Fighting fire with fire: five strategies to enable business change in IT operations

White paper

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HP Operations Center software helps IT operations managers enable change in the organization, in processes and in technology.

Fighting fire with fire

The problem is change; the solution is change. Like firefighters setting controlled burns to combat forest fires, IT managers are addressing the demands of business change by introducing change of their own. To meet new business needs, new applications are deployed on new architectures using new technologies. To serve growing demands for service availability, IT implements network redundancy and server clusters. To improve efficiency, IT turns to server, storage and user access virtualization. To address corporate security and governance requirements, IT implements new processes and tools. And often the IT organization begins to mirror the technology itself with new teams of professionals organized into expertise silos, each with its own technology focus.

Change is occurring in IT people, processes and technology. Like all departments, IT operations must step up to meet change with change of its own, and often with little or no additional budget. But outdated or uncoordinated management tools mire IT operations in the past, preventing them from taking the steps necessary to move the business ahead. HP Operations Center software helps IT operations managers enable change in the organization, in processes and in technology by providing a more unified view of an increasingly diverse IT world. This paper looks at the current business challenges that impact IT, five strategies you can use to meet business needs and how HP can assist you in responding to business change.

Five strategies to enable business change in IT Operations

To understand the solution, we must look more closely at the problem. For the most part, 21st century IT change is driven by 21st century business change. Each change driver evokes an IT response which creates additional demands on IT operations management. Here are some of the key factors.

Five key business challenges and their IT response

Business change	IT response
Time-to-market shortens	Accelerate rollout of new applications and technologies
Acquisitions, consolidations and restructurings occur	Consolidate operations for multiple data centers
IT services become more critical to corporate success	Increase network and server redundancy
Security and governance requirements grow	Refine IT processes, secure tools and networks
More efficient operations demanded for profitability	Increase IT productivity and automate manual processes

Each IT response presents a set of specific challenges to the IT operations department. Meeting those challenges requires IT operations managers to drive change of their own. Let's look at each IT response individually to see how it impacts operations and how HP Operations Center software helps operations managers fight fire with fire.

Strategy 1: accelerate rollout of new applications and associated monitoring.

Each new solution demanded by the business brings with it a plethora of new facilities and technologies, and urgency often trumps consistency. The application may run on your standard server operating system, or your choice may not be available until the next release. The application will have a database—maybe your preferred one, maybe not. Increasingly, applications will be built on middleware like BEA WebLogic, IBM WebSphere or Microsoft® .Net. They may use web services technologies like Simple Object Access Protocol (SOAP) and universal description, discovery and integration (UDDI) and may implement a service-oriented architecture (SOA). The application may even have its own management interface to help you configure and use it and to monitor the status of the application elements.

The tools that come with an application may do an excellent job of monitoring that particular application, and the technologies underlying the new application may be better and more flexible than those already installed. But IT operations must reduce additional training and must be able to fit the new technology into existing processes. To do this, IT operations must create and maintain a more uniform view of increasingly diverse infrastructure.

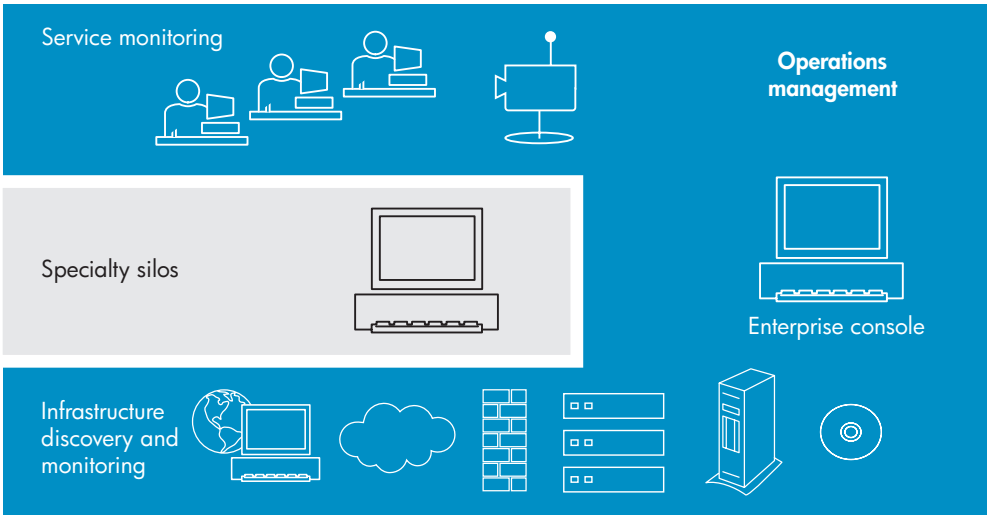
Technology proliferation often creates specialty silos within IT. These specialists need special tools, but they also must support common processes. IT must provide common understanding between operations and specialty teams to improve communications and prevent dropped balls. And specialty teams and operations staff must share common priorities to enable IT to address the problems having the most impact on the business.

How HP Operations Center software helps

HP Operations Center helps IT managers deal with technology proliferation in several ways:

- It has the scope to discover, recognize and manage the new elements. It supports popular Windows®, Linux and UNIX® operating systems and has HP Operations Smart Plug-ins for dozens of key applications, databases and middleware elements. In addition to extensible and customizable agents, HP Operations Center includes agentless monitoring that further extends the scope while reducing administrative burdens.
- It provides operators a unified view of the IT service and its supporting infrastructure, and it offers specialized views to those who need them. Support teams for applications, databases, middleware and web servers each participate in unified processes for problem detection, investigation, escalation and restoration.

Figure 1. Integrate specialty silos.



- It provides a unifying framework for specialized tools associated with specific elements. These include server management tools like HP Insight Manager and Dell OpenManage, storage management solutions like HP Storage Essentials, and an array of tools provided by other vendors. Integration of these tools brings critical new information into operations processes.
- It fosters a common vocabulary and agreed priorities among teams thereby shortening the time to identify and resolve problems.

Strategy 2: consolidate operations and processes for multiple data centers.

In addition to the technology proliferation brought by mergers and acquisitions, corporate restructuring creates people and process challenges for IT operations. Operations processes and organizations must be rethought and redesigned. Consolidation of operations may be called for. At the same time, IT must maintain essential services to all parts of the business. The result can require careful coordination between two or more separate operations centers. Problems may have to be routed to a particular operations center based on factors such as the location of the problem, which users are affected, what technologies are involved or even the time of day. Even if event reporting and dispatch are centralized, problems may get escalated to higher tier support functions in different parts of the world based on similar factors.

How HP Operations Center software helps

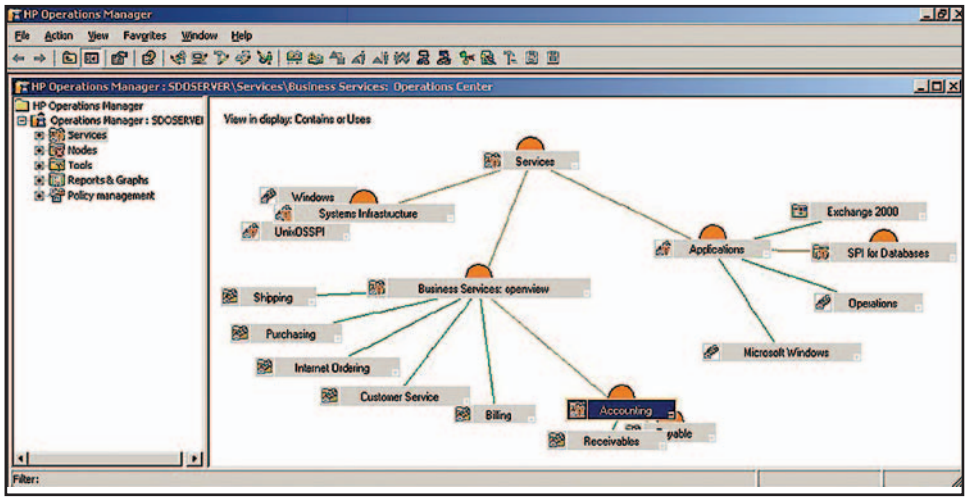
HP Operations Center can flex with the organization.

- Its broad scope enables IT operations to quickly accommodate the diverse heterogeneous environments that result from acquisitions and mergers.
- HP Operations Center can scale to manage thousands of nodes from a single management system.
- Multiple management systems can be combined to further extend scale and to implement multi-center management approaches such as hierarchical operations management, competency centers and "follow-the-sun" operations.

Strategy 3: increase network and server redundancy without increasing demands on staff.

Redundant network links and server clusters have gone far to reduce the lengthy outages caused by hardware failure. When a router fails, traffic is automatically picked up by hot standbys. Server clusters with auto-failover automatically resume an application on a backup server if the primary goes down. Server and storage virtualization software offers the ability to rapidly move an application and its entire execution environment to another server and resume service.

Figure 2. Manage IT services and the infrastructure that supports them.



But redundancy extracts its own price from the operations staff. First, it introduces additional hardware and software elements that themselves must be monitored and managed. In addition to the redundant device itself, there is often a software element that detects the failure of the primary node and initiates the changeover. This is true in network facilities like Cisco Hot Standby Router Protocol (HSRP) and in the server cluster solutions offered by HP and other vendors. If the detection and failover component is not configured or working properly, the failover won't happen.

In addition to the added complexity, redundancy can mask failures. More than one IT shop has had server clusters or HSRP routers attempt to failover only to discover the backup has been down for days because of a previous failover that went undetected. Failovers become a critical event that IT operations must detect and respond to even though the service was not affected.

How HP Operations Center software helps

HP Operation Center is designed to operate seamlessly in a redundant infrastructure environment and to help IT operations be sure failovers happen when needed.

- It is cluster aware. It recognizes and understands server clusters and clustered applications. It monitors the operation of the backup system and the detection and failover mechanism. HP Operations Center recognizes and responds to failover events and can track them to final resolution so operations can be sure standby facilities are ready.
- HP Operations Center works with key server and user access virtualization tools like VMware ESX, HP Integrity Virtual Machines, Microsoft Virtual Server and Terminal Services and Citrix Presentation Server.
- HP Operations Center monitors the availability of the IT service as well as the individual hardware and software elements that comprise the service. And it understands the relationship between them so that IT operations can see what services are potentially affected by the failure of an individual element.

Strategy 4: reduce security vulnerabilities within IT.

In the information economy the assets of the corporation are increasingly entrusted to IT for protection. IT responds in two ways. First, IT acquires and deploys software and hardware designed to enhance data security and verify that users are properly identified, authenticated and allowed the access they are authorized. Second, IT increases the security of its own systems and tools so they do not create vulnerabilities.

Both of these actions create challenges for IT operations. Security systems like firewalls, virtual private networks and identify management packages increase the scope of the managed environment. When they fail, IT operations must see the failure, understand its impact on services and be able to invoke the right expertise to fix it. And to monitor services and infrastructure, internal operations management systems require access to them wherever they exist in the enterprise. But this access must be limited and controlled, and the information extracted must be communicated and stored in a secure manner.

How HP Operations Center software helps
HP Operations Center helps IT operations support the latest security packages while maintaining the security of management systems.

- HP Operations Smart Plug-ins for Checkpoint Firewall and Pix and integrations with Symantec Enterprise Security Architecture and NetForensics enable IT operations to verify their operation and detect and respond to problems.
- It uses encrypted HTTPS communications to protect management data and to operate through corporate firewalls. If preferred, HP Operations Center can effectively manage servers outside the corporate firewall from within the intranet by using outbound-only communications making it unnecessary to open firewalls to inbound traffic.
- It allows IT to define user roles for operators, so each user has secure access to the information and tools needed to do his job but no more.
- It logs activity, so audits of operations events and actions can be performed and compliance requirements met.

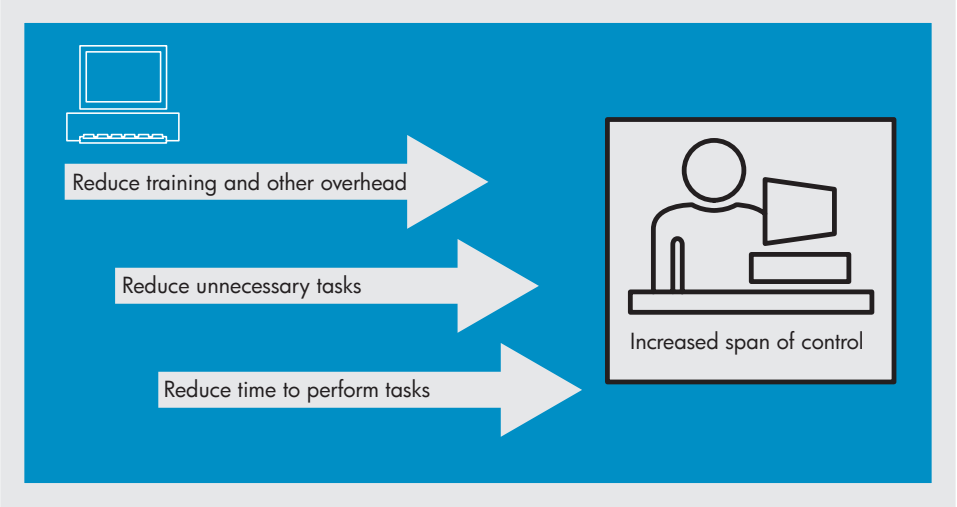
Strategy 5: prioritize IT problems based on business impact.

While IT rolls out new services and doubles down on support of existing ones, most IT executives report that operational spending, as a percent of corporate revenue, is flat or even declining. That usually means new infrastructure and services must be supported with little or no increase in staff. For IT operations managers, a key measure of productivity is span of control—how much infrastructure can be managed by a single operations specialist. To push this number up, operations managers must reduce training and retraining time in favor of productive time. They must streamline and automate operations to reduce unnecessary tasks. And they must reduce the amount of time required to perform manual tasks.

How HP Operations Center software helps
HP Operations Center helps in each area.

- HP Operations Center shortens the time it takes to detect, identify and resolve problems by capturing critical events and the information associated with them and forwarding them to the most appropriate operator or competency center. And it uses event correlation and root cause analysis to enable operators to quickly locate the underlying cause of disruptions.

Figure 3. Achieve more efficient operations.



- It enables operators to see which business services are impacted by problems so that restoration efforts can be prioritized.
- It enables less skilled operators to perform tasks by associating predefined information and instructions with each event. In effect, this captures the expertise of the experts and makes it available to every operator.
- It increases automation by enabling operations to associate pre-defined actions with events. These can be initiated automatically when the event occurs or upon operator command.
- It streamlines communications between teams by providing a common view of services, infrastructure and events. It provides for escalation of problems to specialists or competency centers, and it tracks event status until resolution.
- It provides historical reporting so recurring problems can be identified and resolved.
- It eases administration through "push" deployments of agents and updates and auto deployment of monitoring policies.

Why HP Operations Center?

HP Operations Center helps IT operations implement the changes needed to meet business change, improve quality of service and reduce IT costs.

Combining a top-down and bottom-up approach

Despite ever-increasing IT complexity and siloed management tools, IT organizations are asked to better align IT with business objectives. Doing this takes a true business service management (BSM) solution combining proactive top-down problem isolation with efficient bottom-up service impact analysis to prioritize IT problems based on business impact and to accelerate problem isolation. With HP solutions for BSM, you can prioritize IT problems based on business impact and reduce business risk by linking underlying application, server and network components to the business services they support. The HP business service management solution combines industry-leading products to align IT with business goals.

A service-oriented approach

The HP solution enables IT to consistently monitor the availability and performance of business services from the top down—like business users see them—and from the bottom up—like IT infrastructure specialists see them. That way service degradation can be quickly traced to infrastructure failures, and the business impact of infrastructure problems can be quickly seen.

The market-leading solution

IDC reported that in 2006, HP captured 28.1 percent of the worldwide market for distributed performance and availability management software—more than the next three closest competitors combined[1]. From medium-sized businesses to the largest corporations in the world, customers are choosing HP software—including HP Operations Center—for comprehensive solutions and quick value.

[1]IDC, Worldwide Distributed Performance and Availability Management Software 2007-2011 Forecast Summary and 2006 Vendor Shares, Doc # 208315, August 2007.

Learn more.

This paper shows how the HP Operations Center helps IT operations managers step up to business change. If you need to fight fire with fire, investigate the full functionality of HP Operations Center software and the HP Business Service Management solution.

For more details, visit **http://www.hp.com/go/software**.

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