

# Choosing a partner for enterprise cloud production workloads

*Migrating production workloads minimizes complexity, improves quality and speed of service*



## Contents

- 1 Migrating production workloads: is the potential worth the risk?
- 2 Solving ongoing challenges, seizing new opportunities
- 4 What to look for in a managed third-party cloud
- 6 IBM SmartCloud services
- 9 How to get started
- 11 For more information

### **Migrating production workloads: is the potential worth the risk?**

Thirty-five percent of business leaders want cloud computing to spur “radical business innovation.”<sup>1</sup> That’s the finding of a recent IBM Institute for Business Value study. But thus far, use of clouds has been more practical than profound. Many businesses regularly use public clouds for application development and testing and for data backup and storage. In doing so, organizations find that cloud computing can help solve everyday data center challenges: sprawl; arduous processes to procure, build and maintain server environments; operational inefficiencies; and, of course, rising costs.

IBM believes that increased innovation will come once organizations migrate mission-critical production workloads to managed clouds: clouds administered by outside technology companies that provide consistent availability; enterprise-class security; full management of the cloud infrastructure and workloads; scalable access to applications, resources and services; and an array of other cloud management functions. Workloads such as SAP applications, along with additional enterprise resource planning, customer relationship management, human resource management and supply chain management programs, can bring more value to the business once migrated to these types of clouds. In helping companies save money and staff resources, managed clouds can free up funds and talent to focus on new products and services that will bring increased business value to the organization.

Still, many CIOs, CTOs and line-of-business leaders hesitate to migrate these applications to the cloud. Why? Business and IT leaders worry about a third-party partner’s ability to provide the enterprise-class security needed, both for the cloud and for the virtual private networks used to access the cloud. They are concerned that the availability options offered by many vendors are insufficient for production workloads. They perceive difficulty in requesting and modifying cloud services. They perceive a lack of vendor support. They fear running their workloads on the vendor’s commodity hardware. They worry about the provider’s ability to scale operations globally.

While these concerns are valid, the right managed cloud can effectively support production workloads while simultaneously helping companies seize the new business opportunities that cloud computing enables. This paper will examine the benefits of migrating and running production workloads in a managed third-party cloud, discuss what to look for in a managed-cloud provider and list ways in which organizations can begin plotting a cloud strategy for production workloads. IBM's offerings in this arena—IBM SmartCloud® Enterprise+ and IBM SmartCloud for SAP Applications—are also discussed.

### **Solving ongoing challenges, seizing new opportunities**

Migrating production workloads to a third-party managed cloud, and running them there, can help organizations conquer ongoing workload challenges and seize new opportunities. Maintaining workload application landscapes in-house is arduous. The proliferation of SAP and other systems has resulted in landscape complexity. This complexity, in turn, often causes management difficulties, quality of service issues, slower-than-optimal deployment capabilities and increased total cost of ownership. Many organizations also struggle with finding and retaining professionals with the specialized IT skills—for example, SAP architecture skills and SAP Enterprise Resource Planning proficiency—needed to design, maintain and update these environments. Finally, IT divisions often cannot focus on new activities and implementations that would bring increased value to their businesses because of the resources required simply to maintain the existing production workload landscape.

---

### **DriveWyzé expands its North American business with SCE+**

DriveWyzé is a travel and transportation company that provides mobile applications for truck drivers—allowing drivers to bypass weigh stations and thereby decrease travel times. The company wanted to expand its business in North America. In doing so, it needed to quickly increase awareness of its weigh station bypass solutions and speed time to application deployment.

To accomplish this, DriveWyzé partnered with IBM. IBM deployed SmartCloud Enterprise+ for the company's United States and Canadian markets. SmartCloud Enterprise+ provided the company with robust, affordable, enterprise-level cloud capabilities accessible from and scalable throughout the United States and Canada. As a result, the company was able to quickly deploy its applications for use in new states and provinces. SmartCloud Enterprise+ also helped the company minimize the costs and resources needed for start up.

---

Use of a third-party managed cloud can alleviate these issues. More important, these clouds can also help organizations seize new opportunities by leveraging cloud capabilities for competitive advantage. A cloud's ability to provide on demand provisioning and de-provisioning can help improve organizational agility, flexibility and service. Clouds can have particular value for organizations that need to facilitate mergers, acquisitions or divestitures, allowing new corporate infrastructures to be up and running in a matter of days to more easily meet deadlines. By leveraging cloud computing and cloud services, these organizations can combine or modify infrastructures to suit changing business needs—a much easier process than building an entirely new infrastructure.

Cloud computing for mobile applications can also help companies more tightly link themselves to consumers and clients. A customer in a consumer electronics store, for example, may use a cloud-enabled smartphone application to check in with the retailer upon arrival, obtain coupons tailored to his or her shopping patterns, or receive other pertinent information. The application may provide the consumer with access to cloud-stored receipts, making exchanges easier. Or the consumer may be able to use the program to check for in-store product availability. Cloud-enabled applications can also help organizations study social media to track brand sentiment. Analytics and internal data-sharing applications can be deployed to mine information for business insight and to share findings, leading to improved decision making.

---

#### **Cloud computing solution brings value to institution of higher learning**

**IBM used SmartCloud Enterprise+ to develop a campus-on-the-cloud solution to help an institution of higher learning offer new benefits to its students and employees. The IBM solution provided the institution with cloud-based applications for enrollment and for assignment and tracking of student groups. Additional applications covered billing and student payments, confirmation of enrollment and scholarship reports. With this fully-featured campus-on-the-cloud solution, IBM helped this university reduce computing costs while providing quick time to implementation.**

---

#### **What to look for in a managed third-party cloud**

Not all third-party clouds are appropriate for production workloads. IT and business leaders are right to worry about challenges—from security to computing capabilities to global scaling. To choose an enterprise cloud that can fulfill security, scalability and flexibility requirements, organizations should consider the technology provider's:

- Automation and standardization capabilities
- Configuration options
- Security levels
- Client control features
- Management features
- Ability to fulfill the client organization's business needs.

An appropriate environment for production workloads offers the right mix of automation, standardization and client control. The third-party managed cloud should enable automated management for quick provisioning of the cloud, while providing the client organization with self-service capabilities and rapid services deployment capabilities. The technology provider should offer flexible configuration options and a management platform through which the client organization can configure the cloud to meet its specific business needs. Hardware providing sufficient computing power for production workloads should be used, and the provider should discuss hardware options with the client.

---

### Logistics company eliminates costs of asset ownership with SmartCloud Enterprise+

A large logistics company wanted to eliminate asset ownership and associated costs while simultaneously gaining the capability to scale computing resources to meet business demand. It chose IBM SmartCloud Enterprise+ to accomplish these goals. As a result of its work with IBM, the company was able to transition its existing applications and production workloads to the cloud while obtaining a flexible and scalable service delivery model that supports its plans for growth.

---

Since security is so important, the managed cloud service must also provide enterprise-class security and isolation protocols. In a multi-tenant delivery model, this can be accomplished by deploying the same design principles as those used in private cloud implementations, with appropriate isolation among the organizations sharing the cloud. Dedicated servers that are physically isolated can be used for particularly sensitive workloads. Visibility into activities and threats to the client account are paramount, and the technology provider should employ skilled professionals to monitor client clouds for security threats. Secured virtual private networks can be deployed to further improve security.

While many cloud providers manage the hypervisor, leaving additional service management tasks to the client organizations themselves, the right third-party vendors for production workloads offer managed cloud services—providing a robust portfolio that spans from the virtual machine to the application level. Ideally, these services should be based on proven processes for advanced production workloads and they should facilitate faster service delivery.

Finally, the third-party cloud provider should be attuned to the client organization's business needs. Therefore, it should offer the organization choices in cloud deployment models—private, hybrid, or shared multi-tenant—as well as in availability options, service level agreements and pricing. Cloud environments should be capable of being deployed quickly to hasten the organization's time to value. The provider should have a proven, objective track record in building and managing demanding IT environments. It should also offer guaranteed, business-centric service agreement options, covering service times, production workload response times and availability. Support should be available 24 hours a day, 365 days a year.

## IBM SmartCloud services

With SmartCloud Enterprise+ and SmartCloud for SAP Applications, IBM offers managed cloud services that meet or exceed the benchmarks discussed above. Let's take a closer look at each.

IBM SmartCloud Enterprise+ (SCE+) is a standardized, ITIL-compliant, infrastructure as a service capable of being scaled across multiple cloud data centers on five continents. This fully-managed solution is available in dedicated, hybrid or multi-tenant deployments powered by IBM Power Systems™ or IBM System x® servers. It has been designed to support enterprise production workloads, along with applications in the development and test stages. The SCE+ service management platform enables virtualization and standardization of workloads and the most commonly repeated operating procedures.

Service management and automation capabilities also provide organizations with more rapid provisioning of resources. In fact, management above the hypervisor level is a key feature of SCE+. IBM has defined a full stack of managed services that span from the hypervisor to the application layer. In automating more than 70 tasks above the hypervisor level, IBM delivers capabilities in hours that would normally take weeks.

---

### SmartCloud for SAP Applications helps bank meet strict deadlines, avoid hiring costs

A large European bank was formed to receive depreciated assets from failing banks in its home nation. The European Economic Community had issued a strict deadline by which the receiver bank had to take possession of these assets. The bank issued a request for proposal for an enterprise resource planning system to provide back office support. The new system had to go live a little more than two months after the request for proposal was issued.

IBM worked with this bank to simultaneously deploy both SmartCloud Enterprise+ and SmartCloud for SAP Applications. This provided the bank with a fully-managed SAP service—delivered in six weeks—that enabled the company to initiate a production environment without the construction of a data center, meeting the European Economic Community's deadline while bypassing the need to hire highly skilled staff.

---

IBM's experience running and maintaining applications and production workloads on SCE+ helps IBM tailor and optimize them to suit the requirements of specific businesses and industries. For example, IBM has specific experience running SAP applications for organizations working in the consumer goods industry; hosting mobile applications for organizations working in the travel and transportation industry; and providing managed development and test services that meet the stringent requirements of organizations working in the banking industry.

Web-based administrative functions help organizations achieve a higher level of control. SCE+ allows organizations to control their cloud workloads and applications through a web-based management portal. Authorized users can log on at any time from any place to monitor, provision and otherwise control their clouds. New virtual machines become available shortly after the completion of these requests.

In addition, SmartCloud Enterprise+ offers enterprise-level security, reliability and service-request fulfillment options, tailored to meet a variety of budgets. (See Figure 1.) Security measures include multiple security and isolation features, along with enhanced physical security, intrusion protection systems and vulnerability scanning. These security measures make SmartCloud Enterprise+ appropriate for development and testing of applications in industries such as finance, which had previously only been able to develop and test on private

clouds. High reliability levels are accomplished through around-the-clock monitoring and management of the cloud infrastructure.

An IBM alliance with AT&T further helps allay the security concerns many organizations have about migrating their production workloads to the cloud. IBM's relationship with AT&T provides SmartCloud Enterprise+ users the option to connect to their clouds via AT&T's NetBond virtual private network. This provides added security and speed. SmartCloud Enterprise+, with the optional AT&T virtual private network, is designed to provide a pre-integrated, cloud-within-the-network service that is specifically built for business use—delivering the scalability and speed benefits of a shared cloud with the enterprise-grade security, performance and control attributes of a private cloud. This option helps reduce the many security and complexity barriers that prevent the adoption of cloud for mission-critical workloads.

Package	Virtual machine availability service-level agreement	Infrastructure services
Bronze	98.5%	<ul style="list-style-type: none"> <li>• 32-bit and 64-bit IBM System x—Microsoft Windows and Linux</li> <li>• 64-bit IBM Power Systems—IBM AIX®</li> <li>• Predefined selectable VM sizes (vCPU, memory, storage)</li> <li>• 24-hour service-request fulfillment goal</li> </ul>
Silver	99.5%	<ul style="list-style-type: none"> <li>• Bronze services plus VM mobility within a virtual cluster</li> <li>• 24-hour service-request fulfillment</li> </ul>
Gold	99.7%	<ul style="list-style-type: none"> <li>• Silver services plus automated restart on VM failure</li> <li>• 48-hour total service-request fulfillment goal</li> </ul>
Platinum	99.9%	<ul style="list-style-type: none"> <li>• Gold services plus storage replication across different physical storage devices</li> <li>• 72-hour total service-request fulfillment goal</li> </ul>

Figure 1. The tiered service structure of IBM SmartCloud Enterprise+ offers a range of choices in pricing, platforms and service-level agreements.

Finally, IBM offers business-centric service level agreements that provide organizations a choice of the infrastructure services to be performed, with availability choices ranging from 98.5 to 99.9 percent to meet specific business and usage requirements. If these service level agreements are ever not met, IBM makes financial remuneration to the client organization.

### SmartCloud for SAP Applications

SAP and Oracle applications are now critical to many businesses, but they place a heavy burden on computing systems. Until now, this burden could only be adequately addressed via on-premises solutions or private clouds. Now IBM offers SmartCloud for SAP Applications, making it possible to migrate and run these applications on the IBM cloud. These cost-effective offerings can help reduce complexity and total cost of ownership of SAP environments while improving service levels and speed of service delivery.

SmartCloud for SAP Applications supports all SAP Business Suite and SAP Business Objects products along with a variety of SAP middleware and partner products. Support for the SAP High Performance Analytics Appliance—an appliance that helps organizations access, explore, model and analyze data in real time without affecting the applications or systems studied—is also offered.

Built on SCE+, SmartCloud for SAP Applications delivers SAP environments through an enterprise-class, security-rich managed cloud infrastructure with fast provisioning

and flexibility. Improved service quality results from standardization and automation of SAP tasks, including provisioning, cloning, and refreshing. Standardized, well-defined processes are used to transition SAP environments to the IBM cloud.

---

### SmartCloud Enterprise+ helps chemical company with corporate acquisition

A large European chemical company had completed its acquisition of another chemical company based in a second European country. It needed a global solution for integrating and hosting the services of both entities, including SAP and non-SAP production workloads. IBM deployed SmartCloud Enterprise+ and SmartCloud for SAP Applications. This deployment resulted in a harmonized delivery model and infrastructure for both entities. In addition, this solution supports the acquisition strategy of the parent company and results in lower IT costs for the company overall.

---

SmartCloud for SAP Applications is backed by IBM's longstanding partnership with SAP. IBM has been a certified Global SAP Partner for the last 40 years, is currently a SAP-Certified Provider of Cloud Services, and has more than 10 years' experience managing SAP applications on virtualized, shared infrastructures. SmartCloud for SAP Applications also offers proven processes and an extensive SAP services portfolio.

As part of these services, IBM oversees SAP architectures and provides end-to-end landscape management—including such tasks as software patching of SAP applications and the underlying operating system, database and middleware support. A variety of service classes are available to meet a variety of budgets, availability and management needs. Support is offered around the clock.

### How to get started

Moving workloads to the cloud can be a challenging process. To begin developing a migration strategy, consider:

- Does my organization want to create born-on-the-cloud applications in support of business processes? Or does it just want to optimize and efficiently run existing production workloads in a cost-effective and scalable environment?
- What service levels does my organization need? What type of management support?
- What deployment model does my organization want?
- Does my organization want flexible or fixed pricing?
- Which of our applications are already standardized, virtualized or automated?
- Which applications are independent, not requiring heavy communications with other systems?
- Which applications do not have demanding regulatory or workload isolation requirements?

Answering these questions is a way to start developing a cloud deployment or migration strategy. IBM recommends starting with standardized, independent workloads that experience fluctuating demands. When a workload has these characteristics, the scalability and pay-per-use aspects of SCE+ and SmartCloud for SAP Applications can be most beneficial from agility, flexibility and cost points of view. Examples are video streaming applications, enterprise resource planning applications, customer relationship management applications, web site applications and applications that are subject to seasonal or business fluctuations. SmartCloud Enterprise+ is also appropriate for managed development and test activities.

For organizations that need special expertise in determining which applications and workloads to deploy or migrate, the IBM Workload Transformation Analysis for Cloud can help. Through this service, IBM strategy and practice consultants help examine an organization's workload and application environment. Using robust analytics tools developed by IBM Research, these consultants help organizations understand their mix of simple applications, moderately complex applications, and workloads and complex applications. This, in turn, assists organizations in determining what targets can be moved to what kinds of platforms. This service also prioritizes workload migration to the cloud, delivers a quantitative operational cost analysis for that migration, and provides a gap analysis summarizing the preparation needed to transform the existing environment to a cloud delivery model. (See Figure 2.)

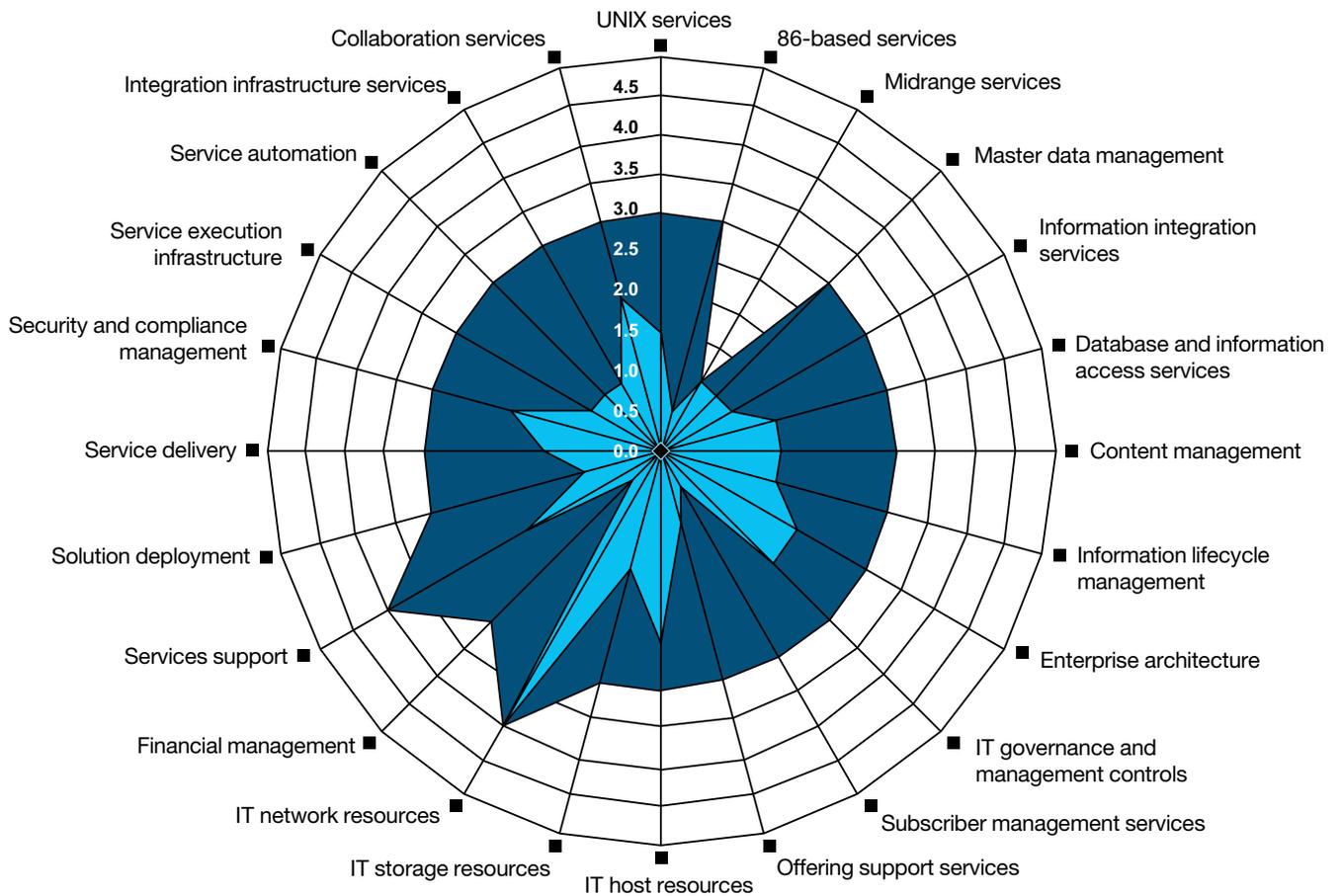


Figure 2. Using data visualization of gap analysis results, IBM can help clients quickly identify focus areas for improvement. In this hypothetical illustration, current capabilities are represented by the light blue areas at the center. The dark blue area is defined by the target level of capability and represents the gaps that must be closed to reach the desired end state.

---

*Which workloads are right for cloud migration? Start with standardized, independent workloads that experience fluctuating demands. When a workload has these characteristics, the scalability and pay-per-use aspects of IBM offerings can be most beneficial from agility, flexibility and cost perspectives.*

---

Migrating complex workload applications to the cloud is a challenging process. Partnering with IBM, organizations receive the benefit of significant migration and management expertise gleaned from the implementation of cloud infrastructures worldwide. In SmartCloud Enterprise+ and SmartCloud for SAP Applications, we combine this expertise with service level choices, security options, business-centric service level agreements, easy provisioning, around-the-clock support and global scalability to provide significant value to your organization.

### **For more information...**

To learn more about IBM SmartCloud Enterprise+ and SmartCloud for SAP Applications, visit:

[ibm.com/smartcloud/services/enterpriseplus](http://ibm.com/smartcloud/services/enterpriseplus)

For IBM insights and perspectives on the issues that matter most to IT and business executives, visit:

[ibm.com/c-suite](http://ibm.com/c-suite)



---

© Copyright IBM Corporation 2013

IBM Corporation  
IBM Global Technology Services  
Route 100  
Somers, NY 10504

Produced in the United States of America  
May 2013

IBM, the IBM logo, [ibm.com](http://ibm.com), AIX, SmartCloud, Power Systems and System x are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “[Copyright and trademark information](http://ibm.com/legal/copytrade.shtml)” at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml)

ITIL is a registered trademark, and a registered community trademark of The Minister for the Cabinet Office, and is registered in the U.S. Patent and Trademark Office.

UNIX is a registered trademark of The Open Group in the United States and other countries

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions. It is the user's responsibility to evaluate and verify the operation of any other products or programs with IBM products and programs.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

<sup>1</sup> *The power of cloud: Driving business model innovation*, IBM Institute for Business Value, 2012.

