Operationalizing Cloud: The Move Towards a Cross-Domain Service Management Strategy

Report Summary

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) Research Report
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IT & DATA MANAGEMENT RESEARCH,
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Table of Contents

Executive Introduction

Cloud computing is a complex and often confusing array of sometimes logically unrelated technologies with consistent roots in virtualization and on-demand service delivery. But perhaps what's most relevant about Cloud computing is the catalytic effect it's having on IT organizations as they seek to become more resilient and responsive in enabling new and existing services, while minimizing capex and opex costs.

One of the more significant trends exposed in the research underlying this ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) report is the easily overlooked catalytic effect of Cloud on service management organizations, and on the technologies that enable cohesive approaches to understanding service interdependencies, managing and optimizing change, and monitoring delivered services for effectiveness. While for many in the industry, Cloud seems to be an excuse for negating investments in best practices such as those from the IT Infrastructure Library (ITIL), nothing could be further from the truth. Although Cloud is stimulating changes towards increased dynamic awareness in core service management capabilities – and in particular, in application discovery and dependency mapping and the large Configuration Management System (CMS) – Cloud technologies are not adopted in a vacuum. They require visibility across both Cloud-related and non-Cloud-specific services as well as increased cross-domain awareness and higher levels of automation. The data in this research is, at minimum, striking in its confirmation that core service management disciplines accelerate a more successful adoption of Cloud. This is a summary of the full report available at http://www.enterprisemanagement.com/research/asset.php?id=1924.

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Methodology and Selection Criteria

The research in this report was directed at capturing trends from a technology, organizational and process perspective in IT organizations seeking to take Cloud beyond an experimental, or fragmented set of deployments, towards a more cohesive strategy. There were 155 global respondents with the center in North America, but representative samples (25 or more) in EMEA and APAC. Data collection occurred in December 2010. Three focal interviews supplemental to the research were also completed.

This research profited from looking at similar data from two other EMA reports – *The Responsible Cloud,* EMA, January 2010*,* and *Network Management and the Responsible, Virtual Cloud,* EMA, February 2011.

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Patterns of Cloud Adoption: 2009-2011

Because of access to data reflecting trends over the last 13 months, EMA was able to look at Cloud adoption with an eye to shifting priorities over time.

For instance, SaaS adoptions were up overall by 10% from a year ago, with 77% of respondents indicating that SaaS was either in deployment or committed. PaaS and IaaS adoption percentages were relatively flat at 39% each for committed deployments – in

both cases actually a modest decline. Data on public versus private Cloud was consistent with adoption patterns from Q4 2009, with a clear focus on hybrid (80%) public/private – and with private Cloud distinctly ahead of public adoptions, especially for larger enterprises (Figure 1).

In terms of your organization's cloud deployments, which statement best describes what stage your organization is at today?

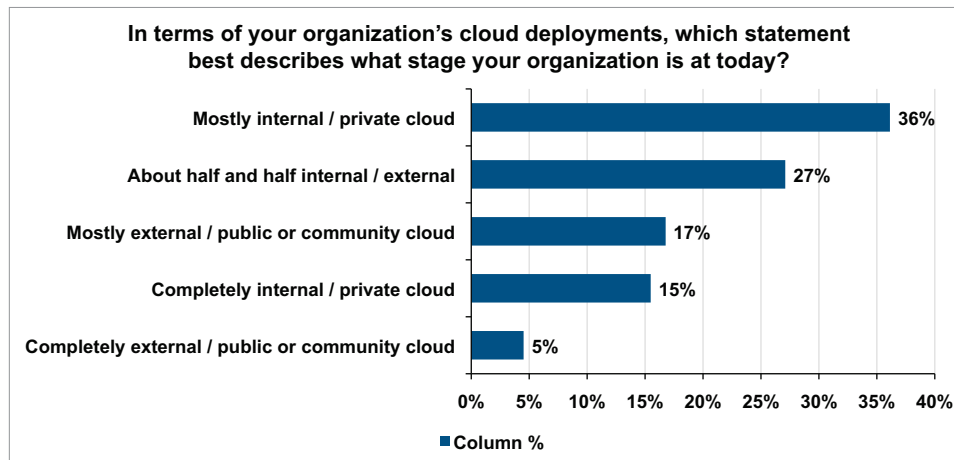|	
Mostly internal / private cloud	36%
About half and half internal / external	27%
Mostly external / public or community cloud	17%
Completely internal / private cloud	15%
Completely external / public or community cloud	5%

■ Column %

Figure 1: Hybrid environments still dominate with private leading public significantly

One Deployment Perspective

EMA has drawn from three focal interviews to provide more contextual perspectives on the data. The quote below was selected for this report summary.

Large East Coast Financial Services Provider

"We have a strong commitment to developing a versatile mix of internally and externally supported Cloud services to support our various lines of business. This will include rapid prototyping. In the past we've been dinged on our slowness to get capacity available for new application services, or extending the reach of existing application services. We also want to be able to provide the support needed for predictably demanding occasions such as monthly and annual audits.

"We're doing this on top of an already successful initiative to virtualize our data centers, including mainframe and distributed infrastructures, which we began four years ago. Our p Series mainframes are now completely virtualized, and about half of our distributed Wintel hardware is virtualized, with probably a fifteen-to-one ratio in terms of applications running on VMware. We are now going on the premise that 'thou shalt move to VMware unless you can show a reason not to.' We had, for instance, some resistance from our Call Center organization, saying they needed their own standalone server. But now they've moved, too.

"As we moved to a virtualized environment, we had to pay attention to application design – for instance, international access to Citrix has required new monitoring metrics. And we had a largely failed VDI initiative because we didn't properly calculate some of the system performance requirements – we tried to treat the end stations as if they were basically PCs. We also hadn't done a proper job on software license management and had to pay the piper when we tried to move to virtual, paying for past sins."

Organizational and Process Dynamics

The Rise of Cross-Domain Services

Perhaps the single most compelling analysis achieved through the current 2010/11 data is growing leadership of a Cross-Domain Services Management organization. The importance of this organization in many respects transcends the growth of Cloud computing itself, as it reflects a fundamental shift in the cultural and political realities of IT. Since most IT organizations do not call this group by the same name, EMA probed at it in a number of ways, including through cross analysis.

For instance, in one question we asked:

Does your organization have a cross-domain services management organization (i.e., an organization responsible for managing and/or planning services for your organization's internal and/or external customers)?

To this question, a surprisingly high 59% said "yes!"

EMA has been tracking the growth of this organization over the years, especially in regards to CMDB/CMS and Business Service Management deployments, and seen the number more than double between 2008 and 2009.

When asked how long this organization has been in place (Figure 2), EMA found relatively consistent growth, with 31% coming within the last 12 months, 36% coming between 12 and 24 months, and the remaining 33% older than 2 years, with the bulk of these being three years old or more. *Moreover, an impressive 54% reported direct C-level oversight and 70% showed VP level or above oversight!*

How long has your organization had a cross-domain services management organization?

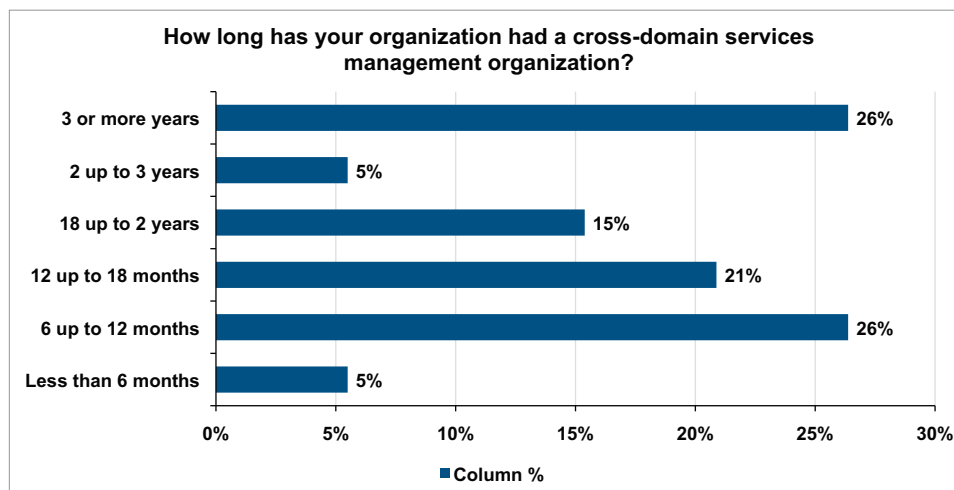| Category	Column %
3 or more years	26%
2 up to 3 years	5%
18 up to 2 years	15%
12 up to 18 months	21%
6 up to 12 months	26%
Less than 6 months	5%

Figure 2: How long has your organization had a cross-domain service management organization?

While conventional wisdom associates this group with larger companies, the data showed that while this was true to some degree, all respondent sizes, including those between 500 and 2,500 employees, showed significant cross-domain services presence.

The fact that the benefits of having a cross-domain services management transcend Cloud adoption was made clear when analyzed against rising IT budgets. Those companies with cross-domain services organizations in place were more than 1.5 times likely to see their IT budget grow in 2010 than those without!

Those IT organizations with cross-domain services in place, whether or not they were *primary* owners for Cloud, followed accelerated patterns of adoption and effectiveness.

- IT organizations with cross-domain services are 1.4 times faster in deploying Cloud services.

- IT organizations with cross-domain services are 1.5 times more effective in leveraging Cloud services for business model enhancements and nearly four times more effective in expanding Cloud revenue through delivering Cloud services.

- IT organizations with cross-domain services are 1.4 times more likely to have Cloud-based applications for finance, HR or Payroll committed to deployment, twice as many production applications for lines of business, (inventory, order entry), and are meaningfully ahead in packaged ERP, CRM and most other Cloud services.

- IT organizations with cross-domain services are dramatically more likely to have deployments of key service management technologies, from user experience management, to application dependency mapping, to CMDBs, to dashboards with advanced analytics, to IT Process Automation.

Changes in Process, Culture, Technology

One of the most significant data points from the research is that *70% of respondents had to rethink or redirect Cloud initiatives once begun!* Only 21% said they did not, and 9% weren't sure! The numbers were even higher (81%) when mapped against those with cross-domain service management organizations.

When asked about how and why they redirected initial deployments (Figure 3), changes in process flows, changes in management software adoption for provisioning new services and changes in application development and design were the top three. However, as a whole, Figure 3 underscores shifts towards a more strategic assimilation of Cloud services.
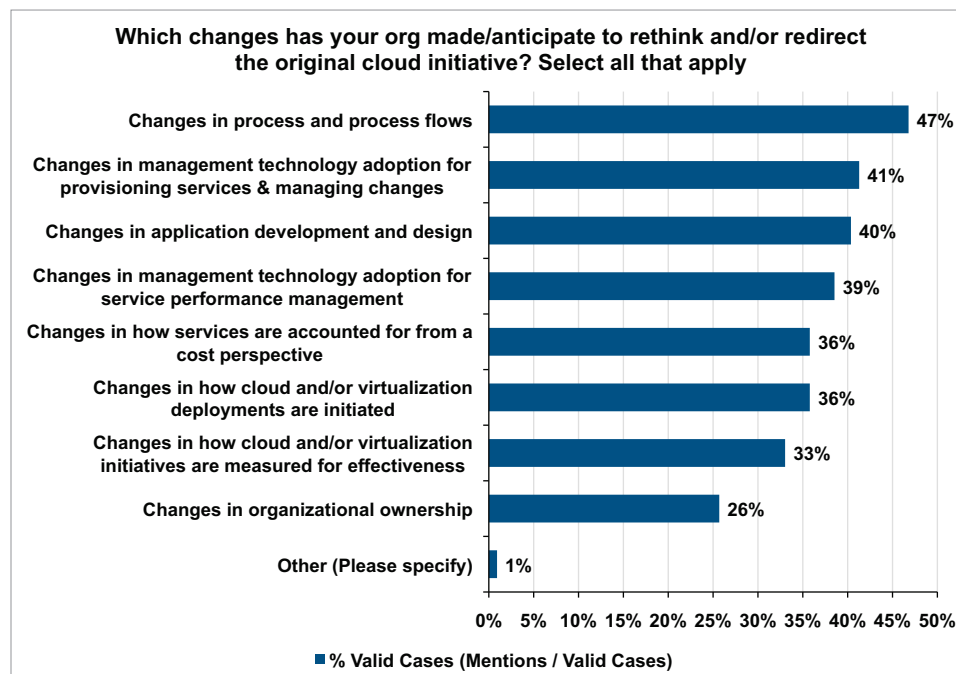

Figure 3: 70% of overall respondents, and 81% of respondents with cross-domain services management organizations redirected or rethought their approaches to initial Cloud deployments in order to achieve more effective strategies for assimilation

Technology Adoption: Bellwether Technologies and Cloud

In order both to better understand how IT organizations were managing Cloud, as well as to provide broader insights into IT maturity levels, EMA targeted twelve "bellwether technologies."

When asking about *achieved benefits*, the results were mostly consistent with late 2009 data (Figure 4). Reductions in capital expense and operational expense came in 1 and 3 both years; however, our 2010/11 data shows that a new option – *faster time to deploy existing services* – took second place. *Improving infrastructure resiliency*, also a new option, came in fourth, followed by *faster time to create/provision new services*.
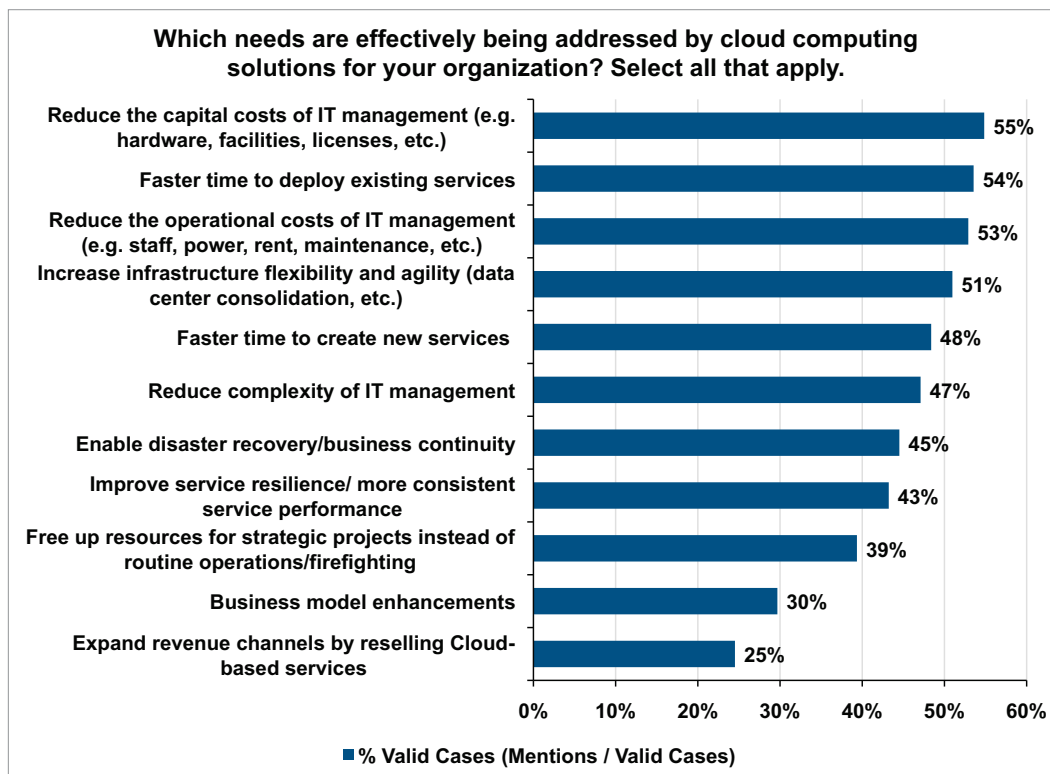
Which needs are effectively being addressed by cloud computing solutions for your organization? Select all that apply.

Need	%
Reduce the capital costs of IT management (e.g. hardware, facilities, licenses, etc.)	55%
Faster time to deploy existing services	54%
Reduce the operational costs of IT management (e.g. staff, power, rent, maintenance, etc.)	53%
Increase infrastructure flexibility and agility (data center consolidation, etc.)	51%
Faster time to create new services	48%
Reduce complexity of IT management	47%
Enable disaster recovery/business continuity	45%
Improve service resilience/ more consistent service performance	43%
Free up resources for strategic projects instead of routine operations/firefighting	39%
Business model enhancements	30%
Expand revenue channels by reselling Cloud-based services	25%

■ % Valid Cases (Mentions / Valid Cases)

Figure 4: Achieved benefits from Cloud deployment as per 2010/11

The strong correlation to "achieved benefits" with having a "cross domain services management" organization has already been addressed (*See cross-domain services and its impact on Cloud adoption*).

The impact of adopting key bellwether technologies for service management also shows strong advantages in Cloud assimilation. EMA examined all key technologies for advantages and found an overall consistent and compelling pattern. Figure 5 shows the roadmap achieved in mapping technology deployments to benefits achieved via Cloud:

Technology Deployments	Benefits Achieved via Cloud
IT organizations with **an Integrated Service Management Dashboard with Advanced Analytics** show advantages in ALL areas but are most notably:	• 1.8 times more likely to reduce management complexity • 1.4 times more likely to reduce capital costs via Cloud • 1.7 times more likely to free up resources for strategic projects • 1.9 times more likely to improve service resilience via Cloud • 1.4 times more likely to accelerate deployment of existing services via Cloud • 1.4 times more likely to increase infrastructure flexibility and agility via Cloud • 1.8 times more likely to expand revenue channels via Cloud • Twice as likely to deliver business model enhancements via Cloud
IT organizations with **CMDB deployments** show advantages in ALL areas but are most notably:	• 1.4 times more likely to reduce complexity of management via Cloud • 1.4 times more likely to improve service resilience via Cloud • 1.6 times more likely to accelerate deployment of existing services via Cloud • 1.6 times more likely to accelerate the creation of new services via Cloud • 1.5 times more likely to increase infrastructure flexibility via Cloud • 1.7 times more likely to expand revenue channels via Cloud
IT organizations with **Application Discovery and Dependency Mapping (ADDM)** show advantages in all areas but are most notably:	• 1.7 times more likely to free up strategic resources via Cloud • 1.6 times more likely to accelerate deployment of existing services via Cloud • 1.5 times more likely to increase infrastructure flexibility via Cloud • 1.7 times more likely to expand revenue channels via Cloud • 1.8 more likely to deliver business model enhancements via Cloud
IT organizations with **User Experience Management (UEM)** show advantages in ALL areas but are most notably:	• 1.5 times more likely to reduce complexity of management via Cloud • 1.4 times more likely to reduce operational costs via Cloud • 1.4 times more likely to accelerate deployment of existing services via Cloud • 1.5 times more likely to increase infrastructure flexibility via Cloud • 1.8 times more likely to expand revenue channels via Cloud
IT organizations with **Service Level Management (SLM)** show advantages in most areas but are most notably:	• 1.3 times more likely to reduce operational costs via Cloud • 1.4 times more likely to improve service resilience via Cloud • 1.5 times more likely to accelerate deployment of new services via Cloud • 1.5 times more likely to increase infrastructure flexibility via Cloud • 1.8 times more likely to expand revenue channels via Cloud

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Technology Deployments	Benefits Achieved via Cloud
IT organizations with **IT Process Automation (ITPA)** show advantages in ALL areas but are most notably:	• 1.5 times more likely to reduce management complexity • 1.3 times more likely to reduce capital costs via Cloud • 1.5 times more likely to free up resources for strategic projects • 1.4 times more likely to improve service resilience via Cloud • 1.7 times more likely to accelerate deployment of existing services via Cloud • 1.4 times more likely to accelerate the deployment of new services via Cloud
IT organizations with a **Service Catalog** show advantages in most areas but are most notably:	• 1.4 times more likely to reduce management complexity • 1.4 times more likely to reduce capital costs via Cloud • 1.5 times more likely to improve service resilience via Cloud • 1.5 times more likely to accelerate deployment of existing services via Cloud • 1.6 times more likely to accelerate creation of new services via Cloud • 2.2 times more likely to expand revenue channels via Cloud
Other bellwether technologies:	• **Unified Service Desk** delivers measurable advantages in all measurable areas except business model enhancements • **Usage-based accounting** delivers 1.4 times the value when applied to leveraging Cloud to reduce capital costs and 2.2 times the value when applied to expanding revenue channels by reselling Cloud services • **BI** helps IT to leverage Cloud to accelerate the deployment of new services 1.4 times

Figure 5: Roadmap achieved in mapping technology deployments to benefits achieved via Cloud

Conclusions

Cloud has become a surprisingly consistent force in driving changes within IT – in particular promoting more engagement with business clients and more cross-domain management directions so central to, among other things, ITIL best practices. The clear "we/them" relationship in effective Cloud adoption between those organizations *with cross-domain services* versus those *without* is telling here. And the differences are at least as striking when it comes to those IT organizations with key bellwether service management technologies and those without.

Cloud has become a surprisingly consistent force in driving changes within IT – in particular promoting more engagement with business clients and more cross-domain management directions

So Cloud seems to be accelerating the need for intelligent, top-down service management both politically and technologically, even if much of the initial hype had a sixties flavor of "tune in, drop out and put-it-in-the Cloud" behind it. The need for visibility, dynamic control, accountability and clear answers to business clients about why services are or are not provisioned via Cloud is cementing, not detracting from, the clear leadership role of strong central service management teams.

EMA anticipates that within two to five years, Cloud adoptions will continue to grow in importance as options, rather than endgames, in support of strong service management organizations. Similarly, Cloud service providers are likely to segregate between those content to "mass market" commodity services for smaller businesses and startups at lower costs, and those willing to partner strategically with mid-tier and larger businesses to provide the shared visibility, control, security and responsiveness that is needed for effective optimization across hybrid (Cloud/non-Cloud) environments.

At the same time, Cloud is reshaping priorities for how service management technologies must evolve – towards more dynamic currency and higher levels of automation. These trends will continue to value core service management and Business Service Management (BSM) requirements for service modeling, user experience management, dynamic visibility into service interdependencies, and superior analytics. However both vendors and adopters will be favored by looking at pragmatic, rather than architecturally perfect options, as standards, technologies and design points continue to evolve.

In summary, it is gratifying to be able to show such a clear relevance of meaningful organizational, process and technology commitments to effective Cloud service assimilation. Data, and the realities behind it, are not always so accommodating to hoped-for objectives. But at least in this research, as 2011 begins, the ties between strong service management initiatives and the effective adoption of Cloud or virtualization capabilities remains linear, compelling and clear.