



I D C T E C H N O L O G Y S P O T L I G H T

Powering Digital Transformation Through the Cloud-Ready Enterprise

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Adapted from *Developing a Cloud Strategy for Digital Transformation: Solve the Three Clouds Problem* by Richard L. Villars and Erik Berggren, IDC #US41519516

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Enterprises today must focus on digital transformation to remain competitive or disrupt their industries. As a result, business leaders expect IT teams to seamlessly deliver next-generation mobile, analytic, and Internet of Things (IoT) applications to the right locations across any device. The foundation for successful transformation is IT's adoption of a "cloud first" mantra that provides the agility and efficiency to enable these innovative new digital services and applications. However, IT organizations must address legacy infrastructure and fragmented management tools that require modernization to reduce costs of operations, ensure application performance, and keep pace with the rapidly changing demands of digital business. This IDC Technology Spotlight looks at the role of Riverbed in accelerating digital transformation by addressing the new requirements for a cloud-ready enterprise.

Introduction: Digital Transformation Drives Shift to a Cloud-Centric Enterprise

Enterprises must be ready to engage in a continuous digital transformation process as they adapt to or drive disruptive changes in their industries and their interactions with customers. This digital transformation involves enterprisewide innovation across many of the following areas: organization (i.e., workforce skills), omni-experience (i.e., customer engagement), operating model (i.e., business model/process changes), information (i.e., data exploitation), and leadership.

From a technology perspective, the successful adoption of cloud services is the foundation that underpins all of these innovation efforts. These cloud efforts are driven by the needs of organizations to more closely align deployment and consumption of IT services and resources with business activities and to provide a platform for agile development and enhancement of the new mobile engagement and analytic-based services that support digital transformation.

However, enterprises face challenges in achieving digital transformation. In *IDC FutureScape: Worldwide CIO Agenda 2016 Predictions* (IDC #259969, November 2015), IDC predicted that by 2017, 60% of digital transformation initiatives will be unable to scale because of a lack of strategic architecture. Silos within organizations pose an additional threat: IDC also predicts that by 2018, 70% of siloed digital transformation initiatives will fail because of insufficient collaboration, integration, sourcing, or project management. In embarking upon digital transformation, enterprises must strategically and holistically align around cloud-centric IT as an enabler of this process.

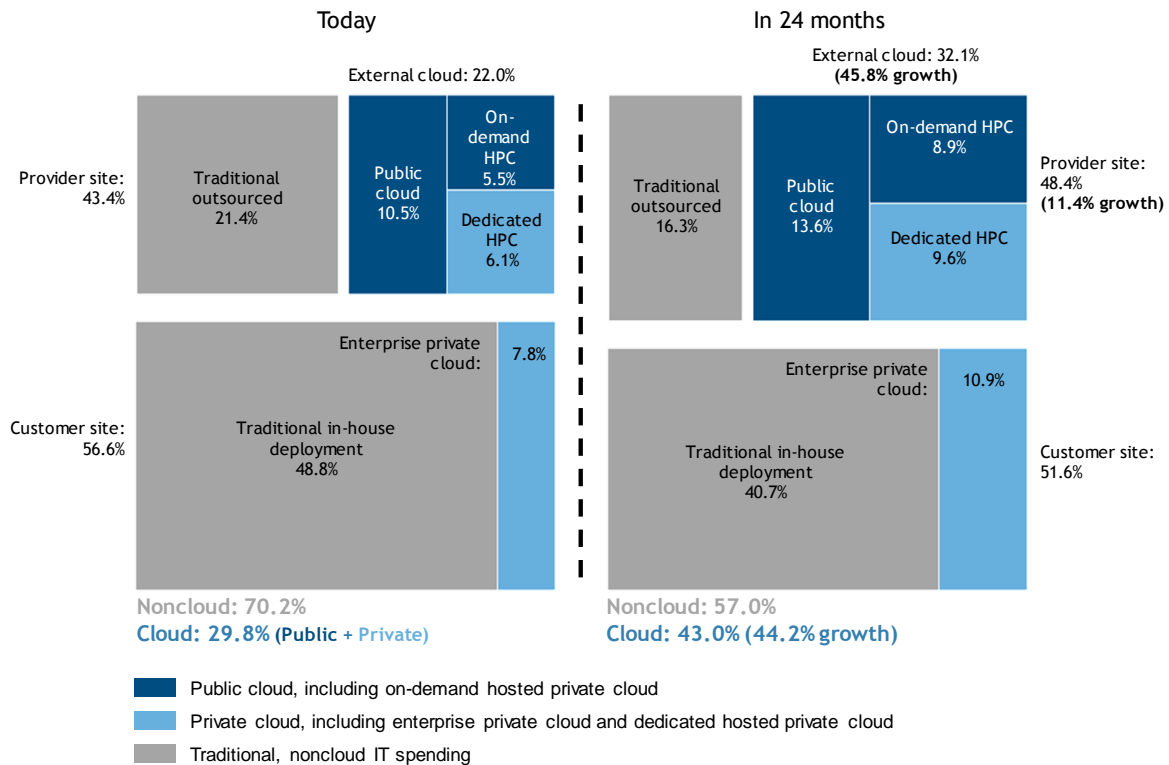
The Quickening Pace of the Cloud Transition

IDC conducts an annual survey of IT, development, and line-of-business (LOB) leaders around the world to gauge their pace of cloud adoption. Figure 1 presents the summary of worldwide results concerning current and planned IT budgeting based on procurement and management models (e.g., on-premises versus off-premises and cloud versus more traditional models).

FIGURE 1

IT Budget Redistribution to Cloud

Q. Please estimate what percentage of your organization's total annual IT budget is allocated to each of the following procurement/management models.



n = 11,350 worldwide respondents

Note: The data is weighted by GDP and company size.

Source: IDC's *CloudView Survey*, January 2016

The messages from the survey are quite clear. Organizations intend to spread their cloud investments across a multitude of options: some in their own datacenters but increasingly on a mix of shared and dedicated IT assets in service providers' datacenters. The most obvious conclusion drawn from this analysis is that the future strategy for organizations is hybrid cloud. The goal for adopting a hybrid cloud solution is to ensure a controlled transition to a cloud model while maintaining control over data and application security.

We are also at the stage where switching to a holistic cloud strategy is a necessity for survival, not just a strategy for competitive advantage. Organizations around the world will need to complete the shift to a predominantly cloud-based environment in the next few years, but one of the most important elements in this shift will be to modernize aging IT infrastructure that wasn't designed for the speed and flexibility needed in the cloud and digital era.

The Future of Cloud Enablement

Developers and business leaders expect their IT teams to automate the provisioning of tuned IT resources for emerging mobile, analytic, and IoT workloads at the right locations while achieving maximum reuse of all their IT and data assets as cloud-enabled applications evolve. But shifting to a cloud-first enterprise isn't just about picking among a specific set of product or service delivery models such as a public, private, or hybrid cloud.

IT organizations must ensure the underlying application, compute, storage, and networking infrastructure works optimally as a seamless, strategic architecture. To do so, they must also realign their infrastructure and network selection and operations strategies to address a specific set of goals:

- Reduce time, staff, and financial resources dedicated to planning, managing, and executing asset provisioning, configuration, and performance monitoring processes.
- Achieve a high level of data control and data insight to ensure the secure use and sustained extraction of value from diverse information in internal and cloud-based content repositories.
- Develop standardized and modularized systems that can be securely deployed and managed as a "fleet" of local connected assets for secure, low-latency delivery of cloud applications to critical business and customer locations around the world.

The most consistent and recurring barriers to more rapid cloud adoption — aside from security concerns — are limitations in network capacity and agility as well as the fragility of legacy infrastructure. The need to link applications and data across diverse cloud options dictates the adoption of a more dynamic, on-demand approach to provisioning and deploying IT assets and resources. IT organizations must work closely with their service providers to enable secure, performance-optimized, multicloud connectivity throughout the organization, including branch-office and customer locations. Specific requirements that solutions need to meet include:

- Enablement of rapid network transformation and realignment between internal and cloud datacenters and critical remote locations
- Creation of a common foundation for the secure control of data in terms of movement, access, and retention
- Delivery of a common performance monitoring facility that extends across all of the internal and cloud-based applications underlying new digital services

No matter what solutions an organization selects, it must also ensure that the solutions incorporate security, visibility, governance, and policy control elements. Security and governance practices and policies need to extend across all cloud options to ensure consistent service delivery and data control regardless of the range of infrastructure and platform resources supporting any specific application. IT teams should specifically evaluate the current use of automation and orchestration solutions such as software-defined networking with the goal of enabling software-defined security/compliance. Further considerations should also center on the adoption of an integrated set of performance monitoring tools to replace disparate point solutions that don't offer the level of accurate, timely insights needed across an increasingly cloud-centric, distributed infrastructure.

Considering Riverbed

Riverbed's solutions allow enterprises to modernize enterprise IT to enable cloud-based initiatives from infrastructure to applications, across headquarters, regional locations, and any branch-office type where business is conducted. Combining an integrated set of software-defined solutions that simplify the complexity of hybrid IT, the Riverbed Application Performance Platform gives enterprises the tools they need to understand, simplify, optimize, protect, and orchestrate applications and data across hybrid cloud and networking environments. The Riverbed Application Platform combines software-defined networking, comprehensive performance monitoring, WAN optimization, and hyperconverged edge solutions to deliver the following business outcomes:

- **Agility.** Deploy and manage network services, applications, monitoring capabilities, and edge IT intuitively and at the pace that supports today's digital business.
- **Visibility.** See and understand how applications and services are performing at all times. Get clear visibility across the entire enterprise from cloud to datacenter to branch to user, providing the insights IT needs to enforce service-level agreements (SLAs) across software-as-a-service (SaaS) applications, cloud-based applications, and on-premises applications and infrastructure.
- **Performance.** Optimize the performance of applications and networks for the best possible user experience and highest productivity for employees, partners, or customers regardless of location, device, or network.
- **Efficiency.** Simplify and automate distributed infrastructure (particularly networking and edge IT) so that business can respond quickly to change, reduce the costs of edge IT replicated across multiple sites, and reduce the time IT spends "just keeping the lights on."

The purpose of the enterprise infrastructure is to deliver applications and business services. By recently introducing software-defined solutions around SD-WAN, cloud-based performance management, end-user experience, edge IT, and enabling the cloud-ready branch, Riverbed is on the pulse of the changing landscape of enterprise applications and how they are hosted and accessed. IDC believes Riverbed can be a viable solution in supporting a cloud-optimized organization.

Challenges

With any technology transition, there are potential challenges. In general, the deployment of critical applications across a growing range of internal and external datacenters makes tuning network connectivity more complex. Application prioritization and granting proper security levels have been key challenges in the rapid migration to cloud applications. Innovations around software-defined networking and edge IT have been making inroads to address these challenges.

Proper monitoring of application performance has become equally paramount. Enterprise IT is challenged to shift from focusing on monitoring the characteristics of single applications to providing consistent performance for complex services built on multiple applications (and multiple clouds IT often has little control over or visibility into). This means enterprise IT must diligently assess the capabilities of its networking and application performance monitoring and management environments today and potentially make substantial upgrades where necessary. Organizations evaluating Riverbed must consider the solution's ability to meet these pressing challenges.

Conclusion

Successful digital transformation of the enterprise is contingent upon the effective adoption of a cloud-first business. As a result, enterprise IT must break away from the traditional silos of compute, networking, and storage and pivot to a holistic infrastructure integrated through the cloud. Strategies for making this transition depend on the implementation of cloud infrastructure, applications, and services that are optimized for an individual organization's needs. A trusted cloud technology solution vendor such as Riverbed can work as a strategic partner in ensuring an effective cloud-centric model that meets the end-to-end needs of the enterprise.

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