Becoming a cloud service provider:

The evolution of communications service providers
Cloud computing for retail
Executive summary
For communications service providers (CSPs), offering cloud-based services is the way forward for business expansion and revenue growth. Millions of people are picking up new applications and services with enthusiasm, in both their personal and professional lives. So, cloud-based services, with their rapidly increasing adoption rates, offer CSPs a once-in-a-generation opportunity to extend the scope of services they provide to create new value for customers and drive growth for their organizations. CSPs are perfectly positioned to take advantage of existing strengths, relationships and their established asset base of networks, systems, processes and other resources to deliver these services and applications to business and consumers, using cloud technology and business models.

This market opportunity has tremendous potential. CSPs that transform themselves into cloud service providers could extend their presence well beyond the traditional communications industry market into the Information and Communications Technology (ICT) industry — and even the media and entertainment sector and business applications space — a vastly larger market than what they are able to pursue today.

But in an environment where competition is coming from all fronts, and not just traditional competitors, CSPs must make informed decisions about all aspects of this significant new endeavor. Specifically, they must carefully define their strategic approach, assess potential vendors and the platforms they offer and determine the market segments they should initially pursue and the services with which to do so.

If they take these actions quickly, decisively and boldly, with a vendor partner serving as a trusted advisor, they stand to reap maximum profit and business growth from this once-in-a-generation opportunity. However, they should not rush to market with an ill-defined approach or sit on the sidelines too long before entering the game, because either action could potentially render them unable to capitalize fully on exploding demand.

This paper examines ways that CSPs can take advantage of cloud computing — both internally, for their own operations and data centers, and externally, as a cost-effective way to create, manage and monetize cloud-based services for their customers.

Cloud computing and CSPs: Exploiting a once-in-a-generation opportunity
Enterprises are rapidly embracing the incremental value that cloud services can bring, from both a business utility and a cost perspective. And CSPs, with their unique assets, systems and resources, can provide the types of services enterprises of all sizes are seeking, along with the performance and reliability they expect. Additionally, if properly equipped with the right new infrastructure to support a comprehensive cloud services operation, CSPs can effectively possess the scale and life cycle management capabilities these new services will ultimately require.
This unprecedented opportunity for CSPs to expand business with cloud services requires tremendous operating dexterity. CEOs in all industries acknowledge the increasing complexity being thrust upon them. The key to improving operational effectiveness and efficiency in the face of this increasing complexity is to simplify operations with new technologies and architectures, such as those enabled by cloud computing, while simultaneously simplifying business processes. Those who seize the opportunity and drive toward a better, not just different, operational infrastructure stand to benefit from simplifying complexity and also lowering costs. As such, they will be better positioned to expand their business and increase revenues with improved profitability. We have recently seen the most dexterous and sophisticated CSPs make significant moves in this direction, and they are already beginning to realize the benefits (Figure 1).

As CEOs of CSPs develop their strategies and begin to prepare their organizations for increasing complexity, they also have a watchful eye on customer needs and new product and service trends. It is clear to all that the on-demand services model is only going to continue to gain in popularity and acceptance as adoption rates and application revenues continue to climb. Accordingly, using business intelligence and analytics applications to understand customer needs and looking for better ways to meet customer demand are paramount on the minds of CSP CEOs, even more than CEOs from other industries, as seen in Figure 2.

![Figure 1. The best-performing companies (standouts) seek simplification as the top means by which their organizations will attempt to manage increasing complexity. CSP CEOs identify simplification, more so than CEOs from other industries, as the best means to manage increasing complexity.](image-url)

![Figure 2. CEOs of CSPs recognize the need to better understand the needs of their customers and their desire for new products and services more so than other CEOs.](image-url)
Because they are large enterprises, CSPs can capitalize on cloud computing in a number of ways:

- Internal and external cost and operational efficiency benefits can accrue to the CSPs that elect to deploy cloud operations for services delivery to their employees, partners and customers.
- Cloud technologies and the business models they enable can help tremendously in both enhancing the operating dexterity CSPs require and enabling better cost control.
- Supported by cloud technologies, a CSP’s business becomes more agile and responsive, and the organization is better prepared to create, manage and monetize innovative services.
- With an infusion of business intelligence and analytics solutions, CSPs can launch and manage smarter promotions and campaigns and make better-informed market segmentation decisions more quickly and with greater confidence.

Demonstrated returns reveal themselves swiftly, and there is great potential to improve future business outcomes. With the aid of a trusted advisor and technology partner, you can develop your cloud strategy and investments in such a way as to reap benefits of cost and productivity gains in both your private (internal) cloud services launch and your public (external) services launch to customers.

There are ways to make the most of your internal private cloud infrastructure investments, including building out your public cloud services environment. It is now possible for a CSP to offer a variety of cloud services rapidly and cost-effectively with pay-as-you-go pricing — and provide easy-to-use, secure, self-service portals where customers obtain, manage and pay for these cloud services. A cloud-based infrastructure simplifies operations; lowers costs related to capital equipment, labor and energy; and enhances operating dexterity and agility.

With the right strategic vision, architecture and cloud service management platform, CSPs can not only build a simpler and more flexible service operation, but they can also lower ongoing costs while more rapidly launching, delivering and managing differentiated services to all types of businesses and consumers.
Taking the right approach to cloud

To create, deliver and manage communications services to customers efficiently and effectively, CSPs have built (and continue to maintain and enhance) extensive networks, support systems and sophisticated operating environments. As a result, CSPs have a significant advantage because their operations and processes have almost everything they need to create, manage, monetize and support a variety of new cloud-based services.

This new breed of services transcends traditional communications with blended IT-communications cloud services that CSPs are uniquely equipped to provide, setting them up to expand what they offer their customers. In this way, CSPs can improve productivity, enhance the availability of information and entertainment services and generally enrich the quality of service experiences that customers have in both their personal and professional lives. However, it is important to note that deploying cloud computing is not without its concerns and challenges, many of which are related to:

- Dynamic customer demands
- A fiercely competitive market landscape
- The challenges associated with selecting a vendor partner for your cloud initiatives
- Ensuring that you have developed the right strategy and approach before you invest

For example, as CSPs are spending billions of dollars to maintain and enhance their networks, Google and others are monetizing the networks very effectively, and at the expense of CSPs. After all, Google, Amazon and similar providers are delivering cloud services over the “free” Internet that organizations like yours provide and spend countless sums to maintain.
In addition, numerous suppliers, partners and vendors are aware of how well CSPs are poised to take the cloud services marketplace by storm, and they are offering a wide and sometimes confusing array of products and services that CSPs can choose from.

The good news is that many of the industry’s largest and most innovative CSPs are starting to approach cloud computing in a very thoughtful way. They are using it both as a foundational new architecture for their IT operations and as a way of delivering an entirely new breed of services they can offer their customers, especially the lucrative enterprise segment. These CSPs recognize that cloud is the secret weapon for more rapidly and cost-effectively creating, managing and monetizing high-value, relevant, blended IT and communications applications and services. And cloud technologies are helping them move to a lower-cost and more flexible operations infrastructure that is ideal and essential for supporting this self-service channel.

As some CSPs have found, when you take the correct approach to cloud computing, you feel the positive effects throughout your enterprise almost immediately—and you are prepared to embrace with confidence an ever more challenging, dynamic and competitive future. After all, the communications industry is the epitome of dynamic. With a flexible, resilient and well-architected infrastructure built on cloud technologies, you can support cloud-based services inside your organization and out. Employees, partners, customers and the CSP organization itself will all benefit from well thought out cloud deployments.

The key is identifying the right vendor partner. This partner should be a trusted advisor who understands the unique position that CSPs are in and has worked to create solutions and services specifically developed to help CSPs evolve into cloud service providers. Then, the process of evolution can proceed in a logical progression.

Success with cloud: Getting started

The following actions can help you get your organization started in its evolution to cloud service provider:

- **Develop a cloud services business strategy.**
  This strategy should support your corporate strategy, address priority market segments and provide a solid foundation for launching and supporting such services that includes people, processes and technology. It should also make the most of your corporate strengths.

- **Align your cloud and general business strategies.**
  You should not view cloud services as a brand new line of business; the goal is for cloud to complement your existing business service lines. With this alignment, you can use your market knowledge and in-house expertise as you launch your cloud portfolio.

- **Select partners that can help you grow.**
  Rushing to market alone with cloud services is not an equation for success. Instead, you want to go to market with industry leaders in the IT space. Such partners can introduce you to a relevant set of innovative application and services partners that can provide an evolving supply of new services and applications for your customers.
With cloud computing, your resources become virtual, rather than physical. No longer are you reliant on dedicated, costly and under-utilized standalone resources to provide business solutions and user services. Instead, the services can now come from virtualized resources, which will save capital equipment costs, enable better utilization of existing assets, lower energy consumption, reduce the amount of resources in the data center needed to support the business and thus make better use of precious space — and much more.

Consider the disparate databases of customer and service information you currently maintain. If you use cloud technology to consolidate and virtualize the servers and storage assets being used by this collection of databases, you can deploy advanced business intelligence and analytics tools to mine the aggregated data much more quickly and easily. You can then capitalize on the information and intelligence provided by these systems to develop smarter campaigns and more targeted promotions and better personalize the up-selling and cross-selling of additional cloud services.

Adopting a judicious use of cloud computing technologies for your own IT infrastructure of applications, servers, storage, databases and more will help you reduce operating and maintenance costs, lower energy consumption and free up data center space. Just as important, it will provide your organization with some experience with cloud services and a foundational capability that you can expand on internally or use to start building your own public cloud service offerings. The secret to success in this process is to obtain assistance from experts who can perform an effective analysis of your operations and determine where your organization can gain the greatest and fastest benefit from cloud.

**Your evolutionary journey: From communications provider to cloud service provider**

The key to success in the evolutionary journey from CSP to cloud service provider, or the new CSP, is being able to create, manage and monetize (sell) services quickly to achieve rapid return on investment (ROI) and market share gains. Therefore, the strategies you develop for the future should consist of these processes:

1. Optimizing the effectiveness, agility and cost structure of your internal infrastructure, using cloud technology
2. Providing a diverse and innovative cloud services portfolio that attracts a wide range of customers in enterprise and consumer segments to drive profitable growth
3. Differentiating the customer experience your brand provides to attract and retain customers in light of intensifying competition

**Job #1: Optimizing your internal infrastructure with cloud**

It is imperative that a CSP not endeavor to rush services to market without a well-designed infrastructure that can create, manage and support these services in a sustainable and profitable way. Cloud computing offers an excellent alternative to operating and maintaining large, costly and loosely connected server farms, databases, storage infrastructures and networks.

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Job #2: Reinventing your service portfolio

CSPs — along with many others — are racing to offer cloud-based services. And as we have already established, CSPs like you have the assets to do this best. But what will distinguish the winning CSPs from the rest of the pack? What will allow you to reinvent your business by creating this vital new revenue stream quickly and cost-effectively with a sustainable and well-designed infrastructure?

In this journey of reinvention, the winners will be the CSPs that offer the most compelling and attractive set of services, many of which must come from a diverse array of ecosystem partners. These services and applications will be easy for customers to obtain, use and manage (think self-service). The services will be priced correctly in simple-to-understand models and will be continually enhanced and refreshed. And, most important, there must be the highly automated and intelligent infrastructure to do all this quickly and cost-effectively, or your business won’t operate profitably.

Because you are a CSP, you can do this, with help from the right trusted advisor and solution partners. You can deliver innovative new offerings while expanding the pull-through of existing services (which could help protect your customer base from web-hosting providers and others seeking to cannibalize your core services). It does not matter whether you are in a developing or mature market, if you act quickly and in a well-considered and decisive manner, you can position your organization to create and launch new services nimbly and profitably.

Cloud essentials: Automation

No matter where you are in the cloud-enabling process, automation is essential. Therefore, you should weave these actions into your cloud plans:

- **Invest in an integrated cloud services management platform.** An optimal cloud services management platform will help you handle, using the latest interface technology and open standards, the business relationship needs between partners, your business processes and customers. It will also support multiple customer environments (private data center, private cloud, public cloud), carrier-grade performance requirements and scalability, multi-tenancy and an assortment of heterogeneous technologies. Be sure to select a cloud service management platform with built-in security and strong service level agreement (SLA) monitoring and enforcement mechanisms.

- **Establish automated partner processes.** A rich and steady influx of new applications is the easiest way to demonstrate value to users, keep them engaged and prevent them from switching providers. A developer-friendly way to add partner-provided content to a network connection 24x7 can shorten time-to-market, minimize recoding with standard application programming interfaces (APIs) and templates and support conversion of certain applications for mobile access.

- **Support on-demand customer use.** Success will come from building a robust but simple-to-use self-service web portal that will provide customers with fast and easy access to your rich portfolio of innovative applications and services, and the ability to buy and manage these services and their account. It is equally important to ensure tight integration with back-office systems so that ordering, provisioning, metering, rating and charging, billing and other functions all support user activities and transactions appropriately and perform as needed.
CSPs can capitalize on the agility of cloud computing technologies to drive differentiation and experiential benefits to customers. As fresh insights accrue, it is easier to make new service recommendations — recommendations that are highly relevant, fully personalized and targeted to specific business user productivity needs or lifestyle service or support capabilities. After you gain a better understanding of what your customers want, and see which services resonate best, the relevancy of your future offerings will rise dramatically. Your company can offer businesses and consumers the applications, services and content that will enrich the quality of their personal and professional lives, improve their productivity and increase the enjoyment they derive from the services you provide.

Choosing the right path forward to enable your organization's evolution
To optimize your internal IT infrastructure, build and deliver a compelling services portfolio and provide a differentiated customer experience, you require a simple yet comprehensive integrated cloud services management platform. The platform should effectively harness the vast capabilities you currently have in place along with those of a broad and diverse partner ecosystem. It needs to be able to onboard partner applications and services easily, create new service mashups with network-enabled widgets, capitalize on the vast application developer community and be able to adjust and expand the service portfolio continually to meet ever-changing customer needs. Most important, this platform must help you create, manage and monetize cloud services.

Job #3: Differentiating the customer experience
Of utmost importance in the whole equation is the customer experience. A rich portfolio of compelling, relevant and well-targeted services will be attractive to customers. However, if the delivery of these services is deficient in any way, your customer experience might be irreparably damaged to the point that they could take their future services dollars elsewhere.

People have to be able to obtain and use their new services easily and intuitively without having to rely on the assistance or intervention of CSP support personnel. This means that comprehensive and well-designed service catalogs and self-service portals are no longer just a good idea; they are vitally important for both commercial success of the offerings themselves and your profit margins. New services that generate thousands of additional calls into call centers in the first days after launch can adversely affect a company’s revenue growth and profitability. So, business leaders at CSPs want an unquestionable means of achieving the operational agility and dexterity required to meet these realities. You need a new way to win in this fiercely competitive battle — and cloud computing has the potential to become the best weapon in your arsenal, if implemented with the right approach.
Creating cloud services requires igniting innovation and differentiating your service portfolio by tapping into an ecosystem of partners who can:

- Provide ready-to-market applications, services or content.
- Develop new applications and services from rich, pre-configured development and testing environments.
- Market white-labeled cloud services provided by a trusted supplier.

To create, manage, deliver and support highly secure, quality-assured services, you need an open, end-to-end, carrier-grade, scalable and integrated service management solution that provides features like:

- Dynamic provisioning of virtualized resources to support service demands.
- Rapid partner-application enablement
- Scalability to millions of new clients and services
- Extremely high virtual machine density per server
- Ability to provision of tens of thousands of virtualized service instances per hour
- Real-time visibility into the cloud infrastructure
- Built-in security, monitoring and high availability
- Usage metering and accounting that is ready to use
- Utilization of open standards and APIs to ensure integration and extensibility
- Predictive and root cause analytics to help you deliver carrier-grade service reliability and benefit from other functions to reduce operational costs while increasing speed and simplicity

To monetize your cloud investments, you must drive the commercial success of your cloud services by:

- Transforming and training your sales force and channel partners so they can sell this new breed of services and ensure their maximum effectiveness
- Capitalizing on business intelligence and analytics so you can offer more targeted promotions, improve campaign effectiveness, better up-sell and cross-sell, create bundles and more
- Optimizing your web portal and storefront to provide customers easy access to and management of the cloud services in your portfolio
- Integrating your cloud service management solution into your operations environment

None of these activities is easy. However, analysts and vendors alike have recognized that CSPs are well-positioned to become major providers of innovative productivity, communications, information and entertainment applications, services and content. As a result, an almost dizzying array of cloud products, platforms and services are available from a daunting number of vendors — big and small.

With so many choices, many CSPs are not sure which vendor or which products to select and are not sure where to turn for a real, end-to-end solution that will solve all their real-world needs. So many solutions offer virtualization, consolidation, remote hosting and development platforms. So how do you choose? How do you determine who is best able to help you in your evolution to cloud service provider?
To launch your new cloud services business successfully, you need more than a technology vendor; you need a trusted advisor to be your business partner. And this business partner must not only have the technology you need to deliver services, but also a complete set of capabilities to offer you a truly end-to-end solution:

- An extensive partner ecosystem with cloud-specific programs tailored to meet the unique needs of CSPs
- The most secure, scalable and carrier-grade service management platform available to launch, manage and support this entirely new business and help it be a commercial success
- Sales enablement training
- Web-portal optimization and integration experience
- Business intelligence and analytics applications
- Direct sales transformation support for cloud efforts
- Development and test environment and experience
- Cloud services readily available for rebranding and remarketing to your customers

The right business partner has the knowledge, experience, ecosystem partners and expertise, technology, software applications, system and other resources and related capabilities to help ensure that your services drive profitable revenue growth and achieve the business expansion goals set by management. The right partner will be up to the challenge of deploying a comprehensive cloud solution that meets your specific needs.

For example, you do not need to waste time sifting through hundreds of companies that can’t provide you with the right set of partner-provided applications and services, or a basic service delivery technology platform that doesn’t support the unique scale, security and performance standards you and your customers have come to expect. The right business partner should be able to provide you what you need from their own portfolio or bring in the partners that will have just what you need.

This business partner should also provide the robust cloud service management solution developed specifically for CSPs that will rapidly enable partners and help you get new services to market fast. The right business partner also needs the deep domain knowledge in IT, cloud and the communications industry and have the skilled resources to help you move from strategy to deployment to service launch and beyond.

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**The ideal cloud service provider platform for CSPs**

The ideal cloud service management platform for CSPs is an advanced, carrier-grade, intelligent and integrated solution that enables you to create, manage and monetize cloud services fast by:

- Rapidly launching partner-enabled applications and services
- Infusing creativity into the service portfolio
- Exploiting advanced automation
- Relying on carrier-grade performance and outstanding scalability
- Delivering highly secure, quality assured services
- Enabling sales transformation
- Using business intelligence for differentiation
- Optimizing channels and self-service portals
To ensure that the cloud service provider solution helps you take advantage of all the benefits cloud can bring them, you should seek out a partner who:

- Has many years of experience engaging with CSPs from around the world and deploying complex solutions with them
- Employs thousands of telecommunications industry–knowledgeable professionals around the world to support projects throughout their lifecycle, from strategy to deployment
- Offers industry-leading integrated cloud service management solutions, with the software, systems and services teams that have deployed proven cloud infrastructure solutions
- Has an established track record of building, equipping and operating sophisticated data centers to very stringent operating requirements
- Understands the needs and imperatives of CSPs and has the knowledge and experience with their end-to-end operations environments and business processes

Such a partner can apply communications industry expertise and cloud and IT technology experience and expertise to integrate partner-provided capabilities, new cloud service management solutions and more. The result is the formation of a simple and completely integrated, end-to-end cloud solution that enables CSPs to create, manage and monetize cloud services rapidly, for the public and their own organization.

**Conclusion**

The world is getting smarter. With the proliferation of interconnected devices that have made innovative services easy to obtain, users of all kinds have developed an insatiable appetite for them, confirming the many advantages that technology can bring to our personal and professional lives. And, there are millions more innovative services still on the horizon.

The rising popularity of services and applications that are delivered from the cloud over robust next-generation networks provides an unprecedented opportunity for CSPs to reinvent themselves as the preeminent providers of these innovative and desirable communications, productivity, information and entertainment applications and services. However, to make the most of this opportunity, CSPs must also step up to the challenge to assure customers that the quality of the service provided is what the customer wants and expects it to be — secure, consistent and available when, where and how the user wants it.

To accomplish these aims, CSPs require a comprehensive cloud service provider platform that can harness their vast capabilities and those of a broad and diverse partner ecosystem to meet customer needs for innovative services and applications and a consistent, high-quality user experience. CSPs also need a trusted, knowledgeable and experienced business partner who has chosen to invest in a solution and related capabilities specifically developed and packaged for CSPs. With the aid of this business partner and its CSP-specific offerings and vast ecosystem partners, CSPs can design, create, deliver, manage and monetize a new generation of cloud-based applications and services rapidly and cost-effectively.
The right business partner supplying the right end-to-end cloud solution and helping CSPs offer the right set of ever-evolving services will help CSPs capitalize fully on the market shift toward innovation, create and capture new value and become the providers of choice for the new era of applications and services the market demands. CSPs can and should evolve into cloud service providers, and they have most of the things they need to do it better than any other set of companies in the world. With the right business partner, they can do it smarter and faster than the competition. And, what can be the result? Strong business growth and expansion with sustainable profitability.

**Why IBM**

IBM has served the communications industry since shortly after the company’s formation almost 100 years ago. IBM has continued to invest in the development of the skills and experience needed not only to solve our communications clients’ most complex problems, but also to transform the industry. IBM has spent nearly $12 billion to deepen its communications industry expertise with strategic acquisitions and 22,000 IBM resources that directly deliver services to our valued communications industry clients.

IBM also has extensive cloud experience. IBM has been developing its cloud computing ecosystem since 2004, when it launched the IBM Software as a Service Partner Program. IBM also has 11 cloud labs for proof of concepts, cloud development projects and client pilot programs, two cloud data centers, 34 data centers for delivering cloud services and 64 sites for managed security services and information protection services. Thousands of clients use our cloud computing solutions every day.

Now IBM has combined its extensive communications industry experience with its cloud expertise to become the first major technology company to offer an end-to-end cloud computing solution portfolio specifically designed for CSPs that enables them to launch private and public cloud services simply, quickly and cost effectively.

**Change is possible. Enable your evolution.**

**Do cloud smarter. Do cloud faster.**

**Do cloud with IBM.**

Find out just how quickly you can take action to create, manage and monetize cloud services for your customers.

[ibm.com/telecom](http://ibm.com/telecom)
1 Essentials for CSPs to Succeed with Cloud-based Services: An executive brief sponsored by IBM. Stratecast, a division of Frost and Sullivan, October 2010.