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SaaS Data Loss: The Problem You Didn't Know You Had

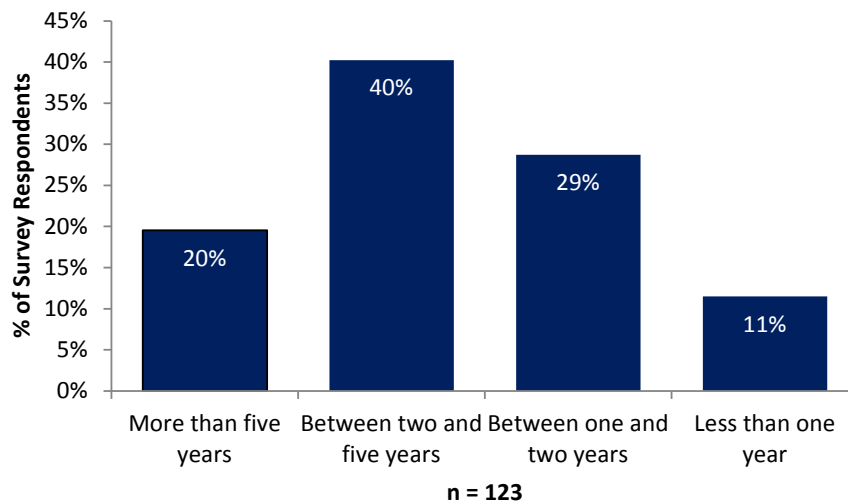
In January 2013, Aberdeen surveyed 123 organizations to learn how they use the Public Cloud as part of their IT infrastructure. This Analyst Insight will focus on Software-as-a-Service (SaaS) as a platform for enterprise applications and the surprisingly high percentage of survey respondents that reported losing data from their SaaS applications. This report is a warning to all that have mission critical data in Public Cloud SaaS deployments — you may not be as well protected as you believe.

This report uses the term Public Cloud to mean services offered by a third-party provider. This is to ensure no confusion with the concept of Private Cloud, which uses cloud tools and procedures in the private datacenter of an organization. They are very different forms of computing deployments and the full terms are used to avoid any confusion.

The Public Cloud — No Longer a Bleeding Edge Service

The Public Cloud and companies that provide remote hosting solutions have been around for over a decade. However, it is only recently that server virtualization and wide-area network performance have made outsourcing to a Public Cloud widely practical and affordable. Aberdeen asked survey respondents to tell how long they have used the Public Cloud as part of their IT infrastructure.

Figure 1: Public Cloud Experience



Source: Aberdeen Group January 2013

Analyst Insight

Aberdeen's Insights provide the analyst perspective of the research as drawn from an aggregated view of the research surveys, interviews, and data analysis.

Definitions

For the purposes of this report, the following definitions apply:

- ✓ **Private Cloud** describes a computing environment where the servers remain in a local data center but the users manage their own environments and costs.
- ✓ **Public Cloud** is a computing environment managed by a third-party provider who rents computing resources to their customers.
- ✓ **SaaS** means Software-as-a-Service and describes an application hosted in the cloud for which users pay a monthly or annual fee.
- ✓ **PaaS / IaaS** describes Platform-as-a-Service and IaaS (Infrastructure-as-a-Service) where companies own and manage their software and just rent the servers and storage that support them from a third-party.

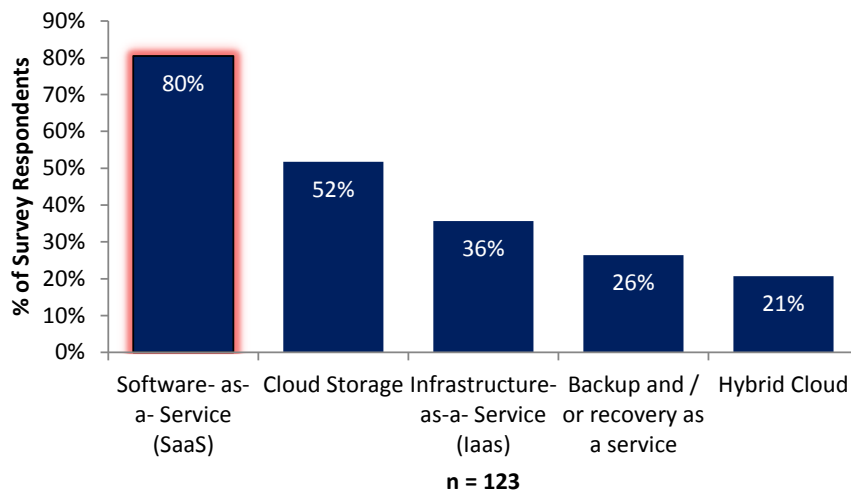
Figure 1 is not a measure of the overall consumption of Public Cloud by enterprises. The chart only reports the usage of those who have deployed some of or their entire IT infrastructure in the Public Cloud. For those who have active Public Cloud initiatives, 60% have been doing it for at least two years. In the world of IT, two years is long enough to find and resolve serious performance issues. Public Cloud computing is now viewed as being “main stream.”

“Pick a solid Cloud provider.”
~ CEO, Small Telecomm
Equipment Manufacturer,
United States

Public Cloud Services

Almost every IT function can be outsourced to a third-party provider and purchased on an “as-a-Service” basis. As part of the survey, Aberdeen asked respondents to report the types of Cloud services they use to support their computing infrastructure. The percentages in Figure 2 will add up to greater than 100% as respondents were allowed to identify all services they currently have deployed in the Public Cloud.

Figure 2: Utilization of Public Cloud Services



Source: Aberdeen Group January 2013

Software-as-a-Service is the most common form of Public Cloud used. Eighty percent (80%) of survey respondents reported some form of SaaS application in their organization. The reasons are easy to understand: a SaaS application requires no long-term software license, the time to deployment is very fast, and in many cases, end-user organizations can bypass IT as no corporate computing resources are required to use a SaaS services other than access to the Internet.

For reports on the other forms of Public Cloud deployments see [Disaster Recovery as-a-Service: It Delivers](#) (April 2012), [Cloud Storage Gateways – Large Enterprises are Learning what SMBs Already Know](#) (August 2012), or [Hybrid Cloud Storage: Getting the Best of Two Worlds](#) (July 2012).

“Watch out for all the costs, loss of application customization, and latency.”

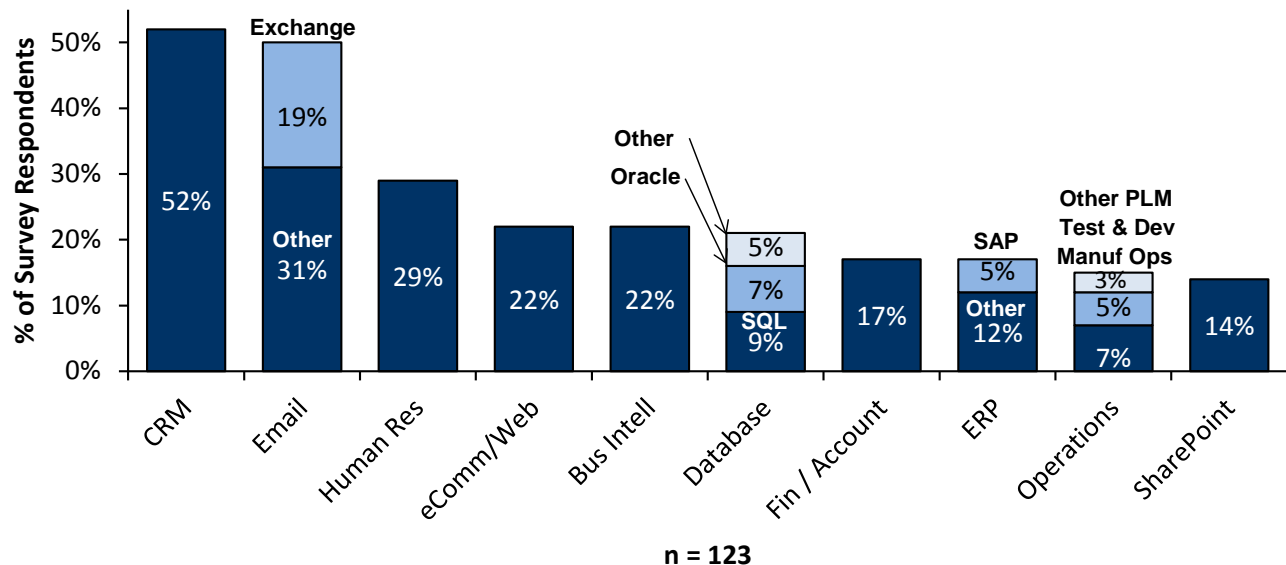
~ IT Manager, Mid-sized
Industrial Equipment
Manufacturer, United States

Cloud SaaS Offerings

Most software vendors now offer a SaaS deployment of their application. Users are likely familiar with Salesforce.com, Google Apps, and Microsoft Office 365 as the most widely used of these, however there are now SaaS offerings for almost every aspect of business management. The technology can be used for departmental apps (such as customer relationship management (CRM), product lifecycle management (PLM), and business intelligence (BI) or by function (email, database, and ecommerce).

Using the SaaS form of an application is becoming popular. In Figure 3, survey respondents reported what types of SaaS applications they used in their organizations.

Figure 3: Utilized SaaS Applications



Source: Aberdeen Group January 2013

The usage rates varied dramatically, with the CRM arena dominating the field (not surprising as this is the home of the popular Salesforce.com). Microsoft's CRM application is also in this category. The 52% utilization rate includes CRM used to manage sales and also service functions such as help desk and customer repair.

Email is the second most popular SaaS deployment with Exchange mail accounting for about 38% of the total. Even with Finance and Accounting, the source of some of the most private data a company manages, 17% of survey respondents reported trusting their data in a SaaS deployment.

Aberdeen will continue to monitor the usage of Public Cloud SaaS applications and expects to see the utilization rates much higher in the

coming years, as the ease of use and financial benefits of this form of computing become widely understood.

SaaS Data Protection

With the growing popularity of SaaS application usage, there is one issue that is not widely publicized — data loss. SaaS providers are quick to point out that their data is professionally backed up with the application spread over several geographically dispersed datacenters. Salesforce.com reports on its website that it performs both disk-to-disk as well as disk-to-tape backup for redundant recovery capability. This ensures that the common causes of application downtime are covered, including loss of power, natural disasters, and application failures. Most SaaS users believe their data is protected, and for these types of data loss, they are correct.

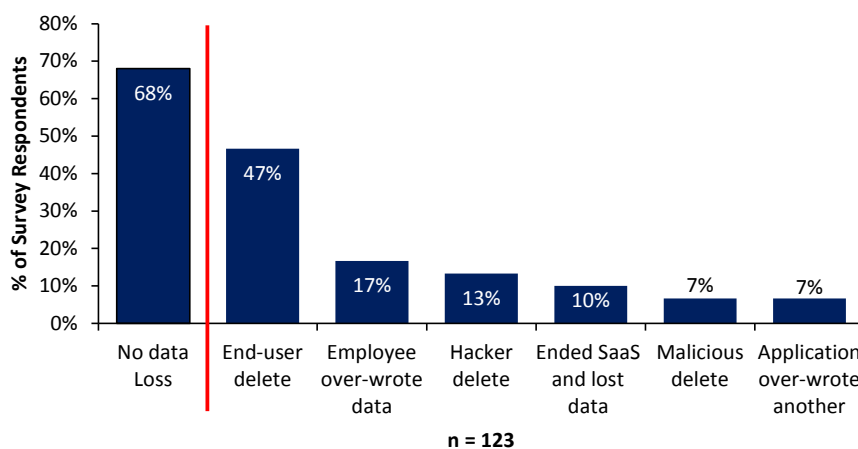
However, once an individual data element in a SaaS application gets changed and the application closed, there is little to no ability to recall the old data. If a particular data field is over-written by an end-user, co-user, or contributing application, the original data is either lost entirely or becomes difficult and expensive to recover. Some SaaS providers do offer services to recover over-written or deleted data, but those services can take several weeks before the data is produced and be very expensive.

While 68% of SaaS-users reported that they have never lost any of their data from an application, a full third (32%) reported that they had. Figure 4 shows the causes of the data loss. This portion of the chart will not total to 100% as those that lost data were allowed to report multiple causes.

“The cost-benefit of outsourcing services not critical to a given business' core product initiative is pure value-add.”

~ CEO, Small Travel Services Firm, United States

Figure 4: Reasons for SaaS Data Loss



Source: Aberdeen Group January 2013

The most common reason for SaaS data loss is end user deletion. This is easy to do; SaaS providers may provide multiple warnings about making sure

the data changes are desired before the application is closed, but end users will still make mistakes.

The second most common cause of data loss is where one employee overwrites a data element shared by others. The original employee may open the SaaS application to see that the data they entered and saved properly has been over-written by a later user.

The Solution

There are services in the market that will proactively backup the data in a SaaS solution and store those files for later access. These files can be stored on their site or at yours depending on your requirements. Some industries require third-party backup protection for compliance purposes so using these sorts of services meets that legal requirement.

As the popularity of SaaS grows and larger enterprises adopt more SaaS solutions, we expect them to demand the same level of control and data protection for their SaaS deployments as they have for their on-premise applications. For mission critical applications, each and every data element needs complete protection. Whatever the solution, SaaS users must ensure that their critical business information is protected from both macro- and micro-disaster events.

Summary: Protect Against all Forms of Disaster

SaaS deployments of business applications are the most popular form of the Public Cloud and offerings run the entire length and width of business management. However, one third of SaaS users have reported losing data from a SaaS application.

As SaaS usage increases, companies will post more and more critical business information in the Public Cloud. It is the responsibility of the end user to ensure that their data is fully protected. This means all data, including that which is inadvertently or maliciously deleted from the current SaaS record. Ensure the SaaS provider offers this form of service for quick data restoration or contract with a Cloud SaaS backup provider so you can quickly recover lost critical data elements.

Survey Respondents

Individuals answering this survey came from diverse geographies, industries, and corporate roles:

Industries:

- √ IT Services – 39%
- √ Software - 16%
- √ Telecomm - 12%
- √ Manufacturing – 8%
- √ Education – 7%
- √ Healthcare/Pharm – 6%
- √ Government – 5%
- √ Others – 7%

Roles:

- √ C-Level – 38%
- √ VP/Director/Mgr – 43%
- √ Others – 19%

Geography:

- √ North America: – 57%
- √ EMEA – 30%
- √ Rest of World – 13%

Size of Enterprise:

- √ Small (less than 100 employees) – 48%
- √ Mid-sized – 28%
- √ Large (more than 1000 employees) – 24%

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Related Research	
<u>Extend your Server Virtualization Program to enable Private Cloud</u> ; May 2012	<u>The Case for Virtualizing your SAP Deployment</u> ; December 2011
<u>EMEA SMEs are leading their North American Cousins in Server Virtualization</u> ; March 2012	<u>The Role of Fault-Tolerant Servers in Protecting Virtualized Applications</u> ; October 2012
<u>The State of Server Virtualization in Small and Mid-Sized Organizations</u> ; January 2012	<u>Four Steps to Proactive Datacenter Management</u> ; November 2012
<u>Measuring the Returns from a Desktop Virtualization Program</u> ; September 2011	<u>Hybrid Cloud Storage: Getting the Best of Two Worlds</u> ; August 2012
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