WHITE PAPER | DECEMBER 2015

Building the Application-Centric Cloud

7 Key Customer Requirements and the Services that Fuel Mutual Success in the Application Economy

ca technologies

Table of Contents

Introduction: The Application-Centric Service Mandate and Opportunity 3

Plotting a Strategy for a Successful Application-Centric Business 5

Architecting An Application-Centric Cloud: The Seven Customer Requirements 6

Application-Centric Cloud Service Offerings: Understanding the High-Demand Alternatives 10

Aligning Marketing and Sales with Application-Centric Cloud Service Offerings 16

How CA Can Help 17

Conclusion 18

About CA Technologies for Service Providers 19

About This Document: Developed by the CA Service Provider Center of Excellence 19

Executive Summary

Businesses are now competing in an application economy. More than ever, it is the caliber of applications that shapes an organization's fortunes. Enterprises will increasingly need value-added services that help speed application innovation. Those cloud service providers (CSPs) that address this demand can move up in the value chain, boost differentiation and establish more strategic customer relationships. This white paper details the opportunities, the requirements and the strategies for delivering winning application-centric cloud services in the application economy.

Introduction: The Application-Centric Service Mandate and Opportunity

For today's CSPs, delivering application-centric cloud service offerings is an increasingly urgent mandate. Here's why:

Applications are critically strategic for customers

Business leaders are now finding that their organizations are competing in an application economy. In this environment, applications have become central to virtually every area of a business' performance, including the quality of its products and services, the degree of its operational efficiency and the scale of its profits. Consequently, the organizations that become leading application innovators will stand to fare much better than others.

In a recent survey, CA discovered the monumental impact that organizations' application focus and expertise are already having in the application economy. The survey found that, while many organizations fell in the middle, there was a distinct subset of leaders and laggards in terms of application prowess.

What distinguishes a leader from a laggard? In short, leaders put DevOps at the core of their business, they look at security as a business enabler rather than a business obstacle, they manage IT strategically, and they adopt a unified, enterprise-wide mobility strategy. Depending on which camp an

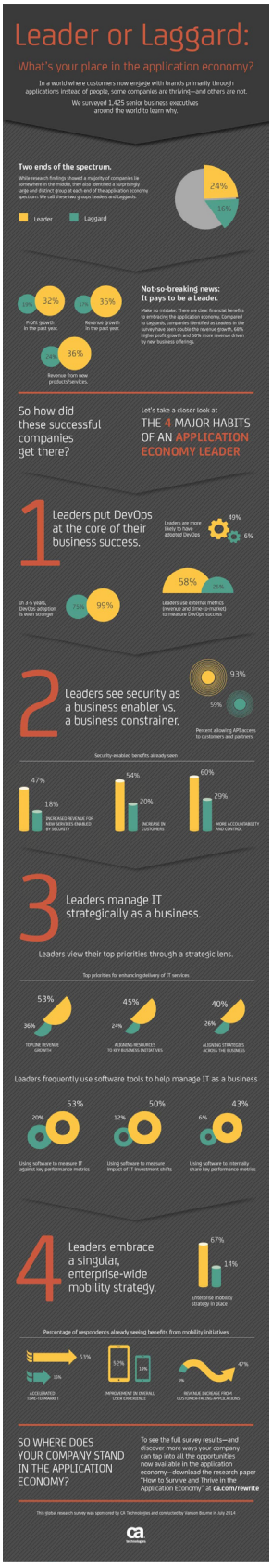
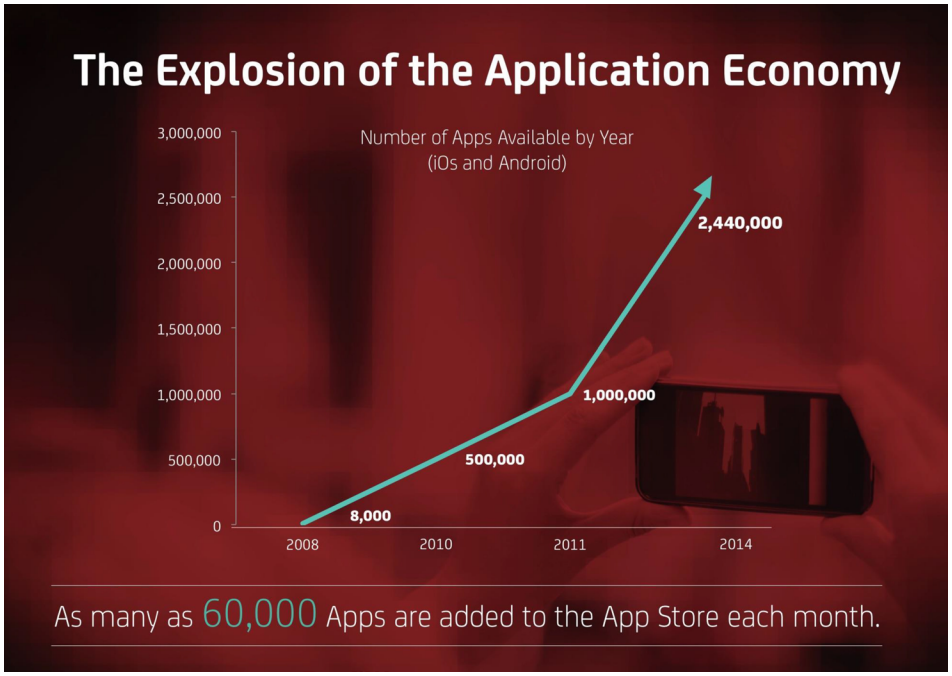


Figure A.

Through its survey, CA has uncovered the unique characteristics that separate leaders from laggards in the application economy—and the profound impact these distinctions have on a business' prospects. (**See the full-size infographic**.)

Figure B.

The massive growth of applications is creating a large market for CSPs.



organization falls into, the difference in business results is huge: Compared to the laggards, companies identified as leaders saw double the revenue growth, 68% higher profit growth and 50% more revenue driven by new offerings.[1] Those CSPs that can deliver the application-centric services that help their customers become leaders can also realize significant business advantages. (See Figure A.)

The application market is huge—and growing fast

Given the strategic nature of applications, enterprises continue to expand their use, development and procurement of applications. This is helping fuel massive growth in application development and sales—and creating a large addressable market for CSPs.

Consider that between 2008 and 2014, the number of applications available on Apple and Android stores grew from 8,000 to 2,440,000. Now, as many as 60,000 applications are added to these app stores each month.[2] Further, now totaling $20 billion, application sales are expected to grow to $100 billion by 2020.[3] By delivering application-centric services, CSPs can tap into this rapidly expanding market.

The cloud is fueling modern applications

In a relatively short time, the cloud has become the central enabler and delivery mechanism for virtually every major technology shift, including mobile applications, big data, social networking, APIs and more. As they seek to achieve their application innovation mandates, enterprises will increasingly need application-

1 CA Application Economy Market Study commissioned by CA, conducted by Vanson Bourne, 2014

2 Sources:

- New York Times, "One Million Mobile Apps, and Counting at a Fast Pace," December 11, 2011, **http://www.nytimes.com/2011/12/12/technology/one-million-apps-and-counting.html?_r=0**
- InformIT, "The Fight for The Mobile App Market: Android vs. iOS", June 9, 2014, **http://www.informit.com/blogs/blog.aspx?uk=The-Fight-for-The-Mobile-App-Market-Android-vs-iOS**
- CBS News, "Apple's App Store full of 'zombies,' says report," July 29, 2014, **http://www.cbsnews.com/news/apples-app-store-full-of-zombies-says-report/**

3 Josh Lipton, CNBC Business News, July 10, 2014, **video.cnbc.com/gallery/?video=3000291221#**

focused cloud services to succeed. The CSPs that can deliver the services that help customers accelerate their application innovation will be delivering great value. Through these services, CSPs will help customers move where they need to be: in the leader category in the application economy.

CSPs will need application-centric services to compete

"The innovations enabled by the cloud are breaking down many of the traditional distinctions that separated competitive categories, leading to a converged market in which a lot of players can deliver a lot of similar offerings."

For service providers generally, and for CSPs particularly, the competitive landscape continues to get more crowded. The innovations enabled by the cloud are breaking down many of the traditional distinctions that separated competitive categories, leading to a converged market in which a lot of players can deliver a lot of similar offerings.

Within this context, it is no surprise that cloud infrastructure services grow more commoditized by the day. In this new competitive landscape, delivering application-centric services is becoming an increasingly critical requirement. By delivering innovative, high-value application services, CSPs can:

- Establish competitive differentiation and sustainable margins.
- Address a vital customer requirement, while engaging in an application market that will be seeing rapid growth.
- Deliver the strategic services that strengthen customer loyalty and improve profits.

Plotting a Strategy for a Successful Application-Centric Business

In formulating a strategy for delivering application-centric services, it is important to do so with a clear understanding of the emerging paradigm for application development, and for ensuring that staff, operations and technologies are aligned with these new realities.

At a high level, modern applications are characterized by their simplicity for end users—and their complexity for developers. Consider the following scenario:

> An event promoter sends John a text message offering a discounted ticket to an upcoming concert. The specialized offer was generated based on John's history of music purchases, playlists and listening habits. The concert is taking place at a nearby venue and the time works in his schedule, so John clicks a link, browses the seats available, makes his selection and books the purchase. Next, John is presented with a promotion for prepaid beverages and food, so he places an order. On concert day, instead of waiting in a lengthy line, John presents a bar code on his phone at a self-serve kiosk, and gets right in. An application directs John to his seat location, and once he's seated, the food and drinks get delivered.

From John's perspective, the process is convenient, seamless and effortless. For the development teams tasked with building this application, however, the effort is significant. This set of services could require the integration of multiple applications, from dozens of organizations. Developers may need to establish connections with the venue's ticketing system and food services, the promoter's online booking application, the consumer's music service and more. To support the e-commerce functionality, the vendor may need to validate the purchaser's credit rating from a third-party credit agency's mainframe.

To make this integration work, security of sensitive and regulated data, such as cardholder records, needs to be taken into account. A dizzying number of data types, communication protocols and application types may need to be synchronized. Ultimately, a whole host of interdependencies come into play, and it all needs to come together quickly and reliably if the user is to experience the service levels required.

"As they look to compete and address customer demand, 94% of business executives say they're under pressure to release applications faster."

It is important to recognize that this complexity applies to end customers' developers, which is what ultimately will intensify the demand for services that can help. At the same time, this complexity also applies to CSP businesses, and their internal teams of developers and administrators.

Modern cloud applications tend to be composite in nature, built on a set of loosely coupled, interconnected components. These applications are also hybrid in nature, typically relying on a mix of internally housed environments and external cloud providers. Building a team and an environment that can thrive amidst this complexity will represent a core objective for CSPs that seek to deliver application-centric cloud services.

Architecting An Application-Centric Cloud: The Seven Customer Requirements

In setting out to deliver application-centric cloud services, it is important to start with a clear understanding of what customers will look for. The following sections detail the key requirements that customers will want their prospective cloud vendors to address. While the specific requirements will vary substantially for each customer and use case, the following requirements represent the core foundational elements upon which high-value, differentiated services will be built and delivered.

Requirement #1. Ease, speed of adoption and speed of delivery

Situation

To thrive in the application economy, businesses will need to innovate and execute faster. If they are to stay relevant, CSPs will need to help customers address this mandate.

As they look to compete and address customer demand, 94% of business executives say they're under pressure to release applications faster. However, only 15% of these executives are completely satisfied with the IT organization's speed in delivering new applications or services.[4] These statistics speak to a clear demand that CSPs are uniquely equipped to address. Through application-centric cloud services, CSPs can help their customers deliver more innovative applications, and do so faster.

Mandate

CSPs need to get new application-centric service offerings to market quickly, and make it fast and easy for customers to leverage services and gain value. If a new service provides a customer with a competitive differentiator, but it takes three months to get the service up and running, the business benefits the customer gains will be minimized, or never be realized at all. Put another way, the pace at which services are delivered will increasingly become just as important as the services themselves.

4 CA and Vanson Bourne Global Application Economy Study, 2014, **http://www.ca.com/us/news/press-releases/na/2014/ca-technologies-study-reveals-application-divide.aspx**

Requirement #2. Resiliency

Situation

"The very scale of the cloud ultimately presents a double-edged sword in this regard. Many more users can be served, but if service levels suffer, many more users can suffer the consequences."

When running applications in the cloud, customers will want to ensure they are delivering an optimal experience to their end users. While this clearly applies to any application delivery environment, the user experience grows increasingly critical in the cloud. The very scale of the cloud ultimately presents a double-edged sword in this regard. Many more users can be served, but if service levels suffer, many more users can suffer the consequences. This can raise the penalties associated with poor service levels—including more lost business, more lost employee productivity, more customers with diminished loyalty to the brand and so on.

At the same time, performance in the cloud gets more difficult to track. Given the distributed, composite nature of cloud applications, there are more interdependencies, and ultimately more variables that can compromise service levels. Customers will look for CSPs that can provide assurances of resiliency. They'll want to partner with CSPs that can deliver self-sustaining, multi-tenant architectures.

Mandate

To address customer requirements, CSPs will need to establish resiliency in two fundamental areas:

- **Infrastructure and system resiliency**. Service levels can't be exposed to a single point of failure, whether at the server hardware level, network routing level or anywhere else in the environment.
- **Application level resiliency**. As applications grow reliant on an increasingly distributed, hybrid collection of environments and services, resiliency needs to be built higher in the stack. For example, if a media streaming firm's video facility in Portland is experiencing over-taxed resources, the application needs to have the awareness to move workloads to the facility in Seattle—without any perceptible performance hiccups for users.

In addition, CSPs need to establish a means for tracking service levels across composite environments. It is only through objective measurement that managers can establish baselines and monitor progress.

Requirement #3. Scalability and agility

Situation

In the application economy, change in virtually every aspect of the customer's business will accelerate. This can include geographies that need to be supported, changing customer demographics and requirements, evolving compliance mandates and so on. Further, this change will often be associated with a customer demand for more, whether it's support for more transactions, more users, more use cases or more regions.

Customers will want to know their provider can support this change and growth whenever needed. Of course, after usage spikes occur, there may also be a corresponding drop in demand, which will need to be handled as well. Scalability and agility have been primary drivers for cloud services adoption all along, and this demand for agility will only grow more pronounced as businesses adopt application-centric services in the cloud.

It is important to recognize that for application-centric services, scalability and agility needs to encompass two key aspects:

- **Pre-production**. Customers will need to be able to do testing of applications that simulate high volumes of transactions, traffic, concurrent users and so on. They'll want agile testing services that enable developers and IT operations to work collaboratively in real time, which helps speed delivery and boost code quality.
- **Post-production**. The architecture will need to support customer requirements for delivering production services to more users, support higher and dramatically fluctuating transaction rates and more.

"Customers have concerns around application security. The litany of massive breaches making headlines and the increasing regulatory burdens and fines for non-compliance all serve to make clear these concerns are well founded."

Mandate

To support pre-production agility and scalability, CSPs will need to deliver virtualized testing services that enable customers to scale testing economically and efficiently. Through these virtualized services, they can help reduce demand for lab resources and therefore alleviate constraints posed by lab resource limitations.

To deliver the post-production scalability customers require, the architecture will need to be able to support larger and more geographically dispersed user bases. To manage services with the agility required, it will be vital for CSPs to build increasing standardization and automation into more areas of operations, effectively bringing the elasticity of IaaS offerings to application-centric services. More often than not, this will require increasing adherence to open standards and more reliance on advanced, innovative commercial solutions rather than in-house development and customization.

Requirement #4. Security

Situation

Customers have concerns around application security. The litany of massive breaches making headlines and the increasing regulatory burdens and fines for non-compliance all serve to make clear these concerns are well founded.

The very scalability offered by the cloud—the ability to quickly expand to serve more users, use cases and regions—can also expand the business' exposure to security threats. While security concerns have been persistent since the cloud first emerged, their importance will only grow more pronounced as organizations move their strategic application-centric services—and all the intelligence and sensitive data associated with their applications—into the cloud. When customers look to move strategic application services into the cloud, they'll be concerned with security risks across several areas:

- **Identities**. As users, infrastructure and applications all grow increasingly distributed, identity will emerge as the new perimeter. Moving forward, securing identities will be one of the fundamental ways to enable authorized users to access the data and services they need, while keeping sensitive assets secure from everyone else.
- **Privileged users**. When moving services out of their own data center, customers will want to ensure their sensitive assets aren't exposed by the CSP's administrators and other privileged users.
- **Composite applications**. While the increasingly composite nature of applications represents a significant opportunity to speed innovation, without the proper management, it can introduce significant risks. For example, APIs can be exploited or they can inadvertently expose sensitive assets.

Mandate

In order to address security across these areas, CSPs will need to establish strong, centralized and auditable control over customers' end user access to applications, and over the access of their own privileged users. In addition, they will need to help customers gain central management and control over APIs, so they can enable innovation, while mitigating customers' risks.

"In the application economy, every company is effectively a software company. The quality of a company's software will therefore play an increasingly central role in the prospects of the business."

Requirement #5. Business and application insight and alignment

Situation

In the application economy, every company is effectively a software company. The quality of a company's software will therefore play an increasingly central role in the prospects of the business.

As enterprise and IT leadership look to procure application-level services, they will be looking to work with a strategic cloud business partner, one that understands the core relationship of applications to the business, and that can help fuel the improvement of both.

Mandate

When delivering application-centric cloud services, CSPs will gain invaluable intelligence into the customer's overall business. This includes not just the company's applications, but its offerings, operations and customers. Across their services, CSPs need to effectively capture and leverage these insights to help guide more informed services as well as guide their internal operations. By providing services that give customers insights into such areas as investment decisions, project status, resource utilization, application usage and the like, CSPs can deliver more value, and more fully capitalize on the business opportunities associated with application-centric services.

Requirement #6. Economic feasibility

Situation

Application-centric services represent a significant opportunity in that they enable cloud providers to break away from commoditized, competitive markets and deliver high-value services that can fuel strong margins. That said, cost has been and will remain a fundamental factor for customers evaluating application-focused service offerings and vendors. Ultimately, customers will need to ensure they can run their applications profitably and cost effectively in the CSP's environment. All other things being equal, they'll choose the vendor and the service that maximize their chances of profitability.

Mandate

Before, during and after the sale, CSPs need to consult their clients around building an architecture that is optimized for application cost efficiency. Internally, the CSP needs to establish a cloud architecture that minimizes resource usage and administrative overhead. Finally, they need to deliver cost-effective support of different aspects of applications, including development, delivery and consumption.

Requirement #7. Supportability

Situation

When customers move from internally to externally sourced application services, they will be ceding a great deal of control and visibility to the CSP. As a result, service supportability will be a critical factor for decision makers evaluating various CSPs and offerings. Supportability for customers encompasses a range of areas, including systems and workflows for handling application issues, tracking performance and availability, managing backups and recovery and handling disaster recovery.

Mandate

Supportability can't be an after thought; it has to be a fundamental tenet to the CSP's solution design and implementation. Application-centric cloud services need to be built upon an architecture that is in alignment with new, low-touch support models, such as self-service portals and forums. For just about any application-focused cloud service, it will simply be too expensive to scale with traditional support models. Consequently, CSPs need to deliver proactive, automated help desk services that enable integration with forums and online knowledge bases.

Up next

The seven elements listed above represent key requirements the end customer looks for when determining which cloud providers to partner with for development and delivery of their business applications. Armed with this understanding of the pillars that represent must-have characteristics of any application cloud service provider, CSP executives can next move forward with building their environment and choosing specific service offerings. The following sections outline several application-centric service offerings that CSPs can consider delivering.

Application-Centric Cloud Service Offerings: Understanding the High-Demand Alternatives

In delivering application-centric services to customers, CSPs will have a number of service types to choose from. Following are a selection of the application-centric services that could be delivered. Spanning the software development lifecycle, these services will address some of the most pressing market demands, and consequently represent some of the most significant business opportunities for CSPs.

Deliver API management services

Why it's important

"As APIs grow increasingly strategic, they're also becoming ubiquitous. In fact, close to 90 percent of enterprises are planning to implement an API program in the next five years."

To further their business objectives in the application economy, enterprises continue to grow more reliant on APIs. API programs represent a strategic endeavor, offering a way for businesses to unleash opportunities for innovation and extend their reach. APIs deliver a core enabler to interoperability, yielding breakthrough innovations in a range of areas, including collaboration, security, services and more. Through APIs, businesses can expose data, applications and services to their customers, partners and other communities, while at the same time centrally managing and controlling access. APIs offer a way to create, deploy and manage applications more effectively and efficiently, enabling development teams to realize breakthroughs in the pace and scope of innovation.

As APIs grow increasingly strategic, they're also becoming ubiquitous. In fact, close to 90 percent of enterprises are planning to implement an API program in the next five years. Further, this move to APIs comes intertwined with customers' moves to the cloud and application-centric services: 68 percent of survey respondents say cloud integration is a driver for API programs.[5]

When customers turn to application-centric cloud services, they'll undoubtedly be looking to harness APIs in order to broaden development and integration of their cloud-based applications. By delivering API management services, CSPs can deliver a key foundational offering that virtually all companies running applications in the cloud will be relying on. Through these API management services, CSPs will give their customers a strong framework that enables more widespread, strategic use of APIs, while streamlining the effort associated with API development and support. By leveraging these services, customers will be able to accelerate their move into the application economy.

Key technologies and requirements

When organizations adopt modern application approaches, such as opening up data and applications to external communities and assembling applications from loosely coupled components, effective API management is critical. This will entail having a sound management framework that enables centralized administration of APIs across hybrid environments. Another vital requirement of API management will be protocol administration. This is a key aspect to broad integration support of disparate systems and environments.

Optimal API management platforms will also offer centralized security management, which means developers can focus on code, without having to also worry about how code changes will affect the organizations' security posture. At the same time, these capabilities will enable more efficient security administration and more consistent policy adherence.

Deliver identity and access management services

Why it's important

In the application economy, applications grow increasingly essential and strategic. This means managing and guarding access to applications continues to grow more critical. As customers rely on a mix of internally sourced and cloud-based applications, managing identities represents the critical way to safeguard access to sensitive assets. Consequently, the demand for strong identity and access management (IAM) capabilities will continue to grow more urgent and widespread.

5 CA Technologies, "API Security and Management Today: A Snapshot", **http://www.ca.com/us/~/media/Files/infographics/API-security-and-management.pdf**

However, many IT organizations within enterprises are ill equipped to address these IAM requirements. Quite often, these teams are wrestling with home-grown tools that lack capabilities for automation and identity federation. These tools require manual efforts to do provisioning and approvals, which leads to backlogs and high error rates.

All these obstacles can cost a company dearly. The failure to address IAM requirements can result in lost productivity and revenues or catastrophic breaches. Plus, as long as organizations are constrained by inflexible, manual tools and processes, not only will their businesses be exposed to risk, but they'll be constrained in their ability to support new applications and services. As Forrester Research analysts put it, "Increasingly in 2014, IAM has become a tool not just for security but also business agility."[6]

These challenges present a significant opportunity for CSPs. By delivering specialized IAM services, CSPs address a critical customer requirement, while offloading a significant administrative burden. Through advanced IAM services, CSPs can help customers address two key objectives:

- Fueling enhanced business agility and innovation by enabling faster deployment of new applications and services.
- Gaining stronger defenses around identities and access.

In this way, CSPs can become a trusted identity provider, one that establishes deeper, more strategic relationships with customers.

Key technologies and requirements

To effectively address their customers' demands, CSPs need to leverage IAM solutions that offer strong security. At the same time, these solutions need to streamline administration, both for the CSP and for the customer's support staff. By offering these combined capabilities, IAM solutions enable customers to both protect and free their businesses.

To build an IAM service that can help the business thrive over time, CSP leadership should look for solutions that can support a complete range of IAM services, including identity management, access management, single sign-on, authentication, user provisioning and management, user self-service and identity federation.

Deliver mobility management services

Why it's important

As outlined earlier, the sales, usage and volume of applications continues to grow dramatically—and this is especially true of mobile applications. For example, up to 60,000 applications are added to app stores every month.[7] In the application economy, one of the key characteristics that distinguish leaders from laggards is whether an organization has an enterprise mobility strategy in place. Of those that do have this strategy in place, 53% have accelerated their time to market, 52% have improved the overall user experience, and 47% have increased their revenues from customer-facing applications.[8]

6 Forrester Research, "Navigate The Future Of Identity And Access Management," April 7, 2014, Eve Maler, **https://www.forrester.com/Navigate+The+Future+Of+Identity+And+Access+Management/fulltext/-/E-res61625**

7 CBS News, "Apple's App Store full of 'zombies,' says report," July 29, 2014, **http://www.cbsnews.com/news/apples-app-store-full-of-zombies-says-report/**

8 CA Application Economy Market Study commissioned by CA, conducted by Vanson Bourne, 2014

While mobility presents a clear business advantage, it is not without its challenges. For example, an enterprise mobility initiative introduces massive complexities in the volume and types of devices, which can serve to distract internal IT away from their core objectives. This effort also requires specialized expertise and tools that most IT organizations do not have. Embracing mobility's opportunities while addressing its risks represents a critical objective for customers—and now CSPs can help them achieve it.

"Embracing mobility's opportunities while addressing its risks represents a critical objective for customers—and now CSPs can help them achieve it."

Key technologies and requirements

To deliver complete mobility management services, CSPs need central platforms that can help customers manage mobile devices, applications, content and email. These services can be indispensable in helping customers address the security and operational risks posed by mobile technologies.

In addition, CSPs need to be able to leverage and deliver strong analytics. These analytics represent a fundamental requirement for gaining visibility into, and guarding against, the security threats posed by mobile device usage. Further, analytics that cover application usage and performance will provide vital insights that help accelerate the optimization of mobile infrastructure and applications.

Given the increasingly ubiquitous nature of mobile device usage, CSPs should be planning to offer mobile device support wherever possible, across all their services. For example, customers' end users and support staff should be able to use their mobile devices to interact with the CSP's application-centric cloud services. In addition, CSPs should be able to extend their application development and testing services, which are outlined in the next section, into mobile environments.

Deliver application testing services

Why it's important

In the application economy, it will be of paramount importance for organizations to deliver innovative new applications to market, and to do so quickly and cost effectively. However, when relying on internal resources and technologies for application testing, customer organizations have traditionally encountered significant hurdles:

- **Bottlenecks**. Often internal teams have lean staffing levels, and they lack sophisticated testing automation capabilities, factors that can conspire to create a bottleneck that slows the overall application delivery process.
- **Limited testing depth**. Given their tool and staffing constraints, internal teams have been forced to do more cursory testing, and as a result, too many issues go undetected, at least until they get into production environments.
- **Expanding costs**. As development organizations attempt to scale their testing to accommodate the modeling of more traffic, more heterogeneous environments and so on, costs grow dramatically.

All these challenges only intensify in the application economy, as the need to scale new application delivery grows more urgent and the number of environmental variables proliferates. As a result, application testing services that help customers reduce time-to-market, lower infrastructure costs, mitigate contention for labs and deliver better overall application quality will represent vital services for many CSP customers.

Key technologies and requirements

To deliver effective application testing services in the cloud, CSPs will need to address several distinct requirements:

"To support customer's DevOps approaches, CSPs need to provide agile testing services that enable developers and IT operations teams to work collaboratively, which helps fuel continuous improvements in speed and quality."

- **DevOps alignment**. To support customer's DevOps approaches, CSPs need to provide agile testing services that enable developers and IT operations teams to work collaboratively, which helps fuel continuous improvements in speed and quality. For example, rather than putting the application into production and waiting for IT operations' feedback on performance, DevOps approaches demand that quality testing efforts start earlier. Through integration with an APM service, developers can get immediate feedback that helps guide iterations.
- **Modern application support**. CSPs will need to establish testing capabilities that are in alignment with today's modern applications, which will entail modeling and simulating the behavior and performance characteristics of multiple dependent systems and services. This may include testing custom applications, mobile applications, performance and big data.
- **Comprehensive service virtualization**. To contend with the interdependencies of modern services, it will also be important to enable the modeling and simulation of the behavior of systems that are unavailable or incomplete. Toward that end, CSPs should be able to support the virtualization of almost any IT asset, including mainframes, credit bureaus, VoIP equipment, card processing services and more. These capabilities are also essential in reducing lab resource utilization, which is vital to helping customers avoid the bottlenecks associated with limited lab resources.

Deliver application performance monitoring services

Why it's important

In the application economy, end-user experience is increasingly vital. This will mean not only delivering innovative, convenient capabilities to end users, but also ensuring these capabilities perform with maximum performance and availability.

However, while tracking and managing end-user experience has traditionally been difficult for many IT organizations, these tasks grow even more daunting when managing modern hybrid application services. As the number of interdependent systems and environments that support a given service grows, so does the complexity of understanding, managing and optimizing service levels. As a result, these requirements make it increasingly difficult and costly for IT organizations to manage this function internally. By delivering robust application performance monitoring (APM) services that help customers address this complexity and improve performance and availability, CSPs can deliver a service that will be increasingly strategic to customers moving forward.

CSPs that offer these services can also extend their value by integrating them with the application testing services outlined above. Through these integrated services, CSPs can provide a strong DevOps environment that effectively supports modern composite applications. In the past, it was only after all integration was done that code was handed over to production. By enabling the tighter integration of application testing and APM, CSPs can help customers tighten these development and IT operations linkages, providing application developers with instant performance feedback that guides overall application quality and a higher user experience.

Key technologies and requirements

If CSPs are to deliver effective and profitable APM services, they'll need to build their offerings on sophisticated APM technologies that help customers track, manage and optimize performance. This entails leveraging platforms that offer the following capabilities:

"Often organizations have employed limited point tools or cumbersome legacy products, so they either lacked the insights they needed or it took too much time and effort to gain those insights."

- **Comprehensive coverage**. Customers need to be able to track all the components that are relied upon for application delivery. This may include hybrid cloud environments and heterogeneous environments, including mobile applications, hardware, middleware, infrastructure, databases, mainframes and more. In addition, CSPs should be able to support a range of platforms and languages, including PHP, Node.js, Java and .Net, as well as open source systems like MongoDB and FUSE.
- **Comprehensive insights and analytics**. CSPs should seek to leverage platforms that can provide advanced analytics and instrumentation. This includes offering correlation and visibility into the relationships among different application components, which is vital in quickly identifying performance issues. These analytics also need to offer coverage of mobile, streaming, Web and other applications. Further, sophisticated behavior analytics should provide insights into performance issues and outages, user experience and performance. For Web applications, information should be available for tracking performance across distributed locations and multiple Web browsers. End-user experience monitoring should be based on the generation and measurement of multi-step synthetic transactions. The CSP should also look to leverage platforms that can track and report on performance against service level agreements.

Deliver business intelligence services

Why it's important

In the application economy, there's a clear linkage between IT and business performance. Consequently, organizations will need business intelligence that reflects these realities. To thrive in the application economy, business executives need to make the right portfolio decisions and gain a holistic view of IT services and assets. To achieve these objectives, they'll need more comprehensive insights that are drawn from all areas of the business, so executives can better understand performance and how to improve it. Armed with comprehensive visibility, business leadership can better track performance metrics and make better plans and investments. Further, they can find the best ideas and optimize their execution, gain insights into application usage and employee activities and interactions, better optimize utilization of staff, hardware, software and more.

However, in many organizations, these management efforts have been handled in an ad hoc, manual fashion. Often organizations have employed limited point tools or cumbersome legacy products, so they either lacked the insights they needed or it took too much time and effort to gain those insights. For enterprises, it will simply grow too risky to stick with the status quo in these areas. Business services and IT investments need to be optimized—and the CSPs that can help with this effort will deliver significant advantages to their customers.

Key technologies and requirements

To deliver the business intelligence services that customers require, CSPs will need to adopt comprehensive technologies that encompass management of the service desk, projects, financials, IT assets and more. By harnessing this integrated visibility, the CSP can ultimately deliver the insights that offer maximum

business value. To maximize margins and customer convenience, these services should accommodate fast, flexible deployment, workflow automation and point-and-click configuration. Through these capabilities, CSPs can enable customers to visualize key metrics with a few mouse clicks, so they can more easily track business performance and spot opportunities for optimization.

Up next

Once CSP executives have established cloud environments that are capable of addressing key customer requirements, and then identified the specific service or set of services that are going to be delivered, they need to effectively bring their services to market. The next section offers detailed input around the critical phase of aligning marketing and sales efforts to successfully position and articulate the value of their application-centric service offerings.

Aligning Marketing and Sales with Application-Centric Cloud Service Offerings

Once a CSP's management team has defined and built its application-centric services, it is important to then align sales and marketing efforts with these new offerings. This is a critical step that is all too often not given the level of attention and effort required. Unless they fully and compellingly articulate the capabilities of their services and the value they deliver, these CSPs ultimately do themselves a disservice and limit their potential success.

First and foremost, these new services will require fundamentally new messaging. In Web sites, social media, collateral and elsewhere, messaging needs to be consistent and effectively describe the nature of the application-centric offerings and the value they provide.

In developing messaging, it is essential to understand the target audiences that the messaging needs to resonate with. CSP executives shouldn't assume that they'll be selling to the same people. The key influencers or decision makers evaluating the procurement of application-centric services may be very different than those that CSP sales teams worked with in the past. For many CSP businesses, core audiences were traditionally largely comprised of IT leadership. When it comes to application-centric cloud services, two other groups tend to become more central to marketing and sales:

Business leadership

As outlined earlier, applications are fundamentally strategic to the business. Given this, it is business executives that are increasingly leading and overseeing the move to application-centric cloud services. In addition to IT directors and CIOs, individuals with titles like chief digital officer and chief marketing officer may now be just as likely to be the primary driver behind the selection of an application-centric cloud

service. While some of these business leaders will have technical backgrounds, many will not. Consequently, it's important to not assume technical depth in sales and marketing efforts. It's also critical to develop messaging that speaks compellingly to the business value that application-centric cloud services deliver.

"Very often, it is the development organization that will determine whether an application-centric cloud service is chosen and, if so, the extent to which it is used."

Developers

In the application economy, developers grow increasingly vital as influencers. Very often, it is the development organization that will determine whether an application-centric cloud service is chosen and, if so, the extent to which it is used.

Selling and marketing to developers is very different than targeting other groups. More than other audiences, developers tend to be very reliant on social networks, online forums and code sharing sites to learn about and vet prospective solutions and services. In these arenas, positive and negative word of mouth can be very powerful, so it is important to manage not only sales and marketing efforts but service delivery and customer care accordingly. Quite simply, early wins and happy development teams can be a CSP's biggest sales and marketing allies; frustrated and angry developers can be the CSP's most difficult adversaries.

How CA Can Help

Leverage comprehensive service offering support

When CSP executives chart the evolution of their service offerings, it pays to have flexibility. CA offers a comprehensive range of solutions that gives CSPs maximum flexibility. With CA, CSPs can work with one partner, while developing the optimal mix of services that's right for their business, both early on and over the long term.

Through its solutions, partner programs and resources, CA can help CSPs build, deliver and support high-value service offerings that are aligned with their target markets, staff skills and expertise, business and delivery models and long-term objectives. CA offers solutions in the following focus areas:

- **DevOps**. To gain the speed demanded by the application economy, customers' DevOps teams must establish more agile development processes. CA offers solutions that help these development teams virtualize the services they need, letting them work more independently, get to market faster and meet the business' demand for new and better services. CA offers solutions that automate and accelerate application deployment—reducing manual effort and errors. In addition, CA gives CSP businesses the holistic monitoring and in-depth management capabilities that are required to boost customers' initial product quality and speed issue resolution.
- **Security**. For CSP customers, security is as much about ensuring consumer confidence as it is about defense. With CA solutions, CSPs can help customers achieve both of these objectives. CA helps CSPs deliver services that enable customers to externalize APIs in a secure, reliable and manageable way. CA solutions also enable CSPs to deliver IAM services that help customers more efficiently manage access, while providing users with secure and seamless access across applications.

- **Agile management**. Within enterprises, people are the most valuable resources. Staff's most valuable resource is their time. CA can help CSPs deliver services that maximize the productivity of their customers' staff. CA helps CSPs deliver services for managing customers' mobile applications, email, content and devices. CA can also power service management offerings that help employees stay productive and make optimal contributions to business growth. By delivering robust project and portfolio management (PPM) capabilities, CA can help customers more efficiently define strategic priorities, plan and track projects, allocate resources and prioritize spending.

"CA offers innovative, category-leading solutions that power services across the application development lifecycle."

Boost differentiation

The cloud provider market is growing increasingly crowded, meaning customers will have many choices. Further, given the strategic nature of application-centric cloud services, customers will be sure to give vendors a great deal of scrutiny before they move forward.

To succeed in this competitive environment, CSPs will need to build, market, sell and deliver truly differentiated application-centric cloud services. Establishing this differentiation will require investment in people, processes and innovative technology.

CA delivers the solutions that enable CSPs to deliver application-centric cloud service offerings that are fundamentally differentiated in the marketplace. CA offers innovative, category-leading solutions that power services across the application development lifecycle.

Accelerate delivery and time to value

In the application economy, competitive windows are shrinking, and that applies to CSPs and their customers. In this environment, CSPs have to be able to deliver differentiated services quickly, and ensure that services help customers speed the achievement of objectives. With its solutions, services and people, CA can help CSPs speed their businesses and their ability to deliver winning services to customers. CA offers solutions that enable standardization, agility and automation, so CSPs can speed service delivery. By delivering comprehensive enablement services, CA helps CSPs more fully leverage their technologies and investments, optimize their operations, enhance their go-to-market capabilities and scale intelligently.

For more information on the need for speed in the application economy, and insights into how CA helps address this mandate, CSPs should be sure to download the white paper entitled "**Meeting the Need for Speed in the Application Economy: A Guide for Service Providers**."

Conclusion

Today's CSPs face some massive opportunities—and some daunting challenges. By understanding and addressing the core requirements customers have for their application-centric cloud services, CSP businesses can address a significant market demand—and profit accordingly. By partnering with CA, CSP businesses can get the solutions, resources and assistance they need to deliver differentiated cloud services—and do so quickly and profitably.

About CA Technologies for Service Providers

In the application economy, successful service providers will have one thing in common: speed. Delivering services that help customers innovate their applications faster—and getting those services to market quickly—now represent critical competitive mandates. Today, service providers around the world are turning to CA Technologies because we help them get faster. CA equips service providers with a scalable service delivery platform that fuels operational optimization, complete solutions that power services at every stage of the application lifecycle and extensive enablement services that can accelerate all phases of your business' execution.

About This Document: Developed by the CA Service Provider Center of Excellence

This document has been written by the CA Service Provider Center of Excellence team and is intended to provide our service provider partners with the guidance they need to address some of their most pressing challenges. Our team has rich expertise in service provider businesses, strategic consulting, technical deployments, sales and marketing. Our documents are informed by the Center of Excellence team's extensive experience over the past ten years in helping build successful service provider businesses and by interviews with some of our most successful service provider partners. This document is provided for informational purposes only and on an as-is basis. The guidance and results described herein are based on the unique experiences of our staff and partners, and may not be applicable to all organizations.

For more information, visit the **service provider page** at ca.com.

Connect with CA Technologies at ca.com

CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at **ca.com**.

CS200-119324_1215