



WHITE PAPER  
Upward Mobility - Moving IT Business to the Cloud

## CLOUD ADOPTION IS SKY HIGH

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Like a gathering storm, cloud adoption is reaching critical mass—with adoption accelerating daily, driven by an increase in strategic enterprise deployments and the astonishing business results achieved.

**60%**

**OF CIOs SAY THEIR #1 PRIORITY FOR 2014 IS CLOUD COMPUTING<sup>1</sup>**

**33%**

**OF IT BUDGETS ARE CURRENTLY INVESTED IN THE CLOUD<sup>1</sup>**

**77%**

**OF CIOs REPORT CLOUD-BASED INFRASTRUCTURE IS ALREADY IN USE<sup>2</sup>**

The cloud is experiencing explosive growth, businesses are actively moving on-premise workloads, infrastructure and platform solutions to the cloud. What started out as a nice way to get enterprise email capabilities at a low cost has evolved, extending beyond IT to enable other company functions—including a variety of SaaS, PaaS, IaaS and Enterprise Resource Planning (ERP) applications, as well as increasing numbers of cloud-based business continuity and disaster recovery solutions.

What are the business advantages of this epidemic migration to the cloud? Read on ...

### Momentum is Growing

- + 2014 is the first year the majority of workloads will be cloud-based.<sup>3</sup>
- + 51% of workloads will be processed in the cloud versus 49% by traditional IT in 2014.<sup>3</sup>
- + Over the next five years, anticipate a 44% annual growth in workloads for the cloud vs. a much lower 8.9% growth for "on-premise" workloads.<sup>4</sup>
- + By 2017, nearly two-thirds of all workloads will be processed in the cloud.<sup>3</sup>

## WHY EVERYONE IS MOVING TO THE CLOUD

Today, 60% of businesses say the cloud is top priority, while 70% are using or exploring cloud service solutions. It's clear that cloud adoption is becoming a business decision that enables more than just optimized IT wins. How are companies leveraging the cloud across the organization?

<b>Insight + Visibility</b>	<b>54%</b> to derive analytical insights from Big Data <b>59%</b> to share data seamlessly across applications <b>59%</b> to manage future Big Data requirements
<b>Collaboration + Integration</b>	<b>49%</b> to facilitate employee mobility and remote access <b>58%</b> to collaborate across the organization and ecosystem <b>59%</b> to improve integration between development and operations
<b>Agility + Productivity</b>	<b>55%</b> have improved organizational efficiency <b>80%</b> have seen an increase in productivity <b>80%</b> saw improvements within 6 months
<b>Rapid Innovation + Development</b>	<b>24%</b> to offer additional products and services <b>52%</b> to innovate products and services rapidly
<b>Reduced Costs + Requirements</b>	<b>21%</b> annual savings for those moving applications to the cloud <b>47%</b> have improved IT operating costs <b>84%</b> have cut application costs
<b>Business Continuity + Disaster Recovery</b>	<b>17.9% - 28.5%</b> cloud use growth anticipated within 6 months <b>31%</b> of businesses plan to move BC/DR to the cloud <b>36% - 51%</b> anticipated rise in DRaaS for remote failover

Sources for this table: [https://www.flickr.com/photos/ibm\\_media/10458282035/in/photostream/](https://www.flickr.com/photos/ibm_media/10458282035/in/photostream/)  
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According to IDC, by 2015, one of every seven dollars spent on software, server, and storage will be cloud-based, growing five times faster than the total IT industry.<sup>5</sup>

## WHAT YOU'RE NOT HEARING ABOUT

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Current research indicates a delta exists between IT adoption and business leaders' perception of the values, risks, and necessity of the cloud to maintain competitive capability and create business advantage. While IT pros are sold on the cloud, business leaders are lagging behind. Here's the low-down on what's up.

### **IT Trusts the Cloud is Good for Business.**

67% of IT professionals already use cloud services and applications.<sup>6</sup> Knowing businesses can be transformed by the cloud, they've shifted momentum to the cloud—not only to increase security and decrease IT costs, but to make IT more agile and responsive to the needs of the business. By migrating to the cloud, a company's IT department can focus on empowering increased efficiencies, innovation and collaboration across the organization—as well as helping increase business insight via cloud-powered Big Data analytics to create untold business advantages.

Although IT professionals are rapidly adopting the cloud for the above benefits, it's clear from recent research from Forrester that business leaders are lagging behind IT at jumping on the cloud bandwagon, and not clearly understanding what's required to harvest the promised benefits of cloud technology.

- + 79% of IT leaders see increased bandwidth as a top strategic priority, while only 56% of business leaders agreed.<sup>7</sup>
- + 57% of IT leaders considered an all-IP environment a top priority.<sup>8</sup>
- + Only 38% of business leaders concur, concerned that a network upgrade could cause business disruptions.<sup>8</sup>

60% of business leaders do not have software defined networking on their radar, according to Forrester, and nearly 40% are unaware of the Internet's new addressing system, IPv6—which the research firm concludes means business leaders are underestimating a key building block for business process automation and the associated productivity and efficiency wins.<sup>8</sup>

"The top network and telecommunications priority... is to increase bandwidth sufficiently to handle the explosion of traffic triggered by cloud computing, multimedia usage and data analytics."<sup>8</sup>

## BREAKING THROUGH PERCEIVED BARRIERS

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What's keeping the business leaders from being sold? And how can you as a CIO or CTO present a case for strategically adopting cloud technology? Top barriers for business leaders include misperceptions about the current level of cloud security, unrealistic fears about cost vs. ROI margins, concerns over not having the needed skills in house to manage migration to the cloud, and no clear roadmap for assembling the needed ecosystem to ensure an effective and targeted cloud adoption strategy.

### Security: Still an Issue?

Even though the cloud increases cost savings, convenience and performance, some companies are hesitant to release mission-critical services into the cloud—worried it could create new risk by moving data off their secure internal network, or off-premise. Studies indicate that slow cloud adopters are most concerned about potential data loss due to security within data centers, followed by privacy risk, and that moving data to other geographies could have tax or regulatory implications.

- + In response to these fears, cloud providers have taken steps to improve data security and privacy in cloud offerings with tighter restrictions on user access, greater use of data encryption, and enhanced real-time threat detection techniques.<sup>9</sup>
- + They've also started to adopt strategic security controls in the cloud, including next-generation identity and access management, and single sign-on and federated single sign-on for cloud services.<sup>10</sup>

**What works best:** Companies often fare best when they implement cloud services gradually into existing systems or work closely with experienced partners. By focusing on security architecture, experts believe cloud services can be even more secure than conventional on-site data centers.<sup>11</sup>

As a cloud-based company, you must maintain sound security policies to protect data from compromise. When you purchase cloud services, ask how the data is stored and how it can be accessed. Ask cloud service providers how they are segregating data appropriately to comply with applicable regulatory mandates. Include these details in contracts and work with your cloud partners to develop security policies that help you anticipate and address potential risks.

### Are the Barriers Real?

**Security** – As a recent Security Week survey shows, 94% of small and midsize firms improved their security once they moved data and applications to the cloud.<sup>12</sup>

**Financial Costs** – 70% of respondents to a study conducted by KPMG confirmed that cloud computing is delivering operating efficiencies and cost savings throughout their organization.<sup>9</sup>

**In-House Skills** – A ServiceLogic survey of more than 1,000 IT professionals found that half feel they need more education on cloud technology in order to meet changing job requirements.<sup>13</sup>

## BREAKING THROUGH PERCEIVED BARRIERS

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### Financials: How Much Does it Really Cost?

Some of the top reasons that businesses are hesitant to migrate to the cloud are perceived financial barriers. Yet, the majority of cloud adopters are quickly seeing substantial ROI. In addition to improved business insight that leads to increased collaboration, reduced time to innovation, and enhanced efficiencies, cloud adopters are reducing software and hardware requirements plus hard operating costs, with impressive results:



**What works best:** In order to ease your business associates' concerns over financial requirements, any cloud migration plan should not only present opportunities for saving money via the cloud, but clearly outline the costs associated with integrating your existing infrastructure and the cloud. Additionally, as business leaders may not fully understand who pays for cloud security, or the pricing models associated with contractual SLAs—these components should be clearly defined and the associated costs outlined.

### The Cloud Delivers ROI

- + 88% of companies using the cloud are saving money and 62% are reinvesting the savings back into their businesses to increase headcount, boost wages and drive product innovation.<sup>17</sup>
- + 60% of respondents said cloud computing reduces the need for their IT teams to maintain infrastructure, giving them more time to focus on strategy and innovation.<sup>17</sup>

## BREAKING THROUGH PERCEIVED BARRIERS

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### Required Skills: Who Do We Need?

Not having the correct in-house skills is another concern. For example, to successfully move more applications to the cloud, the majority of respondents in a recent Cisco study cited a cloud-ready network as the biggest infrastructure element required for further cloud deployments.<sup>9</sup> In the same survey, almost two in five respondents said they would rather get a root canal, dig a ditch, or do their own taxes than address the network challenges associated with cloud deployments. While organizations can host a private cloud on their own infrastructure; deploy and scale rapidly on public cloud services; or take a hybrid approach, how do you know which is right for you and what skills will be needed to accomplish the task? It requires experts.

**What works best:** Luckily for companies new to the cloud, a growing number of cloud service brokers and cloud networking partners are coming online to help businesses of all sizes more clearly understand their options and best practices for smoothly migrating a business to the cloud. By building a team with the required experience and expertise, you can create a strategy based on your actual needs and requirements, and learn which practices and policies will help you take full advantage of cloud computing.

### Cloud Strategy: A Team Approach

Break through perceived barriers to the cloud with a custom team of service providers and partners to meet your company's unique needs.

**Cloud Service Brokers** – As intermediaries, these partners assist in shopping for your cloud services across multiple providers, and can help handle service aggregation, integration and customization.

**Network Partners** – As Integra does, network providers can help set up the right network infrastructure and security to deliver access to voice, data and Internet solutions with the benefits of a hosted environment.

**Cloud Services Providers** – These partners provide SaaS, PaaS, IaaS, and DRaaS solutions. They are available to help define your SLAs and supplement the skills you don't already have in house.

**Systems Integrators** – As strategic partners, these providers help you to implement network and other services seamlessly into your existing organization and infrastructure.

## PREPARING FOR CLOUD MIGRATION

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### The Sky's the Limit When it Comes to the Cloud—But How Do You Get There?

It's no longer whether to use the cloud—it's how and when. Companies need guidance on how to effectively and securely deploy strategic cloud solutions. When you're ready to leverage the cloud to gain substantial business advantage, follow this simple four-step plan to assess your readiness, then get in contact with the experts who can help you create a strategic roadmap to migrate to the cloud in the way that works best for your business.

#### 1 Assess Your Infrastructure

Before contemplating a move to the cloud, you'll need to ensure you have the right network infrastructure in place.

In a recent survey, 37% of respondents listed a cloud-ready network as the biggest element for cloud deployments, ahead of a virtualized data center or Service Level Agreement.<sup>18</sup> Why is high-speed networking so important? Well, in 2014 alone, a majority of workloads will be processed in cloud data centers for the first time and by 2017, that number will grow to 63% when global data center traffic is forecasted to triple.<sup>3</sup>

Network-related initiatives are on the rise, with 53% of IT executives listing enabling networks to support new technologies as a top priority for 2014.<sup>19</sup> Network optimization can generate massive cost reductions; reduce IT requirements; improve uptime, latency and Quality of Service (QoS) for critical services. It can enable access to new devices, resources, "smart features" and processes; can future-proof against anticipated bandwidth and application demands; and enhance productivity while increasing business performance overall. To guarantee the seamless flow of data, you're going to need reliable, high-bandwidth connectivity with symmetrical upload and download speeds.

And while organizations will spend the most IT dollars on network infrastructure, there is also a growing need to spend on additional storage, Big Data, and mobility-related infrastructure.

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## PREPARING FOR CLOUD MIGRATION

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### 2 Know Your Bandwidth Needs

45% of organizations cite bandwidth requirements as a barrier to cloud adoption.<sup>18</sup>

If you're migrating applications to the cloud, do you know what your bandwidth requirements will be? Cisco forecasts that global cloud traffic, the fastest growing component of data center traffic, will grow 4.5-fold from 1.2 to 5.3 zettabytes between 2012 and 2017, while overall global data center traffic will hit 7.7 zettabytes. About 17% of that traffic will come from end users accessing clouds for web surfing, video streaming, collaboration and connected devices. You need to be sure that whatever solution you put in place is scalable and can meet the bandwidth growth that your end users will place on the network.

Creating a strategy based on your actual needs and requirements will make it easier to navigate all the options in the evolving cloud ecosystem. [Integra's bandwidth calculator](#) can help you estimate your requirements. Additionally, you need to ensure that your network can support your required protocols.

As a network grows and changes, many IT organizations find that they want to move faster than their service provider can accommodate. Make certain that your network solution has the ability to scale easily without long lead times. Ethernet Services allow bandwidth scalability up to 10 Gig-E, with QoS prioritization, and 100 Gig-E is just around the corner. Talk to your service provider about your current needs, and make sure they have the capacity to meet your future needs. Proper QoS configuration can ensure that your critical applications receive the prioritization they require. And network monitoring tools can help you evaluate performance and adjust where needed.

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## PREPARING FOR CLOUD MIGRATION

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### 3 Have You Got the Right Tools?

Because of the BYOD revolution, you will need to evaluate the level of Mobile Device Management (MDM), Mobile Application Management (MAM), and security existing in your organization to come up with BYOD security protocols.

BYOD continues to grow and 67% of enterprises have plans to issue mobile devices to employees this year making BYOD security critical.<sup>20</sup> When addressing BYOD, investigate cloud-based, multi-platform enterprise mobility management solutions that can help you seamlessly transition to the cloud with a simple web-based administrator console to control users and devices in real time. A key requirement to consider is the ability to activate and deploy devices, security settings, IT configurations, and apps to users—while increasing access to information and transparency of device use.

### 4 Plan Your Route and Timeline

To successfully prepare for the cloud, you will want to create an actionable plan with achievable goals and measures of success.

Although the temptation may be to shoot for the stars, you're going to need to be selective. Where should your aim be? The reality is that you'll never move all of your current resources to the cloud so determine the areas where a migration could have the biggest impact; prioritize those items; and look for the quick wins. Be clear on how your strategy will meet business objectives and what the resource requirements are. To ensure your plan is on target with your business strategy, assemble a team of cloud experts. Partner with them to develop your roadmap and use their help in navigating along the way. Create benchmarks, report on progress, and be prepared to adjust as needed.

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## GET INTO THE CLOUD WITH INTEGRA

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Based on current research regarding the high rate of businesses migrating to the cloud, it's evident that high-speed data center networking will become even more important than it is today.

Remember the cloud itself and the gathering cumulus of cloud services are part of a worldwide network of secured, well-maintained, inter-connected data centers, supported by a massive system of powerful fiber-optic connections running at 200,000 times the speed of a home Internet connection.

When you're ready to get your head (and your business) into the cloud, partner with Integra. We'll help you learn more about how to best prepare your organization to capitalize on cloud opportunities. Whether you choose to host a private cloud on your own infrastructure, deploy and scale rapidly via public cloud services, or take a hybrid approach—we provide fully-symmetrical data networking and Internet solutions that deliver high-bandwidth Ethernet connectivity over our robust fiber-optic network, directly from your business to cloud data centers and services that will help bring your business into the cloud era.

To get started, contact the people you know for the technology you trust.

**CONTACT US** ▶ (877) 953-7747

### ABOUT INTEGRA™

Integra™ provides facilities-based communications and network services to enterprises, small and mid-sized businesses, government agencies and carriers throughout the western United States, with nationwide and international connectivity delivered via a robust IP/MPLS network. Integra's vast, privately owned network connects customers to 6,400 miles of long-haul fiber optic infrastructure and 3,000 miles of metro fiber across 35 cities in 11 states.

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# Resources

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