A time when companies are looking for ways to cut costs, cloud computing looks like an attractive alternative, one which you would think most cash-strapped IT departments would take a long look at. But a recent survey of mostly IT professionals conducted by Novell finds a strong mistrust for cloud computing in the workplace, while at the same time, a surprisingly wide acceptance for personal use.

> Survey Background

The survey was conducted using members of Novell's Cool Solutions Community from July to September, 2009. 453 people responded, of which 81 percent identified themselves as IT professionals. The respondents were from a variety of geographic locations including the US, India, China, Australia, Canada, South Africa and western Europe. The company sizes varied from 25 or less to more than 5000, with 44.6 percent working for companies with more than 1000 employees. Size is worth noting because cloud computing does offer an attractive option for SMBs, which are less likely to be able to afford to set up and maintain their own IT infrastructure.

The survey participants based their responses on the following definition:

Cloud computing is a general term for anything that involves delivering hosted services over the Internet. The cloud is a set of services and technologies that enable the delivery of computing services over the Internet in real-time, allowing end-users instant access to data and applications from any device with Internet access.

Figure 1: Top things people fear about using Cloud computing at home.
Survey Finds Mixed Feelings On Cloud Computing Among IT Pros by Ron Miller continued

It's useful to categorize cloud offerings as Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS), and Infrastructure-as-a-Service (IaaS). Many cloud services can be deployed in-house, referred to as "the private cloud."

Examples of SaaS include Google's Gmail and Google Docs, Salesforce.com CRM, and Zoho Office. Examples of IaaS include Amazon's EC2 and S3. Examples of PaaS include Saleforce's Force.com and Google's App Engine.

Rule of Thumb: If you don't need to install any software on your computer to use a program, it's probably a Cloud service.

> Cloud Service Usage at Home
When asked how many cloud services they used at home, a full one quarter said they didn't use any, while 64 percent said they used some, but mostly used software installed locally. Only 10 percent characterized themselves as frequent users of cloud services. 17 of 340 people who answered the question left comments and most of them were not cloud computing fans. As one respondent put it, "I use a lot of SaaS services, but often prefer the functionality and speed of a full (fat) client program." One South African respondent brought up the bandwidth issue, saying "NONE, cost and available bandwidth in South Africa by FAR not feasible for this."

When asked what cloud services they use at home, collaboration led the pack with 53.8 percent, followed by DNS at 46.9 percent and blogging at 41.8 percent. (Note: Email wasn't listed explicitly as one of the choices, but based on the written responses, it does appear to be folded into the collaboration choice.) The remainder used it for backup and storage (which is puzzling when you consider some of the responses about lack of trust we cover later on).

> Cost Effective and Convenient
It's impossible in this day and age not to at least look at cloud computing as an option. For CIOs, it offers the attractive option of only paying for what you use, or at the very least, paying a flat monthly fee.

![What are the top three things you like about Cloud services?](image)

Figure 2: Top things people like about Cloud computing at home.
Survey Finds Mixed Feelings On Cloud Computing Among IT Pros by Ron Miller continued

Alan Pelz-Sharpe from CMS Watch speaking at a session called Weathering the Storm: The Future Impact of Cloud Computing on Records Management at the ARMA 09 Conference in October, said it's like buying electricity. "I use this much, I pay for this much." Pelz-Sharpe added that he has clients with mountains of what he calls "shelfware" -- licenses they bought, but never used. "If I'm an IT director being pushed on my budget, I don't need hardware. I just manage my partnerships and agreements [with the cloud vendors] and they will worry for me."

And the data in the survey seemed to bear this out. When asked to list the top five factors they liked about using cloud services in their business, controlling data center and application costs rated high in the overall ratings. But convenience was a big factor too, with high availability scoring the highest top choice with 33.3 percent, followed by ease of use for remote users with 33.1 percent choosing it as their top choice.

Surprisingly, the Easier/Cheaper to Manage category scored zero across all five choice categories. (See Figure 3.)

One respondent summed up the cost issues, writing, "Just to keep cost down, now more than ever, Companies are going under everyday!" While another pointed out how using a cloud vendor meant a lot fewer worries. "Basically, the virtualization aspect of the Cloud. Not having to worry whether our servers in the data center can scale, get out of warranty, need to be mirrored for availability, who's going to pick the right high-availability technology and make it work for us, and so on." But not everyone was convinced this is the way to go, with one respondent bluntly saying it was selling out customers to save money. "People who don't understand the risks think they'll save money. Some companies, to pad their own bottom lines, will move to SaaS, not giving a damn about the viability of the businesses of their customers," which brings us to some of the issues with cloud computing.

> Data and Privacy Issues
Most IT professionals are going to be reluctant to send data outside the firewall where they can't control it. There are many issues to deal with around data privacy.
Survey Finds Mixed Feelings On Cloud Computing Among IT Pros by Ron Miller continued

and being able to get at that data should a company face some sort of legal or regulatory request. IT pros worry about data leaks, loss, and retrieval, and some of these fears were brought into the white hot spotlight recently when Microsoft lost Sidekick owners' data during what should have been a routine maintenance operation. Meanwhile, Apple had a problem with the Snow Leopard operating system upgrade where it was randomly leaking the contents of some MobileMe users' address books. Losses and leaks of this sort are just what scare IT Pros, and the survey data supported this.

When asked to list the top 5 things they feared or mistrusted about cloud computing in the workplace, security came in on top, with 34.6 percent listing it as their top choice (for home use, privacy issues came in on top with 46.6 percent rating it as their top choice). The survey didn't ask specifically about data loss, although loss of control of data did score high with 23.2 percent and 28.3 percent rating them as their top two choices respectively. For others, it was less about security and more about bandwidth, and this was definitely a geographical issue with some countries having unreliable or costly internet access. Still others worried about internet outages bringing business to a standstill. (See Figure 4.)

As one writer put it, encompassing both data loss and outage concerns, “SaaS has already KILLED two of my clients, because of central programming errors that corrupted data, and business stopped because of DSL/Cable connection failures.” Another complained, “Lack of reliability of both SaaS vendor and every ISP/IAP in the business. A storm in a region can knock out Internet access, depriving EVERYONE from accessing business-critical data (and information about the storm).” It's worth noting, however, that a power outage in an internal company data center could have the same effect.

> Governance Issues

Another major issue for respondents was governance over the data. In fact, 30.8 percent listed governance, risk management and compliance as the top concern. At the ARMA 09 trade show in October, which is geared towards records managers, these concerns came up...
frequently. Record keepers aren't necessarily ready to embrace the cloud until the legal and regulatory concerns have been worked out. Jason Robman, who is director of legal solutions and corporate counsel at Recommind, said there simply aren't enough test cases out there to know how regulators and the courts will deal with issues around data stored in the cloud. For now, he isn't ready to trust cloud data storage, saying, "When you let [data] out of your house, you let it out of your control."

And several respondents agreed with him. One wrote, "The security implications are much much greater than most folks even care to think about. The legal implications are also an unspoken evil...recent ISP/email related court rulings have essentially made cloud storage a warrant-less dumpster diving fest for the federal and local police authorities."

> Future Plans

In spite of these concerns, there are projects being planned and tested. When asked about their plans for using cloud services, half weren't sure about their company's plans, but 31.2 said they were discussing the possibility of using the cloud and another 7 percent has some projects underway. Only 11.2 percent reported they were currently using cloud services. When asked to list some of the software they would consider using in the cloud for either personal or professional reasons, some of the answers seemed inconsistent with the responses to other questions. For instance, in spite of the security and privacy concerns raised in the survey, a full 88.3 percent of respondents would be willing to undertake personal tax preparation in the cloud and 70 percent would use accounting software for their company. For business, the most likely usage is for online collaboration with 91.4 percent followed by project management at 89.6 percent. (See Figure 5.)

![Graph showing cloud offerings for business and personal use](image-url)

**Figure 5:** Cloud offerings people would use at home, and at work.
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> Conclusions
There is still mistrust and even significant misconceptions about cloud computing among technology consumers today, and cloud vendors should not dismiss respondents' concerns and fears. There are legitimate questions that need to be addressed, especially around governance and compliance. As one respondent put it, there's an element of hype here and companies need to be careful of that. Yet it's clear that business is moving to the cloud, even when many of their IT staff don't trust it.

As one writer put it, "I see no very distinct difference between a "Cloud service" and applications that run without client software already. In that perspective it's more a hype than a technology evolution." He adds, "We already use them and every time need to consider things like security, privacy, trust and bottom line cost/risk/advantages." And that's what every company considering moving to the cloud needs to be thinking about, regardless of their size, location or business.

Securing the Cloud for your Customers
According to the survey, security issues are the top fear IT professionals have regarding cloud computing in a business setting. If you are a SaaS, PaaS or IaaS provider, you can put that fear to rest for your customers. With the help of Novell® Cloud Security Service, you can offer your customers total transaction security on-demand, with single sign-on capability and comprehensive reporting of user activity built in.

What Is Novell Cloud Security Service?
Novell Cloud Security Service is a Web-based identity and access management service that makes SaaS, PaaS and IaaS providers more secure for the enterprise. This service acts as a trusted identity broker between the enterprise and the cloud providers and is based on open standards—supporting translations between all the major standards in the market today.

Benefits
Comprehensive Audit Logs
Our solution eliminates audit logging concerns by tracking and reporting compliance events from the cloud back to the enterprise. With Novell Cloud Security Service, you can provide compliance reporting to your users, increasing your value to them enormously.

Control of Sensitive Information in the Cloud
Novell Cloud Security Service is the only solution in the market today that is firewall friendly and controls sensitive information in the cloud using an implementation approach called "annexation."

Just-in-Time User Provisioning
Having multiple SaaS applications increases IT maintenance time and costs. When a user is created or deleted in the enterprise, that access information is automatically reflected in all the applications. This means a lower cost of ownership for the enterprise, making your solution more attractive.

Ability to “Connect Once, Deploy Everywhere”
A whole variety of identity and access management systems are in use by your enterprise customers. Our solution takes care of the integration hassle as it supports numerous enterprise identity systems. Our out-of-the-box integrators will slash your deployment costs.

Use of Existing Enterprise Identity Infrastructure
Novell Cloud Security Service offers the most secure way of enabling your customer to use their existing identity stores to access cloud applications.

For more information visit www.novell.com/products/cloud-security-service/