

# DATA CENTER & INFRASTRUCTURE MANAGEMENT

*SIX STEPS TO IMPROVING YOUR IT  
INFRASTRUCTURE*

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## **Introduction**

Efficient and effective data center and infrastructure management is a critically important element of any company's IT strategy—especially so in these challenging economic times. IT infrastructure issues have never been more fluid or dynamic, with major IT companies investing billions in products and services to help guide current and potential customers through the complex infrastructure jungle.

This White Paper is intended to provide a framework for your process improvement efforts and is especially important for companies that have not yet made recent, significant investments in data center and infrastructure management infrastructure. It will provide you with a better understanding of infrastructure management and suggest an intelligent approach to making smart investments in a difficult economic environment.

## **What is Infrastructure Management?**

Infrastructure Management (IM) is the management of essential operational components (both hardware and software)—such as network systems, databases, and applications—along with policies, processes, equipment, and external contacts, for overall proactive effectiveness across the organizational infrastructure. It is important because IM has a profound impact on the efficacy of your entire IT operation. The more closely you can align your infrastructure management to the larger strategic goals of your company, the more invaluable IT will become to its future success.

## **SIX STEPS TO INFRASTRUCTURE MANAGEMENT SUCCESS**

Improving your infrastructure management should not be a piecemeal process. It requires a comprehensive assessment and solution approach. Focusing on a component here and a component there will take you right back to where you're starting from—technology silos that inhibit comprehensive and effective management of complex, inter-related IT elements. These six steps should be considered in a comprehensive fashion. But (particularly for companies just undertaking the process or early in their evolution) it may be necessary to break the process into manageable pieces. As long as you understand the big picture and have a roadmap to achieve it, following these steps will lead you in the right direction.

### **Step 1: Assess your environment and processes**

The old adage that you can't improve what you don't measure is particularly true for IT. With the economy continuing to present uncertainty, it's imperative that IT organizations optimize all of their resources. The first step to optimization is to assess your current operating environment. The following is a helpful checklist of questions to answer in the course of your assessment.

- Where are your assets and how are they being used?
- What do you truly need?
- What can be consolidated? Recycled? Discarded?
- Which software license deals can you re-negotiate?
- Where can you eliminate silos and optimize integration?
- How can you become more proactive and less reactive?
- How can you reduce your total energy costs?
- Are you able to effectively monitor your network and systems from a service standpoint?
- What should you keep in-house and what should you consider outsourcing?

Those are all questions to consider as you or an IT partner conduct a thorough IT assessment. The last question—in-house v. outsourcing—may be the most important decision you will make. Companies around the world are carefully considering their core competencies and taking a serious look at what to maintain internally and what could be better provided through an outsourcing provider. Especially with Software-as-a-Service (SaaS) functions so readily available in the marketplace, why do something yourself if you can purchase similar or superior services at an overall savings?

Never, ever outsource who you are. But seriously consider outsourcing those functions that add little value to your company's success. Assessing what you do and what you rely upon others to do, is like assembling the pieces of a puzzle. Once assembled, your data center and infrastructure management may feature insourcing, outsourcing, and Software-as-a-Service (SaaS).

If you choose an outsourcing partner or partners (or if you are simply choosing a vendor to partner with to augment your in-house resources), trust, value, and innovation should be cornerstone evaluation criteria. Who can help take your IT to the next level and show real return on investment for your operation and your company as a whole?

The old way of looking at IT is to gather requirements, purchase the hardware and software, conduct in-house training, and turn your organization loose with its new toys. Such an approach was predicated upon the assumption that people know what they want and how they want it. Now, with mobile computing, virtualization, cloud computing, and SaaS, things change so quickly that it's hard to anticipate everything you will need. Your IT partner should help you assess your current environment and anticipate your future needs. I also recommend that you select a partner who can actually demonstrate what they claim to achieve. Don't alter the dynamics of your entire IT operation based solely upon a presentation.

### **Step 2: Map your entire IT infrastructure**

Take a comprehensive approach to the infrastructure improvement process. Doing things piecemeal is inefficient and can lead to unanticipated consequences. Typical problems you may encounter include:

- Too many tools being used
- Lack of integration across technology silos
- Silos inhibiting comprehensive management of the physical and virtual infrastructure
- Little or no predictive visibility of the infrastructure
- Lack of centralized management, making root cause determination difficult

Look for these and other important impediments as you conduct your assessment. Start by identifying the major pain points in your operation. Where do you make your largest repetitive investments of both human and financial capital? Those are areas with significant potential for process improvements and should be where you start your comprehensive infrastructure improvements.

### **Step 3: Define your current and optimum processes**

In order to ease those pain points, compare your current processes with your vision for ideal processes. (Again, this may be a task well-suited for your IT partner). Then ask yourself, "How do I get from here to there?" Pick those processes that will deliver the greatest "pain relief," be they HelpDesk cost or response time; software updating; or tool installation. But once you have identified those targets, establish short and long-term goals and incentivize and assess accordingly.

### **Step 4: Select a Solution**

This approach will undoubtedly lead you to a multitude of solution tools with considerable potential to address the pain and solve your problems. While the range of solutions is impressive, selecting the best tool(s) is a challenge. If you use a partner/consultant, consider making acquisition of the tool set part of your RFP or negotiation process.

Regardless of whether you do this in-house or externally, there are a number of important considerations for selecting the optimal solution for you. Here are a few tips to help you make the best choice.

- Don't simply buy the *tool*. Buy the *solution*. Know what processes or improvements you're trying to enhance and make your purchase with the big picture—your ideal end point--in mind.
- Think beyond IT solutions to overall business solutions and tools that address business objectives. For instance, don't simply consider ways to improve a step like changing a password. Think about how the password changing process impacts your overall security infrastructure.
- Look down the road and anticipate where your business will be in the next 6-12 months. Do you foresee continued layoffs and downsizing or is your company in acquisition mode? Answers to questions like these should impact your IT infrastructure re-assessment.

Once you have completed the big picture tool assessment, there are a number of important features to consider as well. Cost is always important, but dive more deeply into both price and value. Factor in the cost and ease of implementation, and the cost of training your own staff and any customer training necessary to make this solution tool work. Look for a tool that will increase productivity, simplify management, and reduce your overall cost structure. See if the vendor offers an online training solution that allows you to sustain your training processes.

Press vendors for alternative pricing strategies, especially if you are in the early stages of your infrastructure management assessment. You may not want to make a huge initial investment for a vast ERP-type system, so see if you can negotiate for fixed price or fixed timeline offerings. They may cost a bit more in the long run, but they can be very helpful in navigating the acquisition and implementation process using built-in review points.

Consider the possibility that what you do and how you do it may not really be all that unique. You can achieve considerable savings if you and your organization can systematize your business processes in order to capture the savings afforded by off-the-shelf solutions. If you can live with industry best practices, you can save considerably. But if what and how you do things is indeed unique, then don't compromise.

One tool offering to consider is [CA's Productivity Accelerator](#) solution. It provides ongoing guidance in implementation and creates and preserves institutional memory throughout the training process—an invaluable feature. It also allows you to customize the content to fit the particular needs of your organization.

Improving your data center and infrastructure management is an important but daunting task. There are challenges aplenty, topped by the lack of centralization and systemization so prevalent in most organizations. They don't call them silos for nothing and everyone is so used to managing their own specific areas based upon their own (often) narrow performance metrics, that it is difficult to change the culture. But these days, it's an imperative if you want to remain competitive.

### **Step 5: Make it Work**

Once you have made all the decisions outlined above, the next challenge is to make them all work. Here are a few suggestions for how to optimize your infrastructure management environment.

- Centralize all of your tools and proactively monitor them as much as possible across the entire enterprise.
- Understand dependencies among the silos and follow change management policies to improve service levels. If you don't understand dependencies, you run a much higher risk of unanticipated consequences whenever you change anything in the system.

- Don't simply address the symptom; look for the cause. A prioritized and shared understanding of services, their condition, and the cause will help eliminate waste and dramatically improve response time.

## **A Case Study**

This approach proved valuable to a major health care client of ours. This organization was challenged with the management of a widely distributed, complex WAN and LAN infrastructure that supports a large number of critical business applications and services. They had no enterprise-wide strategy for managing that IT environment and had relied on a handful of point tools to do so. This left them exposed to service disruptions and inefficient IT management. To provide a consistent level of care across its facilities, the IT staff required fast and reliable access to electronic patient records as well as results from a wide range of tests. The organization's network was critical to information sharing and therefore had to remain highly available and operate at an optimal performance level.

The company turned to [PSR Associates](#) to provide products and services for the standardization of the IT infrastructure. The platform needed to reliably detect system and network events/conditions nationally. It needed to provide intelligence that would assist in problem isolation. And it needed to provide root cause analysis to speed the recovery from those events and conditions.

We installed a solution that focused on the management of the core system and network components, including Systems (Servers), Core Routers, Core Switches, Data Center LAN devices, and WAN devices to the edge of all remote sites. We implemented [CA SPECTRUM® Infrastructure Manager](#) (CA Spectrum IM) and [CA eHealth® Performance Manager](#) (CA eHealth PM) to monitor roughly 3,300 network devices and servers allowing them to capture important availability and performance metrics. These solutions simplified fault management through root cause analysis and helped maximize bandwidth utilization.

### **Step 6: Focus on the End not the Means**

The most important advice I can offer is to think beyond IT. Assess your business—not just your IT needs—and draw parallels between your IT metrics and your company's larger operational metrics. Are you providing real value to the business? That's the ultimate indicator.

Align IT services with the primary products and services your organization offers and manage your infrastructure to align with the bottom line business needs. Focus on the strategic and outsource or automate the non-strategic. Offload the mundane and refocus your people on becoming core business partners. Transform IT from an obligatory overhead to a dynamic cost center. Design metrics that best address your larger strategic imperatives and then turn your people loose on higher value services.

Transforming your infrastructure management environment is tough work. But following these guidelines and learning from your own unique experiences, can yield substantial returns for you and your entire company.

I'm interested in your feedback. Please share your IM successes and frustrations with us at [infrastructuremanagement@psrassociates.com](mailto:infrastructuremanagement@psrassociates.com).