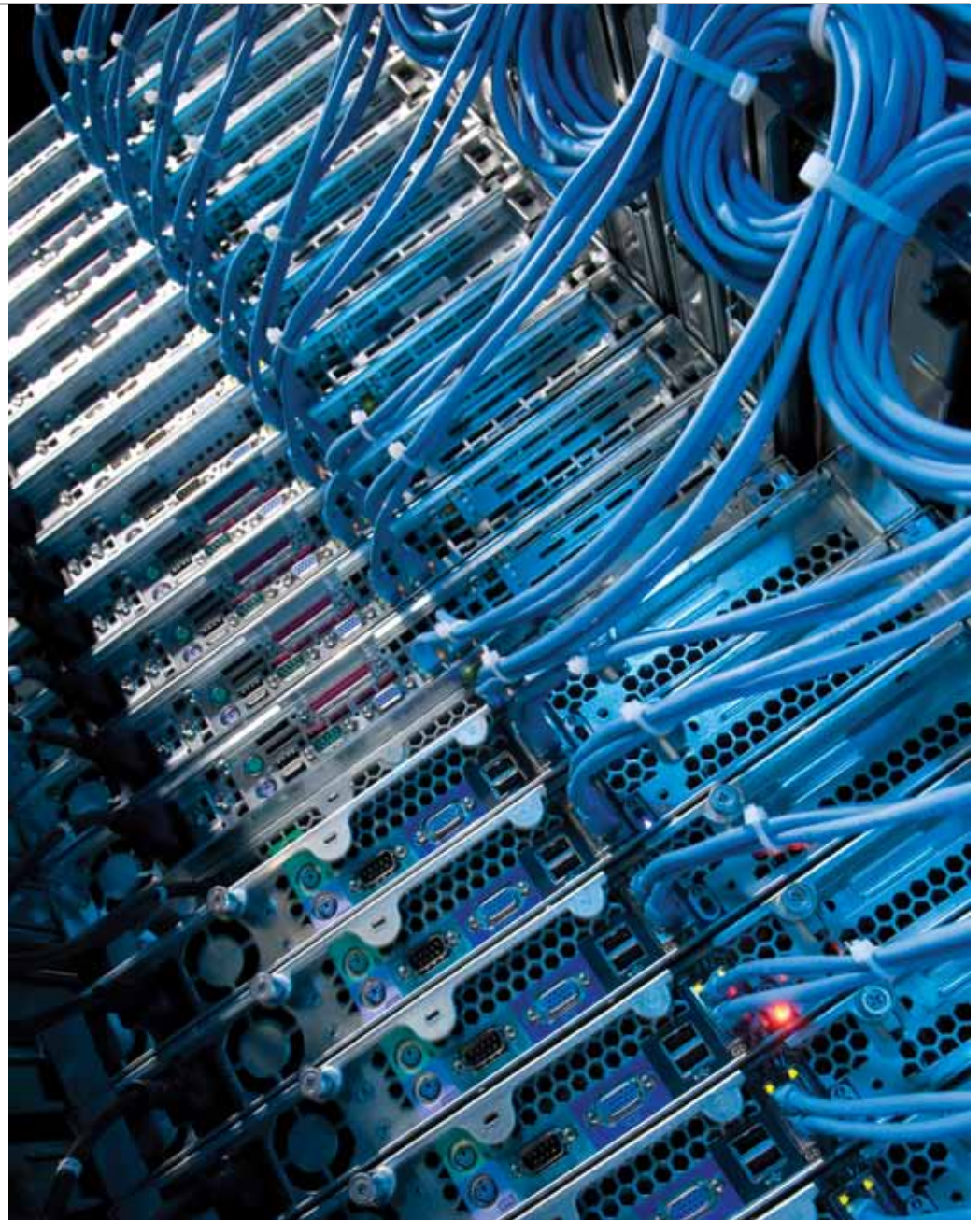


HP Customers Reveal Real-Life Benefits of IT Automation



Introduction

Any IT organization that is serious about reducing costs and increasing effectiveness is embracing automation. IT automation has been proven to deliver significant benefits including cost reductions, time savings, improved consistency, and increased reliability. Only one real question remains: Just how far can automation take an organization in real implementations?

This paper, based on in-depth interviews with 14 customers who use HP Business Service Automation solutions, investigates that question by looking at the actual benefits achieved by those customers' live implementations.

The customers consistently reported that automation benefits are real and substantial, although their approaches to automation varied greatly, covering patch management, compliance, provisioning, application release, configuration management, and more. This paper describes the various types of benefits reported by customers and takes an in-depth look at the three common experiences reported by the majority of participants:

1. Return on investment (ROI) builds over time, with returns increasing dramatically as more processes are automated.
2. The fastest way to get a return is to get started. Success breeds more success as automation is adopted and people constantly find new ways to use automation tools.
3. While you can certainly justify an automation purchase based on hard ROI, there is even greater value in the soft benefits received from automation.

Project Methodology

HP Software commissioned Dimensional Research to interview customers who have deployed HP Business Service Automation solutions and obtain in-depth feedback on the actual benefits received from using these products. Dimensional Research conducted 14 telephone interviews with HP customers; this report is a summary of those conversations. All customer quotes were taken from interview transcripts, although some quotes have been edited slightly for grammar and readability.

HP secured the participation of customers for the interviews, then passed their contact information

to Dimensional Research. HP did not participate in the interviews and did not offer input into this report except to clarify certain details of product functionality.

During the interview, participants were asked about their automation environment, specific processes automated, and the differences in business results with HP automation products compared with prior approaches. Participants were not compensated for participating in this research project, although as a token of appreciation for their time a small donation was made to the charity of each participant's choice.

Participant Profile

Because of the challenges in getting corporate approvals to discuss IT operations publicly, all participants were ensured their feedback would be presented as part of a summarized report with no attribution. The participants were employed at large companies from a wide range of industries including:

- International financial services companies (7)
- Innovative health-care companies (2)
- Leading telecommunications companies (2)
- Multinational retail chain
- Large academic institution
- Energy company

Each of the fourteen participants had responsibilities for at least one area of business service automation. Our participants used server automation (7), network automation (6), client automation (2), storage management (1), and run-book automation tools (6). The total of these numbers adds up to more than the total number of participants because many customers use more than one automation product.

The environments managed by the participants were consistently large and very complex. Clients reported automating anywhere from 3,000–10,000 physical servers (many of those running multiple virtual servers), 4,000–50,000 network devices, 100,000–375,000 client devices, and 7–10 petabytes of storage. All participants had devices from multiple vendors and required automation for a wide range of configurations, standards, and compliance requirements.

Participants used automation solutions alongside a variety of other tools from HP and other vendors. While the number of physical servers was not

growing organically for most participants, (although some server numbers were growing through acquisition) the number of virtual servers, network devices, and storage devices were growing at rates from 15% to 300% year-over-year.

Quantifying the ROI of Automation

The participants in this study consistently reported that automation delivers real and substantial benefits, although their approaches to automation varied greatly. Most of the quantifiable benefits were described in terms of specific use cases: provisioning, compliance, configuration management, and more. Specific examples of those benefits are discussed later in this paper.

Three topics that were consistently mentioned by study participants present an overarching view of the value of automation: ROI compounds over time, a rapid start is essential, and qualitative benefits are as important as quantitative results.

Automation ROI Builds Over Time

Participants consistently reported that the most compelling benefits of automation emerge over time. This is not to say automation is only a long-term investment. Certainly, customers report receiving good returns within a short period of time. For example, it was standard practice with many companies in this study to require a hard justification for purchase within a year of deploying any new operational tool.

However, the compounding benefit of automation was viewed as the most impressive part of the ROI. Once a process is automated, the value of the effort to put the automation in place is realized on an ongoing basis. One participant reported that each member of his team had a goal of automating 2000 man-hours of work each year. In the first year, that goal meant little more than break-even ROI, but in the following years the automation stayed in place, which enabled the customer to avoid hiring one new employee for each existing staff member every year.

“Every day we find more uses that increase the value we get from automation.”

The Key to Fast ROI: Just Do It

An automation initiative can be challenging to kick-

off. Participants frequently told stories of how certain teams were not open to automation and reported there were often more political than technical challenges to overcome. Customers who reported successful automation implementations shared a consistent tip: *Just get started.*

Participants who were the fastest to deploy automation or build automated workflows also saw the fastest ROI. In a classic case of success breeding success, experiencing the benefits of ROI drove even more creative thinking about how automation could be used. Exact examples of this thinking ranged from sharing reports that gave other individuals and teams ideas for expanding the use of automation, to successful automation across multiple groups that demonstrated how communication could be improved.

Study participants also consistently emphasized they were getting benefits from automating tasks they hadn't even considered when they originally purchased automation tools. As one participant said, “You simply cannot conceptualize all the possibilities when you first decide to buy a tool like this one.”

HP Professional Services was identified as a key success factor in quickly starting an automation effort. Multiple participants reported these engagements helped to create early results, which then drove the internal team to try more activities on their own.

“You have to start by getting agents deployed as soon as possible. Once you start to get visibility, adoption will soar.”

Hard ROI? Yes. Soft ROI? Absolutely!

Participants reported they were expected to show hard ROI for their automation purchases and they did, as shown in the specific use case examples covered later in this report. However, participants were consistently unwilling to limit the ROI discussion to a conversation about the numbers. While our original line of questioning focused very specifically on hard ROI, the customers in this study went out of their way to emphasize the significance of softer benefits.

Customers who successfully implemented automation consistently felt that IT operational integrity is part of the cost of operating a large enterprise. While it is



difficult to put a dollar value on operational integrity that is acceptable to the entire organization, it is a key to the success of the IT function.

“We struggle to put a hard dollar value on consistency and auditability, but that’s where the most compelling value of automation is obtained.”

ROI of Specific Automation Use Cases

Most of the specific examples of benefits received came from discussions of automation in specific use cases. This report segments these examples into the following areas:

- Provisioning
- Compliance Reporting
- Change Management and Problem Resolution
- Configuration Management
- Run-Book Automation
- Application Release
- Visibility and Reporting
- License Consolidation
- Personnel Savings

Provisioning

From deploying new servers, network devices, and desktops to right-sizing storage infrastructure, provisioning was consistently mentioned as an area that benefited from automation.

USE CASE	PROVISIONING BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Enable thin provisioning of storage	Regained 40% of space from existing storage.
Time required to roll-out new functionality for desktops	Previously it would take almost a year. That time is now down to 4-8 days.
Time required to provision new networking equipment	Twice as fast as with previous approaches.

Participants also reported provisioning benefits from using HP Business Service Automation that were not as easy to quantify. These benefits included:

- Significantly faster identification of available storage for provisioning

- Moving from a multi-step server provisioning process that had more points of failure to a one-step process that is more accurate
- Consistency of software builds

“The standardization alone is worth it. Just knowing you’re going to get the same result every time has huge value.”

Change Management and Problem Resolution

The ability to automate changes not only saved time, but also dramatically simplified problem resolution activity and decreased problem time-to-resolution for participants in our study.

USE CASE	CONFIGURATION MANAGEMENT BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Standardization	Prior to HP BSA, no standardized network configurations. Now fully standardized and backed-up configurations.
Speed of implementing configuration changes	Time to roll-out server configuration changes to thousands of servers went from two weeks to 15 minutes.
Configuration reporting	Gained the ability to report on server configurations, which we need for license compliance.

Participants also reported change management and problem resolution benefits from using HP Business Service Automation that were not as easy to quantify. These benefits included:

- Trouble ticket volumes began to decrease once automation began.
- Gained the concept of “roles” for approving and escalating privileges for making changes.

“Automation gives us better information, which means we solve problems faster.”

Configuration Management

Many participants saw significant improvements to configuration management once automation was adopted. Because configuration management is tedious, it is very error prone when performed manually, which can create significant security issues. With automation, configuration tasks can be performed consistently.

“Manual configuration is tedious so you make mistakes. Before automation, we would avoid making any changes. Now our configurations are current and the accuracy is tight.”

Run-Book Automation

Run-book automation is the ability to define, build, orchestrate, manage, and report on workflows that support system and network operational processes. Participants in this study who use HP Operations Orchestration were very excited about the benefits gained by automating tedious, cross-functional workflows.

Participants emphasized that run-book automation savings were incremental. For example, saving 10 minutes in a workflow isn’t very impactful until you execute that run 100 times per month. Then repeat that time savings for a dozen workflows and the overall savings become significant. Consider this real-life example:

“Your typical workflow is not complicated, but it’s long and tedious. If you get an alert about a server, you have to log onto the server to validate if it’s up or down, validate if it’s hosting customers, is it servicing

live traffic, if it is load balanced, and how is it configured. Then you have to shut down the applications in a specific order, zip all diagnostics information, put the zip file on a specific location on a development server, email the business partner, then start up the services in a specific order, put back in load balancing, validate it's up, and if it is, put in load balancing. That takes a good 20 minutes. And we get hundreds of alerts a week. With HP Operations Orchestration, the server alert kicks off a headless flow, which does all the steps in less time without errors. Plus all the steps are documented.”

USE CASE	RUN BOOK AUTOMATION BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Savings from running multiple flows many times	One workflow that ran 200 times per month saved \$339,000 in a year.
Gain audit and historical runs	Prior to HP Operations Orchestration, no documentation of workflows.
Fix problems faster	Save thousands of dollars for each fix that shortens customer impact times.

Participants also reported run-book benefits from using HP Business Service Automation that were not as easy to quantify. These benefits included:

- Improving communication among groups by documenting all steps in flows that run across teams
- Bringing discipline to processes by ensuring they are run the same way every time, for example, server decommissioning

“The big benefit of HP Operations Orchestration is consistency. You remove the human factor and do everything in the right order.”

Application Release

The process of rolling out applications can be complicated. Participants described servers that had databases, Lightweight Directory Access Protocol (LDAP), web servers, application servers, unique portal configurations, etc. Each of these elements needed to be deployed in a specific order, but manual processes were often inconsistent.

USE CASE	APPLICATION RELEASE BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Decreased failure rates	Went from 20-30% failure rates to .15% failure rates for application release processes under automation.
Increased ability to make changes	With automation, can deploy up to five application updates per week to thousands of servers.
Greater confidence with application rollbacks	Gained ability to quickly roll-back changes and minimize damage to customers.
Time savings	On our first try, we saved 3-6 man months of time, and we will improve those numbers as we learn.
Deployment consistency	Prior to automation, applications would be deployed slightly differently across each server. With automation, there is consistency and control.



“Rollback is invaluable. Saving a bit of time for my guys, that’s nice. Not impacting the customer is priceless.”

Patch Management

Patch management was an important activity for study participants in order to keep up with security and compliance requirements. Automation delivered confidence and speed to the patching process. “Patching used to be our biggest challenge. We have to patch over 1000 machines in more than 300 locations with very tight patching windows. With HP Server Automation it’s straightforward, even though we only have staff in three locations.”

USE CASE	PATCH MANAGEMENT BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Patching servers	Gained the ability to patch servers behind firewalls and within the demilitarized zone (DMZ) from a centralized tool.
Headcount savings for desktop patching	Prior to automation, had eight people using Microsoft SMS. Now have one person doing the same with HP Client Automation.
Headcount savings for server patching	Moved from “all hands on deck” patching late at night to having one person managing the automation and checking for issues.
Eliminate need for onsite staff	Prior to automation, we would have to coordinate local techs to do patching. Now we can do all patching remotely.
Desktop patching	Previously, it would take three months using Microsoft SMS. Now it takes 10 days with HP Client Automation.

Compliance Reporting

Delivering the information needed for compliance reporting and auditing is a clear win for automation. Study participants support an incredibly wide range of compliance needs including the North American Electric Reliability Corporation (NERC) standards for energy companies, Payment Card Industry (PCI) standards, and

Federal requirements such as US Department of Defense Information Assurance Certification and Accreditation Process (DIACAP), Sarbanes-Oxley (SOX), Statement on Auditing Standards (SAS 70), and more.

The participants who reported using automation for compliance typically had not been able to run compliance reports at all in the past and were now able to add a completely new capability.

USE CASE	COMPLIANCE BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Time for server compliance reporting	Eliminated 75% of the time previously required using manual reporting methods.
Deliver patching needed for compliance	Prior to HP BSA, we had sites that failed compliance audits because of our inability to patch. We now pass those audits.
Ability to conduct compliance audits	Did not have the capability to do even simple audits prior to automation. Now we have real confidence in our ability to be audited.
Mitigate security vulnerabilities	Prior to automation, lack of ability to roll-out vulnerability patches created compliance exposure.

“Compliance drove our automation strategy. Being able to control permissions at a very detailed level allows us to meet our SOX compliance goals.”

Visibility and Reporting

Although visibility seemed like a soft benefit to many participants, it was frequently cited as one of the most important gains from automation. Visibility enabled participants to:

- Generate detailed reports to identify which components to upgrade
- Quickly fulfill requests with accurate information rather than scrambling to pull something together
- Share accurate information that enabled more people in the company to make better decisions

“The best part of automation is the reporting. Just having the data about what’s there delivers benefits in hundreds of different ways.”

License Consolidation

Several participants cited the ability to discontinue maintenance of other products as a significant part of the ROI achieved from the HP automation suite. For some participants, this action delivered pure cost savings, as in the case of a company that almost paid for the cost of HP automation by centralizing a wide variety of other tools. Other study participants not only saved money, but improved operations. One participant was able to replace a tool for collecting performance data that had only 60% coverage with the HP products and gain 98% coverage. In turn, this expanded coverage enabled the customer to do capacity planning, which they were unable to do before with the existing tool.

“When we started we had four management systems, which meant four agents on every box. We were able to decommission all four products, dramatically reducing license costs while increasing our capabilities.”



Personnel Savings

It was particularly interesting to discuss headcount changes with the study participants. Often the ROI of automation is calculated by evaluating the number of employees that could be saved. There were a few cases where people were let go when automation tools were brought in (particularly in cases of acquisition), but that was not the most common scenario. More typically, employees were not fired when automation was adopted. Instead, organizations were able to grow their infrastructure without hiring new employees and did not fill open positions when people left. The ability to grow the IT infrastructure without additional hiring was cited as a critical benefit given recent economic conditions.

Another personnel issue consistently mentioned was the ability of existing staff to do more interesting and high-value work. When the repetitive and boring work is taken away, it is easier to get existing staff to “up their game.”

USE CASE	PERSONNEL BENEFITS WITH HP BUSINESS SERVICE AUTOMATION
Storage administrator ratio	Doubled the amount of storage with the same number of administrators after deploying HP Storage Essentials.
Desktop system administrator ratio	Cut the number of system administrators per 1000 desktops by a factor of 10.
Server system administrator ratio	Ratio grown from 1:100 to 1:150 administrators per servers.

“We’re pushing out 10 million changes a year with six guys. Once you have your practices and tools in place, it’s more than possible.”

Conclusion

The actual benefits that a given organization will achieve from automation will be specific to their operations and circumstances. This study shows that significant hard and soft benefits can be gained from automation across a wide range of infrastructure types, IT cultures, and processes.

About Dimensional Research

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