

Virtualization Still a Priority for SMBs Hesitant About the Public Cloud

Introduction

With greater demands on IT departments to meet growing data and application needs from increasingly mobile business users, infrastructure virtualization has taken on a whole new level of importance. Key to building an optimal business experience, virtualization can enable critical applications to draw from a shared pool of storage and compute resources as needed. If done correctly, it can also allow an enterprise to easily scale up to meet increasing demands. Virtualization is the technology most-often used to provide high availability for critical applications, allowing automatic failover to other virtual hosts in the event of a system failure. Although virtualization can bring many benefits, it can also present new challenges to an organization's IT infrastructure and operations. One of the other major movements in information technology today is cloud computing, essentially allowing end users to draw computing and storage resources out of publicly available infrastructure and services.

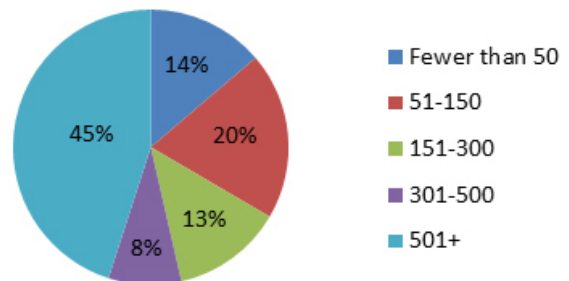
The following report is based on two online surveys completed in Q1 2013. The goal of the surveys was to gather data on the approaches that IT teams are using to virtualize their infrastructure, and how they may be looking at cloud computing as a part of their near-term plans.

Survey Methodology

This survey was sponsored by Scale Computing, a leading provider of hyperconvergence solutions for small to medium-sized organizations. ApplicationContinuity.org used an independent database of IT professionals employed at U.S.-based companies to identify survey participants. Participants were not individually compensated for survey participation, but were offered a copy of the final report and the chance to participate in a daily drawing to win an Apple iPad for the duration that the survey was open.

A total of 3,285 participants completed the web-based survey, representing a wide cross section of organization sizes (Figure 1) and industries. Of those companies responding, more than half had fewer than 500 employees. The top industry verticals represented were consulting and business services (16%); manufacturing and industrial (15%); education (12%); financial services (11%); healthcare (8%) and local government (6%).

**Figure 1: Company Size
(by headcount)**



Summary of Findings

- 90% of survey respondents prefer to keep their critical applications and data running on local infrastructure.
- Consolidating infrastructure and making more efficient use of server resources are the primary driving factors for virtualization.
- “Overall cost” and “Level of complexity to deploy or maintain” are the primary concerns when choosing to virtualize.
- Security continues to be the key concern among IT professionals when it comes to how and where their company’s data and infrastructure is managed.

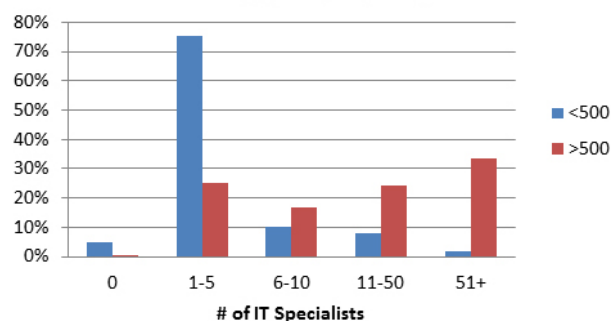
Survey Results

Doing more with less: As would be expected, smaller companies (<500 employees) have far fewer IT specialists on staff than larger companies, with the vast majority of small companies having less than five IT specialists supporting the business (Figure 2). Unexpected, though, was the finding that of larger companies (>500 employees) surveyed, 25% also have less than five IT specialists. Both small companies and some of the large companies have learned to do more with less, and their tendency to run lean organizations is supported by having efficient IT management principals and processes in place that effectively support the IT needs of their businesses.

“[We are] not set for high availability or redundancy. Too many single points of failure.”

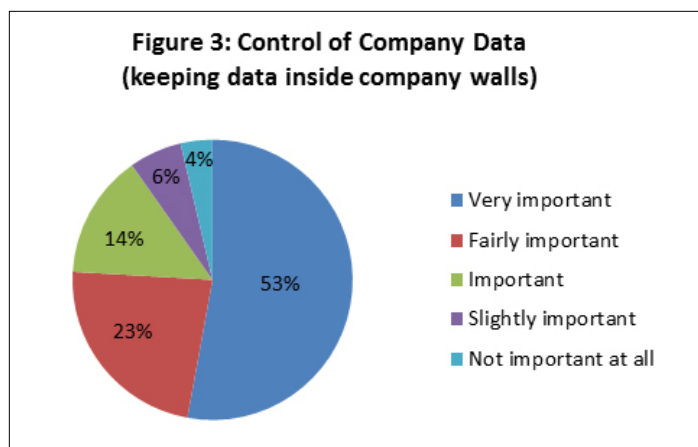
– IT Senior Director for a middle market electronics manufacturer

Figure 2: Number of IT Specialists (by company size)



Life in the cloud, or not – cloud computing is billed as good for business: quicker application deployments, greater flexibility and scalability, lower infrastructure and staffing costs, fewer servers to maintain and fewer staff needed to maintain it. And yet, 90% of survey participants indicated that it is ‘important or very important’ to keep control of their own data within their company’s infrastructure instead of entrusting it to a cloud provider.

More telling about the lingering reluctance to move to a cloud architecture: the applications that participants deemed as core to ‘running’ their business are the least likely to be considered for cloud migration. A staggering 90% of survey respondents (Figure 3) feel the need to keep their mission-critical applications and data running on a local infrastructure.



Most Likely Applications for On-Premise

1. Product Lifecycle Management (PLM)
2. Manufacturing Solutions
3. Business Process Management
4. Data Management
5. Compliance and Risk Management

On the other end of the spectrum, mature applications, such as the customer relationship management and marketing automation systems, are the ones most likely to already exist in the cloud, or be considered for migration to the cloud.

Most Likely Applications for the Cloud

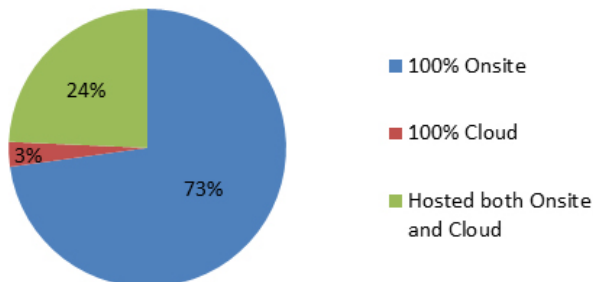
1. eLearning
2. eCommerce
3. Human Resource Management (HRM)
4. Marketing Systems
5. Customer Relationship Management (CRM)

When asked how much of their computing infrastructure was virtualized in a high availability environment, large companies with more than 500 employees were far more likely to indicate they had at least 25% of their infrastructure virtualized (74% vs. 57%). For the smallest companies with less than 50 employees, only 45% had already virtualized more than 25% of their infrastructure. This gap can be partially explained by some of the direct responses of survey participants who perceive that implementing a virtualized infrastructure will be costly and complex. This may have been true in the past; but increasingly, infrastructure virtualization solutions are entering the market at more advantageous price points that are also much less complex to implement and manage. This shift is having a very disruptive impact on how companies, especially smaller ones, are analyzing whether giving up control to the “cloud” for lower cost is the right decision or not.

“The cloud is inherently untrustworthy, and up-time is already beginning to be seen as a weakness.”

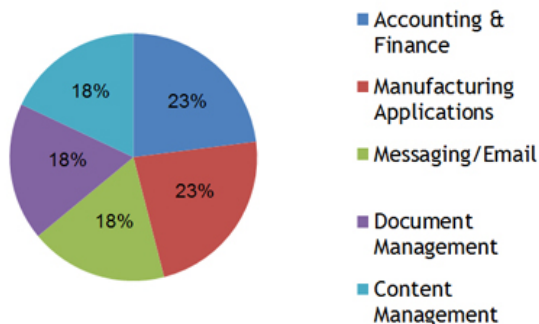
– CEO of a small consulting company

Figure 4: Virtualized Infrastructure Locations



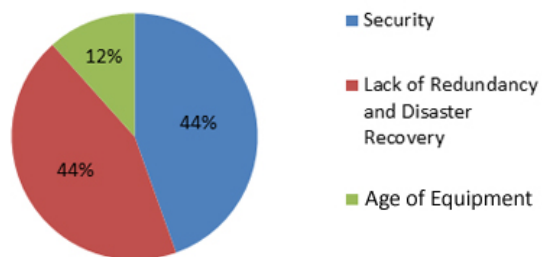
Finally, when looking at where companies are locating their virtualized infrastructures, only 3% of respondents indicated that their infrastructures are 100% in the cloud (Figure 4). Although an additional 24% of companies have some part of their virtualized infrastructure in the cloud, this is typically only for bursting, test and development, and lower risk applications. Core business applications, as already discussed, are typically managed onsite on infrastructure that is controlled by the company’s IT professionals (Figure 5). These onsite infrastructures often provide a more advantageous price point versus a dedicated and often prepaid infrastructure in a cloud environment.

Figure 5: Mission Critical Applications On-Premise



Security, security, security: Across the board, security was listed as the number one concern among all participants when asked about their company networks, followed by a lack of redundancy (Figure 6). Smaller companies, with <500 employees, had a variety of responses: in their case, redundancy and disaster recovery ranks equally with security as their top concerns. Companies are striving to maintain a high availability of critical business applications and be able to quickly recover from any network or application failures. For companies with more than 500 employees, bandwidth was the third most-often mentioned concern.

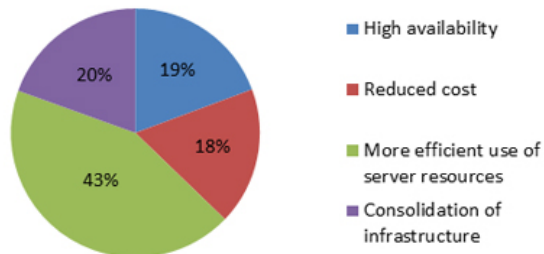
Figure 6: Top Concerns About Network



“Availability is my number one priority so I’m also listing it as my biggest concern”

– EVP, Centralized Operations and Information Technology at a Regional Bank

Figure 7: Primary Reasons for Virtualization



It's virtually certain this will work: The companies surveyed understand that increased efficiency, reduced costs and lower administrative needs are all benefits to be gained by virtualizing their infrastructure (Figure 7). For small companies, with <500 employees, consolidating infrastructure and making more efficient use of their server resources are the primary driving factors to virtualization. Larger organizations have a similar view on consolidating infrastructure, but see reducing overall costs as more of a concern than efficiently using server resources.

When asked which factors are the most important when evaluating high availability virtualization solutions, participants cited overall cost and the level of complexity to deploy or maintain a virtualized infrastructure as the two most important considerations. The length of time required to deploy an infrastructure, and the specialized knowledge or skills needed to manage a virtualized infrastructure, followed closely behind.

By far, the least important decision making factor when evaluating high availability virtualization solutions is the brand name of the company providing the virtualization solution. Despite the number of large mature companies selling virtualization solutions in the marketplace today, an equal number of new-market entrants exist that provide often more dynamic and cost effective options.

Most Important	Overall cost
Very Important	Level of complexity to deploy or maintain
Important	Special knowledge required to deploy or maintain
Somewhat Important	Length of time required to deploy
Least Important	Brand name

Hyperconverged solutions, for example, integrate storage, servers and virtualization into a single package. These range from companies providing proprietary systems and software solutions, through to those who deliver systems based on open source stacks.

About ApplicationContinuity.org

ApplicationContinuity.org exists as a virtual community that seeks to bring together information, ideas and opinions from interested persons and organizations. ApplicationContinuity.org publishes information on application survivability and reliability, with a primary focus on messaging and email continuity, telecommunications and network continuity along with information on strategies to ensure that critical applications operate on an acceptable level of performance.

For Scale Computing

Scale Computing develops hyperconverged solutions for small to medium-sized organizations based on its patented ICOS [Intelligent Clustered Operating System] technology. Since launching its initial scale-out storage solution in 2009, Scale has grown to over 1,100 deployments. Scale is currently expanding its footprint throughout the datacenter with what analysts are calling the industry's first hyperconverged architecture, HC3. Scale's HC3 seamlessly integrates storage, servers and virtualization into a scalable, turnkey infrastructure that's as easy to manage as a single server. Designed specifically for IT generalists, HC3 is ideal for those who have not yet adopted virtualization due to cost and complexity, enabling them to run highly available applications. For additional info, visit www.scalecomputing.com.

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