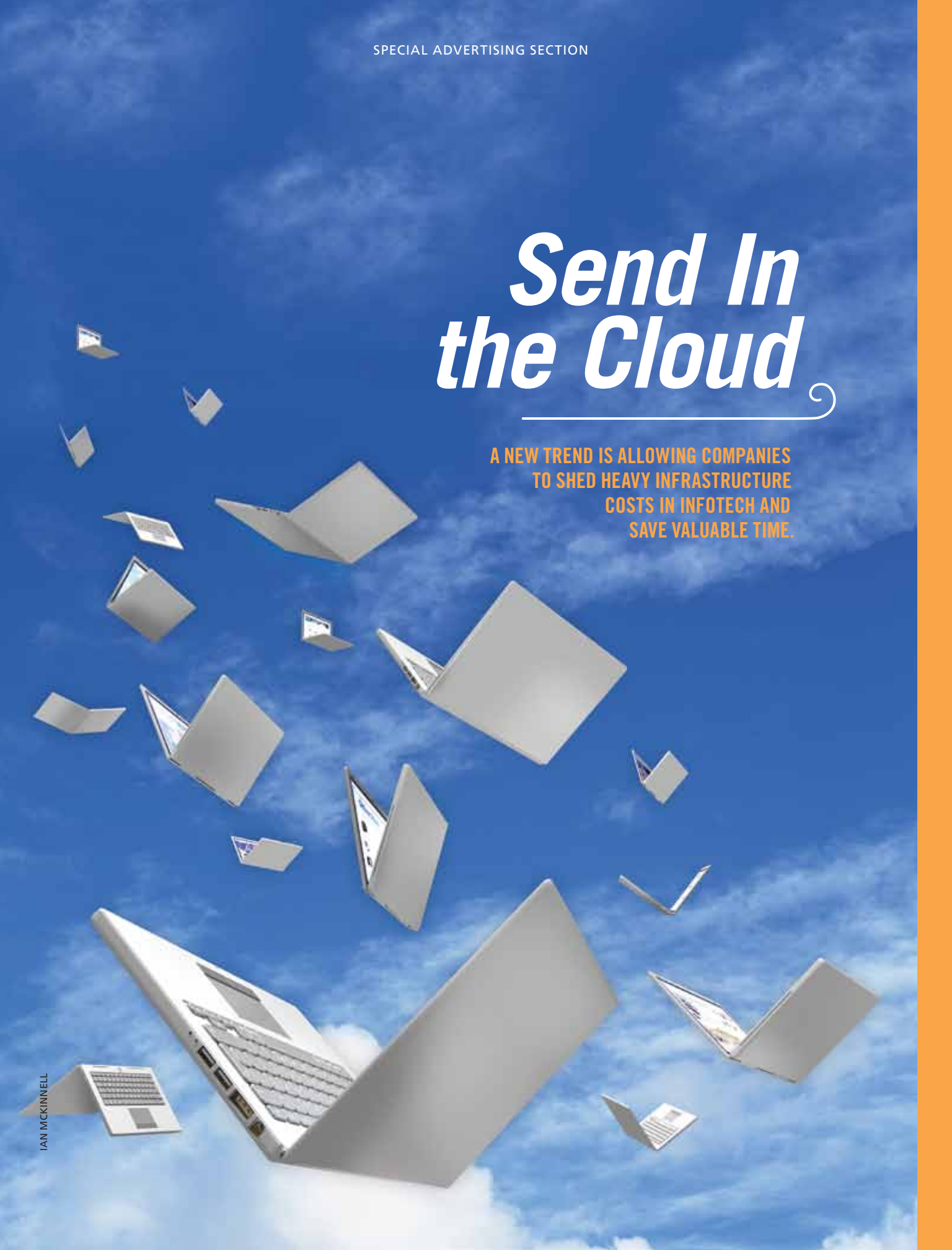


# *Send In the Cloud*

A NEW TREND IS ALLOWING COMPANIES  
TO SHED HEAVY INFRASTRUCTURE  
COSTS IN INFOTECH AND  
SAVE VALUABLE TIME.





**E**arlier this year, Netflix made an interesting decision. The king of DVDs-by-mail opted to outsource most of its web technology needs to Amazon, the giant Internet retailer. On the surface, this may seem odd, since Amazon is also in the DVD business. It turns out, however, that Amazon is among the pioneers in cloud computing—the business of leasing remote technology infrastructure, software, and other applications.

According to Brooks Borchering, CEO of NaviSite, a leading cloud computing service provider for large enterprises, many companies today are choosing a similar path to transform their IT operations. “Cloud computing enables corporate IT departments to become dramatically more efficient, dynamic, and responsive to shifting business priorities,” he says. “It fundamentally changes the way IT functions and offers compelling productivity improvements and economic benefits.”

Borchering cites three benefits for corporations. First, tapping into the cloud provides in-

stant access to cutting-edge, high-performance infrastructure, eliminating the traditional capital spending constraints, which is particularly relevant in today’s challenging economic environment. Second, the consumption-based pricing model allows businesses to treat IT as a service, paying only for the resources they use. This is a much more cost-effective model that still ensures the necessary resources are available for peak usage requirements. Finally, new easy-to-use management applications provide advanced features and functionality that deliver efficiencies and productivity gains by ensuring businesses can quickly and easily match IT resources to their business requirements.

The cloud computing concept has advanced to the point where there is now a blossoming market for leasing computing services via the Internet rather than owning those resources in-house. Estimates of the marketplace vary widely, though no one doubts that its growth will be exponential. Research firm IDC predicts that cloud computing will reach \$42 billion in revenues by

“CLOUD COMPUTING CHANGES THE WAY INFOTECH FUNCTIONS AND OFFERS COMPELLING PRODUCTIVITY IMPROVEMENTS AND ECONOMIC BENEFITS.”

—Brooks Borchering, CEO of NaviSite



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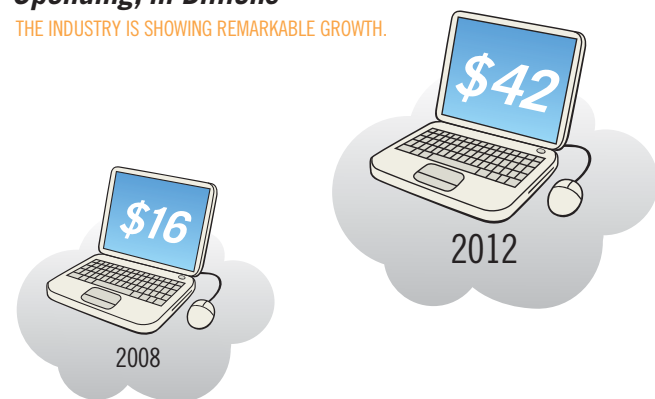
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2012, nearly three times the 2008 total, while a Merrill Lynch projection has cloud revenues soaring even higher.

Whatever the number turns out to be, reasons for the cloud's remarkable growth aren't difficult to grasp: Cloud computing offers fast and virtually limitless access to cutting-edge IT at a fraction of the cost of standard methods. NaviSite's Borchering recalls one client—a higher-education services provider—that turned to NaviSite to pursue new business opportunities while supporting existing applications. "With our innovative web-based management tool,

### Estimated Cloud Services Spending, in Billions

THE INDUSTRY IS SHOWING REMARKABLE GROWTH.



Source: IDC, October 2008.

the customer can quickly test new environments, then tear them down or convert them to production environments," he says. "At the same time, our consumption-based billing model ensures they pay only for the resources actually used. Since moving to the cloud, this service provider has enjoyed more than a 30% reduction in costs and recognized significantly increased performance and productivity."

The main reason for the disparity in revenue projections for the cloud is the difficulty of agreeing on a precise definition of the cloud's dimensions. Some argue that every transaction, e-mail, or blog flying across the Internet is an example of cloud computing because the servers used to store and relay the information usually belong to third parties. Others prefer a narrower

definition of cloud computing: the conscious practice of leasing IT services via the web.

Either way, the central concept is simple: Use the Internet to plug into an external IT grid, much like drawing electricity from the local electric utility, instead of building and operating your own power plant. With cloud computing, rather than owning and maintaining an IT infrastructure to support a company's peak capacity needs—which it might reach only once or twice a year—enterprises rent IT services as needed. This helps the IT manager set limits on expenditures without compromising the company's ability to access whatever IT resources might be needed in a crunch.

There's more. Cloud companies also provide a broad array of software services; platforms for developing new software and web applications; and the interfacing that enables different software programs to work together. Cloud-based software is an especially thriving business.

CDC Software is a Shanghai-based leader in hybrid enterprise software solutions such as ERP, CRM, eCommerce, and other business applications for on-premise and cloud deployments. Some of CDC's 10,000-plus global customers choose to run these applications in-house, but many are opting for the benefits of the cloud. That's particularly true of companies in China and India, says Peter Yip, CEO of CDC Software, because they don't have large investments in legacy systems like many companies in the U.S. and Europe.

"However, we're seeing a rise in the adoption of our cloud-based CDC eCommerce and i-Supply cloud solutions in the U.S. and Europe," says Yip. "Our *Fortune* 500 customers, for example, use i-Supply as a cost-effective means of connecting with suppliers in China and India.

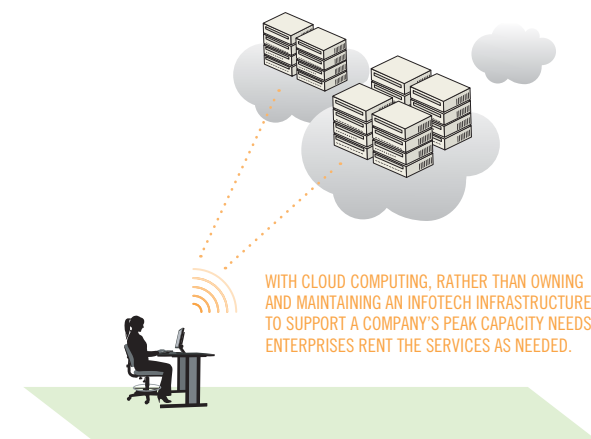
"Nonetheless, China and India are likely to lead the world in cloud adoption because the need for IT solutions is so great in both countries—especially for small and medium-sized enterprises looking to capitalize on global-business best practices supported by technology."

Companies of all sizes also need disaster recovery systems. For many, that used to mean duplicating the company's entire IT system in a remote location, but entire systems can now be backed up easily and quickly in the cloud. Access to cloud security and backup is easy for consumers, too, thanks to two innovative new products from Trend Micro, a global Internet security

provider. The first of these, Trend Micro's Titanium suite of security products, protects against proliferating cybercrime without hindering a PC's speed and productivity. Historically, says Carol Carpenter, Trend Micro's general manager, volume business unit, "Security software has focused on protecting each computing device, but the real threat now is not to the computer. The threat is to the consumer's personal data such as credit card information, login credentials, and more. That's what cybercriminals are after."

With traditional security systems, users must download an endless string of new security-update files, then let their computers do the work of scanning for incoming threats. As PC owners can attest, running such security software tends to slow almost any PC's performance. Titanium works differently: It protects against cybercrime without crippling a PC's productivity because it is the only security system stored primarily in the cloud, with a global server network that constantly watches over the customer's PC.

Titanium's cloud servers block malevolent files,



e-mails, and websites before they can do harm, while also downloading enough security software to protect each computer when it's offline. Titanium stops cyberattacks before they start, using the company's Smart Protection Network, a cloud-based technology that continuously updates and correlates threat databases and gives users immediate access to the latest protection.

Trend Micro's second breakthrough, SafeSync,

### ADVERTISEMENT



## China Forecast: Gathering Clouds

HOW CDC IS RESHAPING THE INFRASTRUCTURE OF AN ECONOMIC SUPERPOWER.

No country seems more alert to the transformational benefits of cloud computing than China, where the government is funding the creation of cloud computing centers in major cities so that local companies can access vital common cloud services at low cost. As part of this enormous undertaking, the Chinese government has tapped CDC Global Services, the services affiliate of CDC Software, to design and manage some of these centers. Shanghai-based CDC Software, a developer of hybrid enterprise software for on-premise and cloud deployments with more than 10,000 custom-



ers worldwide, plans to provide the software-as-a-service (SaaS) solutions for some of these new cloud centers.

C.K. Wong, CEO of CDC Global Services, says the company will manage a cloud computer center in Foshan that is targeted to serve 60,000 businesses in the city and the neighboring region. Foshan, which ranks among China's

top 10 cities in per-capita GDP, is close to Guangzhou, the provincial capital of Guangdong, an area known as the "world's manufacturer."

"We believe these new cloud computing centers will be vital to the broad and rapid adoption of cloud computing throughout China, and in the economic growth of these respective regions," says Wong. "We are honored to play a role in designing and supporting them." Together, CDC Software and CDC Global Services expect to play a central role in helping to shape the growth of cloud computing in China and around the world.

ENTIRE  
INFOTECH  
SYSTEMS  
CAN NOW BE  
BACKED UP  
EASILY AND  
QUICKLY IN  
THE CLOUD.



a cloud-based data storage service, protects files against hardware failure. Most consumers know they should back up important data, including photo and music files, but they often don't because of the inconvenience, says Trend Micro chief technology officer Raimund Genes. SafeSync remedies that problem by automating the backup process and making it continuous for every photo, music file, and keystroke, whether from a home or office computer, and storing it all in a secure but readily accessible cloud environment. SafeSync users can freely access their stored files using any device with an Internet connection. The service also comes in handy for sharing files with family, friends, and colleagues.

Together, these new products from Trend Micro may radically change the way consumers protect their computers from malware, cybercrime, and potential loss of data due to hardware failure.

For large companies and government agencies, security concerns remain the major reservation with respect to cloud computing. Financial institutions, health insurers, hospitals, and other groups are understandably reluctant to entrust their sensitive data to the cloud. Increasingly, though, such concerns can be addressed through the creation of private and virtual private clouds—highly secure environments designed

to store data and other resources for single users or groups of users.

"The cloud is clearly not one-size-fits-all," explains NaviSite's Borchering. "We offer flexible cloud deployment models to address specific customer needs, ranging from secure-hosted cloud solutions to private on-premise solutions."

Few people fully appreciate the revolutionary importance of the cloud, even though virtually everything a consumer does on the Internet—from posting a photo on Facebook to purchasing a new sweater or an e-book—involves the use of cloud servers. Even so, the growing power of the cloud to foster innovation while adding security and convenience may be difficult for the average consumer to grasp. The appeal to businesses and other organizations

is more immediate: Cloud computing lowers costs by dramatically reducing the problem of IT underutilization.

Technology executives liken that problem to flying a jetliner with empty seats. In similar fashion, companies spend vast amounts to acquire and manage the technology they need to stay competitive. However, during economic downturns and periods of seasonal slack, companies often shut down some of that capacity because it's underutilized and becomes a drag on profitability. Cloud computing not only solves that problem, it converts IT from a capital expenditure item on the balance sheet to a more easily managed operating expense, which is one reason chief financial officers are often cloud enthusiasts.

Cloud users pay for IT services by subscription or metered usage. Either way, they usually spend far less for state-of-the-art IT than they would if they had to purchase, maintain, and staff the same resources on their own. Little wonder that the cloud is growing and helping to accelerate IT innovation globally. ●

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"THE REAL THREAT ... IS TO THE CONSUMER'S PERSONAL DATA. THAT'S WHAT CYBERCRIMINALS ARE AFTER."  
—Carol Carpenter, general manager of Trend Micro

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