

Executive Summary

Consolidating Infrastructures: IT's New Call to Business

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Executive Summary

“Lower costs and greater efficiency have long been common refrains in IT, and will continue to be. But with IT becoming more central to a business’s ability to launch new products and deliver services, CIOs and IT leaders have become increasingly concerned with their infrastructure’s ability to execute — and are more concerned that IT isn’t fast enough to meet the goals of the business. In the growing movement to offer IT-driven products and services, consolidating multi-system, multi-site infrastructures that impede communications, business processes, and contact center and enterprise operations can help alleviate such concerns, and enable IT to succeed in its new role.”

From A Practical Guide to Infrastructure Consolidation Considerations
Interactive Intelligence, June 2011

AMD and HP said it best in their jointly-sponsored 2010 report on data center infrastructures: In the last few years, organizations have been positively gluttonous in adding servers, storage, and networking devices just to keep pace with demand, particularly in the effort to adapt to changing global business requirements.¹ That trend appears to be reversing itself. According to a 2011 *InformationWeek Analytics* survey of more than 200 CIOs and IT executives concerning their business’s near-term infrastructure objectives², 32% of the survey’s respondents reported plans to consolidate/reduce applications in 2011, with another 20% planning consolidation in a 2011-2012 time frame. Respondents further indicated plans to re-architect their data centers in the near term (22% in 2011; 23% within 24 months) and to increase the use of Software as a Service and other hosted services as part of their infrastructure and data center planning (23% in 2011; 23% within 24 months).

Of course, consolidating voice and data infrastructures is not a new practice. In the contact center space, software platforms and IP networks have long allowed contact centers to consolidate multi-point hardware architectures into single server-based application suites, with objectives being primarily to simplify administration and reduce operations and maintenance costs in addition to improving customer service processes. Corporate acquisitions, in which a company inherits the systems and offices of the organization(s) they acquire (or downsize and restructure), have also historically spurred infrastructure consolidation, with the aim to eliminate system disparity and get all existing and acquired business units on the same platform. However, a more prominent emerging driver for making infrastructures and IT operations less “gluttonous” are business objectives that tie IT directly to revenue generation and an expanding role as a business incubator.

Looking to the IT infrastructure to create revenue streams

Again of the CIOs and IT leaders surveyed by *InformationWeek Analytics*, 34% said their key priority for 2011 is introducing new IT-led products and services for customers — nearly double the 18% who considered this a priority in 2009. Another 27% of those surveyed said a targeted 2011 initiative is to create a new business model and revenue stream by leveraging their organization’s IT infrastructure more fully. In line with those goals, 48% of the survey’s respondents added that making business processes more efficient by way of IT is high on their list of priorities for 2011.

¹ “The Time is Right to Transform The Data Center,” TechTarget Custom Media, 2010, sponsored by AMD and HP.

² Murphy, Chris, editor. *InformationWeek Analytics* 2011 Global CIO Survey of IT executives, U.S., February 2011.

If IT is to drive product/services delivery and contribute revenue to a greater extent, IT teams as a whole must view the infrastructure they provision in a progressively creative light — to ensure that it is both lean enough and agile enough to extend new product and services offerings at the business’s pace, not “whenever IT can get to it.” In many organizations, CIOs and IT decision-makers are already emphasizing consolidation to meet this new call to business, aided by innovations such as the cloud and still-evolving technologies for virtualization. Here are some of the guiding principles these leaders are following for the infrastructures they oversee.

Seek opportunities for innovation... despite an unfavorable IT culture

In industries of all kinds, CEOs and other top executives are learning how positively IT and innovation impacts their operations, and are turning to their CIOs and IT leaders to identify, implement and promote innovative solutions to move the business forward. Unfortunately in the current IT culture, technology leaders are being tasked with this initiative while their budgets and staffing resources are largely being diminished. Nevertheless, opportunities to innovate under such conditions do exist, and the cloud is providing most of them.

In a recent report on cloud-based innovation, Microsoft cited private clouds in particular.³ More and more CIOs, the report said, are looking to private clouds not only as an avenue for helping their organizations defray or offset the cost structure of IT investments, but also as a way to reallocate human and technical resources to support unfunded corporate innovation mandates. “Private clouds are an essential step of business innovation within IT,” said Peter A. Jensen, Microsoft’s director, Product Marketing, US BMO, System Center and Virtualization. “That is, through the abstraction mechanism and the empowerment implied in a scalable, elastic self-service model (such as a private cloud), IT is completely changing how it delivers business value to the enterprise — and what the enterprise is coming to expect from IT.”

Research firm IDG sees the cloud, and virtualization, the same way. In their eZine “Blueprint for the New IT,”⁴ IDG points to several benchmarks of the cloud and virtualization that can benefit IT’s infrastructure efforts in business-critical performance areas; the benchmarks were identified in a global IDG poll of 350 CIOs and IT leaders. With regards to the link between their infrastructure and creating new revenue streams, IT leaders recognized the cloud’s self-serve delivery model and ability to scale capacity on-demand as key components. More evident of the two is introducing and distributing new self-serve products and services via the cloud. Think iTunes, Amazon.com, downloading a bank’s new service app to a tablet device, purchasing concert tickets on a smart phone, and so on. But by also leveraging the cloud’s on-demand scalability, businesses can offset the inefficiencies of larger, multi-system infrastructures to support peak volume requirements that are generally infrequent. Using the cloud to virtualize data centers, contact center operations (especially multi-site operations) and remote offices, organizations can quickly scale their IT and customer service resources up and back down as needed to handle situations such as a new product launch or limited-time special offer.

“Virtual computing is the flexible platform needed to support and drive this brave new business world.”

IDG

³ “How IT Is Driving Business Innovation with Private Clouds,” Microsoft, CIO Custom Solutions Group, 2010.

⁴ “Blueprint for the New IT,” IDG Enterprise Custom Solutions Group, 2011.

Along with infrastructure agility, scalability via the cloud can be an effective cost control mechanism for IT leaders, as can the pay-as-you-go pricing structures of innovative solutions such as software as a service (SaaS), communications as a service (CaaS) and other hosted services that allow IT managers to offload voice and data functionality.

Innovation scenario: Virtualization with Communications as a Service (CaaS)

A west coast bank recognized for its entrepreneurial approach and distinctive banking solutions — as well as for its innovative use of technology to deliver those solutions — maintains more than 180 office and branch locations in four states. Two contact centers in different states are central to the bank’s operations for customer service, business development, and launching new banking products and services.

Business drivers

- Failing multi-point, multi-vendor infrastructure, largely unsupported
- Growing need to consolidate call and business processes for customers and internal operations
- Objective to free up IT resources to focus on consolidating infrastructure organization-wide by eliminating 30% of support calls

Infrastructure solution

- Cloud-based CaaS contact center services integrated with existing on-premise enterprise voice infrastructure
 - CaaS services deployed to both contact center locations via virtual single platform
 - Ability to shrink or grow deployment on-demand with CaaS licensing model: users, new features, new banking services (eServices, IVR)

Benefits unique to the bank

- Cloud-based consolidation of contact center infrastructure and multiple systems
 - Maintain all audio “locally” while offloading call control to CaaS solution
 - Banking regulation — improved compliance capability
 - Security — greater control over data and voice traffic, and customer information
- Positioned for growth
 - Empower contact center sites to “hold their own destiny” moving forward
 - Adaptability for potential future bank acquisitions (including acquired systems), adding agents, generating new banking services, etc.

Efficiency can always be better

Different businesses and IT managers view efficiency (and a lack of it) in different ways. At the voice and data infrastructure level, however, it’s generally agreed that the most efficient infrastructure is one that is fully standardized, simplified and automated, as opposed to those that rely on proprietary, complex and cumbersome IT systems⁵ To continually improve infrastructure efficiency — and business agility in particular — the link between efficiency and standards cannot be emphasized enough, in networks as well as in aspects of an infrastructure such as server counts, administration tools, systems processes, and so on.

To date, the most widely accepted and utilized industry standard for voice operations on an IP network is the Session Initiation Protocol (SIP). This protocol, along with multiprotocol label switching (MPLS), a mechanism used for converged data networks, has gained

⁵ “A Look Inside the Efficient Data Center,” Dell Tech Dossier, CIO Custom Solutions Group, 2010.

acceptance among IT leaders in the last few years by offering more robust and flexible network configurations. Beyond consolidating networks and simplifying network management with solutions like SIP and MPLS, IT can further simplify the infrastructure by consolidating applications, physical servers and even processes. In contact centers and more recently in the enterprise, voice and data applications are continually being consolidated into integrated and easily managed all-in-one suites that significantly reduce physical server volumes. Consider the cloud and virtualization, and server counts can be reduced even more. Dell, for instance in its Data Center Technical Dossier, goes so far as to advocate that enterprises stop deploying physical servers wherever possible, and consider virtualization to consolidate the number of servers they manage — a reduction rate that can reach as high 20-to-1. Once an organization has standardized and simplified its infrastructure, automation becomes a natural follow-on to manage the variability of IT workloads, including the transition of management tasks from IT to individual business units, as one large regional bank accomplished after a string of acquisitions.

Use solutions such as SIP and MPLS to consolidate networks and further simplify the infrastructure.

Efficiency scenario: Smaller footprint, broader reach to business units

The largest regional U.S. bank in their area with banking and mortgage lending services for consumers as well as small and large businesses. Through several acquisitions, the institution is recognized as one of the largest among US banks and thrifts. To serve its customers, the bank maintains retail branches throughout their region, plus a contact center operation consisting of 6 sites and 1,000 agents.

Business drivers

- Communications system to handle dynamic business changes
- Ease of deployment and operation, contact centers and multiple business units
- Push administration from IT to the business — not possible on previous platforms

Infrastructure solution

- Integrated infrastructure for enterprise IP telephony and contact center operations (two core vendors)
 - Contact center platform/application suite integrated with enterprise voice platform using all remote stations
 - Phones registered on voice platform, persistent connection
- Local carrier as current SIP interface, moving to direct SIP trunking; planned integration with SIP-based corporate IVRs

Benefits unique to the bank

- Smaller infrastructure footprint
 - In contact center, 64 servers from previous vendors reduced to 10 servers; maintenance = \$100k savings annually
- Ease of system/process management
 - Example: contact center call routing routine = 4 steps; previous solution = 18 steps
 - Much faster deployment of new banking products and services
- Multiple business units run independently
 - IT maintains contact center apps and services, “hands off” functionality to each BU
 - BUs manage skills, routing, reporting changes with no IT intervention

Consolidate in stages, with an eye on the “big picture”

We mentioned earlier that consolidating voice and data infrastructures is not a new practice. If anything, standards such as SIP and the new breed of integrated application suites has made it easier and far more inviting to move from multiple vendor platforms to a single converged architecture, primarily in the contact center and particularly for multi-site contact center operations. As one IT manager summarized regarding his insurance company’s large-scale project for consolidating multi-vendor platforms as well as 27 contact center sites: “We completed the migration to our enterprise voice platform, and then decided to move to a single contact center system across all 27 centers to replace our separate ACD, IVR, quality monitoring and workforce management systems. We chose an all-in-one platform (for our contact center operations) because it was built as a single system and offered a more seamless, simplified environment.”⁶

In this insurance company’s case, the drivers for infrastructure consolidation were straightforward and fairly common: consolidate multiple systems, from multiple vendors, at multiple sites. What isn’t always so clear, however, is exactly how to plan and execute the consolidation from beginning to end. In most cases involving multi-system, multi-site infrastructures, a total rip and replace approach is unrealistic due to cost, system downtime, cutover support and a number of other such considerations. The more logical approach, and one that many IT chiefs have executed successfully, is to integrate/consolidate over time in a phased implementation. By taking incremental steps to consolidation, businesses and their IT teams can proceed one multi-point component at a time, or by transitioning a manageable number of components or applications at a time. By design, most all-in-one application suites allow a contact center (and in many cases the enterprise) to simply activate or “turn on” only those applications it needs, when needed, such as ACD, IVR, voice mail, etc. Hosted cloud-based services such as CaaS provide the same approach with their pay-as-you-go pricing models, in that an organization pays only for the apps and functionality it actually uses.

In particular to transform a data center in stages, Dell views consolidation as part of the bigger infrastructure picture. A first step, for instance, is to increase the level of virtualization throughout the data center, as well as in other operations such as contact centers and remote offices. Especially in today’s business/IT environment, virtualization is inevitable, and helps build the foundation for the next-generation data center. A next step is to consolidate — not just applications themselves, but also by moving away from having IT resources dedicated to specific applications. For standardization, data center infrastructures should standardize on more components such as SIP-supported networks, blade servers, and management protocols, so that the data center and organizational infrastructure as a whole supports more industry standards. As new technologies come out, standardization makes it easier to plug and play. At the decision-making level, organizations should create cross-function IT teams to more comprehensively share knowledge and eliminate silos. Or as Peter Jensen of Microsoft acknowledged, IT leaders and businesses alike “require a clear understanding of IT processes, business processes... and the transparency that must be in place to map these two sets of processes together.”

Consolidate apps to move away from having IT resources dedicated to specific applications.

Dell

⁶ Phone interview, February 14, 2011

Phased consolidation scenario: “Single system” for 27 contact center sites

Considered a “family of businesses,” a recognized global insurer provides disability, long term care, life and voluntary insurance products to more than 170,000 businesses in the U.S. and U.K., including nearly 40% of companies currently in the Fortune 500. The insurer itself is ranked in the top 250 on the Fortune 500 list. In serving 25 million people worldwide, the company maintains a contact center organization consisting of 27 sites and 1,100 agents throughout the U.S and U.K. Individual call and contact centers range in size from a few agents to hundreds, and incorporate a growing segment of remote work-at-home agents.

Business drivers

- Single system to replace current multi-vendor systems in 27 contact center sites
 - One solution to get business/IT “on the same page ” to meet multiple objectives
- Seamless, simplified environment
 - Applications, administration and IVR development, plus open integration with existing enterprise voice (IP telephony) platform and business systems

Solution chosen

- Phased transition — migration from legacy multi-vendor platforms to fully integrated (and more consolidated) dual-vendor “all-in-one” platform and application suite
 - Contact center application suite integrated with existing enterprise IP telephony platform using SIP trunking; all trunking into voice platform environment
 - Scheduled to replace legacy recording and WFM systems with like applications from new contact center suite

Benefits unique to the insurance company

- More contact center solution expertise and agility than “larger vendors”
 - Virtualization across many sites, work-at-home agents
 - Multichannel platform — move from call center to multichannel contact center
 - Enhanced web and IVR self-service, maintained in-house
 - Smaller footprint: 10 servers vs. 40-50 and 60-70 servers from other vendors

Read More

Download *A Practical Guide to Infrastructure Consolidation Considerations* from Interactive Intelligence. Go to www.inin.com/Interactive Resource Center/Practical Guides.

Take Action

Interactive Intelligence offers solutions well-suited for multi-system, multi-site infrastructure consolidation, virtualization support, and private cloud deployment with its standards-based all-in-one Customer Interaction Center™ (CIC) software platform. CIC provides a complete feature set for contact center automation, enterprise IP telephony, and business process automation, and is available both as an on-premise solution and as a cloud-based Communications as a Service (CaaS) offering. The CIC-based CaaS Contact Center service takes advantage of CIC’s SIP-architected platform for deployment model flexibility, services delivery and control using VoIP and an efficient MPLS network.

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