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DATA MANAGEMENT TAKES FLIGHT

By 2015, financial institutions' spending on cloud computing will have exceeded **$27 billion**[1]. But what is cloud computing and how can credit unions begin to use it to their benefit today?

" *Not only are we building solutions for Redstone, we are selling our applications to other financial institutions,*" said Harry Gunsallus, SVP of Technology at Redstone Federal Credit Union in a release.

CLOUD ADVANTAGES

- Pay by usage cost structure[6]
- Operational saving of 30% of more[1]
- The ability to store data on demand for a specific amount of time or indefinitely [6]
- Remote access for global business continuity [1]
- Access to advanced services without heavy infrastructure investment[6]

DON'T JUST SAVE MONEY, MAKE IT

Financial institutions are utilizing advanced cloud models to build **new applications** and market their **strongest programs** for **revenue generation**[2, 6]. What cooperative potential could this yield for individual credit unions, leagues, and CUSOs to turn employee talent into income?

"Small and medium businesses are insane not to leverage the advantages of cloud computing. It ends up being almost in all cases a security upgrade because they can't otherwise afford the practices." - Jim Reavis of Cloud Security Alliance[7].

ARE YOU ON YOUR GAME?

20%

Most financial institutions utilize only **20%** of their computational resource capacity[2], undermining their potential and overbuilding data center space.

At an average of $600-10,000 per square foot plus maintenance costs, that's elbow room few can afford[4].

START WITH VIRTUALIZATION

The creation of Virtual Machines (VMs) allows credit unions to **increase computational capacity** and **better manage data resources** by running multiple virtualized versions of hardware or operating systems[2,3] through each physical server.

READY FOR TAKEOFF?

The cloud model goes beyond virtualization to move hardware, operational tasks and IT burdens associated with networks, servers, data storage and applications off the institutions' plate. These shared resources are stored and managed on **remote servers (the cloud)** and **accessed on demand** through online channels[6].

MIX AND MATCH

There are multiple types of cloud computing services and models for deployment. The best option depends on the organization's size, its admin abilities, the types of data it's looking to store and its capacity for developing technology[2].

CLOUD SERVICES

SaaS (Software as a Service)

These are third party cloud applications that provide some function like email or Customer Relationship Management. They are accessed online through a subscription with no installation and no to low administrative customization[2,6].

IaaS (Infrastructure as a Service)

IaaS provides on demand VMs to put existing operating systems, software and apps on the cloud, but capability to make changes to the cloud's structure or networking components are limited[2,6].

PaaS (Platform as a Service)

PaaS lets developers both create and provide new apps that the platform runs without the need for interactions with VMs. Programs are written and designed for the cloud, eliminating many admin skill and infrastructure requirements[2,6].

DEPLOYMENT MODELS

Public

Off site clouds hosted online by a service provider and utilized by multiple end users[2,6].

Private

Clouds built for one organization with data stored at the company's physical location or under the dome of the company's firewall[2,6].

Hybrid

A combination of public and private clouds that keeps sensitive data protected and under the control of the institution, and puts less sensitive data on public clouds for cost savings[2,6].

DON'T FEAR THE CLOUD

49% of customer security breaches in 2010 came from inside the organization (lost laptops, employee negligence, etc). Many times, less people have access to the cloud than would have access to data using conventional storage[9,2].

KEEP YOUR CODE IN CODE

Some cloud providers don't allow internal audits, so utilize external auditing resources to make sure your needs are met[5]. Pockets of data make tempting targets so consider what other clients are on public clouds and their security standards as well as your own[9]. **PCI compliance** or other **security measures** are the **most important factor** in deciding how much data to host in the cloud and where [2,5].

SOURCE: (1) "SaaS Cloud Computing: A Fast Track to Modernization For Banks." CGI.com. http://www.cgi.com/sites/cgi.com/files/white-papers/saas-cloud-computing.pdf (2) Franch, Robert, vice president of collaboration solutions at AON Corporation and Gray, Marley industry technology strategist at Microsoft. "Retail Banking in the Cloud for Cost Effectiveness and Greater Collaboration." 2011 BAI Conference, Chicago, Illinois. (3) "Managing the Real Cost of On-Demand Enterprise Cloud Services with Chargeback Models." Cisco Systems ; Inc. http://www.cisco.com/en/US/services/ps2961/ps10364/ps10370/ps11104/Cloud_Services_Chargeback_Models_White_Paper.pdf (4) Golden, Bernard. "McKinney Cloud Computing Report Conclusions Don't Add Up." CIO.com. 4.27.09 http://www.cio.com/article/490770/McKinsey_Cloud_Computing_Report_Conclusions_Don_t_Add_Up (5) Wang, Chenxi . "Forrester: A Close Look at Cloud Computing Security Issues." csoonline.com. 7.1.09 http://www.csoonline.com/article/496388/forrester-a-close-look-at-cloud-computing-security-issues (6) "Cloud Computing: Building a Framework for Successful Transition." GTSI. http://www.gtsi.com/cms/documents/White-Papers/Cloud-Computing.pdf (7) Bussey, John. "Seeking Safety in Clouds." Wall Street Journal . 9.16.11 http://online.wsj.com/article/SB10001424053111904060604576572930344327162.html (8) "Redstone Federal Credit Union Finds New Revenue Stream in DNApp Sales to Banks & Credit Unions." Open Solutions Inc. http://www.opensolutions.com/about-us/in-the-news/11-10-11/Redstone_Federal_Credit_Union_Finds_New_Revenue_Stream_in_DNApp_Sales_to_Banks_Credit_Unions.aspx (9) Press Release: 2010 Data Breach Report From Verizon Business. U.S. Secret Service Offers New Cybercrime Insights http://newscenter.verizon.com/press-releases/verizon/2010/2010-data-breach-report-from.html