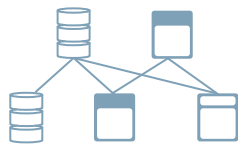


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## LEVERAGING DATA CENTER AUTOMATION AND PRIVATE CLOUDS: OVERCOMING THREE CRITICAL CHALLENGES

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R I V E R T U R N

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## EXECUTIVE SUMMARY

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**D**ata center automation and private clouds have emerged as leading strategies for increasing business speed and agility and improving the ROI of IT. This paper addresses the challenges organizations today confront when pursuing these strategies for the purposes of improving IT efficiency and boosting their technology ROI. Specifically, it examines three critical challenges they face when looking to automate and optimize their IT environment and maximize ROI:

- 1. The need for integration and automation**
- 2. Preparing for cloud computing**
- 3. Sorting out competing vendors and service providers**

This paper looks at the issues of integration and automation; explains the different options for cloud computing and private clouds, including public, private, and hybrid clouds; and introduces the role of the independent advisor in selecting an appropriate vendor from the confusing options out there. It then presents the case for the Riverturn solution. In the process it provides two useful checklists—*Five Signs Your Organization is Ready for Data Center Automation* and *Common Mistakes When Sourcing an RFP*.

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## INTRODUCTION: ORGANIZATIONS FACE COMPLEX AND CONFUSING IT CHALLENGES

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Information technology seems to only get more complex: more technologies, new devices, different capabilities. Everything needs to be connected with everything else. At the same time, nothing seems to go away. Regardless of the state of the economy the number of systems to be deployed, managed, integrated, and supported only increases.

Not surprisingly, demand for IT services and capabilities keeps growing. Workers are being asked to do more; customers keep requesting more services and new types of services. Meanwhile, new technologies continually pop up—cloud, server virtualization, storage virtualization, and more.

At the same time organizations are demanding IT reduce spending or at least hold the budget flat while the market grows increasingly competitive. What is management to do?

The first thing is to recognize the fact that business and technology is changing, and the business needs to change too. Management wants to transform the business starting with IT. This entails reducing sprawl and taking advantage of new technologies. The business also needs to deliver more services, enable greater innovation, and achieve greater speed and flexibility while consuming less energy and reducing data center costs. Sound impossible? Not so; such data center transformation often starts with Data Center Automation (DCA). It allows you to rapidly adopt new technologies without increasing the amount of resources to manage your infrastructure and without degrading the level of service you provide.

DCA combines management automation software and services with the goal of enabling IT to deliver increasing levels of services and more capabilities while driving down the costs. Through the intelligent deployment of advanced management tools and services DCA enables an organization to maximize its data center resources and optimize its use of IT, thereby improving the organization's return on its IT investment.

As simple as it seems DCA works. Savvis, a managed computing and network infrastructure company, turned to Riverturn for help in deploying the suite of HP's DCA management tools in their complex environment. Since that initial effort, "Riverturn and DCA has been an indispensable part of our team and a key contributor in our successes," says Steve Hasenbeck, Savvis.

This paper is intended for IT and business managers and looks at these issues and DCA in terms of the three main challenges that result. It then offers an approach that management and IT can employ right away and presents DCA and cloud computing as effective solutions. Finally, it introduces Riverturn, a proven third-party technology advisor and solution provider. At the end, you will find an appendix detailing Riverturn's core capabilities. It also includes helpful breakouts on the five signs you are ready for DCA and another on common mistakes when preparing an RFP.

**Now let's look at the challenges IT is facing. ➤**

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## CHALLENGE #1: THE NEED FOR INTEGRATION AND AUTOMATION

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Look around your organization and take notice of how many systems are deployed. Look at the sprawl of servers, storage arrays, switches, and racks. Then look at your application portfolio and the number of licenses you are maintaining.

All these systems, devices, and applications have to be managed and supported. Most of them need to be integrated with some or all of the rest. This becomes a never-ending task that keeps a small army of people busy. No sooner do they get everything working then something changes—a new regulation, a customer demand, a competitive challenge—then they have to do it all over again.

A leading medical information website encountered such problems. “We faced an IT environment that needed a major overhaul. We expected substantial downtime, but Riverturn helped us upgrade, automate, and orchestrate it all with little downtime,” reports a senior infrastructure manager.

The constant expansion of the organization’s systems footprint also creates a number of problems. To begin, it requires a significant number of people to administer and support all those systems, which

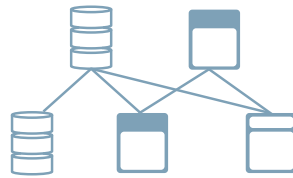
drives up the IT budget. The volume of systems also take up a considerable amount of physical space and consume increasing amounts of power and cooling, which add to the cost.

Most importantly, all these systems need to work together, share data, and communicate. This requires more people with specialized integration skills.

Furthermore, it is not enough just to integrate systems once and be done with it. Every time something changes the integration has to be reworked to accommodate the change. In a dynamic, growing business these kinds of changes come quickly and often. Yet, not doing the integration is unacceptable.

Without integration; service levels and data quality would plummet, labor costs would skyrocket as workers resort to manual work-arounds, and mistakes would proliferate. Compliance would become impossible.

DCA addresses the situations above and more. With skilled IT workers hard to find and costly to retain organizations need to enable the workers they do have to do more. DCA helps system administrators handle more servers and networks and storage managers cover more terabytes of storage.





With DCA the organization's IT staff can work more efficiently. It relieves them of the routine, repetitive tasks that take time but do not constitute productive work. By enabling remote, scalable management of hundreds or thousands of servers, IT organizations can improve server-to-administrator ratios. Using DCA to speed operational tasks, IT departments achieve major productivity gains. Deployments, upgrades, and patching processes that take weeks and months to perform manually can be completed in days, hours, or even minutes, effectively multiplying server administrator efficiency. All of this is wrapped around a distributed model of security that can be integrated into the current directory, providing granular access to components based upon role.

## **Five Signs Your Organization is Ready For DCA**

- 1. Poor server-to-administrator ratio (<25:1) leading to high labor costs**
- 2. Many IT groups, many hand-offs between groups**
- 3. Trouble meeting audit and compliance requirements**
- 4. Provisioning response time is unable to satisfy new business demands**
- 5. Slow manual configuration and patch management processes**

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**“Riverturn has been an indispensable part of our team and a key contributor in our successes.”**

**Steve Hasenbeck // Senior Operations Systems Analyst // Savvis**

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## CHALLENGE #2: PLANNING AND PREPARING FOR CLOUD COMPUTING

Cloud computing has emerged as an IT and business fact of life. It is not simply another new technology; it presents an opportunity to redefine IT as a flexible, efficient service. The cloud enables a new way of delivering technology capabilities as highly virtualized IT services. Eventually almost every organization will take advantage of at least some aspects of cloud computing to one degree or another.

Today, however, organizations are wrestling with the concept of cloud computing. There are many viable cloud options and the best choice for a given organization is not immediately clear. Even the types of cloud—public, private, and hybrid—can be downright confusing.

■ **The public cloud**, like that offered by Google, Amazon, and others is familiar. In the public cloud, IT resources are made available for short or long periods of time, and organizations generally pay for what they use. The value of the public cloud is the

ability to access IT resources, paying only for what the organization uses when it uses it without the infrastructure overhead. The public cloud, however, raises some concerns around security and control that are addressed by the private cloud.

■ **Private clouds** sit behind the corporate firewall and provide IT capabilities on demand as services to the organization's users. Although the private cloud does not reduce the IT investment, it does offer

greater security, control, flexibility, and more efficient use of the existing resources. The value of the private cloud is the agility it enables by delivering IT capabilities as virtualized services. The organization can deploy and re-deploy IT capabilities as virtualized resources fast to meet changing business needs.



■ **The hybrid cloud** provides a way for private cloud to tap IT resources residing in the public cloud for brief periods, such as when responding to a spike in demand. In that case the private cloud may access

additional server or storage capacity to meet a sudden demand while continuing to deliver expected IT levels of service. The value of the hybrid cloud comes from the flexibility it allows by ensuring IT can meet committed service levels regardless of unexpected demand or to segment types of services, such as public facing and internal, for different clouds.

DCA is pivotal in capturing the full benefits of virtualization and cloud computing. It ensures full lifecycle management of both physical and virtual

servers, network devices, and storage and automates the deployment of software applications to traditional or private cloud environments, often accelerating the rollout of new or updated applications. Specifically, it provides automated provisioning, virtual machine cloning, patching, configuration management, script execution, and compliance management. DCA also provides the scalable and secure capabilities necessary for geographically dispersed locations across virtual, public, and private cloud environments.

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## CHALLENGE #3: PROLIFERATION OF VENDORS AND SERVICE PROVIDERS

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Systems vendors have identified DCA as one of the critical next big trends, along with cloud computing and virtualization. That means the major hardware and software vendors are rushing to introduce solutions for DCA, cloud computing, and more. Some of these are promising offerings, others are repackaged and renamed offerings of questionable value. Still others are partial solutions, some of which may evolve into full offerings.

The upshot is a confusing mix of offerings, only a few of which may be right for your business. How is an organization to know? They will encounter different types of automation and different types of cloud capabilities. Before organizations can even begin to make the right choice they need a strategy that will guide them through all aspects of DCA, from design through deployment, management, support, training, and, ultimately, organization-wide adoption.

Even the best organizations can benefit from the right expert input. “We had an idea for what we needed to do. Riverturn suggested a different

approach that worked out much better,” said the Vice President of a leading global financial services company.

A key step in addressing the third challenge is to improve the request for proposal (RFP) process. With an effective RFP process companies can better meet the third challenge while reducing overall costs and improving the quality of their sourcing. To achieve

successful and lasting sourcing relationships, companies must thoroughly evaluate this long-term strategic decision and educate themselves on what is possible in the marketplace. A roadmap with proper planning and alignment needs to be developed to make sure the

company goals are achieved, proper market research is performed, and an objective provider scoring system is developed.

Organizations looking to develop the right RFP to drive their sourcing strategy and transform their operations can benefit from outside expertise here too. The right sourcing decision is based on a strategy that considers the unique mix of management





objectives of the individual company and its business situation. A trusted advisor can help. Such an advisor starts with an assessment of the business and its technical needs combined with an understanding of its business objectives and where management wants it to go. It's preferable that the advisor is deeply grounded in a range of technologies and can bring an independent understanding of the various offerings. It also is helpful that the advisor have good relationships with the leading vendors.

### **Common Mistakes When Sourcing an RFP**

- Writing the RFP before fully aligning on sourcing strategy
- Prescribing the solution as part of the RFP
- Not sufficiently addressing the retained organization assumptions
- Inadequate research and evaluation of outsourcing service providers
- Improper evaluation of RFP responses
- Failure to use an independent subject matter expert
- Not bringing Procurement into the process from the start
- Failure to include support and training requirements
- Not considering deployment issues
- Failure to check engineering and training certifications and credentials
- Failure to define success criteria and an adoption plan
- Lack of a defined exit strategy

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**Vice President Engineering // Leading global financial services company**

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## INTRODUCING RIVERTURN

Riverturn is the leader in designing, deploying and supporting automated data centers that can position IT organizations for high performance. With proven expertise and unequaled implementation capabilities, we provide Hewlett-Packard (HP) Data Center Automation (DCA) solutions and services that help organizations deliver Infrastructure as a Service (IaaS), which is imperative to keep up with today's dynamic business requirements.

Given the accelerating rate of change in technology, it becomes nearly impossible for any organization to stay current while still focusing on its own core business. We stay on top of the full technology landscape and identify the specific combination of technologies and services that best meet your organization's needs. Our experience in delivering HP-based DCA and Cloud projects to Fortune 500 clients has enabled us to develop highly-effective strategies that maximize return on investment (ROI).

Riverturn applies its knowledge and technology skills to deliver solutions in the following areas:

- **Achieve and Improve ROI** Optimize IT system performance through virtualization, automation, cloud computing, and more.
- **Reduce Management Costs** Increase efficiency by enabling fewer administrators to handle more IT resources and lower overall expenses.

- **Optimize Enterprise Scalability** Ensure that IT infrastructure can scale up (or down) as needed through virtualization and cloud computing.
- **Maximize Data Center Performance** Ensure that applications have sufficient resources available for maximum performance.
- **Deliver Infrastructure-on-Demand Capabilities** Use virtualization, cloud computing, monitoring, and automation so IT infrastructure resources can be available as needed to keep up with rapidly changing business needs.
- **Understand Compliance Requirements** Ensure that IT systems will comply with all appropriate regulatory and governance mandates and avoid compliance risk.
- **Enable Change Without Downtime** Leverage virtualization, automation, and cloud computing to provide flexibility without taking systems off line.
- **Capitalize on Cloud Technology** Develop and execute private, public, and hybrid cloud strategies where appropriate to maximize efficiency.
- **RFP Guidance, Development, and Management** We guide you through the RFP process by first understanding a company's needs and objectives and then drawing on our extensive knowledge of technologies and vendor practices.
- **Facilitate Adoption** Develop flexible plans for mapping requirements, training and evaluating processes to ensure a speedy and successful adoption of the solution.

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## CONCLUSION: ORGANIZATIONS NEED A PARTNER THAT OFFERS PROVEN SOLUTIONS

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The technology environment today presents both complex challenges and significant opportunities along with ample ways to trip up even the most conscientious organizations. The emergence of DCA, virtualization, and cloud computing in particular can tax an organization that wants to focus on its business and not on the technology. That's why they need a trusted partner as an advisor who can guide them through the complexities and lead them to the business results they seek.

"Riverturn is one of the select few consulting partners that I trust to provide the highest level of service to our customers. I know I've left our customers in very capable hands when Riverturn is involved. The company consistently has gone beyond the call of duty to make sure that our customers realize enhanced value from the services being performed. I appreciate

the fact that Riverturn always conducts business with the highest level of integrity," says Sharon Eilon, Director HP Software Professional Services.

Riverturn has delivered a long record of success for clients like Savvis, J.P. Morgan Chase, Wells Fargo, WebMD, DIRECTV, Fidelity, Verizon, Partners Health, IHG, Allstate, Sungard, and more. For customers like these Riverturn is a proven, reliable partner. Noted Steven Hasenbeck of Savvis: "Riverturn quickly became our resident expert that allowed us to successfully deploy our HP Suite of DCA tools in a complex environment."

**To learn more about Riverturn and its services  
contact us today ► 919.313.4886**

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**Sharon Eilon // Director, HP Software Professional Services // HP**

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## Core Practice Areas

■ **Server Automation (SA)** provides lifecycle management for enterprise servers and applications from establishing a baseline to provisioning, patching to configuration management, and script execution. It enables the server administrator to manage compliance holistically from the application, server, and storage device. HP Server Automation also automates operations and processes across disparate IT teams and physical and virtual servers.

■ **Operations Orchestration (OO)** helps reduce operational costs and improve service quality by automating routine IT tasks, such as repetitive maintenance, change provisioning, and incident resolution. It integrates with the existing IT environment to ensure minimal impact on current procedures and tools while fully utilizing the organization's IT investments

■ **Network Automation (NA)** is both a strategy and an integrated set of proven products spanning the network management domain to give organizations complete control of their physical and virtual network infrastructure, which forms the essential foundation for all business services delivered.

■ **Storage Essentials (SE)** delivers a storage resource management solution that gives IT organizations the monitoring, visibility, reporting, and trend analysis they need to make virtualization work the way it is supposed to; by fully utilizing all storage resources.

■ **Cloud Service Automation (CSA)** delivers a private, public, or hybrid cloud-computing solution that enables you to transform existing data center and virtualization investments, as well as traditional IT business applications into a cloud environment. This transformation allows you to deliver services faster while enabling higher levels of quality and security.

■ **Database and Middleware Automation (DMA)** automates administrative tasks like provisioning and configuration, compliance, patching and release management associated with databases and application servers. When performed manually, these day-to-day operations are error prone, time consuming and difficult to scale. With the efficiencies of HP Database and Middleware Automation, you can better meet aggressive SLAs and maintain compliances while you reduce labor and overall administration costs.

■ **Customization Services** will in many cases provide significant productivity boosts by eliminating manual tasks, as well as improving ROI. Also included are on-going installation and upgrade services for DCA solutions including; Web based portal design and development, Content and policy development, OO Workflow & Content scripting, and RFP consulting and guidance

■ **Training & Support** A full suite of HP training services for server, network, and operations orchestration and can be used in conjunction with customized training; Riverturn also acts as the next level of support.

