

Solutions for the adaptive enterprise.



## HP Integrity Essentials

Management solutions for HP Integrity servers





At HP, we are committed to protecting our customers' investments in existing management tools and processes. In making the management of Integrity servers as simple and cost-effective as possible, we are pursuing a path of consistency.

## Managing the newest technology

As Intel® Itanium® processor technology gains momentum in the enterprise, there are questions on the minds of many potential customers of Itanium-based servers. "How will I manage my HP Integrity servers? Will I be able to use the tools that I have in place for my HP 9000 and ProLiant servers, or will the Intel Itanium architecture require a separate and entirely new set of monitoring software and hardware?"

### A commitment to consistency

The short answer to these questions is, "Rest assured." At HP, we are committed to protecting our customers' investment in existing management tools and processes. We are making the management of HP Integrity servers as simple and cost-effective as possible by pursuing a path of consistency. When you purchase HP Integrity servers, you will be able to manage them with the same great software that you use right now to manage your HP 9000 and ProLiant servers. And this applies to all of the operating systems (OSs) that will be available on Integrity servers—Windows®, HP-UX 11i, Linux®, and OpenVMS.

### Unified infrastructure management

Why common tools? Because technology is constantly changing and will continue to change. Until now, different operating systems and hardware platforms have required different management tools. That means system administrators have had to spend time learning the details of one platform's management system, only to find themselves starting over upon the installation of the next server running a different OS. Given the ongoing

shortage of IT staff, it is likely that these professionals are already stretched thin. The last thing they need to do is waste time repeatedly mastering the intricacies of various new management tools.

To meet this challenge, HP offers HP Systems Insight Manager (HP SIM)—a single, unified platform to manage HP Integrity, HP ProLiant, and HP 9000 servers across operating systems as well as HP StorageWorks MSA, EVA, and XP arrays. HP Integrity Essentials extend HP SIM, providing modular, integrated system management software for complete HP Integrity server management. By providing an increasingly consistent set of management tools, HP enables you to build an Adaptive Enterprise—simplifying your IT environment, making your organization more agile as it responds to change, and unlocking the value of your IT investments.

## Preparation for an ever-changing technology environment

The trend toward virtualization is driving the need for more unified management of all devices on the networks. As IT managers seek to build infrastructures that can quickly adjust as business demands change, they are creating pools of virtualized servers and storage that can automatically be directed to the highest business priorities. Unifying management is a prerequisite for managing virtualization and automation efficiently. HP Virtual Server Environment (VSE) is an integrated virtualization offering that provides a flexible computing environment, helping you optimize your HP Integrity server resources. VSE consists of a pool of dynamically sizable virtual servers; each can grow or shrink based on service-level objectives and business needs. Whether you are managing a physical environment or a Virtual Server Environment, HP SIM and HP Integrity Essentials provide the unified management required for success.

## Integration with HP OpenView management software

Because seamless integration with enterprise management solutions is critical to maintaining a flexible infrastructure, HP offers its industry-leading HP OpenView software to help you manage your infrastructure, manage your IT services, and improve IT and data center utilization. Integrated, modular tools from HP can lower IT costs and help boost the availability and performance of the IT infrastructure. HP server management tools are well integrated into HP OpenView software, and this integration results in the most manageable data center solutions available.

For more information about HP Integrity Essentials for HP-UX 11i, Linux, Windows, or OpenVMS, advance to the appropriate section.

HP is making its HP-UX 11i management tools available to manage the HP Integrity server line.



## HP Integrity Essentials for HP-UX 11i

The industry standard for mission-critical reliability, scalability, flexibility, security, manageability, and high availability, HP-UX 11i is the OS of choice for enterprises with large and complex systems that must integrate and run seamlessly.

### Central point of administration

**HP Systems Insight Manager (SIM)** is the central point of administration for management applications that address the management requirements of HP-UX 11i customers. HP SIM delivers powerful monitoring and control, notifying the administrator of potential hardware or software problems before they occur. It also provides inventory-reporting capabilities that dramatically reduce the time and effort required to track server assets. HP SIM provides secure communications as well as role-based security to make certain that its powerful capabilities are kept secure from unauthorized users. And HP SIM is an effective tool for managing HP storage, power, client, and printer products.

The central administration, software deployment, and configuration management tools are offered at no additional charge with the HP-UX 11i Foundation Operating Environment (OE). HP Integrity Essentials for HP-UX 11i are advanced plug-ins to HP SIM that provide modular, integrated system management software for complete HP Integrity server management.

### Software deployment

**Ignite-UX** addresses the needs of HP-UX 11i system administrators who perform fast deployment for one or many servers. It provides the means for creating and reusing standard system configurations, enables replication of systems, permits post-installation customization, and is capable of operating in both interactive and unattended modes.

**Software Distributor-UX (SD-UX)** is the HP-UX 11i administration toolset used to deliver and maintain the HP-UX 11i operating system and layered software applications. Delivered as part of HP-UX 11i, SD-UX can help manage the HP-UX 11i operating system, patches, and application software on HP Integrity servers.

**Update-UX** is a tool for customizing the behavior and automating the process for HP-UX 11i operating environment updates.

**Software Package Builder** is an intuitive, graphical user interface (GUI)-based tool for packaging software into SD-UX packages so that they can be installed and managed in the same way as HP's system software.

### Configuration management

**System Management Homepage/System Administration Manager (SAM)** is used to manage accounts for users and groups; perform auditing and security functions; tune kernel parameters for enhanced system performance; and handle disk, file system, and peripheral device management. HP SIM enables these tasks to be distributed to multiple systems and delegated using role-based security.



**Partition Manager** creates and manages hard partitions (nPartitions). Once the partitions are created, they can be managed consistently with all the other tools integrated into HP SIM.

**HP-UX 11i webmin-based Admin** is a Web-based system management framework that allows a wide variety of open source webmin system management modules to be plugged in. HP supports this tool for the configuration of the HP-UX 11i Apache-based Web Server and the HP-UX 11i Tomcat-based Servlet Engine.

**HP-UX Bastille** is a security hardening/lockdown tool that enhances the security of an HP-UX 11i UNIX® host. It accommodates the various degrees of hardening required of servers used for webs, applications, and databases.

**Security Patch Check** efficiently improves systems security by performing analysis of file sets and patches installed on an HP-UX 11i system and generating a report of recommended security patches.

**Serviceguard Manager** can monitor and manage Serviceguard on HP-UX 11i and Linux clusters from a single point. It provides a GUI to administer HP Serviceguard, Serviceguard Extension for RAC, Metrocluster, and Continentalclusters and to display their status.

**Integrated Lights-Out** and **Management Processor** provide remote server management, a necessity for many of today's IT organizations of all sizes as they strive to meet an endless stream of critical demands for efficiency and responsiveness. Integrated Lights-Out (iLO), an intelligent management processor, is available on most entry-level HP Integrity servers, while the Management Processor is available on mid-range and high-end servers. Both offer a "virtual presence" that delivers extensive server management control—as if you were in front of your remote or headless data center servers.

## Workload management

**Secure Resource Partitions (SRPs)** control the resources that processes use during peak system load. SRPs allow administrators to run multiple mission-critical applications on a single system, improve response time for critical users and applications, allocate resources on shared servers based on departmental budget contributions, provide applications with total resource isolation, and dynamically change configuration at any time—even under load. For example, Process Resource Manager (PRM) can manage the allocation of CPU, memory, and disk bandwidth. When the security containment functionality that ships with the HP-UX 11i Foundation OE is in use, the processes running in each SRP cannot communicate with processes in the other partitions. This enables multiple application instances to run securely in a consolidated environment, providing the benefits of consolidation while preserving the security of a scale-out environment. PRM is included with HP-UX 11i Enterprise Operating Environment.

**HP-UX Workload Manager (WLM)** is an intelligent policy engine for the HP Virtual Server Environment. It provides automatic CPU resource allocation and application performance management based on prioritized service-level objectives (SLOs). WLM improves response time for critical users, allows system consolidation, and helps manage user expectations for performance. WLM is the intelligent policy engine that drives the HP Virtual Server Environment (VSE), providing optimized and dynamic resource allocation to both increase asset utilization and maintain service levels. WLM is included with HP-UX 11i Mission Critical Operating Environment.



**HP Global Workload Manager (gWLM)** is an intelligent policy engine for HP VSE that automatically allocates resources among multiple workloads to increase server utilization while meeting service levels for high-priority applications. Designed to work across multiple HP-UX 11i and Linux systems, gWLM is ideal for large, centralized IT environments that host applications for many departments.

- **HP OpenView Glanceplus** provides a powerful system monitoring and diagnostic tool; Glanceplus Pak, which includes Glanceplus and the Performance Agent, is included with HP-UX 11i Enterprise and Mission Critical Operating Environments
- **HP OpenView Storage Data Protector (Omniback II)** provides reliable, high-performance data protection

## HP OpenView management software

At HP, we know that some of our HP-UX 11i customers will be seeking a higher-level solution—something that allows them to manage an entire network of hardware, software, and services from a single point.

For those customers we offer HP OpenView management software—our enterprise-level application portfolio for managing data and voice services as well as the infrastructure they run on. Recognized throughout the industry as a leading performer, HP OpenView software is an all-encompassing enterprise management solution. The following HP OpenView agents run on HP-UX 11i on the HP Integrity server:

- **HP OpenView Operations Agent** provides a fully integrated, single-pane-of-glass management solution for systems, networks, applications, and databases
- **HP OpenView Performance Agent** monitors and analyzes the performance of systems and application trends

In addition, HP OpenView Network Node Manager management station runs on HP-UX 11i on the HP Integrity server. Network Node Manager automatically discovers, draws (maps), and monitors networks and the systems connected to them. All other HP OpenView management tools, including HP OpenView Operations, Service Desk, and Service Reporter, will be able to collect and process information from the agents running on HP Integrity servers running HP-UX 11i.

HP offers a full complement of server management tools for seamless management of Linux environments.

## HP Integrity Essentials for Linux

The fastest-growing OS in the world, Linux is known for speed, portability, and reliability—making it the OS of choice for technical computing environments, for application development, and at the edge of the network. Linux is also growing and emerging in the enterprise. For example, database applications, security, and telecom are also leveraging the benefits of Linux.

As the leading supplier of Linux servers in the industry, HP recognizes that Linux servers are deployed in heterogeneous environments, and consequently there is a need for common server management tools. With that in mind, HP offers a full complement of server management tools through HP Integrity and ProLiant Essentials for seamless management of Linux environments.

**HP Systems Insight Manager (SIM)** improves system uptime and provides powerful monitoring and control. It delivers pre-failure alerting for servers, so potential server failures are detected before they result in unplanned system downtime. HP SIM also provides inventory-reporting capabilities that dramatically reduce the time and effort required to track server assets and help system administrators make educated decisions about which systems may require hardware upgrades or replacement. HP SIM provides secure communications as well as role-based security to make certain that its powerful capabilities are kept secure from unauthorized users. And, HP SIM is an effective tool for managing HP storage, power, client, and printer products.

**The HP Integrity Essentials for Linux** listed below are advanced plug-ins to HP SIM that provide modular, integrated system management software for complete HP Integrity server management.

**HP Enablement Kit for Linux** facilitates the setup and installation of the operating system. The kit, which ships with Integrity servers, includes SystemImager, an open source operating system deployment tool. SystemImager is a golden-image-based tool that can be used for initial deployment as well as updates.

**Partition Manager** creates and manages hard partitions (nPartitions). Once the partitions are created, they can be managed consistently with all the other tools integrated into HP SIM.

**Integrated Lights-Out and Management Processor** provide remote server management, a necessity for many of today's IT organizations of all sizes as they strive to meet an endless stream of critical demands for efficiency and responsiveness. Integrated Lights-Out (iLO), an intelligent management processor, is available on most entry-level Integrity servers, while the Management Processor is available on mid-range and high-end servers. Both offer a "virtual presence" that delivers extensive server management control, as if you were in front of your remote or headless data center servers.

**HP Global Workload Manager (gWLM)** is an intelligent policy engine that automatically allocates resources among multiple workloads to increase server utilization while meeting service levels for high-priority applications. Designed to work across multiple HP-UX 11i and Linux systems, gWLM is ideal for large, centralized IT environments that host applications for many departments.

## HP OpenView management software

Linux is gaining wider acceptance in the market, and there is increasing demand for management solutions for Linux applications, services, and infrastructure. HP OpenView software's modular, open, and scalable architecture enables deployment of solutions that are precisely matched to an organization's unique operating environment—both today and as it evolves over time to adapt to change. The HP OpenView software family provides complete network, system, application, and storage management solutions.

HP OpenView management tools, such as HP OpenView Operations and Network Node Manager, collect and process information from the SNMP agents running on Linux on the HP Integrity server. HP OpenView Operations and Performance Agents will directly collect and correlate event, storage, and performance data from HP Integrity servers with Linux.

Because technology is changing and will continue to change, HP uses unified infrastructure management.



## HP Integrity Essentials for Windows

Easy to use, manage, and support, Microsoft® Windows remains extremely popular for application services—and, as it increases in robustness and scalability, it is moving further into the enterprise data center. Most customers running Windows today are using IA-32-based servers. They're familiar with ProLiant server management tools and stand to gain efficiency by using those tools and skills for any new servers that they purchase.

In an effort to deliver that efficiency, HP is enabling the management tools that Windows users know and love with the HP Integrity server line. The HP Integrity Essentials Foundation Pack for Windows is a complete tool set to install, configure, and manage HP Integrity servers running Windows Server 2003, Datacenter and Enterprise Editions, for Itanium 2-based systems.

**HP Systems Insight Manager (SIM)** improves system uptime and provides powerful monitoring and control. It delivers pre-failure alerting for servers, detecting potential server failures before they result in unplanned system downtime. HP SIM also provides inventory-reporting capabilities that dramatically reduce the time and effort required to track server assets, and it helps system administrators make educated decisions about which systems may require hardware upgrades or replacement.

HP SIM provides secure communications as well as role-based security to make certain that its powerful capabilities are kept secure from unauthorized users. And, HP SIM is an effective tool for managing HP storage, power, client, and printer products.

The HP Integrity Essentials for Windows listed below are advanced plug-ins to HP SIM that provide modular, integrated system management software for complete Integrity server management.

**Smart Setup CD** includes an Extensible Firmware Interface (EFI)-based setup utility (EBSU) designed for easy server and array controller configuration. The CD also includes all the latest tested and compatible HP drivers, firmware, utilities, and management agents to assist both in the server deployment process—by preparing the server for a Windows operating system installation—and in ongoing server management. For even easier deployment, the HP Integrity server can be ordered with Windows Server 2003 preloaded.

**Partition Manager** creates and manages hard partitions (nPartitions). Once the partitions are created, they can be managed consistently with all the other tools integrated into HP SIM.

**System Management Homepage for Integrity servers with Windows** helps system administrators rapidly respond to potential and actual system failures, increases system stability, and makes troubleshooting less complex. It provides consolidated information about the system's health and configuration via a simple, Web-based user interface. All reports on system faults and the status of major subsystems appear on the System Management

# Good news for fans of flexibility and efficiency: HP Systems Insight Manager offers a consistent approach to platform management.



Homepage—accessible either directly through a browser, or through a management application such as HP SIM or an enterprise management application (available on selected systems).

**Integrated Lights-Out** and **Management Processor** provide remote server management, a necessity for many of today's IT organizations of all sizes as they strive to meet an endless stream of critical demands for efficiency and responsiveness. Integrated Lights-Out (iLO), an intelligent management processor, is available on most entry-level Integrity servers, while the Management Processor is available on mid-range and high-end servers. Both offer a "virtual presence" that delivers extensive server management control—as if you were in front of your remote or headless data center servers.

## HP OpenView management software

As Windows moves further into the enterprise data center, making sure the elements in the Windows infrastructure are reliable and well managed becomes increasingly important. Orchestrating these elements to support the organization's business priorities and opportunities is equally critical. HP is unmatched in the industry in providing software to manage the entire IT environment, including hardware, software, and services. HP OpenView applications aggregate and correlate management information from every element in the infrastructure, monitor the health of each of these components, and prioritize and resolve potential problems to keep the IT infrastructure and related services up and running.

HP OpenView management tools, such as HP OpenView Operations and Network Node Manager, are able to collect and process information from the SNMP agents and WMI (Windows Management Interface) running on HP Integrity servers with Windows. HP OpenView Operations and Performance Agents directly collect and correlate event, storage, and performance data from Integrity servers with Windows.

Need more stability and efficiency in your IT environment? Use HP Systems Insight Manager to manage all your HP systems.



## HP Integrity Essentials for OpenVMS

OpenVMS is a technology designed to perform under the most extreme conditions. Its capacity for transaction support, bulletproof reliability, and security are among its proven benefits. OpenVMS couples unparalleled functionality with enhanced performance, providing the high availability and reliability that your applications demand.

**HP Systems Insight Manager (SIM)** improves system uptime and provides powerful monitoring and control. Its inventory-reporting capabilities can dramatically reduce the time and effort required to track server assets. HP SIM provides secure communications as well as role-based security to make certain that its powerful capabilities are kept secure from unauthorized users. And, HP SIM is an effective tool for managing HP storage, power, client, and printer products.

The HP Integrity Essentials for OpenVMS listed below are advanced plug-ins to HP SIM that provide modular, integrated system management software for complete Integrity server management.

**Management Station** makes it easy to manage computing resources across multiple OpenVMS systems. It is used to manage accounts for users and groups, file systems, printers, and storage on the systems.

**Availability Manager** is a system management monitoring tool that collects system and process data from multiple OpenVMS nodes simultaneously. It helps system managers and analysts target a specific node or process for detailed analysis. In the unlikely event that the operating system is not running, the server can be power-cycled using Availability Manager.

**Class Scheduler** provides the capability to manage CPU, memory, and disk storage resources on a per-user basis. This helps manage user expectations for performance.

**Integrated Lights-Out** and Management Processor provide remote server management, a necessity for many of today's IT organizations of all sizes as they strive to meet an endless stream of critical demands for efficiency and responsiveness. Integrated Lights-Out (iLO), an intelligent management processor, is available on most entry-level Integrity servers, while the Management Processor is available on mid-range and high-end servers. Both offer a "virtual presence" that delivers extensive server management control—as if you were in front of your remote or headless data center servers.

## HP OpenView management software

HP OpenView management software is an enterprise management solution that monitors, controls, and reports on the health and performance of heterogeneous IT environments from a single point.

HP OpenView Operations Agent for OpenVMS presents real-time monitoring and event management to both HP OpenView Operations for UNIX and HP OpenView Operations for Windows servers, using native agents and Smart Plug-ins (SPIs). The agent monitors performance, detects bottlenecks, reports on the availability of the OpenVMS servers, and can send alarms and notifications based on thresholds set through policies based on the filtering criteria to the HP OpenView Operations server.

HP OpenView Storage Data Protector (Omniback II) provides reliable, high-performance data protection. In addition, HP OpenView Network Node Manager, which will run on HP Integrity servers running OpenVMS, automatically discovers, draws, and monitors networks and the systems connected to them.



For automated, intelligent management of HP Integrity servers

For more information or to learn more about the HP family of server management tools, please contact your HP sales representative or authorized HP partner, or visit us at: [www.hp.com/go/integrityessentials](http://www.hp.com/go/integrityessentials)

© 2004, 2005 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Intel and Itanium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Linux is a U.S. registered trademark of Linus Torvalds. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. UNIX is a registered trademark of The Open Group.

5982-4996 Rev. 2, 07/15/2005

