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CIOs Take to the Cloud

Liberated from on-premise maintenance and upgrades, CIOs are focusing on innovation and growth

We're in the midst of an epic IT shift in which traditional enterprise on-premise systems are being rendered obsolete by widespread adoption of the cloud computing model. The global migration toward the cloud is the catalyst behind a wholesale transformation in the role of the CIO. Once charged with simply "keeping the lights on," today's CIOs are expected to play a far more strategic

role in business direction and growth. In our age of hyper-speed business and brutal global competition, enterprises look to CIOs to deliver innovative solutions that squeeze every last nickel of business value and competitive advantage from IT investments.

The cloud has opened new worlds of opportunity for CIOs to fulfill those strategic objectives. With a cloud model, CIOs and IT at large are liberated from Sisyphean maintenance and upgrades of on-premise



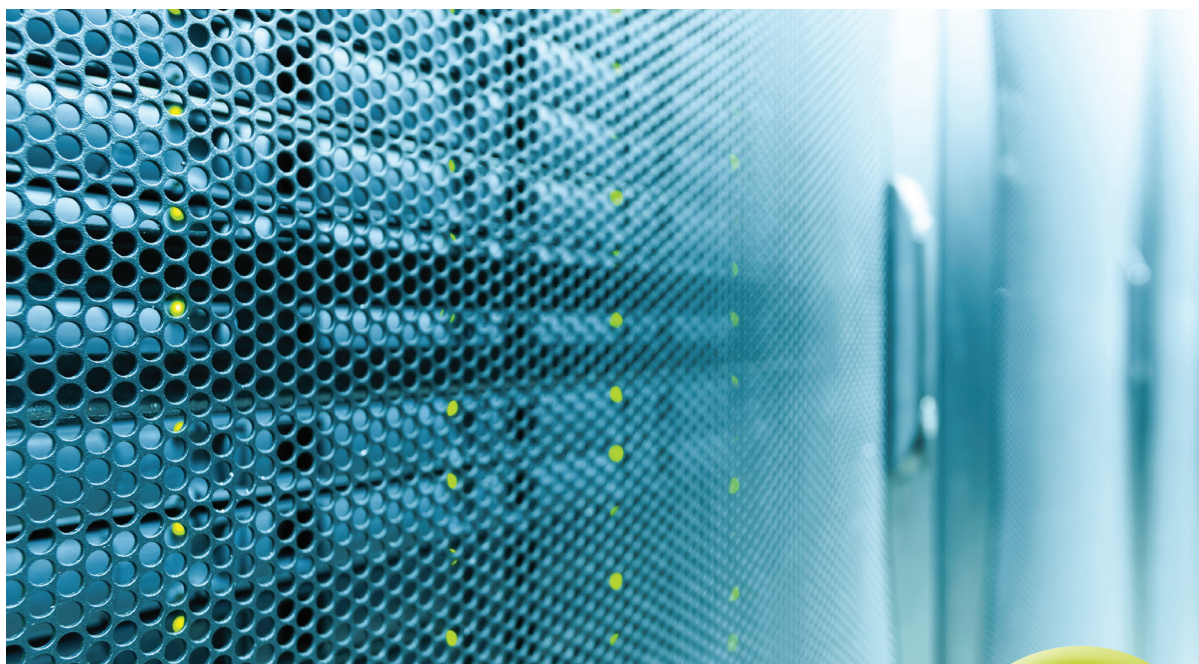
infrastructure. Enterprises gain agility to launch new ventures at a fraction of the time and cost required with in-house systems.

CIOs can outsource to the cloud vendor responsibilities for security, backups, networking, and software maintenance to better focus on optimizing the applications and processes their organizations need to function at maximal cost-efficiency. They can channel resources into leveraging mobile and social business technologies to strengthen relationships with customers and suppliers. They can grow analytics practices to turn big data into business insights.

As a NetSuite veteran since 2000 who has managed our data centers for a decade, it's my job as CIO to make that vision a reality for our customers by delivering a robust, scalable, and secure computing platform.

Data Centers: A NetSuite Crown Jewel

Though I head IT for a cloud business management software vendor, my responsibilities are along the lines of an old-school CIO—I'm responsible for NetSuite's in-house infrastructure that makes the cloud model possible, as well as implementing NetSuite and



third-party cloud applications that run our business. Our data centers that deliver the NetSuite service are a crown jewel of the company characterized by high availability, application and operational security, performance, and scalability:

High availability. We've averaged 99.96 percent uptime over the past 12 months while processing nearly 100 billion application requests, with status available 24/7 at <http://status.netsuite.com>. Each data center provides data mirroring, disaster recovery, backup power and failover capabilities with all servers, storage,

and hard drives built on several layers of redundancy in a multitenant model.

Application security. Industry-standard SSL is in place to encrypt all data, including user IDs and passwords, while we equip customers with flexibility in establishing role-based permissions, fine-grained password configuration options, IP address restrictions, two-factor authentication, and idle disconnect features. Application-only access means that customers can

Data center details

Get an inside look at NetSuite's world-class data centers.



NextService

Field Service Management
Built on the SuiteCloud Platform

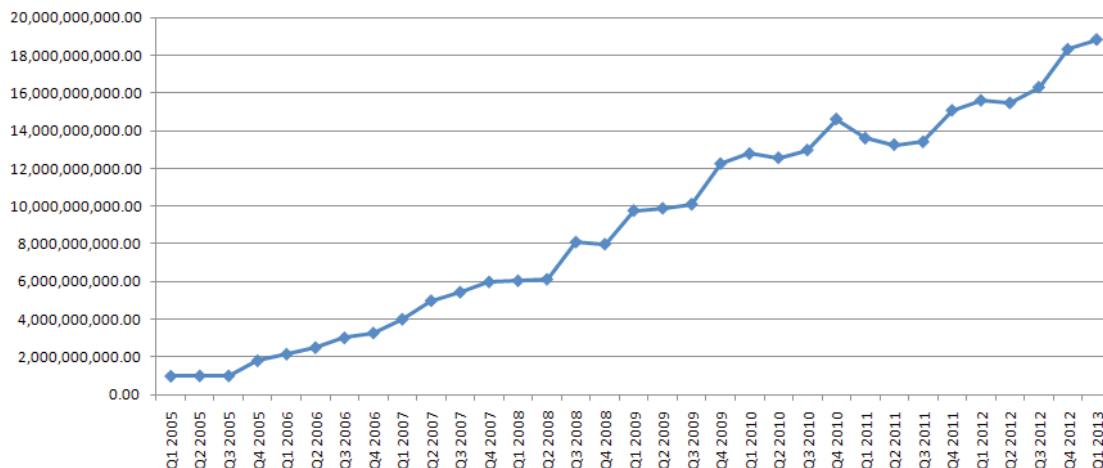
It's not magic, just good software.



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Total # of page requests



Scalability is reflected in growth in the number of page requests between 2005 and 2013, to more than 20 billion a quarter.

access only the application features, not the underlying database or infrastructure components.

Operational security. We employ numerous intrusion detection systems to identify malicious traffic attempting to access the network, and are PCI-DSS and EU-US Safe Harbor certified. SSAE 16 Type II and ISAE 3402 Type II audits are prepared by a Big Four audit firm. On-premise guards, CCTV video surveillance, physical controls, and biometric identification are among the many operational security mechanisms in place.

Performance and scalability. Our three-tier architecture of web, application, and database is

horizontally scalable, based on multi-core processors and maximum RAM configurations. Production database servers run principally on flash SSD storage to deliver the industry's fastest possible I/O performance, and we employ a large team of developers and database engineers to continually optimize the system.

CIO War Stories

It goes without saying that most organizations, particularly large enterprises, don't undertake a move to the cloud lightly. CIOs who have spent their careers building in-house data centers are rightly concerned

with how the cloud aligns with their ideals for security, reliability, and data control. Thorough due diligence into a cloud vendor's integrity and viability is a mandatory part of deliberations.

Yet these same CIOs are fed up with the ceaseless struggle inherent with on-premise systems. Virtually every CIO can tell IT war stories of cost overruns, integration nightmares, and "version lock" that results from fear of tackling a costly, lengthy, and disruptive upgrade (until the vendor forces it with an EOL announcement). CIOs have endured "do more with less" missives from management and are hard-pressed to find IT resources with skills in certain outdated legacy technologies.

NetSuite is increasingly the solution of choice for enterprising CIOs in the mid-market and at larger enterprises. NetSuite is in place at 20 percent of the Fortune 100, including Procter & Gamble, FedEx, Cisco, MetLife, and others, often in a two-tier ERP model. Cloud ERP is deployed at a subsidiary

or new venture and integrated with on-premise ERP at headquarters to enable fast time to market and lower cost and complexity.

Our SuiteCloud Development Platform is instrumental in enabling NetSuite interoperability with other cloud and on-premise applications. Twice-yearly updates free IT leaders from the looming challenge of upgrading an in-house application. Along with real-time data and a single, integrated solution covering ERP/financials, CRM, and ecommerce, it's a sound formula for rapid growth.

Norm Fjeldheim, CIO of the \$26 billion semiconductor maker Qualcomm, is among the early adopters of cloud ERP in large enterprises. Qualcomm first deployed NetSuite, in a two-tier model synched with on-premise Oracle ERP at headquarters, to support a new product launch in Mexico. "We had to do it fast and we had to do it cheap," Fjeldheim says. "NetSuite seemed like the perfect fit, and it certainly was."

Today, Qualcomm runs 10 subsidiaries on NetSuite, including its Qualcomm Labs incubator that develops and brings to market new products. "Several have spun out of the incubator into full standing divisions still running NetSuite within Qualcomm," Fjeldheim says. "NetSuite has been perfect for us to use for those new divisions."

NetSuite at Qualcomm

Qualcomm CIO Norm Fjeldheim outlines how the chipmaker uses NetSuite at SuiteWorld.

'A Phenomenal Journey'

Williams-Sonoma is another large enterprise to turn to NetSuite to rapidly enter new markets. As part of a global expansion, the \$4 billion retailer of high-quality products for the home implemented SuiteCommerce to launch four new physical stores and branded ecommerce sites in Australia, with NetSuite OneWorld

integrating with the company's existing US infrastructure.

"From both a functionality standpoint and a technology perspective, NetSuite delivered a robust solution in a tight timeline," says John Strain, Williams-Sonoma CIO. "It's been a phenomenal journey... to be able to make this omnichannel launch happen as one holistic solution."

Williams-Sonoma Goes Global

Williams-Sonoma CIO John Strain discusses how his company launched its Australian operations on NetSuite.

To borrow Mr. Strain's phrase, it's also been a phenomenal journey for NetSuite to evolve since 1998 from an ambitious startup into the world's leading provider of cloud business management solutions, serving more than 20,000 organizations around the world. As NetSuite continues to move up-market, we increasingly work with CIOs who relentlessly scrutinize every aspect of our offering to ensure it



meets their high enterprise standards. That's a good thing.

Even better is when we see those CIOs realize success. At Qualcomm, Williams-Sonoma, and many others, CIOs have new flexibility in the cloud to zero in on business problems with focused software solutions. Freed from the yoke of IT maintenance and upgrades, these CIOs are becoming chief innovation officers who play an instrumental role in optimizing their organizations to improve efficiency, delight customers, fuel growth, and beat the competition.

We've had plenty of lessons learned in our 16-year history. Part of my role

as CIO is ensuring that we turn those lessons learned into best practices essential to delivering secure, reliable, and scalable solutions that customers can grow into, not grow out of.

Douglas A. Brown is the Chief Information Officer and SVP Engineering Operations at NetSuite. In his current role, Doug is responsible for uptime, performance, security, and compliance of the NetSuite service as well as worldwide IT and facilities. Doug holds a Bachelor of Arts in Chemistry from Indiana University and a Masters in Science in Chemistry from the University of Detroit-Mercy.