

WHITE PAPER

Gaining Business Value and ROI with HP Systems Insight Manager

Sponsored by: HP

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EXECUTIVE SUMMARY

This IDC white paper presents results of an IDC study, sponsored by HP, to quantify the benefits, cost savings, and return on investment (ROI) that can be achieved by HP customers using HP Systems Insight Manager (HP SIM) software to help manage their IT infrastructure and operations. The study is based on standard IDC ROI methodology, which is used to calculate the costs of performing common IT administrative, operational, and support functions (both before and after implementing management software); determine the cost savings resulting from implementing the software; and calculate ROI metrics based on cost savings, gains in IT efficiency, and gains in user productivity.

HP SIM is distributed with HP servers and provides unified management functions for HP platforms, including ProLiant, Integrity, BladeSystem, and StorageWorks, as well as for other industry-standard servers. For the study, IDC conducted in-depth interviews with 12 enterprises that use HP SIM. The companies range in size from 200 employees to over 50,000 employees, with an average size of just over 11,000 employees. The companies represent market segments in financial services, telecommunications, healthcare, aerospace, energy, and consumer products. Geographic distribution includes North America, Europe, and Asia/Pacific. Infrastructure platforms managed with HP SIM include HP-UX, Linux, and Windows systems.

Key Study Findings

IDC's study concentrated on the cost savings and other operational benefits resulting from the use of HP SIM for infrastructure management. Key findings include the following:

- On average, the surveyed companies were able to achieve savings of \$35,533 per 100 users over a three-year period using HP SIM software.
- IT labor optimization accounted for just over one-half of these cost savings. Principal factors include reduced server administration costs and lower user support costs.
- ☐ The companies were able to nearly double the number of servers managed per administrator, increasing the sever-to-administrator ratio by an average of 98%.
- After HP SIM was deployed, the amount of downtime dropped by an average of 77%, declining from 2.1 hours per month to 0.6 hours per month.

Overall ROI Results

IDC used the costs and savings data gathered in this study to calculate ROI metrics resulting from deploying HP SIM. Table 1 shows the overall data and summarizes the ROI results averaged across the 12 interviewed companies.

- On average, the surveyed companies invested \$4,987 per 100 users over three years (\$17 per user annually) in deploying HP SIM, including the costs of installation and servers, IT labor support, hardware and software upgrades, and training.
- ☑ The total savings from the deployment averaged \$35,533 per 100 users over three years (\$118 per user annually). For the purpose of the ROI calculation, IDC deducts the opportunity cost of not having the initial investment in some other instrument yielding 12%. For the surveyed companies, this results in a net present value (NPV) of savings of \$23,327 per 100 users.
- Based on the average investment of \$4,987 per 100 users, the payback period for deploying HP SIM averaged a short four months for the companies surveyed.
- Comparing the three-year NPV of savings with the three-year cost of investment yields an average ROI of 468% over three years, a strong positive return.

TABLE 1

ROI Analysis for Deploying HP Systems Insight Manager per 100 Users

Item	Average
Three-year cost of investment	\$4,987
Three-year savings and revenue benefits	\$35,533
Net present value of savings	\$23,327
Payback period	4 months
Three-year ROI	468%

Source: IDC, 2007

Three-Year Cost Savings

Figure 1 shows the distribution of cost savings resulting from deploying HP SIM for the 12 companies interviewed in this study. Savings are expressed as averages over a three-year period, normalized in terms of per 100 users. The overall average three-year savings is \$35,533 per 100 users, resulting from four major components:

- IT labor optimization accounted for the greatest cost savings from deploying the HP software. On average, the surveyed companies saved \$18,060 in server administration and user support costs per 100 users over a three-year period.
- Savings in user productivity averaged \$3,296 per 100 users per year, or \$9,888, over three years.
- ☑ Recaptured revenue from the reduction in downtime averaged \$1,829 per 100 users over three years.
- ☑ The surveyed companies realized an additional \$5,757 per 100 users in hard cost savings over a three-year period, mainly from the elimination of other management tools.

FIGURE 1

Average Three-Year Savings per 100 Users from Deploying HP Systems Insight Manager



SITUATION OVERVIEW: KEY IT CONCERNS

IDC tracks key IT concerns on an ongoing basis through a combination of structured surveys, end-user interviews, case studies, and other in-depth research. The following key concerns were recently expressed by IT managers and professional staff:

- Pressures to contain costs and achieve efficiencies. Controlling IT costs both capital expenditures and ongoing operational expenses — remains a key requirement for IT organizations. IT budgets have been under pressure for a number of years, with cost containment a principal objective. Capital costs are related to optimizing the process and timing of hardware and software acquisitions and deployments. Operational costs are significantly dependent on the number of IT staff required to perform specific functions.
- Need to align IT with the business and show business relevance. Increasingly, IT is viewed as a service provider to the business, providing services that deliver and support key business processes and applications. Alignment includes such activities as relating infrastructure events to their impact on IT services and end users, tracking IT and business metrics, and calculating the costs of delivering specific services.
- Need to achieve service objectives for key workloads. IT needs to deliver agreed service levels in terms of availability and performance to meet business objectives. Service levels of key workloads must be tracked in terms of uptime, workload volumes, and response times for key transactions and for user interactions. Operational service levels must be compared against service objectives, with provisions for adjusting workload priorities and resource allocations to meet requirements. Such functions as automated event and fault management are important to achieve uptime objectives.
- Need to improve infrastructure utilization. The overall requirement for IT is to improve the efficiency and ROI of the IT hardware and software assets deployed in the datacenter and throughout the organization, especially by increasing server utilization. Server platforms can include distributed Unix, Linux, and Windows systems used for such functions as application servers, database servers, Web components, and middleware. IT needs to track actual utilization levels and optimize the allocation of infrastructure resources to applications and workloads. Decision support is required to optimize asset deployments occurring as a result of major datacenter infrastructure changes, such as server consolidations resulting from corporate mergers and acquisitions.

IT MANAGEMENT DRIVERS

IT management needs are being driven by a number of major economic and organizational factors. Chief among these factors is the ongoing cost squeeze on IT budgets. With high operating costs consuming the lion's share of IT budgets, there is little room for budgeting new projects and allocating funding for innovation. As a consequence, IT management is continually looking for ways to recover and redirect operational spending by increasing staff productivity and efficiency, such as through the use of automated management software tools. IT management also seeks constantly to reduce hardware costs through consolidations and migrations to new, more efficient hardware.

Other challenges relate to the difficulty and cost of managing complexity in the datacenter. Due to such factors as mergers and acquisitions, centralization of IT facilities, and ongoing acquisition of new hardware platforms, many datacenter managers have to deal with heterogeneous environments that can include diverse hardware platforms from multiple vendors, as well as both new and legacy platforms. Issues center around the need to efficiently manage heterogeneous platforms with software tools that interoperate across platforms and provide a common look and feel across the platforms for datacenter operations. Another driver is the desire to minimize the complexity of IT operations by reducing the number of IT vendors through consolidation.

The reality of Web-enabled and online business means that IT must ensure 24 x 7 availability for key applications, which requires that IT provide management software and hardware facilities for ensuring business continuity in the event of major equipment failures or datacenter outages. Increasingly, provisions for business continuity are going beyond traditional backup-and-recovery solutions to the ability to quickly move running applications to alternate site facilities, based on using virtual machine images. Management software is a key component to enabling business continuity.

Requirements for Platform Management

Platform management supports IT operations and delivers cost savings through automation of routine tasks, leveraging of staff resources, higher availability, and faster response to incidents and problems. The following are key requirements for platform management software:

- Automation of routine tasks for increased efficiency. Management software can be used to automate routine tasks, such as monitoring common types of infrastructure alerts and providing automated responses for known conditions. Automation of routine tasks can increase IT staff efficiency by reducing staff time spent on these nonproductive functions and by increasing the scale of operations that can be achieved by a staff member, such as increasing the number of hardware devices that can be managed by an individual system or network administrator.
- ☑ Leveraging of staff resources for increased productivity. Productivity is a measure of how much staff time can be spent on work that brings value to the business such as deploying new or improved applications to increase competitive advantage. Use of management software can help increase the proportion of staff time dedicated to productive work that increases business value.
- ➢ Higher availability with fewer outages and less downtime. System and network uptime plus application and database availability are key requirements for conducting business in today's increasingly online environments. Downtime costs vary based on industry segments and the nature of the applications. They include costs from the loss of business opportunity and from decreased end-user productivity when key applications cannot be accessed. The use of infrastructure management software can reduce downtime, improve application performance, and increase the revenue opportunity to the business.

- ➢ Faster response to incidents. The use of infrastructure software can greatly improve the speed with which IT can respond to infrastructure incidents. This can occur in a number of ways, ranging from automated responses to simple alerts and alarms, to automatic creation of trouble and repair tickets for service desk functions, to problem determination and resolution aids such as event correlation, impact analysis, and root cause analysis.
- Cost savings and improved ROI. As demonstrated repeatedly by numerous IDC studies, the overall effect of using automated software tools for IT infrastructure management typically results in cost savings and significant ROI. Areas for cost savings include reduced hardware and software costs, IT staff efficiency, end-user productivity, and enhanced operations for business applications, including reduced downtime and faster performance.

THE HP SIM APPROACH

HP SIM is platform management software distributed with HP servers. It provides unified platform support for HP ProLiant, Integrity, and BladeSystem servers; HP StorageWorks, HP-UX, Windows, and Linux operating environments; and other industry-standard servers. The key objective of HP SIM is to provide unified infrastructure management, defined as the operation and management of servers and storage across multiple platforms from a single interface.

HP SIM Functions

HP SIM provides a comprehensive set of hardware platform management functions through core software-based management services. Core HP SIM services support the monitoring and management of physical and virtual platforms, with a common GUI display facility across platforms. Core HP SIM capabilities include the following unified management functions:

- Asset management: Automatic discovery, identification, and inventory of infrastructure assets attached to the network
- Event and fault management: Detection and notification of faults such as hardware component failures (The software automates event handling such as execution of scripts to handle failures or notification of IT staff or users that failures have occurred.)
- Monitoring and reporting: Common Web browser–based GUI display as well as common command-line interface support across platforms
- Role-based security: Gives systems administrators granular control over which management operations users can perform on selected devices
- Management of distributed tasks: Manages the remote execution of tasks on managed systems
- Instant Support Enterprise Edition (ISEE): Proactive monitoring of a user's network by HP support engineers who can provide remote hardware or software support, depending on the user's service contract

In addition to core functions, HP SIM supports a wide variety of plug-ins — modular extensions used to provide additional management facilities. Many of these plug-ins are distributed as Essentials packages, such as ProLiant Essentials. They provide such functions as software distribution, performance management, vulnerability and patch management, remote management, and virtual machine management. Additional software plug-ins are available as fee-based management packs, such as Rapid Deployment Pack (RDP).

HP SIM Benefits

HP SIM is a core differentiator that adds value to HP hardware by providing closely integrated, out-of-the-box platform management software. Key benefits include the following:

- ☑ Unified infrastructure management: Commonality of management software across platforms reduces operational complexity.
- Improved IT staff efficiency: Simplified IT operations saves staff time.
- Software cost savings from modular architecture: Base HP SIM is licensed with the platform, without additional fees. Fee-based extensions can be licensed modularly, as needed.
- ☐ Improved efficiency from modular software design: Use of common components for core functions reduces software overhead.
- Automation: Automated functions reduce errors, leverage staff time, and speed problem resolution.

Overall, the benefits of using HP SIM are those expected from the use of automated software tools to improve system management, including improved IT operational efficiency, higher hardware utilization, improved availability and performance, fewer outages, and less downtime.

DETERMINING THE BUSINESS BENEFITS OF UNIFIED INFRASTRUCTURE MANAGEMENT

To validate and determine the business benefits of unified infrastructure management, IDC conducted in-depth interviews with a number of enterprises using HP SIM. After asking detailed questions about the deployment and support costs and the savings achieved, IDC applied its proprietary ROI methodology to the results to determine the average ROI and payback period that the surveyed companies realized from deploying the HP management software.

IDC's ROI Methodology

IDC's ROI methodology uses a three-step process to calculate the ROI and payback period:

- Ascertain the investment made in deploying the software, and the associated training and support costs.
- Measure the savings from improved IT labor optimization and user productivity from deploying the software, the revenue recaptured from reduced downtime, and the cost savings from reduced spending on hardware, software, and other management tools.
- Project the costs and savings over a three-year period, and calculate the ROI and payback for the deployed software.

Investment

To get an accurate assessment of the investment in deploying HP SIM, IDC asks for the installation costs as well as the total cost of any associated servers, hardware and software upgrades, and any required training. The investment also includes the loaded costs of the incremental staff required to support the deployment.

Savings and Recaptured Revenue

To determine improvements in IT labor optimization and the associated costs savings, IDC asks questions about the average loaded IT labor salaries and the time spent on IT administrative tasks before and after the deployment. IDC also asks about the amount of downtime and number of downtime incidents before and after deployment, to determine the recaptured revenue that would otherwise be lost because of downtime, and the cost savings from improved user productivity. Other questions focus on cost savings from reduced spending on hardware and software and the elimination of other management tools.

- IT labor optimization is a measure of how productively IT staff use their time. To remain competitive, companies must be able to grow their systems and networks at a faster rate than the IT staff required to support them. By reducing the time IT staff spend on routine, nonproductive tasks, IT managers reduce operating costs and free up staff to implement new initiatives more rapidly, helping to create a competitive edge. Skilled IT professionals continue to be scarce; therefore, companies expect existing staff to take on more work and responsibilities. If IT departments are unable to achieve the required economies of scale and take on the more productive tasks, they restrain corporate managers' business decisions and discourage aggressive deployment of technology to gain a competitive advantage.
- ☑ User productivity is increasingly dependent on system uptime as organizations become more network-centric. Because users are often able to switch to other activities when service interruptions occur, only a fraction of the potential user impact time is counted toward the final ROI result. User productivity may also suffer when employees have to wait for help desk support or other IT administrative tasks, but in this study loss of productivity was minor and is not included in the ROI calculation.

- ☑ Recaptured revenue is also a function of system availability. By reducing downtime, companies lose less revenue, avoid potential service penalties, and lessen the threat of customer dissatisfaction and possible loss of a customer's business.
- Cost savings may accrue from reduced spending on hardware and software or the elimination of other management tools.

Calculation of ROI and Payback Period

IDC uses the NPV of the savings and recaptured revenue over three years in calculating the ROI and payback period for the deployment. The NPV of the savings is determined by subtracting the amount that would have been earned by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost.

IDC bases its calculations on a number of assumptions:

- ☐ Time values are multiplied by burdened salary (salary + 40% for benefits and overhead) to quantify savings from IT labor optimization.
- Downtime values are the product of the number of hours of downtime multiplied by the number of users affected.
- ☐ The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.
- △ Lost end-user productivity is the product of downtime multiplied by burdened salary.
- △ Lost revenue is the product of downtime multiplied by the average revenue generated per unit of time.

Not every hour of downtime equates to a lost hour of productivity or revenue generation; therefore, IDC attributes only a fraction of the result to savings. As part of the survey, IDC asks each company what fraction of downtime hours to use in calculating productivity savings and lost revenue and uses the result in its calculations.

Further, the full benefits of the solution are not available during the deployment period; therefore, IDC prorates the benefits on a monthly basis and subtracts the appropriate amount for the deployment time from the first-year savings.

Survey Demographics

IDC interviewed IT managers at 12 companies of different sizes in a variety of industries that had deployed HP SIM software to replace individual or multiple management tools. To obtain specific figures for savings and costs, IDC asked a series of questions about HP SIM deployment and support costs and the associated time and staffing requirements for particular administrative processes before and after the deployment.

The interviewed companies range in size from 200 employees to over 50,000 employees, with an average size of just over 11,000 employees. The companies have an average server administrative staff of 10 full-time employees (FTEs) using HP SIM to manage an average of 495 servers, with an average of 8,402 users. Five of the companies use HP SIM to manage both PC and Unix servers. The companies represent a number of vertical markets, including financial services, telecommunications, healthcare, aerospace, energy, and consumer products in North America, Europe, and Asia/Pacific. Infrastructure platforms include multivendor Unix, Linux, and Windows systems.

Survey Results

IDC's survey focused on the cost savings and other benefits of unified infrastructure management made possible by the HP SIM software. From the results of the interviews, IDC was able to determine the average ROI and payback period that the surveyed companies had realized from deploying the HP software, based on increases in IT labor optimization and user productivity, other cost savings, and the recapture of previously lost revenue. Illustrative quotes from the respondents provide qualitative support for the ROI analysis.

IT labor optimization. To determine the cost savings from improved IT labor optimization, IDC asked questions about staff time needed for activities related to server administration and user support before and after deploying the HP SIM software, as well as the loaded salaries of the IT staff.

A number of HP SIM features are designed to optimize the work of IT staff. For example, single sign-on to managed nodes reduces the time needed to administer servers by allowing administrative staff to sign on to managed nodes securely from a single console. In addition, the command execution feature allows administrators to manage more systems by allowing them to schedule commands to be executed on remote systems. HP SIM is also designed to increase the utilization ratio of users to servers by rooting out even forgotten pieces of server infrastructure, reducing the number of unneeded servers.

Being able to run a command on 70 servers at once is really helpful to me because [before] I had 70 servers, and if I had something that took me 10 minutes a server, I couldn't do more than one at a time. That's 700 minutes that I had to spend.... Before on the manual processes, we were staying up all night making changes sometimes. With HP SIM, I can just schedule it. So not only can I do [the changes] all at once, but I can schedule them for any time I want. — U.S. university

Additionally, numerous HP SIM features increase the server-to-administrator ratio. Unified management reduces the need for management software maintenance and consolidates personnel requirements, allowing staff sharing across domains. Logical system groupings with aggregate status also allow more systems to be managed. On average, the surveyed companies increased the server-to-administrator ratio by 98%, from 24.6 before deploying HP SIM to 48.8 after deployment.

I don't know if it's quantifiable in hours, but running HP SIM allows a single system administrator to manage more of a geographically dispersed area. — U.S. financial services firm

Other time savers include the provision of information about configuration down to slot number, allowing upgrades to be planned and ordered without having to visit the system or take it out of service. HP SIM also reduces the time to deploy new servers by providing information about open bays and available power, which allows placement of servers without having to provision new infrastructure.

To lower IT support costs, HP SIM includes features to reduce the number of calls and the time to handle each call, as well as to reduce escalations to higher-level or dispatched support, and the time needed for this level of support.

HP SIM saves me from having to call HP on the support line. HP SIM receives traps from your server and it centrally manages them. It filters those traps received to see if something is broken, and then this program encrypts the file and sends it out via HTTP to Atlanta. They get it and they open a trouble ticket, and then they turn around and assign somebody to it and call you. And usually within two hours, I'll get a call saying, 'We noticed you have a problem with your server. It looks like you've got a bad hard drive. We'll send one out to you.' So, I get it in the mail the next day and replace it. I love it. If I don't have to call an 800 number, definitely I love it. — U.S. aerospace manufacturer

In the survey, IT labor optimization accounted for the greatest cost savings from deploying the HP software. On average, the surveyed companies reduced their annual IT labor costs for server administration from \$15,636 per 100 users to \$10,242 after deploying HP SIM. The companies also reduced their annual IT labor costs for user support from \$12,015 per 100 users to \$11,170. These numbers are based on an average loaded salary for the IT staff of \$80,688 for the first year with annual 5% increases.

Annual time savings in server administration averaged 31% (see Table 2). The companies also reported an average 13% reduction in time spent on inventory and asset management, as well as an average 10% savings in time spent on both datacenter operations and administering other management tools. In addition, the companies reported an average 9% savings in time spent maintaining the configuration database and a further 7% savings in time spent on change management.

Time Savings on IT Administrative Activities from Deploying HP Systems Insight Manager

Activity	Average Time Savings (%)
Server administration	31
Inventory/asset management	13
Datacenter operations	10
Administration for other tools	10
Maintaining configuration database	9
Change management	7
Help desk/problem management	1
Security management	1

Source: IDC, 2007

User productivity. To ascertain the impact of the HP SIM software on user productivity, IDC asked questions about the employee time lost when system downtime prevented access to needed applications and information. IDC asked about the number of downtime incidents and amount of downtime before and after deploying the HP software, as well as the percentage of users affected and their average loaded salaries.

HP SIM provides online firmware and software updates to reduce the need for planned downtime. Prefailure alerting also improves system availability by notifying administrators before an outage occurs. Service can be scheduled during a maintenance window rather than as an emergency.

That's the beauty of HP SIM. You know when something's wrong, whereas prior to having HP SIM, you wouldn't know until it crashed. — Energy firm in Australia

I think the best thing about it is it tells you what's wrong, and if something's going wrong, you can do preventative maintenance. — Energy firm in Australia

Users get better response time. I am thinking of one instance where it literally doubled. — Financial services firm in Canada

In the last year since we put it in, I would say we have avoided probably two-dozen outages. Some of them would have been hellacious. — Medical center in the United States For the companies surveyed, the average number of downtime incidents declined from 2.5 per month to 1.4 per month, and the amount of downtime dropped from 2.08 hours a month before deploying HP SIM to 0.62 hours a month after deployment — a 77% reduction. On average, 23% of users were affected by each downtime incident. Assuming that each hour of downtime equates to 12 minutes of lost user productivity, we found that the savings in user productivity averaged \$3,296 per 100 users per year over three years, based on a loaded salary of \$73,333 in the first year with annual 5% increases.

Recaptured revenue. To calculate the revenue recaptured from reduced downtime, IDC asked respondents to estimate the revenue their companies lost for each hour of downtime. IDC also asked what fraction of downtime hours to use in calculating lost revenue to allow for the fact that some revenue would not be lost but delayed due to the downtime. The respondents suggested an average revenue loss factor of 20% and a revenue loss per hour of \$60,000. Taxing the revenue at 50% results in an average recaptured revenue of \$1,829 per 100 users over three years.

Other cost savings. To determine other hard cost savings, IDC asked about the number of management tools that HP SIM replaced and the cost of supporting them and any required hardware or software upgrades. Because HP SIM supports non-HP systems through industry standards, companies don't need separate tools for each platform. On average, the surveyed companies achieved hard cost savings of \$5,757 per 100 users over a three-year period.

Payback and ROI. On average, the surveyed companies invested \$4,987 per 100 users over three years in deploying HP SIM, including the costs of installation and servers, IT labor support, hardware and software upgrades, and training.

The total savings from the deployment averaged \$35,533 per 100 users over three years. From these savings, IDC deducts the opportunity cost of not having the initial investment in some other instrument yielding 12%. For the surveyed companies, this results in an NPV of the savings of \$23,327 per 100 users.

Based on the average investment of \$4,987 per 100 users, the payback period for deploying HP SIM averaged four months for the companies surveyed, yielding an average ROI of 468%.

CHALLENGES AND OPPORTUNITIES

Based on responses from the users interviewed in this study, HP SIM is wellregarded as a platform manager, providing perceived value and demonstrating positive ROI. HP SIM provides a unified approach to managing diverse HP servers, including ProLiant, Integrity, and BladeSystem platforms, and supports a variety of operating environments, including HP-UX, Linux, and Windows.

HP SIM plays a role as a strong HP platform differentiator in the marketplace, but it must also play a role in supporting heterogeneous customer environments, particularly in large enterprise datacenters. The reality is that many large datacenters already have heterogeneous installed hardware and will continue to deploy server infrastructure from multiple vendors. Such organizations will want to manage the combined infrastructure pool from an overall enterprisewide perspective.

Thus, HP SIM must continue to interconnect and interoperate with other platform managers, regardless of vendor, to meet enterprise datacenter needs. HP SIM also must continue to support and integrate with the large enterprise management software "frameworks" prevalent in large datacenters from a variety of system and software vendors, in addition to supporting HP Business Technology Optimization (BTO) management software, including the HP OpenView products. HP can also benefit by finding ways of more closely aligning its HP SIM and HP BTO go-to-market strategies as a way of linking platform strategies to enterprisewide management.

Another challenge is to raise the visibility of HP SIM within customer IT organizations so that HP SIM's value is recognized beyond the boundaries of the immediate IT server infrastructure staff. One of the key value propositions for IT is to support the business, through such actions as reducing operational costs and improving service quality, including increased availability and faster performance. IT management and staff need to become much more familiar with the role and impact of HP SIM on operations and on the services IT delivers to end users. Ultimately, ROI is about the business impact of IT assets and services, and this story needs to be widely communicated within and between the IT and business organizations.

CONCLUSION

The use of IT management software tools typically brings direct benefits to IT operations, company business services, and end users in terms of cost savings, higher operational efficiency, reduced downtime, and increased productivity. These areas were the principal focus of the HP SIM ROI study.

Based on the results from in-depth surveys of 12 companies, the use of HP SIM software has resulted in average total savings of \$35,533 per 100 users over three years on a normalized basis. The payback period averaged a short four months, and the ROI averaged 468%. These results clearly demonstrate the direct benefits realized by the HP SIM software, based on the experiences of customers interviewed for the IDC study.

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