Herding Cats:
The Retreat to Centralized Computing

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It's happening again! History always has a funny way of repeating itself. I'm not talking about hip huggers being rebranded as "low-rise jeans," or the recurrence of bell bottoms (oh please tell me that the pastel t-shirt and white sport coat with the sleeves pushed up is coming back soon), but taking computing full circle.

Computing resources were precious and expensive when they began to integrate themselves into the lives of universities and some forward thinking companies. Computers filled rooms that were less powerful than the laptop on which I am writing this column. Terminals on desks were simply "dumb" interfaces to these powerful (at the time) machines, and the home computer didn't even exist. Who had the money? And what would you do with it?

As time progressed, and Moore's Law was repeatedly demonstrated, computers got smaller, cheaper, and more powerful. In our information economy, it's rare to find a skilled worker in her office without a computer. The trend is pushing more toward mobile computing and away from desktop devices, and data leakage is a serious problem.

Large companies are now looking at the IT resources they have amassed and realizing that there are significant sums of money tied up in idle resources consuming power, cooling, management, and bandwidth. Couple that with the push for mobility in the workforce and the ubiquity of computing devices, and we are now seeing a trend emerge that pushes companies and users to centralize their data and resources.

In comes cloud computing, the new "solution" to all of our problems, and ironically very similar to how computing used to be done in the good old days. Cloud computing means different things to different people, but for the purposes of this column let's define it as an on-demand pool of computing resources that can be made globally accessible.

From a server perspective, its shows IT shops how to dramatically reduce provision time, power and cooling requirements, and a potential to increase security virtually through advanced infrastructure concepts like VMware, EMC, and Cisco's recent partnership Acadia promises to deliver through the Vblock solution. It's also a way to allocate costs more closely in line on a per transaction basis, thus paving the way for true utility computing. Pay for resources only when you use them, more in peak periods, and pay only what it costs to directly process the data you are targeting.

From a desktop perspective, it promises companies centralized control over their data and systems by providing gateways to these systems through virtual desktops. Imagine as a worker being given $2,000 to procure a laptop and accessories of your choosing, and then provisioned a virtual desktop to house software, email, and intellectual property. Properly configured, the data may actually never leave the cloud, and a stolen laptop is just that--a stolen laptop. Not a lawsuit waiting to happen.

From a business continuity and disaster recovery perspective, the cloud provides inexpensive, on-demand resources that you really can't find anywhere else. Imagine a massive power outage like we saw in 2003 in the northeast hitting again, and data centers are quickly able to transfer processing to the cloud, thus ensuring that the business continues to operate even if the generators run out of fuel. All this at a fraction of the cost of having a hot site ready to go in case of emergency.

Regardless of the angle you take, it represents a move back to centralized computing. Applications and data can now live deep in the core of a network as opposed to on hundreds or thousands of desktops and laptops throughout the world.

So when do you take cloud computing seriously? Today, I hope. There is much to gain from using cloud computing as part of your service delivery strategy, provided that you use the right version of it in the right situation. Remember, if cloud computing is a square peg, don't try to jam it into a round hole. IT managers have to understand the costs associated with an investment, and more importantly the break even point at which you recover your investment. Security professionals need to work closely with IT managers to ensure that costs associated with securing this infrastructure are properly accounted for, and the appropriate controls are implemented based on the risk associated with the systems.

About the Author:

Branden R. Williams, CISSP, CISM, CPISA/M, has been making a name for himself in the Information Technology and Security arena since 1994, as a high school Junior. Now, a graduate of University of Texas, Arlington earning his BBA in 2000 with a concentration in Marketing and the University of Dallas, where he earned an MBA in Supply Chain Management & Market Logistics, in 2004, Williams is sought after as both an Adjunct Professor and Information Technology & Security Strategy Leader in the corporate world.

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