

In Brief

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AS MORE ORGANIZATIONS ADOPT THE CLOUD, NEW ISSUES WILL CONTINUE TO EMERGE.

Each issue, *IEEE Cloud Computing* news briefs looks at recent happenings and trends in the cloud world.

Support Grows for New Software Approach that Could Boost Cloud Computing

Major technology companies such as Amazon and Google are supporting Docker (www.docker.com), a new open source platform that could make it easier to run applications on multiple machines.

Developers use Docker to place applications in software containers, which users can download across the Internet or on any private network and use on any Linux machine or cloud platform.

This would be huge benefit for cloud computing, which is often used to make applications that are kept online available to all types of computing devices. In fact, proponents note, this is one of cloud computing's purposes.

They add that Docker will make developers' lives much easier by letting them focus on designing programs

without worrying about the machine or platform on which they'll run.

Containers aren't new, but Docker claims its technology makes packaging applications and moving them among various types of machines easier.

The system consists of the Docker engine, a lightweight runtime and packaging tool; and the Docker hub, a cloud service for sharing applications and handling workflows.

According to Docker, about 14,000 applications are now using its containers. eBay is using the system to test new software in its datacenters. And Google, which is trying to challenge Amazon's dominance in the cloud computing market, is also working with Docker.

The technology isn't without its concerns. For example, machines must download software enabling them to use the containers. The software is supposed to run the same way on all Linux versions, but this isn't always the case. Some containers therefore might not run on all operating systems. Docker and its supporters say they are working on this.

In addition, some cloud service providers are working on their own proprie-

tary application-portability technologies and thus might not adopt or might even oppose Docker.

Service Offers New Approach to Cloud Security

A vendor has released a new open source program designed to let users securely store data in the cloud for future access without also having to place their private cryptographic keys there.

CloudFlare's Keyless SSL lets users store the private keys on an internal, rather than a public-facing, server. The ability to better protect keys could overcome concerns that businesses that handle sensitive data—such as financial and healthcare companies—have about keeping data in the cloud.

Typically, firms using the cloud store private keys on the same public-facing server that handles Web traffic. However, this could let hackers access the key and compromise the security of data stored online.

In some cases, businesses use third parties to handle their SSL systems, including their keys. However, this places those keys out of the businesses' control.

With CloudFlare's new system, private SSL keys are maintained on customers' internal servers, which can sit behind firewalls or be secured in other ways. Users install an agent on their servers to handle data-access requests. To protect the communications involved in the process, the system transmits and processes key-signing requests via an encrypted tunnel to the user's server.

CloudFlare says it got the idea for the new product after being approached by financial institutions that had suffered cyberattacks.

The company plans to bundle Keyless SSL with its enterprise security service.

Will Cloud Computing Close the Tech Industry's Gender Gap?

Intel and other companies are expressing hope that the rise of cloud computing could attract more women to technology-related jobs.

The US Department of Labor predicts that the increasing use of cloud computing technologies and services will create 1.4 million jobs domestically by 2020. However, US universities will provide enough graduates to fill only an estimated 29 percent of them. Intel says the need to make up the difference could provide a way to get more women interested in technology careers.

Currently, women hold only an estimated one-fourth of US computing and technical jobs. However, cloud computing is a relatively new technology requiring different types of skills. Intel says this could attract women who might not have been interested in traditional computer technologies and could force companies to change their traditional hiring approaches.

To encourage this process, Intel recently paid half of the registration fee—which ranges from \$1,395 to \$1,595—for women attending the first IT Cloud Computing Conference in late October in San Francisco. The company also paid the entire fee for 50 female college students majoring in science, technology, engineering, or mathematics (STEM).

This effort exposes women to technology and gives them an opportunity to network and to meet professionals in the field, according to Intel, whose president, Renée James, is a woman.

Support for these types of efforts has come from the nonprofit Girls Who Code organization (<http://girlswhocode.com>), whose members include Adobe Systems, Amazon, AT&T, eBay, Facebook, Google, Intel, Microsoft, and Twitter.

Study: European Companies Aren't Taking Advantage of Cloud Technology

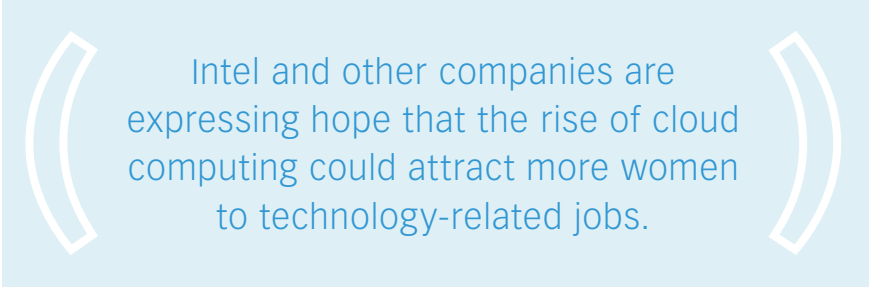
Large corporations are having trouble finding enough IT workers with the expertise necessary to meet their cloud computing goals.

Many companies, therefore, haven't been able to fully adopt cloud technologies. And their IT departments aren't confident of their readiness to do so, according to a recent study by market research firm International Data Corp. (IDC).

about 1,100 companies worldwide and found similar issues.

IBM Uses the Cloud to Take Analytics to the Masses

Typically, only large companies with the money to buy powerful computers and expensive software and hire specially trained personnel have been able to perform complex analytics on the huge amounts of data they collect. This has limited the adoption of sophisticated data analytics products.



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IDC initially surveyed European firms and found that 56 percent of responding IT departments can't find qualified workers to support their cloud-related efforts. About 60 percent are having trouble improving the skills of current employees so that they can help with tasks such as evaluating cloud service providers.

Only about 30 percent of European IT departments told IDC that they can determine the costs and benefits of their cloud projects well enough to justify them to management. And just 40 percent of companies say they use cloud technology extensively and effectively enough to gain a marketplace advantage.

All this is occurring as European enterprise spending on cloud services and technology has grown 25 percent during the past year. To determine if these problems are limited to Europe, IDC interviewed high-ranking staff at

Now, however, IBM is using its Watson supercomputer technology and the cloud to deliver such services to smaller organizations. Scientists and developers from IBM's data analysis and Watson units worked on the Watson Analytics project for about a year before announcing it recently.

The system combines IBM's data analytics approaches with Watson's computing power and machine-learning capabilities, as well as its ability to work with natural-language input. The latter enables company employees who aren't data scientists to query databases to recognize useful patterns or derive helpful predictions from large amounts of corporate information.

The system can display results in formats such as text, charts, or graphs. It can also incorporate data about external factors to help with the process.

Industry observers cite a need for services that can do what Watson Analytics promises to do. However, they add, the offering's success will ultimately depend on factors such as reliability, ease of use, and the value of its results.

Security Experts: Hackers Stole Nude Photos of Celebrities from Apple's iCloud

The unprecedented series of high-profile cybercrimes that began late last year may have moved into the cloud.

A possible attack on Apple's iCloud cloud storage and cloud computing service has joined an ongoing series of hacks on major retailers such as the Target department stores; JPMorgan Chase, the US's biggest bank; the huge Home Depot home-improvement store chain; and grocery store groups across the United States.

In many of these cases, the attack-

ers stole customers' sensitive personal data, including Social Security numbers and payment card information.

Recently, security researchers say, hackers broke into Apple's iCloud service and stole nude photos, explicit videos, and other personal material that 101 celebrities had loaded onto their iPhones and then stored in iCloud. The material was subsequently posted for sale on black market websites.

Security experts contend that the cybercriminals breached the iCloud accounts by exploiting a flaw in Apple's Find My iPhone API. They say the API didn't lock out people making more than a set number of failed attempts to log into accounts, as many applications do for security purposes. This let the hackers keep trying possible passwords—based on knowledge of the celebrities—until they hit the right ones.

They then connected to iCloud and retrieved various people's iPhone backups.

Apple acknowledges security issues with Find My Phone and says it's fixing them. But the company claims it isn't responsible for the theft of celebrities' personal material.

Instead, it contends, hackers either guessed celebrities' passwords based on public information about them, or used phishing to send fake but legitimate-appearing emails that convinced celebrities to provide login information.

iOS 8 Bug Deletes iCloud Documents

Users of iPhones and iPads running iOS 8 say an operating system flaw deletes iWork documents from the iCloud Drive when they reset their devices.

On the MacRumors user-support discussion website, users reported that performing the "reset all settings" operation removed word processing, spreadsheet, and presentation documents from the new iCloud Drive, which iOS 8 can use for storage and synchronization.

They complained that the dialog box at the start of the reset specifically said that the process would restore factory settings—as a last resort to solve system problems—but not delete data. Some users stated that even the Apple Time Machine restoration application couldn't recover the missing files, although one said it could.

Several people complained that Apple technical support representatives told them that, for example, the problem was temporary or that the data was still on the device.

Now, however, some users say, it appears they will never recover the documents.

Apple introduced the iCloud Drive this year, saying it was an alternative to third-party cloud storage and synchronization services. ●●●

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