

Mining for Gold in the Carrier Cloud

By Jesse Cryderman

Over the next ten years, communications service providers (CSPs) will lose up to 50 percent of their traditional revenue stream. For a tier 1 provider, that might mean \$1 billion. So the billion-dollar-question is, what businesses are big enough to generate this kind of income?

The list is short, and at the top is cloud computing. Gartner research projects cloud traffic will increase 12-fold and explode into a \$150 billion sector by 2020, and it probably will; these days, everyone is cloud savvy.

Richard Chinitz, TOA Technologies, acknowledges that “companies across all industries from around the globe are quickly realizing that cloud-based solutions are the only path into the future of business, and choosing to purchase software from the cloud will benefit overall company growth and increase efficiencies.” Indeed, the phenomenon is not localized, but global, and “the momentum is starting to roll everywhere in the world,” commented David Frattura, senior director, strategy–Cloud Solutions, Alcatel-Lucent.

It’s no wonder, then, that CSPs are putting their chips on the table. Informa Telecoms Analyst Camille Mender pegged CSP investment in the cloud north of \$11 billion in 2011. This doesn’t come as a surprise—we’ve seen the price tag on major cloud acquisitions by Verizon (Terremark) and CenturyLink (Savvis).

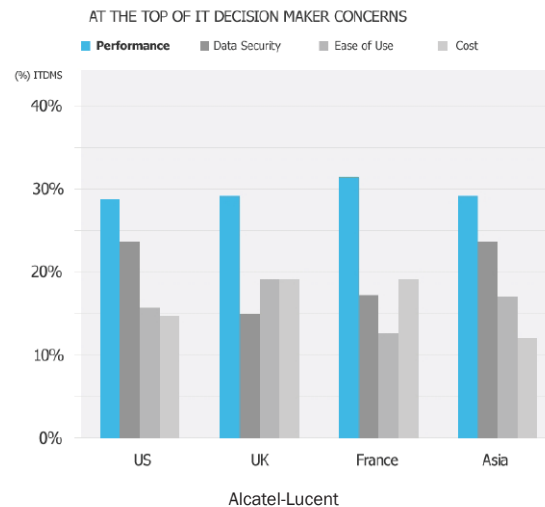
However, can CSPs compete with pure-play cloud providers and leverage the carrier cloud for the win? What do the CSPs have as an advantage? What are some of the current offerings on the market from CSPs?

The Carrier Advantage

There are some good reasons why CSPs stand to profit greatly from cloud, provided they play their cards right. First, they already have an established reputation with business customers for managing SLAs and meeting security standards. Adolpho Hernandez, president, of Alcatel-Lucent’s Software, Services & Solutions Group, said last November that IT decision makers “believe communications service providers are in the best position to deliver the quality and security they expect, making them the cloud provider of choice for the enterprise world.”



More importantly, however, “The network makes the cloud, and CSPs own the network,” said Hernandez. “That is a very powerful combination.” Indeed, this key competitive advantage is the cornerstone of the carrier cloud value proposition, especially for large enterprises that are leery of moving IT infrastructure off-site. As you can see below in figure 1, top IT decision makers around the world think performance in the cloud is the major drawback, which places network operators—who have visibility and control of the performance metrics—in an advantageous position, competitively.



How Carriers are Moving into the Cloud

We see several strategies among carriers for moving into the cloud. From an infrastructure-as-a-service (IaaS) perspective, there are examples of organic strategies, building a cloud computing offering in-house, like we see from TATA Communications. Other CSPs, like Verizon and CenturyLink, have

Not for distribution or reproduction.

taken a different approach and acquired cloud computing companies in order to quickly get to the front of the pack. In several other cases, carriers are transitioning hosted services to cloud services, or converging managed services with the cloud's virtual infrastructure. "Many cloud solutions from CSPs for business customers are part of a managed services offer where they provide cloud services along with data lines (T1 lines) into their location, and varying set of IT data center services to support the infrastructure of the cloud, such as security," noted Sanjay Kumar, vice president of communications and media at Progress Software.

Brian Kracik, director Communications Industry at Oracle, explained how CSPs have moved into the cloud. "CSPs have generally started with compute services and many of the CSPs are investing in datacenter infrastructure," he said. "The IaaS space is quickly being commoditized, and we see that CSPs are moving to differentiate themselves by exploiting their largest asset, the network."

In the software-as-a-service (SaaS) category, it's all about partnerships, says Nava Levy, vice president, SaaS/Cloud Solutions, cVidya. "To provide SaaS apps, CSPs are often leveraging partnerships. For example, Mozy for back up as a service (CSPs): China Telecom, Vodafone, Cox; Microsoft employee productivity apps with UPC: Vodafone, Telstra and O2." Partnerships allow CSPs to accelerate time-to-market, and play in areas where they might not have sufficient expertise, such as the IT domain. "Some of the CSPs have selected cloud apps aggregators/brokers such as Jamcracker (Telstra, TELUS), Parallels (Charter, Telekom Austria, Telekom Malaysia) and AppDirect (BellCanada) so that they can deliver quickly

"The network makes the cloud, and CSPs own the network—That is a very powerful combination."

a one stop shop for enterprise software for SMBs," explained Levy.

Platform-as-a-service (PaaS) is the least mature category, as far as offerings from CSPs. In most cases, CSPs are leveraging third-party resources to offer a PaaS solution, like AT&T and OpenStack. John Landau, Senior Vice President of Global Managed Services, TATA, agreed that PaaS offerings from carriers are quite a ways behind other cloud offerings. "CSPs variously offer IaaS and SaaS to growing networks of customers. General purpose PaaS, however, is a less mature offering family at present."

The beauty and promise of cloud as a service is that it's not just Tier 1 operators who can afford to move into the cloud. Smaller CSPs strike partnerships to sell third-party cloud services (Swisscom is reselling Verizon's cloud services), and companies like CHR enable smaller telcos to offer cloud computing services to their customers on demand, with no infrastructure investment (see link to this month's vendor spotlight to learn more about CHR).

Current Offerings

"The most common CSP cloud services are perhaps multi-tenanted communications services (a category of SaaS), such as hosted unified communications and hosted contact center, and a number of CSPs



The image shows a promotional graphic for CSG International. It features the company logo, which consists of a stylized grid of red and dark red squares to the left of the letters 'CSG' in a large, bold, sans-serif font. Below 'CSG' is the word 'INTERNATIONAL' in a smaller, all-caps, sans-serif font. Underneath that is the tagline 'accelerate business. anywhere.' in a lowercase, italicized, sans-serif font. In the bottom right corner of the graphic is a red button with the text 'LEARN MORE »' in white, bold, uppercase letters.

also offer cloud computing,” says John Landau. IaaS offerings are available from many Tier 1 carriers, including AT&T, Orange, BT, TATA Communications, Verizon (via Terremark), and CenturyLink (via Savvis). As noted above, PaaS offerings from CSPs are still in their nascent stage, but there are some examples.

I spoke with Steve Caniano about AT&T Platform as a Service, which was launched last November. “It’s an online, cloud-based service that allows for fast development of cloud-based business apps. It’s an offer targeted primarily to independent software vendors, corporate information technology leaders, and line-of-business managers.”

Regionally, Who’s Ahead of the Pack?

“The most mature region is currently North America followed by Western Europe and Asia,” says Nava Levy. “In North America the leading players are AT&T, CenturyLink (acquired Savvis for \$3.4B) and Verizon (acquired Terremark for \$1.4B). All three have been investing heavily in cloud across SaaS, PaaS and IaaS.”

David Frattura agrees that North America is a bit “ahead of the game.” This is in part due to a more mature cloud consumer, and also because CSPs in NA have already been moving into managed services, so the jump to cloud solutions isn’t that far. European CSPs, says Frattura, are a little more hesitant, waiting to see how CSP cloud offerings shake out in across the pond.

Room for Improvement:

“The fact is that if service providers don’t nail the



In the software-as-a-service (SaaS) category, it’s all about partnerships

business model for their cloud service, the technology becomes utterly irrelevant,” proclaims Jeff Yoshimura, Zuora. “Bottom line: the most successful providers of cloud services are ones that make it easy for the customer to get the services they want, how they want them, and when they want them.”

Attempting to be everything to everyone is not going to work. By studying market trends, two needs emerge that CSPs can refine in order to better position their cloud offerings.

- **Self-Service:** The days of making a call to a technician in order to provision a service are quickly coming to an end. Improving the self-servicing abilities of cloud solutions is a step in the right direction, and providing a self-service trial portal is even better, says Yoshimura, Zuora. Right now, says Brian Kracik, of Oracle, “the level of complexity is dictating the degree of self-service. A CSP offering a more complex SaaS for ISVs requests that an email or phone call be made to obtain the service, thus not meeting the NIST self-service requirement for cloud.”
- **Virtualization:** A recent white paper from Forrester detailing the private cloud market uncovered a surprising fact: “Most enterprises aren’t really ready for the full capabilities of a private cloud because their virtualization management isn’t mature enough.” In other words, 80 percent of the 1,037 IT decision makers surveyed said their top priority was to consolidate IT infrastructure via server consolidation, data center consolidation, or server virtualization, while only 28 percent listed cloud solutions as a top priority. One of the biggest promises of the cloud is virtualization of infrastructure, in other words, converting a capital expense to an operating expense. Services crafted around these dynamics would fare better than full service private clouds, in many cases.

A Changing Skyscape

As a result of CSPs movement into the cloud computing market, several trends have emerged. First, we’re seeing CSPs expand and evolve into more of an IT services company. This both creates opportunities for new offerings like a business triple-

play bundle (communications services, managed CRM, and IT services on one bill from one provider), as well as challenges for CSPs, as they “start competing with the internal IT operations of their business customers,” pointed out Sanjay Kumar.

Another trend is found in the competitive landscape itself. No longer is it a question of Verizon competing with AT&T, or KDDI vs. NTT Docomo. Today’s competitive landscape is “global service providers from very different regions competing with each other and with global IT services firms,” says Kumar.

The opportunities to find gold in the carrier cloud are very real, and CSPs are certainly moving in the right direction. IaaS and SaaS offerings from CSPs are becoming more mature, and improving self-

“CSPs variously offer IaaS and SaaS to growing networks of customers.”

servicing as well as creating PaaS and infrastructure virtualization offerings is a wise move. The coming years will see great growth in the cloud, and combined with the trends highlighted here, the telecom world is changing yet again. As Mr. Kumar exclaimed “Now it’s going to get interesting!”