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WHITE PAPER

Managing the IT Service Lifecycle: The HP Approach

Sponsored by: HP

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EXECUTIVE SUMMARY

As long as there have been computer systems, and demanding users of computer systems, IT executives have had to deal with the challenges that go with serving multiple masters. Users need timely support for their systems, and business units need complex technology delivered reliably in order to generate revenue or lower costs. Therefore, IT executives' big challenge continues to be ensuring a secure, reliable IT infrastructure that fully supports and adjusts to an organization's dynamic business needs in a cost-effective manner. In the past few years, IT executives have increasingly turned to integrated IT service management solutions based on the IT Infrastructure Library (ITIL) and other process standards that allow them to optimize IT service performance and availability while reducing operational costs.

IT asset discovery is a key component in determining costs for capabilities provided to business units, since IT assets are usually a large component of delivering the needed capability. IT capabilities that support business unit needs cost the organization technology and labor resources to create, administer, and maintain. Once the costs associated with providing a new capability are established and chargeback of the costs associated with the new capability happens, the IT organization can clearly demonstrate value, especially if the IT organization is demonstrating lower chargeback rates, faster delivery of service, or improved performance over time. An IT service focused on integrating incident, problem, change, and service-level management can save costs by automating previously manual tasks, including the discovery and tracking of assets within the IT environment, to minimize waste, loss, and risk.

Virtualized environments add a complicating factor in that tracking virtual machines (VMs) and virtualized licenses forces IT organizations to better track and manage the licenses for the virtual machines themselves, as well as any software residing on the machines. Therefore, the flexibility gained by using virtual machines and applications can be offset by the complexity involved in tracking and managing them. Failing to track and manage these machines leaves critical management issues unaddressed, not to mention the added complexity of dealing with physical and virtual assets in the same environment.

HP is addressing the cost-focused need of IT organizations with HP AssetCenter (recently renamed HP Asset Manager). HP acquired the AssetCenter solution with its 2005 acquisition of Peregrine Systems and has furthered existing integrations with the AssetCenter product and the rest of the HP software product line. The HP Asset Manager software application suite is based on best practices defined by the ITIL standard for managing assets over their lifecycle, with an additional focus on IT financial management. This focus ensures that HP Asset Manager implements ITIL-based processes effectively and over an asset's lifecycle, yet at the same time provides business users and IT executives with the insight necessary to determine the costs associated with providing IT with the service it needs.

SITUATION OVERVIEW

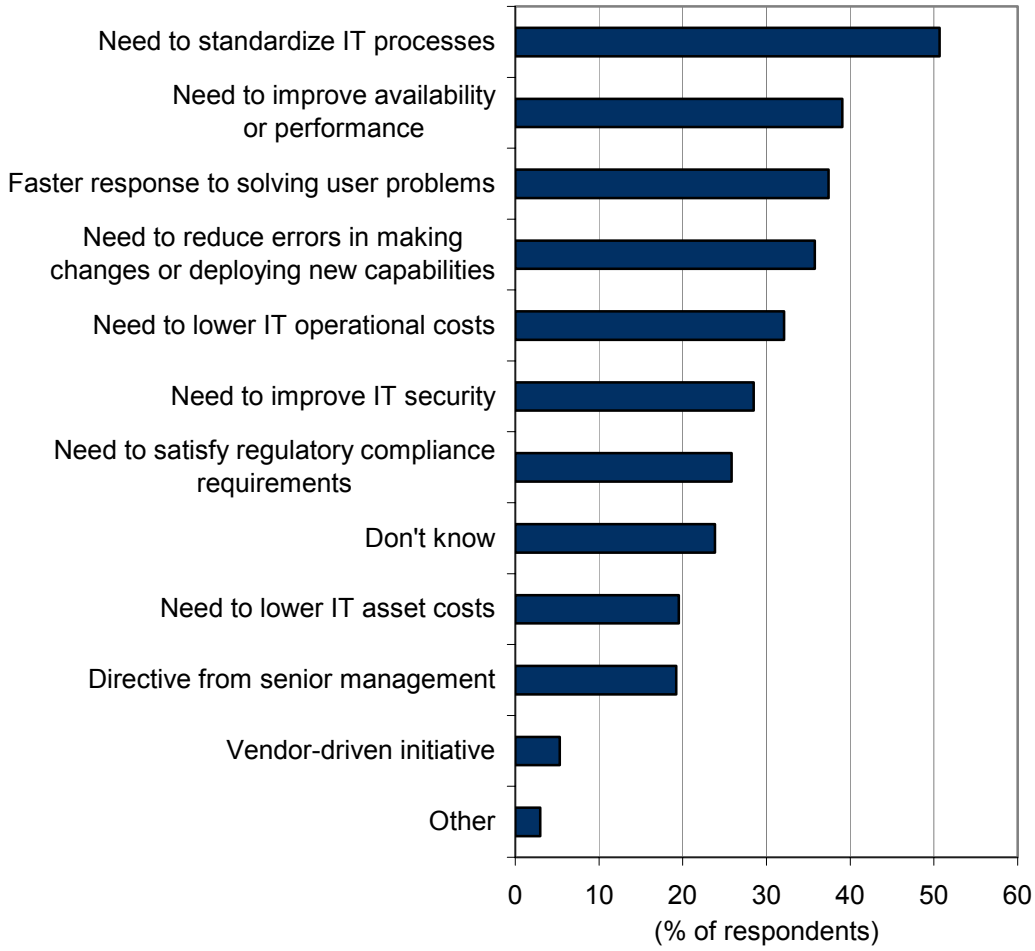
IT executives continually address cost-control measures while they deal with increased system complexity and demands for improved IT service performance. At the same time, IT executives also handle infrastructure and application upgrades, patches, and consolidation efforts. IT staffs must react to, and resolve, faults and problems as promptly as possible. Ideally, IT must anticipate where problems may occur and work to prevent them. These tactical capabilities must also address determining costs associated with these efforts. But the broader need recently is for IT to think and act more strategically in managing IT and IT resources that align with the business and business strategy.

A number of trends are driving IT organizations to adopt ITIL and other process standards. Recent IDC data shows that the top 3 reasons that IT organizations are moving to adopt these standards include the need to standardize IT processes, the need to improve availability, and faster response to solving user problems (see Figure 1).

FIGURE 1

Motivation for ITIL Adoption

Q. What motivates or would motivate your IT organization to adopt ITIL or a standards-based approach to management?



n = 302

Note: Multiple responses were allowed.

Source: IDC's Enterprise Panel, December 2007

The guiding hand of ITIL helps IT executives best determine how to deal with these trends through a mix of actions that affect the people implementing the processes, the technology used in the processes, and the processes themselves.

PAIN POINTS AND CHALLENGES

Frequently, creating IT alignment and integration with the business causes IT to address challenges associated with the following areas:

- **Discovery and inventory.** Determining how many IT assets exist and what type is critical to efficient asset management, but IT organizations may still lack the capabilities they need in order to determine even this most basic of requirements.

- **IT complexity.** Heterogeneous systems and inconsistent integrations lead to IT complexity. Within this complex environment, there may not be systematic processes to minimize the impact of errors within the IT infrastructure, so user support is reactive, often ad hoc, and prone to mistakes. Software complexity requires IT staff to devote more time to managing software applications at the expense of maintaining the hardware, resulting in more faults and reported incidents.

- **IT governance and compliance issues.** Part of documenting compliance with the appropriate regulations requires following the appropriate procedures and documenting that the procedures were followed. Introducing new solutions or systems invites opportunities for making unintended changes in the IT environment, as well as violating existing governance and compliance procedures.

- **The rise of IT security threats.** Threats to the corporate IT environment have moved far beyond the mere hacker and virus launcher generating attacks for the sake of disrupting corporate environments. That threat has increased to include the criminal element that attacks networks or installs spyware or rootkits to gain control of machines to steal passwords and identities.

- **Risks associated with adopting new technology.** A basic requirement of any solution is to keep costs to a minimum and allow testing to identify and mitigate or eliminate potential risks. Further, introducing new technology to the production environment even with testing can still invite accidental changes as a result of unanticipated reactions from applications due to hardware and software that was not known to be part of the production configuration.

IT'S NEED TO DRIVE BUSINESS ALIGNMENT AND INTEGRATION

Responding to current customer needs, suppliers of IT service management software have developed enterprise management solutions that correct these inadequacies. Today's solutions integrate incident, problem, change, and service-level management and save costs by automating previously manual tasks, including the discovery and tracking of assets within the IT environment to minimize waste, loss, and risk. The tools also standardize on the processes and best practices of the ITIL. They add business value by prioritizing projects and changes based on their importance to the business and by aggregating IT data into a coherent whole.

SOFTWARE ASSET MANAGEMENT

Software asset management is the effective management of software assets throughout the IT asset's lifecycle. IDC sees IT organizations still being challenged with the basics, which is merely determining what assets they have and the underlying hardware and software applications. Effective software asset management therefore requires:

- **Software asset discovery.** Determining the number of software licenses authorized for a given application located on a physical or virtual asset is a must. Frequently, IT must also know the hardware configuration because in automatic deployment and provisioning solutions, being able to automatically determine whether an existing hardware platform can support a specific software application is a requirement.

- **Determining license usage.** Software asset management has gained plenty of attention with tracking and managing licenses when vendors that grant license agreements periodically conduct audits to verify use of the licenses in compliance with the agreements. These audits can result in demonstrating to both the IT department using the software and the vendor that the IT department is using more software licenses than it purchased, resulting in additional fees being charged by the software vendor. The resulting need to refute such charges is another driver behind adopting software asset management solutions.

- **Software asset reconciliation.** Reconciliation is a key component of lifecycle management. Frequently, asset information is discovered by multiple solutions that have agents, and in performing their discovery, they find assets that look the same as assets discovered by other solutions. At the IT administrator's discretion, rerun scans of the IT environment are used to ensure that the picture of the overall IT environment is up to date. Without a reconciliation engine, a solution for asset management in general or software asset management in particular, may end up counting assets twice.

But there also needs to be a transition from software asset management with an eye toward accounting for the cost of licenses, tracking and managing the movement of licenses, and then providing the capability to deploy, update, maintain, and retire licenses. This transition has to also include virtualized software licenses. Software vendors are just starting to better address using software licenses as part of virtual machines and as part of the virtual infrastructure.

FINANCIAL MANAGEMENT OF IT SERVICES

Ultimately, IT organizations are being led to perform IT financial management, where costs for software and hardware assets are included in a total cost figure that can then include the license itself, the costs associated with providing the service for using the license, and then providing that figure to users in the form of chargeback in accordance with the service-level agreement so that users really understand the obligations (as well as the benefits) of using the license.

Financial management of IT services includes three key areas that should address how physical and logical assets are provided and managed:

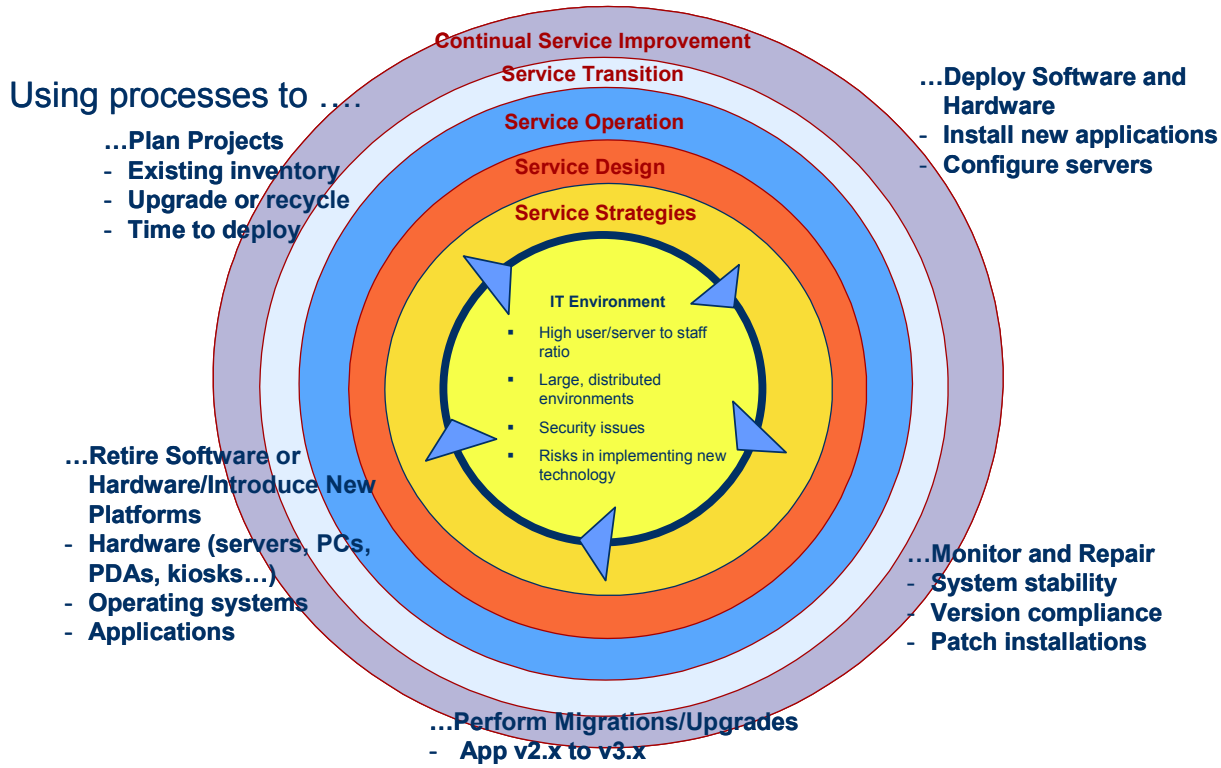
- **Budgeting.** Tracking licenses in accordance with a previously created spending plan goes a long way toward controlling costs.
- **IT accounting.** Direct costs include capital costs for purchasing licenses and providing the service for that cost. IT accounting should also cover indirect costs associated with the provisioning of the asset and other costs associated with providing the necessary hardware and software infrastructure for that license.
- **Chargeback.** Having the capability or ability to assign costs associated with providing the service based on the cost information mentioned earlier is critical to quantifying the value of the service provided to internal corporate customers. Ultimately, chargeback shows users of a service what it really costs to provide that service, and it is a critical part of aligning IT with the business.

ITIL SERVICE LIFECYCLE MANAGEMENT

With the release of ITIL version 3 in June 2007, IT service management received a stronger focus on the lifecycle of a service being provided to the organization. ITIL version 2 stressed IT alignment with business, and ITIL version 3 emphasizes IT integration with the business. Figure 2 describes five stages in the service lifecycle, in which IDC characterizes the ITIL version 3 management practices in the context of lifecycle management. The first phase is the initial planning of the project, the second phase is the actual deployment of software and hardware, the third phase is the day-to-day use of the software and hardware, the fourth phase is the upgrade of the software, and the fifth phase is the retirement of the software or hardware. See Figure 2 for more details.

FIGURE 2

Service Lifecycle Management



Source: IDC, 2008

The Challenge of the Virtualized Environment

IT organizations are increasingly viewing their virtualized infrastructure as a growing asset that enables a more flexible and agile infrastructure. As such, asset managers and virtual administrators are managing virtual machines as assets across the life span of the VM, from creation through retirement. In fact, the ease with which VMs can be created is leading to VM sprawl, forcing organizations to rethink their ROI expectations and management processes.

As adoption of virtualization continues to cut across storage, servers, desktops, and applications, there is a need to include virtualization in standardized processes such as ITIL, CobiT, or CMM. IT executives are viewing virtualization as a strategic investment. Key areas of investment for IT leaders include tracking change, configuration, problem, incident, and financial management for VMs. As time progresses, IDC expects that virtualization will become a de facto architecture inside and outside the datacenter and will require that ITIL version 3 drive the service management orientation that production adoption demands across the enterprise.

HP and Transitioning to Financial Management of IT Services

HP's Service Management Center offering consists of the four products listed below. These products provide a thorough view for not only determining IT assets within an organization but also determining relationships between assets and automating the management of those assets over their lifecycle (see Figure 3).

- **HP DecisionCenter.** Since its acquisition of Peregrine in 2005, HP has continued developing HP DecisionCenter to help IT organizations better understand the impact of performance on their organizations and also to help in scenario analysis.

- **HP Service Manager.** A combination of the Peregrine ServiceCenter product and the HP OpenView Service Desk, this solution goes beyond basic trouble ticket reporting, escalation, and resolution capabilities to help manage service levels, create and track service requests, and integrate with change and configuration management solutions directly to speed delivery of IT assets and services to users.

- **HP Discovery and Dependency Mapping Inventory (DDM-I).** This product automates the discovery of all IP-based device information on clients, servers, printers, mobile device and network devices, and so forth.

- **HP AssetCenter (recently renamed HP Asset Manager).** This solution addresses software asset management with contract management and procurement capabilities in an IT financial management solution. HP Asset Manager is covered in more detail in the following section.

FIGURE 3

HP Service Lifecycle Management

Source: HP, 2008

HP ASSET MANAGER

The HP Service Management Center has HP Asset Manager as its foundation because HP views asset information as critical to being able to ultimately provide good financial management capabilities for IT. Financial management starts with providing appropriate discovery tools enabling a view of the asset (such as the HP DDM-I discovery tool). Within HP Asset Manager, financial management is performed using four modules:

- **Lifecycle Asset Tracking module.** IT assets enable IT administrators to determine what the IT asset is and who is using it. The Lifecycle Asset Tracking module looks for assets, who is using them, and where they are located.
- **Contract Management module.** Contract management adds value because either business units struggle with adding contracts or contract records are widely distributed or buried in a drawer. This module allows IT to see if the software license is under a maintenance agreement and allows IT to more effectively plan for the asset's retirement and replacement. Additionally, IT managers can perform lease-versus-buy scenario planning as a result of Contract Management's integration with HP DecisionCenter. Warranty and insurance information is also included, as these components are also critical in determining costs for chargeback.

- **Software Asset Management module.** Software license compliance, cost and usage measurement, and software upgrades can be tracked and dealt with in this module. Because assets can be both physical and virtual, IT organizations are able to identify and manage both sets of assets for their tracking, management, and cost impacts. And because software assets are tracked and managed, verification of compliance and audit rules and requirements can be verified as necessary for specific services.

- **IT Financial Management module.** The costs for goods are measured here through fixed asset reconciliation, and total cost of ownership is calculated. This is critical for communicating the total role of determining IT's value to the business units and gives the business unit a measure of the services being consumed.

As HP Asset Manager transitions, one necessary part of product development is integration with other products. HP Asset Manager has a list of HP products with which it integrates out of the box, including the rest of the HP Service Management Center family, HP Network Node Manager, and HP Client Automation. HP Asset Manager also connects with a number of third-party application connectors for Tivoli, IBM Lotus Notes, BMC/Remedy, SAP and inventory connectors for Microsoft, LANDesk, CA, and Altiris. With integrations to HP Client Automation and HP Discovery and Dependency Mapping, HP Asset Manager can discover assets and initiate software deployment and management activities on a PC or a server.

HP AND ITIL

It is somewhat well known that HP has been involved in the creation and development of ITIL version 3. Along with its ITIL version 3 work, HP has been working to ensure that its product line is also consistent with ITIL management practices. The company does have a configuration management database (CMDB) that can be used as the authoritative source of asset or configuration item information or that can be used as one of many asset repositories in a federated CMDB approach. Together, these technologies enable HP Asset Manager to provide asset information to other parts of the infrastructure through the UCMDB.

IDC ANALYSIS

Much vendor focus has been placed on ITIL and ITIL-based management, especially within North America, in the past six to eight years. IT organizations have continued moving from firefighting mode to more proactive management strategies, but across all IT organizations, there is still much to do. Still, the trends toward virtualization and consolidation, especially in the datacenter, have increased IT complexity within the enterprise.

HP is moving ahead with an ITIL version 3–focused approach to helping IT executives plan moves and anticipate future directions of their technology. With key technologies surrounding IT asset discovery and inventory, discovery and dependency mapping software, a CMDB, a service desk, and configuration management solutions, HP has a robust set of solutions to assist IT executives in clarifying their own complex environments.

CHALLENGES

Continued Integration

HP Asset Manager will need to continue the integration path toward HP DecisionCenter so that chargeback can occur. The road map toward integration needs further highlighting and transparency so that customers better understand where HP is taking the solution set.

OPPORTUNITIES

Virtualization

HP has put into action a number of virtualization initiatives, including ProLiant iVirtualization for integrated virtualization capabilities that include preloaded hypervisors on HP ProLiant servers. HP Insight Dynamics - VSE is a new class of software to visualize, plan, and change both physical and virtual servers using exactly the same approach. HP also has a partnership with Aperture to integrate datacenter management into HP Asset Manager through an add-on module. These management capabilities differentiate HP from competitors and show the value of HP solutions, and they should be further highlighted.

CONCLUSION

Aligning IT with the business requires creation and maintenance of specific technologies applied to meet business user needs. This in turn requires tight integration among solutions that provide a specific user-focused service from the IT organization. In the past few years, IT executives have turned to integrated IT service management solutions that allow them to optimize IT service performance and availability while reducing operational costs.

In order to reduce costs, IT executives must first know what costs they must address. IT organizations have been creating IT services tailored to individual business needs, thanks to recent adoption of ITIL for IT service management.

HP is addressing the cost-focused need of IT organizations with HP Asset Manager. HP acquired the Asset Manager solution with its 2005 acquisition of Peregrine Systems and has furthered existing integrations between the Asset Manager product and the rest of the HP software product line. With the incorporation of best practices into the HP Asset Manager management software application suite, HP is providing customers with an effective ITIL adoption tool, even if the IT organization using the solution is not formally adopting other ITIL practices within its organization. Asset Manager's capabilities in managing detailed asset information are also being leveraged to address IT financial management. It is the financial view that will also give the IT organization greater knowledge with actionable data to determine the most effective, efficient use of scarce IT resources within an organization and decide better which services to provide business units and at what price. IDC suggests that IT executives with a need for detailed asset information to support financial decisions consider HP Asset Manager for their organizations.

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