

Cloudy with a Chance of... Great Service!

Fair Weather in the Cloud Requires Management of the Service Value Chain

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Melissa Borza

VP, PRODUCT MANAGEMENT

CA VIRTUALIZATION AND SERVICE AUTOMATION





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Executive Summary

Challenge

Handling IT complexity can feel like driving through a raging storm. System complexity is rampant, and anything that can simplify IT and business-IT interactions is appealing to enterprises of any size.

Cloud computing, virtualization, and on-demand solutions are evolving to address these challenges. To help manage the heterogeneity and vast multifaceted connections between information technology components and the businesses they drive and support, service management is paramount.

Opportunity

Cloud computing presents a new model for offering and managing IT services through shared and often virtualized infrastructure. This paradigm shift will change the way people work and process information. Based on the shift from a physical to virtual environment, the breadth of this transformation spans the organization to offer many opportunities for positive and progressive change. The relationship between employee and the technology they need to do their jobs is being revolutionized by the cloud. No longer tethered to the desktop PC, the workplace will become a different place with improved access to the information needed for success.

Benefits

With the cloud, enterprises can leverage centralized and virtualized IT systems, services, and a variety of service providers to access high-quality and high-value IT services, while lowering their own overall costs and increasing productivity to enable them to focus on core business competencies. Through the various types of cloud environments, businesses can shape their own version of the cloud to suit their business needs and bring the greatest cost savings and value. Whether you are a large public company or small private business, there are benefits to be reaped through cloud computing environments that are shifting how businesses view IT as a service and cost center.



SECTION ONE:

Challenge

The Big Shift Toward Virtualization

What's the appeal of cloud computing? Just as businesses no longer run the cafeterias housed inside their office buildings, they now are looking to find new ways to free up more internal resources to focus on maximizing the value of their core competencies to drive growth and profits. So, instead of running IT as a factory, and to better handle business and technology changes, enterprises are looking to run IT as a supply chain of services, sourcing capacity and services in 'machine' time from wherever it makes sense based on SLAs, security, location, availability and cost. In this scenario, both enterprises and service providers become producers and consumers of services — and it is the CIO's job to weave together this value chain in a way to best support the company's business. In other words, the goal will be to manage IT as a component or link in the Service Value Chain within the Cloud-Connected Enterprise, and not to serve up cheeseburgers and one-off services.

When companies replaced their own internal cafeteria cooks, servers, and cashiers, they looked for established and experienced food service providers that could deliver a complete café with all the necessary supporting services to meet their specific needs. This has been happening in IT, too, as organizations look to external experts to deliver services like Sales Automation and Customer Relationship Management, that they need to run their business. This highlights the value and increasing importance of service providers within the service value chain. Now, we are also seeing IT service providers transform internal infrastructures to provide private cloud services. They, too, will need to ensure they have locked down service management processes in order to deliver secure and reliable services to their customers and business users.

Dynamic Value-driven Service Delivers Total Alignment

The Service Value Chain has many key stakeholders, like the internal IT department, end users and the business application owners, along with external service providers — all of whom have a stake in the right quality of service being delivered at the right price at the right time. Ultimately business is about serving customers so service value chain management must not only manage and optimize the customers' experience but also ensure maximum business value. The enterprise cannot afford to have customers abandoning \$1,000 shopping carts because they could not access a web page with warranty details. So, the management focus of IT remains maximizing the service consumption experience and meeting the expected service levels in terms of quality, performance and availability for the services that are delivered to the end customer. In this new paradigm, the view is total alignment from the first link of the chain to the last, with every link contributing value-driven capabilities.



CA sees the move to viewing IT as a dynamic service value chain in a cloud-connected world as a long-term trend that will fundamentally remake existing technology markets. In the meantime, cloud computing is gaining momentum. Regardless of your perspective, at the core of cloud computing is the concept of a service. What cloud computing enables is expedited service design, service request and service delivery. To ensure success, both cloud service providers and cloud service consumers need to understand the whole Service Value Chain (see Figure 1), and to do that you need accessible service management solutions to determine:


- What specific services are offered
- How services are performing overall
- How services are meeting service level agreements for quality, availability, and user satisfaction
- How much services cost from the design/delivery and the subscription/consumption perspectives
- How quickly and easily can services be modified to meet evolving business needs
- How services are packaged (what are the base components) and delivered, provisioned and deployed

Whether the cloud is the next big thing or simply an extension of how we work today, one thing is certain: it can optimize service delivery and support with appropriate transparency into the processes and metrics surrounding those services. Many pundits agree that cloud computing changes the landscape for service consumers, service providers, and the businesses that rely on them. The technology is evolving quickly to deliver secure, reliable services; minding the costs, quality of the services delivered, and the consumption of those services is not just prudent, it's necessary for survival. The ultimate goal for businesses is ensuring they have disaster-proof service access and delivery regardless of the location or the source of the services.

Process First, Then Cloud

Another important point to keep in mind is that cloud computing is no short-cut to process maturity. Before setting off toward cloud initiatives, both providers and consumers must understand their respective goals and objectives. Without a clear understanding of the business processes and supporting IT processes they have today and will need in the future, success will be difficult to come by. You need to know what to expect and where you hope to gain efficiencies and savings BEFORE you dive into the deep end.

Service Value Chain Management in the cloud-connected enterprise exposes the hidden and explicit costs, performance issues, and consumption and availability details about the cloud-provided services being relied upon - whether services are delivered via private, public, community or hybrid cloud environments. When service management is in play combined with cloud computing, the end-result is better customer service and improved productivity — and that all adds up to a better bottom line.



If we approach cloud-provided services as we would any other outsourcer model, it's clear to see that there are many challenges when managing services delivered from a new provider. From other outsourcing experiences, companies learned that governance, policies, and compliance frameworks had to be established to drive success. Whether through cloud computing providers, managed service providers, internal IT departments or some combination of all or any of these, service consumers need effective means to contract services, modify services, and measure the quality, performance, availability, consumption and costs associated with them. They need Service Management. Someone within the organization still needs to own the service and to ensure that it's meeting the business requirements and that they have the right level of transparency into what's happening inside the cloud (or inside other provider environments) to quickly resolve issues. Without Service Value Chain Management, cloud-provided services expose businesses and their customers to a high degree of risk.

SECTION TWO:

Opportunity

Opportunity in the Cloud

The opportunities presented by a cloud computing environment create a paradigm shift in the business operating infrastructure. To understand the breadth of this transformation, it's important to understand three key dimensions of moving to the cloud:

1. The physical to virtual shift will materialize. No longer will users be tethered to desktop PCs, physical servers, local applications and software. Instead, they will be able to access relevant applications, information and data anytime, anywhere via mobile and remote endpoints and interfaces based upon their specific personality profiles. The desktop PC becomes irrelevant, as the same applications and content can be delivered to virtually any other endpoint on demand.
2. One-to-one relationships become one-to-two or one-to-many and many-to-many relationships. With the Web hosted in the cloud, all interactions between end users and applications not only from IT to the business, but also from anywhere in the service supply chain to any consumer become readily accessible and deliverable from a variety of cloud service brokers.
3. Elastic applications become possible. In the past, IT delivered monolithic uni-dimensional applications. Over time, these applications evolved into multi-dimensional, composite applications. What the cloud enables is dynamic and ad-hoc composition of applications based upon specific roles, specific end-user needs, and other variables. More than simple mash-ups, elastic applications are dynamically allocated and composed on the fly, just-in-time, and can be delivered to any physical or virtual endpoint.



Another aspect to consider is that cloud offerings will come in many shapes and sizes. For example, there are several variants of cloud environments:

- **PUBLIC CLOUD** This type of cloud computing environment is what most people refer to generically as *cloud computing*. In this scenario, an external vendor or cloud supplier, like Amazon or FedEx, is hosting and managing the dynamic provisioning of IT infrastructure to support a variety of cloud consumers needs.
- **PRIVATE CLOUD** The private cloud is an internal IT configuration that enables organizations to deliver services to their constituents. For many consumers, the idea of exposing sensitive data beyond internal security controls is too risky to consider; however, they do want to capitalize on the benefits cloud can offer. By building out an internal or private cloud, they can reduce their security risks, ensure proper corporate governance, and also gain some of the efficiencies that cloud computing offers.
- **HYBRID CLOUD** The hybrid cloud consists of a combination of public and/or private clouds that are used by an organization.
- **COMMUNITY CLOUDS** The community cloud refers to an up-and-coming cloud environment that is dedicated to supporting a specific group or industry vertical.
- When all four cloud environment types are in widespread use by businesses and consumers alike, we can envision a computing world very different from what is familiar today to most of us. The opportunities abound, from decreased operating expenditure and increased ROI, to a more productive workforce able to freely access the most relevant data they need to do their jobs well.

SECTION THREE:

Benefits

Benefits of Cloud Computing, Enabled by CA Solutions

To realize the benefits of virtualization, companies must understand that cloud computing includes a variety of IT functions that range from delivering pure infrastructure to provisioning high-level business processes, and that cloud also can cover just about everything in between. From an infrastructure perspective, understanding what's in the cloud is fairly straightforward: basically it's the hardware components and the applications that run on those components. In this environment, the application equals the service. In a more complex scenario, however, applications, infrastructure, and non-IT components converge to deliver a variety of IT and business services directly from the cloud environment to the end user, and that is where service management comes into play.

CA Supports the Service Value Chain

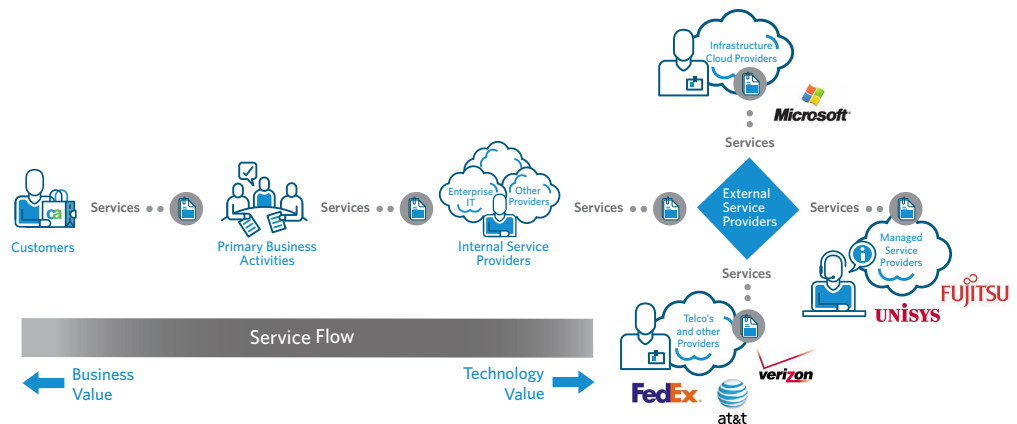
In cloud environments, it's paramount that services are able to securely connect and reliably communicate with internal IT services and other public services. CA Service Management solutions enable enterprise-class aggregation, correlation, integration and automation between services in the cloud as well as between the cloud and internal data centers.

CA Service Management not only helps cloud service providers define and deploy business-relevant, cost-effective and high quality services, it also helps cloud service consumers. CA Service Management monitors the performance and health of the services deployed from the cloud to track business requirements, service level agreements (SLAs), and underpinning contracts. CA Service Management also helps consumers and providers to determine the root cause of an incident or problem and maintain service availability at critical times based on business needs.

CA Service Management provides policies and rules for authentication, authorization, and logging, so that enterprises can have comprehensive control over access to the services and better transparency into the service components that are a part of the cloud deployment.


FIGURE 1:

THE SERVICE VALUE CHAIN



Request and Demand Management

As with traditional supply chains, Service Value Chain Management must have a mechanism for service consumers to request an existing service or to propose that a new service be created. CA Service Management delivers these capabilities. By providing a catalog where services are published and offered for subscription and consumption, CA Service Management enables direct access to services needed by the business. In addition, CA Service Management automates the fulfillment of service requests and ensures that all related transactions are logged and auditable.



Service Value Chain Management also requires that resource usage and consumption be monitored and managed in order to support strategic decision making. By understanding exactly who is using a service, along with when and how, service providers can determine the intrinsic value that the service is providing to the business, and IT can also use this information to compute the return on investment for their cloud computing initiatives and related services.

Incident, Problem, and Change Management

The core focus of CA Service Management is to support the business and IT when it comes to outages and changes. A cloud provider must ensure that all outages or exceptions to normal operations are resolved as quickly as possible while capturing all of the details for the actions that are taken. Moreover, change management becomes critical for a cloud provider whose revenue is based upon the delivery of a highly available and stable environment. Strict change management practices must be adhered to and all changes implemented during approved maintenance windows must be tracked, monitored, and validated. Unintended downtime results in lost revenues and possible penalties depending upon specified service level agreements and contracts. That, in turn, can impact future revenue streams by affecting cloud consumer renewals and future sales.

The CA CMDB component of CA Service Management is designed to provide cloud providers with a deep understanding of the relationships among configuration items or CIs. Knowing the details of CI relationships empowers the Change and Incident Manager to better determine that a modification to one service may impact several other related services and the components of those services. This provides more visibility into the cloud environment and allows consumers and providers to make more informed decisions not only when preparing for a change but also when diagnosing incidents and problems.

From the cloud consumer perspective, CA Service Management delivers additional capabilities. As technology and services move outside of the internal IT organization into the cloud, the IT department still needs to support how their employees use these solutions and services. If a sales person cannot login to the CRM system or an employee from finance sees an error when running an opportunity report, they still need help from their local IT department. Therefore, IT must not only provide the first line of support through the service desk function, but they also must provide detailed knowledge regarding how to address common requests and solve common incidents. CA Service Management supports internal IT-provided and cloud-provided services in the same manner. CA Service Management supports enterprise-class incident, problem, change and knowledge management for all services.

Configuration Management

Just as it is vital for a restaurant to understand the source of the food it serves, so, too, must cloud service consumers and providers understand the location, source, cost, availability, stability and governance practices surrounding your data and the service components received or delivered. If something goes awry, they will need to discern the root cause quickly, resolve all problems efficiently, and provision and maintain services cost effectively. CA Service Management enables transparency into the cloud, mapping the components and their relationships within and across the available services.



Asset Management and License Compliance

In a cloud computing scenario, companies need to manage the lifecycle of IT assets especially when it comes to the desktop environment. While it is a given that higher-ticket data center assets may not require traditional asset lifecycle management by the cloud consumer, the cost and vendor management aspects will still be a priority. For businesses that pursue a hybrid approach and decide to deliver some services on-premise and others via cloud providers, a clear strategy must be mapped out regarding hardware and software license management to help ensure companies can meet their governance and contractual requirements. With CA Service Management, organizations can manage their licenses and readily allocate them to better improve usage, contain costs, and maintain compliance. Licensing for the cloud promises to be just as complex as traditional server licensing, and CA Service Management is designed to simplify this process and protect both consumers and providers from financial penalties associated with failed audits.

Service Contract Management

Another key to successfully working in a cloud environment has to do with the contract established between the business or service consumer and the service provider. CA Service Management helps define, monitor, and report on service, system, cost, and consumption metrics within aggregated and correlated business-centric service levels. Armed with that information, organizations know at any point in time the health of their services — whether they are delivering them or consuming them.

Service Level and Contract Management in the cloud world is imperative. Managing and enforcing Service Level Agreements (SLAs) that are in place with the cloud vendor ensures that defined provider, consumer and end-user service levels are being met. Ultimately on-premise IT departments are accountable for the quality, performance and availability of services provided to their end users. Like the fulfillment of a request, service levels and service level monitoring must be transparent and accessible to the end users. CA Service Management enables end users to request and subscribe to specific services, regardless of where the service resides or the delivery platform. What the cloud enables is a cloaking of the complexity that goes into designing and delivering complex, multi-faceted services, and allows the end user to focus on simpler tasks, which results in improved customer and end-user satisfaction.

Service Financial Management

Ensuring that costs are optimized is a critical responsibility for any successful business, and IT has specific challenges here. Often projects lose funding and costs are cut without knowledge of the potential impact to other IT projects and existing services as well as impacts to the business as a whole. This is just as true from a cloud perspective, and it can be even more complicated as the Service Value Chain adds more links! CA Service Management provides service accounting, budgeting, costing, and portfolio management capabilities to help both service consumers and service providers handle the financial aspects of managing the Service Value Chain. With CA's technology, the appropriate cost information can be better aggregated and associated with relevant services. This helps service providers to understand not only the true costs of delivering and maintaining services, but also with determining the price point to offer variations of their services.



SECTION 4:

Conclusions

With the evolution of the cloud-connected enterprise, Service Value Chain Management becomes a crucial component of success. Now that multiple service providers — whether from within the cloud, from internal IT, or from traditional outsourcers — are lining up to deliver value to businesses, it is more critical than ever that service management solutions be implemented to protect the business, maintain cost controls, and maximize business value.

Cloud computing has arrived and offers real business value when combined with an industry-leading service management solution. As you embark on your journey into cloud computing, remember that the key to a sunny forecast among the clouds comes down to trust. If you are planning a cloud computing initiative, work with trusted vendors and establish clear contracts for the services they are providing that explicitly call out service levels, quality, security, availability and performance targets. With these metrics defined, you'll know what to expect and you can ensure you have fair weather ahead!

SECTION 5:

About the Author

Melissa Borza is a VP of Product Management for the CA Virtualization and Service Automation business unit. Melissa focuses on Service Management strategy and product planning. With nearly 20 years of professional experience, Melissa has written articles on service management, change and configuration management, application life cycle management, IT trends and best practices. Melissa has presented at IT seminars and conferences throughout the world. Melissa is responsible for combining her strategic business expertise and customer outreach with her knowledge of technology to highlight the imperative of managing the Service Value Chain within the Cloud-Connected Enterprise.

Prior to coming to CA, Melissa worked as a journalist and as a college adjunct instructor. She holds a bachelor's degree from Cornell University and a master's degree from Syracuse University.



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