> </ul>	<p>Use HP Systems Insight Manager</p> <p style="text-align: center;">+</p> <p>HP OpenView Network Node Manager</p> <p style="text-align: center;">+</p> <p>HP OpenView Operations</p> <p style="text-align: center;">+</p> <p>HP OpenView Service Desk</p>

## Conclusion

Today's economic realities demand that businesses leverage IT investments more effectively to get the best return (RoIT) and create a competitive advantage. HP understands that enterprises are facing changes in their business conditions at unprecedented rates and from a variety of sources. Now more than ever, staying competitive means maximizing IT infrastructure resources and employing more efficient operation procedures to respond to a demanding marketplace.

HP's vision for the Adaptive Enterprise helps companies to synchronize their IT resources, processes and infrastructure with business strategies. This approach enables businesses to reduce the cost of change and total cost of ownership, simplify management complexity, and provide the enterprise with the ability to rapidly implement solutions that deliver a competitive advantage. With an HP adaptive enterprise, IT can rapidly adjust to the changes needed to meet new business initiatives and opportunities.

HP is in a unique position to deliver a complete portfolio of products, solutions, and expertise that enables businesses to develop a truly adaptive enterprise. Together HP OpenView and HP Systems Insight Manager provide a solid and reliable IT foundation, as well as end-to-end capability to manage change and automate the dynamic link between business and IT —the essence of the Adaptive Enterprise.

## For more information

For additional information on the HP's vision for the adaptive enterprise, HP Systems Insight Manager and HP OpenView, the following resources are available:

[www.hp.com/go/hpsim](http://www.hp.com/go/hpsim)

[www.openview.hp.com](http://www.openview.hp.com)

[www.hp.com/go/adaptive](http://www.hp.com/go/adaptive)

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Revision 2, 11/2005