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Cloud 2.0

New Challenges, New Opportunities For Cloud Service Providers

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Introduction

Cost reductions and lower operational expenses drove most initial cloud deployments. Think of this initial deployment and infrastructure-based phase as 'Cloud 1.0.' However, cloud service providers (CSPs) today are fast approaching an inflection point, driven by underlying changes in their customers' expectations.

Increasingly, users are demanding that their CSPs deliver enterprise-ready, value-added, easily scaled services with security baked deeply within. They want hosted cloud solutions that are deployed on demand, tuned to specific dynamic workloads, and easily cloud-interconnected in hybrid models. In other words, the hallmarks of cloud now are speed and agility, but most of all, services. Customers are looking to their CSPs to provide a business-ready cloud infrastructure.

Thus, for CSPs, the real need today is for an elegantly architected cloud platform that users see as operationally efficient and simple, with the ability to deploy new services not in hours or days as before, but literally in minutes. And, as research shows, trust and security in CSPs and the partners in their ecosystem will go a long way in determining the winners and also-rans among hosted cloud providers going forward.

Leveraging a major research survey from 451 Research, this report details the business drivers of the fast-emerging era of 'Cloud 2.0,' showing the impact of this change on CSPs while suggesting ways that CSPs can best position themselves to capitalize on this dynamic cloud environment.

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Business Drivers of Cloud 2.0

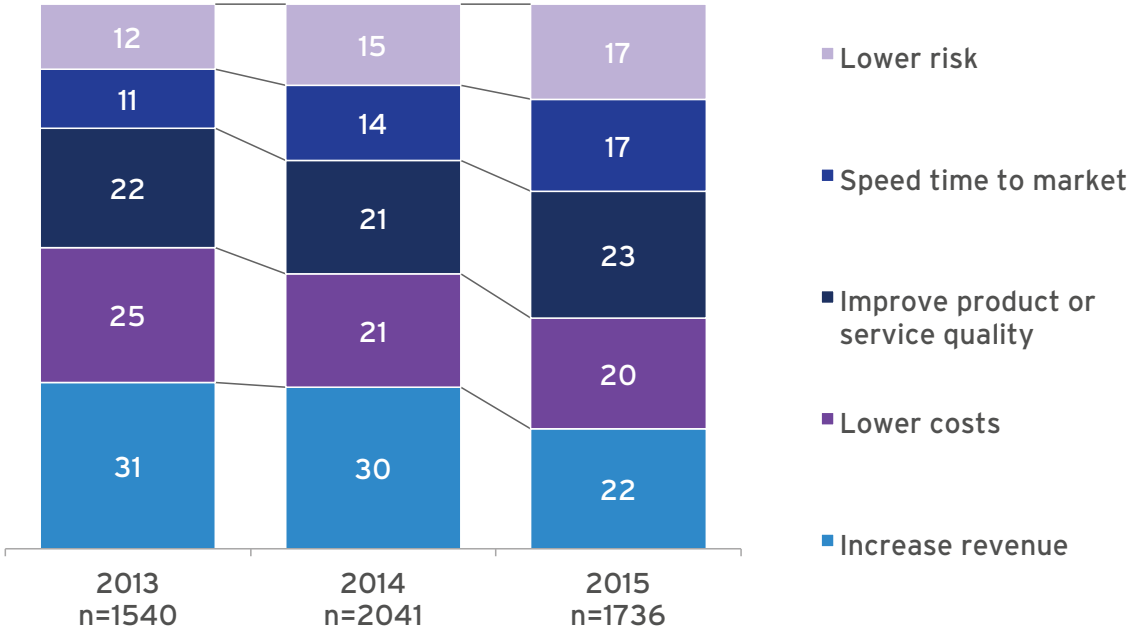
Just a few short years ago, the top goals of cloud deployments from the users' perspective were bottom-line-oriented: increase revenue and lower IT costs. Today, however, organizations are tasked with the competing mandates of continuous innovation and lowering risk. By definition, sustained innovation implies greater risk-taking, with a low-risk position essentially being one of maintaining the status quo. This new business reality is causing tension, and organizations need some help in mitigating it.

Consider some key findings in a survey of more than 1,700 global respondents undertaken by 451 Research, the *Hosting and Cloud Study 2015*. Survey results show that while increasing revenue is the number-two goal, the top spot has been taken over by 'improving product or service quality' (see Figure 1). And in the next few years, this will be joined at the top by goals such as lowering risk and speeding time to market. Saving money through efficient operations will be merely table stakes.

Figure 1: Companies Doubling Down on Lowering Risk

Survey respondents were asked to allocate 100 points among the following five goals as they relate to their company or organization.

Source: 451 Research, *Hosting and Cloud Study 2015*



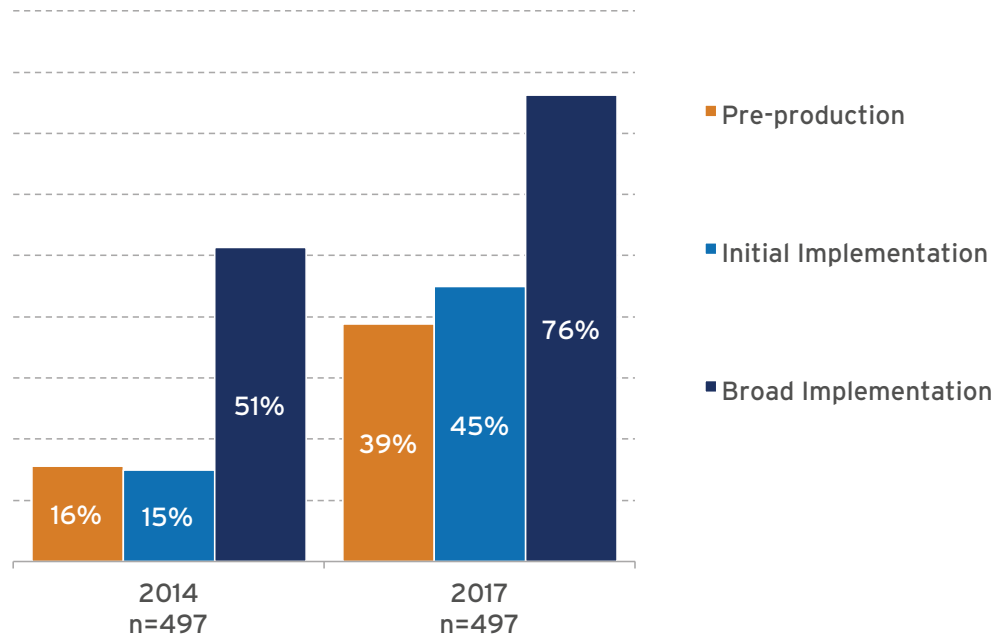
To put it another way, the bar is about to be raised significantly when it comes to the expectations user organizations have of CSPs. Depending on the decisions made and bets placed in the months and years ahead, these business-driven cloud changes can represent a huge opportunity for CSPs – or pain and suffering.

Several factors are driving, if not accelerating, the push to the Cloud 2.0 era. The most significant driver is the intention of big cloud users – those with about half their applications in the cloud today – to place some three-quarters of applications in the cloud within two years. These are organizations with a low risk tolerance that are in need of increasing numbers of services, not the more cutting-edge 'cloud newbies' with which CSPs often deal. This factor demands a different, more sophisticated and services-rich approach to the market for most CSPs (see Figure 2).

Figure 2: Cloud Deployments Booming

Respondents were asked, 'Thinking of all the applications your organization runs, what percentage are currently running in any cloud computing environment? And what will that percentage be in three years' time?'

Source: 451 Voice of the Enterprise, Cloud Computing Q414



In addition, there is ever-increasing demand for optimal security in a world where the threats are unrelenting and compliance is growing more complicated. Organizations can ill afford to let the mitigation of these issues compete with the drive for innovation. But they cannot ignore the threats either. The truth is that mission-critical workloads require enterprise-grade trust and security. Thus arises the opportunity for CSPs to fill this security gap.

Not only that, but the compliance and regulatory environment is highly dynamic, changing from one location to another. Privacy rules in Europe, North America and Asia vary widely. Something as routine as a national election in any country can usher in an entirely new set of regulatory and compliance requirements for IT. CSPs offering the capability to deploy pre-packaged solutions that are highly secure and also geo-compliant will meet a pressing and ongoing need.

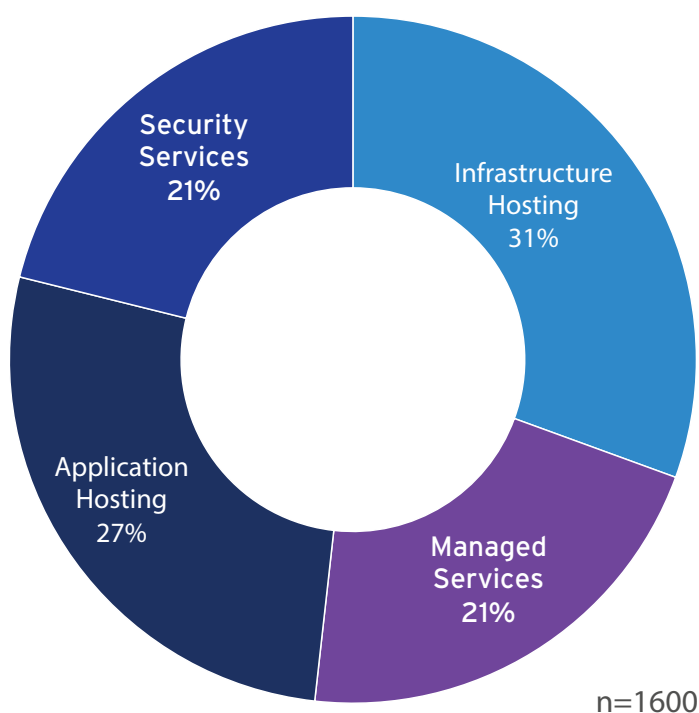
What Does It All Mean for CSPs?

Clearly the dynamics of the business environment have thrown down the gauntlet for CSPs. Simply stated, in the Cloud 1.0 era the customers went along for the ride, opting for lowest costs in a drive to shed both capex and opex. Today, however, the customer is very much in the driver's seat. Customers seek CSPs that can help them clear a secure path to sustained innovation.

The current opportunity for CSPs is potentially huge. Nearly 70% of the opportunity for CSPs is beyond infrastructure hosting, which was the dominant Cloud 1.0 paradigm (see Figure 3).

Figure 3: The CSP Opportunity Today

Source: 451 Research, *Hosting and Cloud Study 2015*

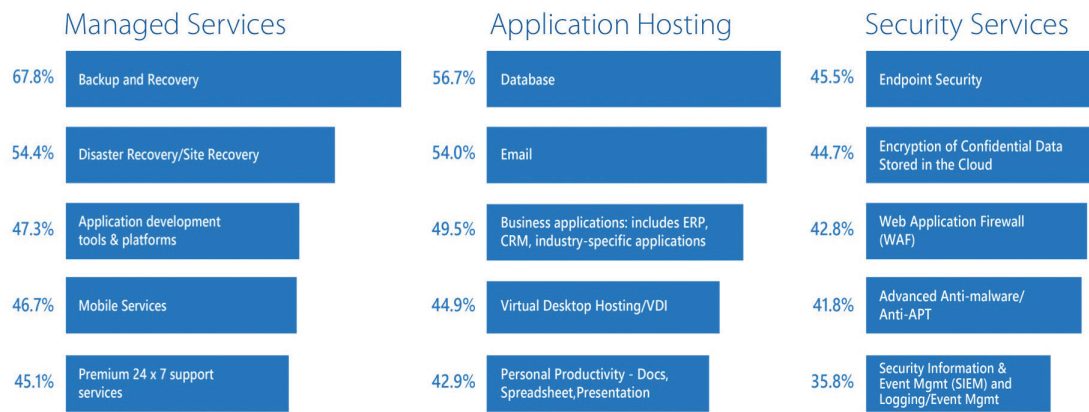


In fact this larger portion of the overall pie underscores some of the main characteristics and tenets of Cloud 2.0, which is far more user-driven than Cloud 1.0. To this end, users are looking to their service providers for managed services offerings, including backup and disaster recovery.

Similarly, there is demand for application services such as database and email (see Figure 4). Users are seeking a greater measure of IT simplicity, freeing up valuable IT staff time from operational issues so they can focus more on strategic projects.

Figure 4: Value-Added Services: A Growing Revenue Opportunity

Source: 451 Research, *Hosting and Cloud Study 2015*



Customer expectations are as numerous and varied as the many different clouds that are emerging to satisfy shifting requirements. These expectations include the following:

- **Cost Control** – Cloud 2.0 is about new services. But bringing them to market requires that CSPs closely monitor their costs and carefully manage and control the complex integration of infrastructure and application layers. The ability to employ repeatable processes in the deployment of different services could significantly boost monetization.
- **Pre-packaged backup and recovery services** – When asked in the 451 Research study to list the managed services that will consume the most spending in the next two years, backup and recovery placed first. Offloading this chore to CSPs would in turn offload a major ongoing headache from IT organizations.
- **Speed to market** – Agility and quickness are crucial in terms of the way many organizations are learning to compete. CSPs need the means to help customers get new services to market in days or even hours, rather than in weeks or months.
- **Cloud service performance** – The business environment is highly dynamic. This dynamism must be matched by equally flexible and scalable cloud services. The hardest part of this for CSPs is ensuring a high level of reliability and security to properly handle higher-stakes mission-critical applications. By contrast, Cloud 1.0 was mostly about handling email and application development.
- **SLAs are front and center** – Customers need and demand predictability from their CSPs, just as they can expect it from their own datacenters. They want service-level agreements that deliver measureable capex and opex savings without compromising service availability.
- **Services that are hybrid-cloud ready** – While hybrid cloud is still in the early adoption phase, customers clearly understand the requirement of workload portability between different clouds in a hybrid environment. For the CSPs, this means finding a way to securely deliver network policy management and agile infrastructure provisioning that is virtually transparent to the customer.
- **Global-ready solutions.** For so many businesses, the Internet means the world is their oyster – potentially. They are not bound by fixed locations. For CSPs, the opportunity here is to provide services that account for the specific geographic environment in terms of compliance, regulation and data privacy.

What Customers are Looking for in a CSP

In the context of Cloud 2.0, customers are trying to move away from the stand-alone, isolated systems and infrastructure of yesterday and move toward rapidly configurable systems that are a match for the business challenges they face. To this end, they want a fully application-aware 'business ready' cloud platform for IT service delivery.

The 451 Research study yielded clear insights into just what customers want from a CSP. The CSP attributes highlighted in green in Figure 4 represent those areas where users feel their service providers come up short on delivery. In that sense, they may well represent those areas of greatest potential opportunity for CSPs seeking to expand their business by responding directly to customer needs.

Figure 5: How Customers Choose Cloud Service Providers

Respondents were asked to provide the following information:

1. Allocate 100 points among the following 5 categories according to how important they are in selecting a service provider.
2. From the list below, choose the three attributes that are most important in selecting a service provider.
3. Please rate each of the attributes for how important they are in selecting a service provider, where 0 is not at all important and 10 is extremely important.
4. For each attribute, what best represents the PROPORTION of other service providers in the marketplace that meet this attribute, based either on your own experiences or what you've heard?

Source: 451 Research, Hosting and Cloud Study 2015

Products/ Services 23%			Company Qualities 22%			Customer Service 21%			Pricing 19%		Sales Team 15%		
	% Select Top 3	% Few/None Meet Need		% Select Top 3	% Few/None Meet Need		% Select Top 3	% Few/None Meet Need	Rating 0-10		% Select Top 3	% Few/None Meet Need	
Secure	51%	25%	Trustworthy	48%	34%	Technical Knowledge	45%	23%	Value for Money	8.3	Trustworthy	44%	33%
Performance	47%	23%	Technical Experts	41%	23%	24x7x365 phone support	34%	25%	Enterprise agreements	7.6	Product Knowledge	39%	21%
Uptime/Reliability	41%	27%	Experienced	35%	25%	Responsive	33%	29%	Economical/Low cost	7.6	Responsive	33%	30%
Industry specific solutions	22%	42%	Consistently Deliver	27%	38%	Knows my Business	26%	44%	Bundled Pricing	7.4	Understands my Business	33%	44%
Open/Flexible Platforms	21%	34%	Innovative	26%	29%	Accessible/Easy to reach/Multiple Access Points	24%	28%	Flexible Payment Terms	7.0	Easy to do Business With	28%	29%
						Work together to deal with problems	24%	36%	Pay as you Go	6.7			

This customer wish list can be neatly summarized as follows: They want services that give them sustained innovation without adding risk. The Cloud 1.0 requirements of cost savings and associated factors fall to the back of this new set of demands from CSPs. Not surprisingly, heading the list are services that perform highly reliably and securely. The data shows that customers feel many CSP offerings can fit this bill. Where CSPs fall short today is in delivering industry-specific solutions, and in offering open and flexible platforms. This latter feature becomes more prominent as customers pivot to hybrid cloud environments.

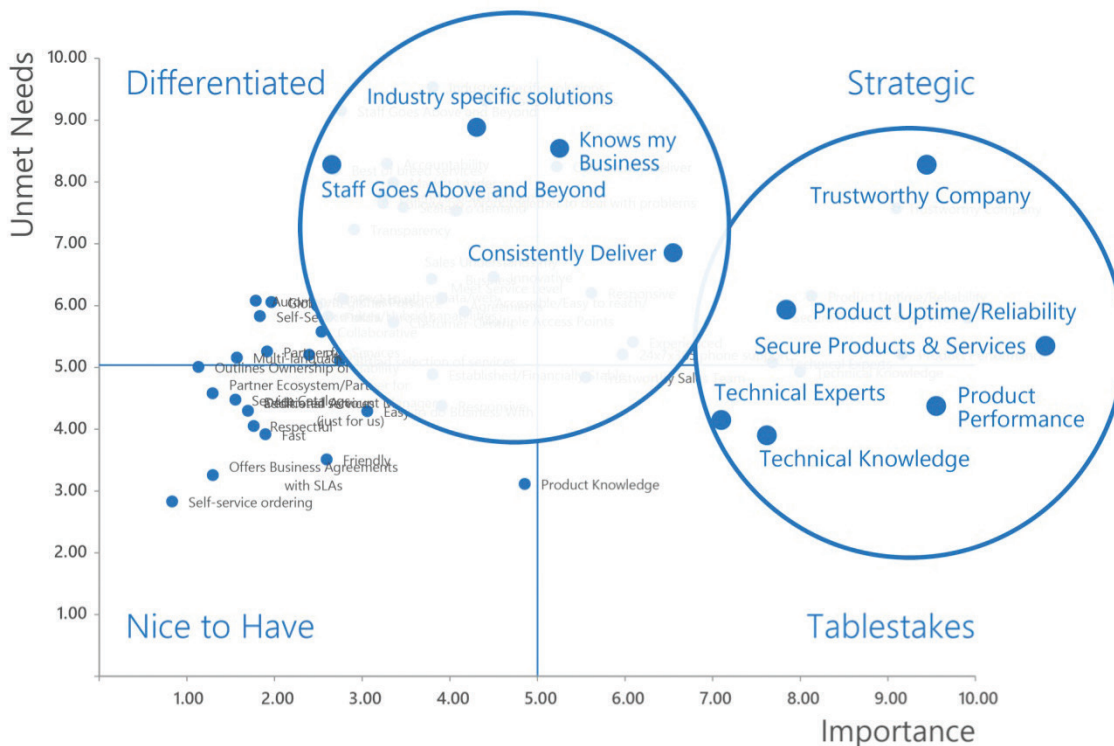
Right behind the demand for services themselves is a desire to work with trustworthy companies that consistently deliver those services backed by deep experience and in-house expertise. This is where brand names can really matter. Customers have long and beneficial relationships with known and trusted partners and other companies clearly committed to market longevity.

The third key factor in selecting a CSP is customer service, the study data shows. Just as ‘industry-specific solutions’ was shown to be lacking in products and services, a partner that ‘knows my business’ is clearly a gap that customers feel CSPs are not filling very capably. Success awaits those CSPs that can optimize their infrastructure, paring back time spent on operational issues and freeing up time to develop business-level relationships with clients.

Figure 5 summarizes these demands graphically. It is customers, not CSPs or their partners, that are defining the requirements of Cloud 2.0. To understand why trustworthiness is such a vital consideration in selecting a CSP, consider just what the services provided by the CSP and deployed by the customer *mean* – they represent the face of the customer to the world. If applications based on these services perform sluggishly; if client data gathered by these applications cannot be assured; if non-interoperable clouds worsen system recovery from a failure – the customer is then in a world of hurt.

Figure 6: Customer Requirements Define Cloud 2.0

Source: 451 Research, Hosting and Cloud Study 2015



The obverse of course is that there is significant upside for the CSPs that figure out how to deliver cloud environments from an automated platform offering self-service capabilities tuned to specific workloads.

Delivering on Customer Demands

The ability for a CSP to build and offer the kind of multicloud services customers want requires an underlying infrastructure designed to work seamlessly from hardware to applications in this multicloud environment. But this has to be done in a way that reduces the CSP's total cost of ownership to deliver healthy margins and provide the investment needed to develop more services.

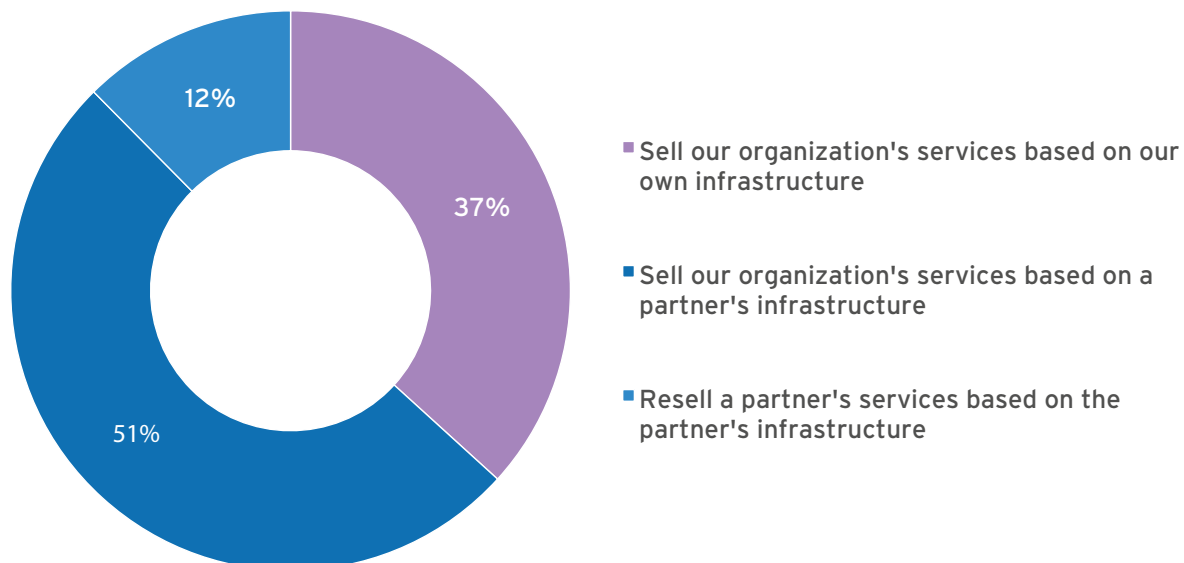
A key to making this happen is the ability of CSPs to insert as many repeatable processes as possible into the development and delivery of new services. This means having an underlying platform utilizing a software-defined network (SDN) model, allowing the CSP to on-board and more rapidly install new services with far less operational complexity. The SDN model facilitates rolling out repeatable processes, such as security provisioning and validation. The result is lower TCO as well as faster time-to-market for new services. And when services can be provisioned and rolled out more quickly, meeting SLAs is easier. Repeatability means less human intervention, and therefore less chance of human error.

An even greater potential benefit of the SDN model is derived when repeatable processes save the CSPs time on operational issues such as hardware provisioning, cooling, licensing and so on. This gives the CSP newfound resources to develop the industry-specific solutions and individual customer knowledge that was shown in our study to be vital in selecting a CSP. In other words, it enables the CSP to function as a strategic partner, not just a service provider.

Finally, the 451 Research study shows that successful CSPs will leverage services based on the infrastructure of highly trustworthy partners (see Figure 6). No one, not even the biggest IT vendors, can go it alone when it comes to developing and deploying a cloud services platform that meets the complex and dynamic needs of customers. Rather, this kind of solution is far more likely to be the product of a partnership of equals dedicated to offering best-in-class hybrid, IaaS, PaaS and SaaS resources.

Figure 7: Future CSP Revenue Tied to Partnering Success

Source: 451 Research, *Hosting and Cloud Study 2015*



Conclusions and Recommendations

- A majority of the 1,700+ enterprise end users polled by 451 Research believe that up to 75% of their applications will run in the cloud within three years. During that time, their expectations from CSPs will be met only if CSPs can deliver a business-ready infrastructure, replete with pre-packaged solutions and the highest levels of security as a given.
- Being inherently conservative and risk-averse, IT buyers will choose cloud partners based on which providers they trust the most, believing they will deliver the highest level of services and support, increasingly tuned to the specific needs of their industry. Thus, partnering for CSPs is mission-critical as they seek out cloud platforms on top of which they can build sustainable, scalable services at the maximum speed and the minimum cost.
- CSPs need to be keenly aware that customers are expecting nothing less than full-service IT delivery beyond the simpler infrastructure offerings that dominated the Cloud 1.0 era. In particular, the 451 Research survey data shows that the application services that customers want most include database, email, business applications, VDI and personal productivity tools. CSPs looking to get a toehold in new accounts and solidify their standing in existing accounts should be prepping packaged backup and recovery services.
- Finally, remember the main challenge for the customers: Innovate without adding risk. The next wave of customers are looking to their CSPs to provide a business-ready cloud infrastructure. Thus, for CSPs the need today is for an elegantly architected cloud platform that users see as operationally efficient and enterprise-grade.