Open Standards Are Dissolving Cloud Silos

May 2012

Author:

Elizabeth Hedstrom Henlin, Software Analyst

elizabeth.hedstromhenlin@tbri.com

TBR

TECHNOLOGY BUSINESS RESEARCH, INC.

Contents

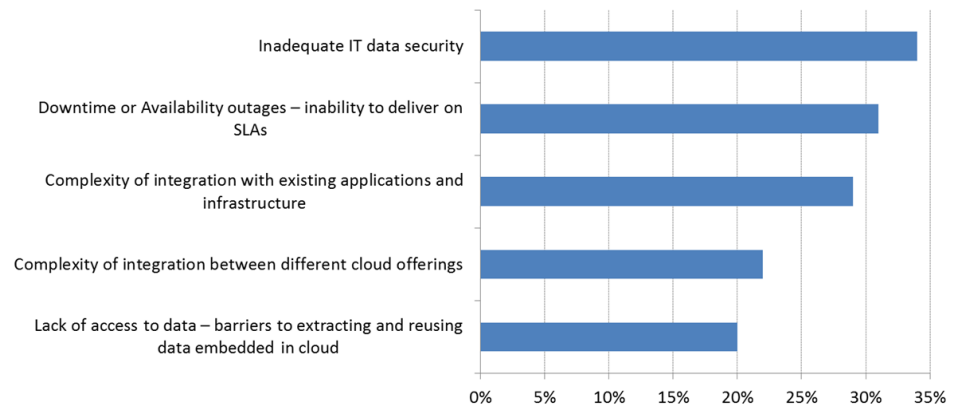# Open standards are fueling the next evolution of cloud

Open standards are positioned to drive new levels of interoperability across cloud deployments

Between now and 2020, IT departments will shift from buyers and builders of solutions to internal service brokers for lines of business, with cloud computing as one vehicle for that change. This transition is a tipping point between efficiently delivering internal services and effectively scaling to meet company growth.

FIGURE 1

Top 5 Perceived IT Risks in Deploying Cloud Capabilities

SOURCE: TBR WINTER 2012 CLOUD COMPUTING ADOPTION STUDY; N=302

As noted in the figure above, TBR's *Winter 2012 Cloud Computing Adoption Study* highlighted customers' perceptions of cloud risks, with respect to integration with both traditional infrastructures and other clouds; respondents indicated their fears of the cloud's potential to slow or even prevent access to business-critical data.

Key cloud usage cases, including secure federation, automation, common management and policy, as well as transparency are fueling open-source development and discussion of technologies and standards. Coalitions such as the Open Data Center Alliance are leading the dialogue on these initiatives, collaboratively highlighting the potential these use cases can deliver for cloud interoperability and end users' business value.
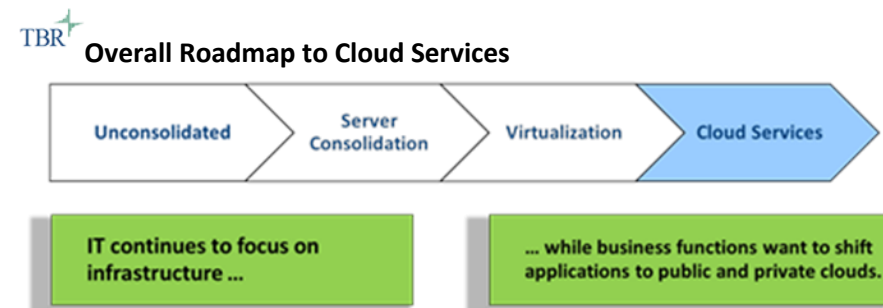
TBR sees a substantial opportunity to address risk and drive cloud computing adoption with industry implementation of the use cases and open standards advocated by the Open Data Center Alliance. Vendors and end users alike can then realize value-driven growth.

I. Consideration

Cloud standards help IT managers balance investments with the demands of traditional infrastructure

IT managers are tasked with improving spend-to-performance ratios while alleviating rising demands on traditional IT infrastructure. Furthermore, line-of-business demands are straining IT departments. Growth, flexibility and agility requirements as well as a shift toward mobile and remote access continues to expose the weaknesses of existing solutions. To support current business while preparing IT infrastructures to integrate with cloud deployments, TBR believes customers should follow a road map that allows them to incrementally transition to cloud services (public, private, or hybrid deployments) without sacrificing core processes.

FIGURE 2

TBR

Overall Roadmap to Cloud Services

SOURCE: TBR WINTER 2012 CLOUD COMPUTING ADOPTION STUDY; N=302

Cloud computing has largely proven to be a timely initial answer to IT managers' concerns. As shown in the figure above, taken from TBR's *Winter 2012 Cloud Computing Adoption Study*, the evolving enterprise credibility of cloud computing gives rise to a new array of potential consumers – line-of-business decision makers willing to risk data in the cloud, provided the cloud delivers measurable ROI.

To capitalize on vendors looking to monetize cloud computing products, IT managers can include open cloud standards as one of their key criterion for external vendors under evaluation – driving vendors not already engaged with standards coalitions (including the Open Data Center Alliance, the Storage Networking Industry Association, and the Distributed Management Task Force) to move toward hardware-agnostic cloud application layers, creating new efficiencies of scale and interoperability across clouds.

TBR highlights the Open Data Center Alliance's leading position in this initiative, driven by its ability to stay close to end users while remaining tied to vendors across segments – enabling a unique point of view and advocacy.

II. Design and Deployment

Open standards can help reshape cloud usage, consumption and operations within IT environments

Largely due to the momentum started by coalitions, open standards are delivering improved efficiencies in cloud design, portability, integration, implementation and management. Industry leaders and use cases include:

FIGURE 3
Standardization of Cloud Segments and Use Cases – Leading Associations
LEGEND:

Group or Platform	Acronym
Object Management Group	OMG
Cloud Security Alliance	CSA
Cloud Standards Customer Council	CSCC
Open Data Center Alliance	ODC-A
Open Compute Foundation	OCF
Open Cloud Consortium	OCC
Storage Networking Industry Association	SNIA
OpenStack	
CloudStack	
Open Grid Forum	OGF
Distributed Management Task Force	DMTF
Open Network Foundation	ONF

Use Cases	Software as a Service (SaaS)	Platform as a Service (PaaS)	Infrastructure as a Service (IaaS)	Desktop as a Service (DaaS)
Provisioning Metering Billing	OMG ONF	OMG ONF	OMG ONF OGF DMTF	OMG ONF SNIA
Security	CSA ODC-A	ODC-A	ODC-A	ODC-A
Quality of Service	OCC ODC-A CSCC	ODC-A OCC CSCC	DMTF ODC-A OCC CSCC	ODC-A OCC CSCC
Identity	CSA	CSA	CSA	CSA
Development (Associations & Platforms)	ODC-A	OMG OpenStack CloudStack		OMG SNIA ODC-A
Virtual Machines			DMTF	
Data and Storage	OCF ODC-A	ODC-A OCF	ODC-A OCF	SNIA ODC-A OCF

The growth of innovation through open cloud standards is helping make IT managers' desire for maximum efficiency and minimal complexity a reality. An open discussion of these associations, platforms and their standardization missions will drive dialogue around which standards are best designed to maximize customers' investments.

Vendors affiliated with these platforms and coalitions have the opportunity to position cloud portfolios to meet market demand while keeping customer concerns around environment and interoperability top of mind.

Open standards accelerate IT's cloud journey, moving from IT efficiency to business effectiveness

While cost efficiency fueled early cloud adoption, TBR maintains that long-term purchases of cloud computing solutions will hinge on IT's ability to position cloud as driving business growth – moving beyond technology to link cloud with existing business processes. The perceived cloud computing integration risks customers see – not only to core infrastructures and applications, but within clouds – also create an opportunity to brand cloud computing as driving business value with the addition of open standards.

Standards and openness have brought tremendous change and efficiency to IT deployment and management. TBR believes this wave of change is set to envelop cloud, creating long-term benefits for IT managers. IT managers' engagement with associations such as the Open Data Center Alliance and the Distributed Management Task Force help build expertise in cloud usage models and challenges. Context brought to their businesses then informs more complex, value-oriented RFPs within their own organizations.

Following the example of application developer peers, IT managers can create value for their businesses by engaging with standards associations on an ongoing basis. Contributing through purchases, participation and delivery of feedback and intellectual property will determine where these associations look next for chances to benefit users, ensuring these associations are driving the most value with open standards for IT managers in their core work.

III. Enablement

Cloud purchasers seek trusted advisors, delivering assured infrastructures to drive long-term growth

Purchaser adherence to understanding and embracing open cloud standards, as espoused by multiple standards alliances, will ensure cloud computing vendors earn the trust of cloud implementers, driving interoperability across cloud and traditional IT environments.

Key risks reported by end users are also addressed in part by the interaction of coalitions groups and the evolution of open standards. Collaboration both in open cloud computing coalitions and also in support of open platforms – including OpenStack and the Open Data Center Alliance – shows customers that vendors are supportive of their needs. The perception of integrated offerings also helps customers avoid fears of solution lock-in.

Of note, the Open Data Center Alliance is working with solutions providers to drive vendor-focused answers to customer concerns around integration between clouds and critical business functions. TBR sees a number of use cases from the Open Data Center Alliance as critical to cloud's next evolution, including but not limited to:

- Virtual machine interoperability
- Bandwidth control to maximize input-output efficiency
- Standards that will drive industrywide views of provider assurance
- Best practices to shape service catalogs' standards across providers

Further details on these usage cases can be found at the Open Data Center Alliance's website.

Customers now expect cloud computing investments to not only deliver savings to justify initial spends, but also expect enterprise-grade standards and behavior. Those vendors that can deliver assured cloud infrastructures with near-term cost benefits that integrate with diverse IT environments are positioned for long-term customer loyalty and purchasing.

Proven experience in supporting diverse portfolios positions Intel as a unique, enabling cloud partner for customers

For customers, Intel's unique position in the stack works to their advantage. Intel has mapped its cloud strategy to the needs of IT managers, as it looks to simplify the design, deployment and operation of cloud computing solutions. Remaining true to its standards promoter legacy, Intel looks to enable simpler design and deployment of clouds within IT environments.

For IT managers, it is a buyers' market when evaluating cloud computing

solutions. Solutions are proliferating in real time, and the comprehensive reach of cloud applicability spans segments and geographies. Intel's credentials position it to serve as a trusted cloud advocate. Moreover, Intel is addressing risk and amplifying its cloud credibility with substantial investment of resources and personnel into standards-focused organizations, including:

- Open Data Center Alliance (ODC-A)
- Open Compute Foundation
- Distributed Management Task Force
- Cloud Security Alliance

As the ODC-A's sole technology advisor, Intel is positioned to gain insights into customer cloud usage and adoption and deliver market recommendations for new open cloud standards that can increase cloud's integration within the datacenter. With its technological experience, Intel is looking at a product level to do what it does best – enable and improve customers' IT environments – but now within the cloud. Through the Intel Cloud Builders Program, Intel is delivering reference architectures for cloud solutions with its partners built on ODC-A standards.

As cloud standards evolve, Intel is positioned to serve as the bridge between the industry and end users

A credible x86 track record allows Intel to expand its IT standards leadership to include cloud computing. Over the last two decades, Intel has played a pivotal role in the establishment of IT standards benefiting IT managers. In recent quarters, Intel has shown its commitment to expanding its enterprise-ready capabilities through a broadened focus to include not only server processors, but also a broader range of datacenter products that include networking and storage.

Understanding that IT managers expect the same performance standards from the cloud as they do from traditional solutions, Intel is committed to delivering trusted infrastructure from end-to-end within cloud stacks, ensuring secure information.

TBR believes Intel has set a trend with its open, engaged support of open cloud technology standards. Intel's leadership, along with that of its peers in the Open Data Center Alliance, the Open Compute Foundation, and the Distributed Management Task Force, will encourage innovation and openness, leading to the creation of new cloud computing technologies and solutions designed to improve the lives of IT managers.

About TBR

Technology Business Research, Inc. (TBR) is a leading independent technology market research and consulting firm specializing in the business and financial analyses of hardware, software, networking equipment, wireless, portal and professional services vendors. Serving a global clientele, TBR provides timely and accurate market research and business intelligence in a format that is uniquely tailored to clients' needs. TBR analysts are available to further address client-specific issues or information needs on an inquiry or proprietary consulting basis.

For More Information

TBR has been empowering corporate decision makers since 1996. For more information, visit www.tbri.com.