riverbed

THE FOUR STAGES OF CLOUD ADOPTION

HOW TO BUILD A FRAMEWORK FOR SUCCESS IN THE CLOUD

A NEW ERA EMERGES

Over the last few years, the cloud has emerged as a mainstream and essential tool for managing IT resources and building a more agile and flexible business. No less important: It drives cultural change and process improvements within IT.

Today, as organizations look to build a modern IT architecture that scales rapidly and globally while supporting numerous digital channels and a variety of devices, the cloud is nothing less than critical. It delivers a business and IT framework that supports innovation, digital transformation and disruptive business models.

On a practical level, the cloud improves an organization's ability to innovate, communicate and collaborate. Employees can work autonomously and interact with other functional teams in ways that would have been unimaginable in the past. This helps build a faster and smarter enterprise.

The cloud also supports strategic models that lead to innovation and digital disruption. Consider companies such as Uber, Airbnb and Intuit, the maker of TurboTax—all of which connect people, products and services in new and remarkable ways. Their business models scale quickly and seamlessly and they are able to roll out frequent updates to keep up with customer needs.

Simply put: They operate at digital speed.

The cloud delivers a critical framework that allows organizations to thrive at innovation, digital transformation and the development of disruptive business models.

WEATHERING THE STORM

Beyond the promise of building a more strategic business and IT framework lies an array of challenges. Success is not guaranteed, strategically or financially.

Too often, organizations dive into cloud initiatives on a tactical, piecemeal and ad hoc basis. Business and IT leaders do not map out and implement systems effectively. The end result is a somewhat chaotic IT and business environment that doesn't fully deliver on the promise of the technology. The patchwork of point solutions can become its own problem, leading to additional complexity, slowing down applications—and, thus, business operations—reducing visibility into performance and claiming the majority of IT's time as teams struggle to find the sources of issues.

There are a few key things to know about the cloud:

- **First**, not all applications are meant for the cloud. On-premises deployments are here to stay, at least for a while. In some cases, they are required for compliance reasons.
- **Second**, not all cloud environments are created equal. The cloud is an umbrella term that refers to a lot of different products, services, features and capabilities. Vendors vary and delivery mechanisms aren't all the same.
- **Third**, planning, implementation and the measurement of results matter—whether and how an organization is moving some or all of its applications and infrastructure to the cloud.

Not surprisingly, an enterprise must strike a balance between expenditures for cloud resources and desired performance. The goal is to optimize ROI by achieving maximum performance at the right level of investment. Automation and efficient utilization of cloud resources are critical to establishing this balance.

As a result, an initiative must focus on two core principles:

1. Helping an enterprise establish a lean IT framework while unleashing fast and agile IT processes; and
2. Putting the customer first by creating discernable value. The most successful organizations measure value delivered at least partly through near real-time analytics that offer insights into customer behavior, attitudes and business trends.

Strategy and implementation matter:

There are four key stages to successful cloud adoption. Organizations must focus on these factors to ensure best-practice results:

Stage 1 - Assess →

The first step is to understand which on-premises applications are the best candidates for migration to, or development in, the cloud.

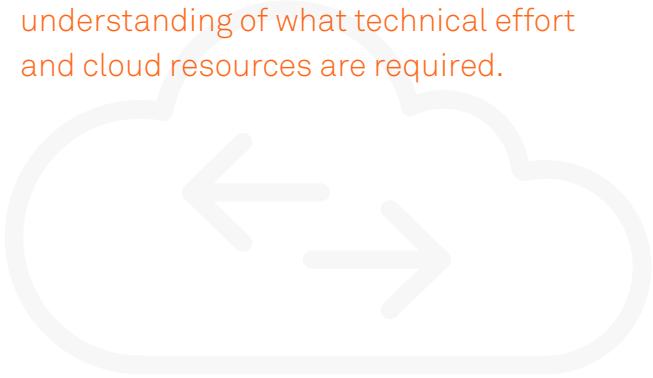
This decision should be based on usage trends and business impact. A revenue-generating application that experiences seasonal usage and has global demand is an obvious candidate. Ideally, the application architecture should be reasonably suited for a cloud platform.

On the technical front, you need to identify critical and non-critical apps, understand resource utilization—compute, memory, etc.—on-premises. This information can clue teams into projected resource consumption in the cloud.

On a practical level, it's vital to understand dependencies and interactions between modules within applications shortlisted for migration. When an enterprise has clear visibility into these factors and can size the effort, a migration strategy becomes much clearer.

GOAL

A prioritized list of applications and services to move to the cloud, based on the business case. Also, a clear understanding of what technical effort and cloud resources are required.



Stage 2 - Prepare →

Once an enterprise has a prioritized list of applications that are candidates for the cloud, you can move forward with the preparation stage of a cloud migration.

This phase is all about tearing down the existing application and re-architecting it for the cloud. This process starts with a thorough review of application modules, their dependencies and their compatibility with the cloud.

This review may include re-fitting the applications to comply with architectures based on micro-services that utilize containers that play well with cloud platforms. The goal is to ensure that these applications utilize resources efficiently, are easily maintainable and can scale rapidly based on business need.

Ultimately, an organization must have total visibility across their entire on-premises and cloud-based environments in order to verify that applications perform from both a technical and business perspective.

GOAL

Rebuilt applications that adopt a service-oriented architecture suitable for cloud deployment—one that is efficient, scalable and easily maintainable as new capabilities are introduced to meet business requirements.

Stage 3 - Manage →

It's critical to verify that applications and services in the cloud are up and running at all times—and for all users on all their devices.

Service providers' service level agreements (SLAs) often stop at the edge of the cloud. And, knowing that a server is up and running does not tell you how the application is performing for the end user. Verifying service, performance and security policies requires tools that deliver visibility across an entire portfolio of applications, networks, infrastructure and devices—all from the end user's perspective.

Not surprisingly, the ability to monitor performance and gather insights across the application delivery chain—from the end user across the network and into the servers and databases—along with the ability to improve service delivery over the network, must be deployed into the cloud infrastructure. The real-time visibility and control that comes from it enable IT to collaborate across domains and the business to ensure 24/7 performance, plan for product or system improvements, and quantify impact on customer satisfaction and revenue.

This may involve the following issues:

- Instrumenting the IT environment to harvest and display performance data.
- Collaborating across functional groups within IT, such as app development, network engineering, operations, system administation and mobility.
- Working with business teams to glean key insights and take appropriate action.

There are also external considerations, which can include the ability to validate SLAs and ensure the long-term viability of the cloud provider.

GOAL

Gain a clear end-to-end view of your organization's applications, networks, systems, and other resources on and off the cloud—along with insight into the resulting user experience and business impact. Analyzing these insights arms IT and business teams with the information they require to deliver optimal performance and make strategic technical and business decisions.

Stage 4 - Improve →

The end goal is to create discernable value for the organization, as well as customers and business partners.

To do so, organizations need to rethink and reengineer processes to further exploit cloud capabilities.

An initiative can go in many directions. For example, an enterprise may adopt rapid and agile app development and testing, along with DevOps practices that enable continuous delivery of releases.

An initiative might also tap a data-driven approach to better understand customer requirements and growth, so that teams can build and deploy the right features. This can come down to A/B testing new features or building product adoption funnels to help make decisions. Today, all of this must occur within a 24x7x365 IT framework. Applications, services and data must operate and flow without interruption.

What's more, this IT environment must support new and improved platforms and emerging technology, such as the Internet of Things and more advanced mobility features, including speech processing and visual processing. Flexibility is paramount in an era where the only constant is change.

GOAL

Develop a plan and a framework for leveraging the cloud to drive process improvement and, in the end, achieve digital innovation and maximum return on investment.

CONCLUSION: FORWARD THINKING

When your enterprise focuses on these four key areas and embraces a best-practices approach to a migration, you can put the cloud to work in the most productive and cost-effective ways.

More importantly, you and your team can create a foundation for digital business—one that facilitates innovation that leads or adapts to disruption. Organizations that succeed in establishing a strong cloud foundation become more nimble, flexible and competitive. They are the ones that transform today's challenges into tomorrow's opportunities.

LEARN MORE ABOUT RIVERBED'S SOLUTIONS FOR THE CLOUD