

# JOINING THE CLOUD REVOLUTION



# Table of Contents

## 1. What is Cloud Computing?

- a. Technology overview: Joining the Cloud Revolution
- b. Different approaches to the cloud
  - i. Software as a Service
  - ii. Platform as a Service
  - iii. Infrastructure as a Service
- c. How companies use cloud technology to their advantage

## 2. Benefits of Cloud

- a. Cost savings (predictable costs)
- b. Cost savings (reduced capital expenditures)
- c. Saving space
- d. Flexibility
- e. Remote access
- f. Reliability

## 3. Cloud Technology

- a. Servers
  - i. Understanding virtualization
  - ii. Blades
  - iii. Co-location
- b. Software
  - i. Understanding licensing
  - ii. Software products
- c. Private circuits – can they connect directly to the data center?
- d. Backup & Recovery

## 4. Selecting a Cloud Partner

- a. Differences in vendors and quality of the cloud (cost vs. resiliency and uptime)
- b. Challenges of integrating with multiple SaaS vendors
- c. Experience
- d. Are they a true partner?
- e. Can they help develop an appropriate cloud plan?
- f. Reliability
- g. Cost
- h. Understanding industry-accepted best practices

## 5. The Cost of Not Joining the Cloud Revolution

## 6. Conclusion/Key take-aways

## 7. How All Covered Can Help Businesses Join the Cloud Revolution

# What is Cloud Computing?

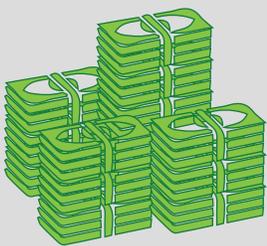
## Technology overview: Joining the Cloud Revolution

The trend of businesses moving their critical data to the cloud has been nothing short of revolutionary.

Historically, all data was stored locally on hard drives and servers in an in-house data center, and managed completely by a local IT team. Working in the cloud represents a 180-degree turn from this mindset.

Instead of a local IT team maintaining servers, running backups, and applying software patches, the new cloud-based paradigm hands off the management of servers and data to experienced outside providers, allowing local IT teams to focus on their core competencies.

This has resulted in organizations that enjoy a number of advantages relative to their competitors. Delegating their IT-intensive tasks has made cloud-based businesses more nimble; they enjoy greater physical and virtual security, reduced investments in hardware and administrative overhead, improved performance and access, and continuity of business operations even in times of disaster.



**Global business spending for infrastructure and services related to the cloud will reach an estimated \$174.2 billion in 2014, up 20% from 2013.**

Few businesses will argue with these results. As a result, cloud-related tech spending by businesses is expected to triple between 2011 and 2017, as per research by information concern IHS. By then, enterprise spending on cloud computing will amount to a projected \$235.1 billion. Global business spending for infrastructure and services related to the cloud will reach an estimated \$174.2 billion in 2014, up 20% from 2013.

WHAT IS CLOUD COMPUTING?

## Different approaches to the cloud

This explosion in use and new-found confidence in cloud methodologies has led businesses to take a hard look at how to best manage their IT resources. Depending on their needs, these companies adopt one of several different approaches to cloud system integration:



Software as a Service (SaaS), in which a business subscribes to an application over the Internet instead of purchasing separate licenses that would run on a local computer.

SaaS is considered by many to be a “basic form” of cloud computing. These services are provided completely online via a web browser and require no localized installation



Platform as a Service (PaaS), in which a business can create its own unique applications for daily use. This service provides developers with APIs to create applications for a specific environment. A developer can create any application they would like; however, the app is specified to the platform utilized during the development process.

It is important to remember when developing for PaaS is whatever platform is used to develop; only the tools available within that platform are available for use. Most PaaS providers, however, do support a variety of tools and languages and make them available to developers.



Infrastructure as a Service (IaaS), in which a third party provides a business with all the computing infrastructure (physically or virtually) required, including file-based storage, firewalls, and IP addresses, to name a few services.

This is the most comprehensive cloud platform available today. It is generally utilized by enterprise-level companies and provides an infrastructure for developing, running, and storing apps entirely in a cloud environment.

This is far more powerful than SaaS and PaaS environments. The overall power and level of scalability of IaaS to users, IT admins, and developers is just about infinite. As a business changes, it is easy for IT teams to adapt the system to the required scale.

## WHAT IS CLOUD COMPUTING?



## How companies use cloud technology to their advantage

When it comes to SaaS, there is generally no additional hardware cost, as the power to run the application is provided by the cloud provider. Additionally, there are no initial setup costs as applications are ready to use by the subscriber.

Since everything is kept in the cloud, businesses do not require any locally installed software other than a web browser, so software subscriptions can be started and stopped at any time, as well as the number of users that require access.

Also, the platform can be accessed from virtually any device, since all that is required is an Internet connection – from desktops, to laptops, to tablets and Internet-accessible phones. This is especially ideal for employees who are regularly on the road.



PaaS provides a platform and environment for developers to build applications and services via the Internet. Just like SaaS, services are hosted in the cloud and accessed by users through a web browser. Developers utilize tools supplied by the provider in order to create software applications.

As with most cloud configurations, PaaS services are paid on a subscriptions basis. Also, just like SaaS, this system is easily scalable based on business need. Just like with other cloud systems, there is little to no need to invest in a locally-hosted physical infrastructure. This virtual approach saves on both capital expenditures and personnel, allowing those funds to be diverted elsewhere, such as those with IT-skills to focus on development instead of server management.

PaaS also allows for better collaboration between teams that are in different physical locations. What might be most important is that data security, backup, and recovery is all managed within a PaaS system.



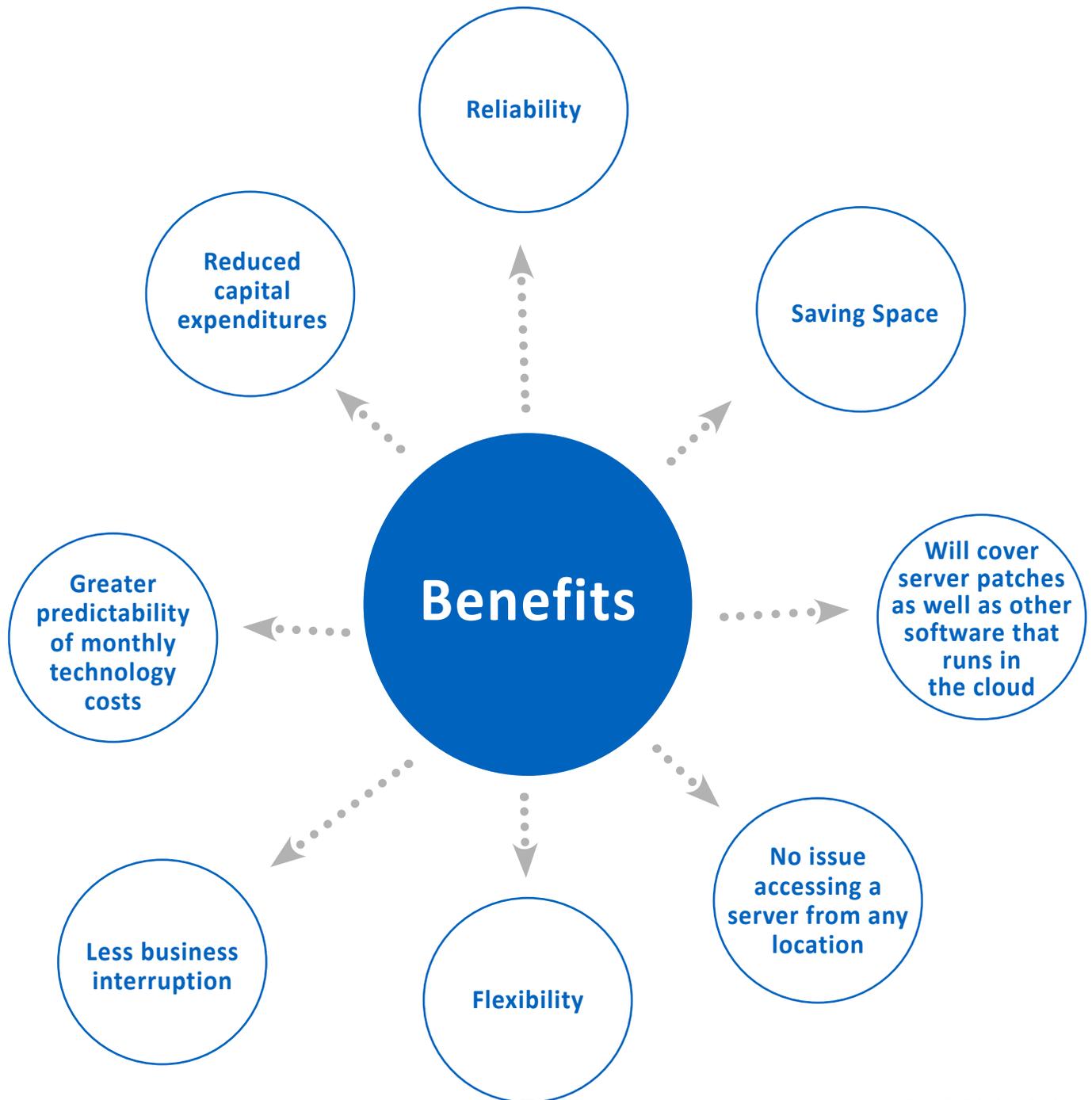
Just like PaaS and SaaS, IaaS provides great cost efficiency and easy scalability without the management of an on-site server room or data center. Everything is virtual, so as business needs change, it is easy to expand or contract, and space requirements are easily adjusted without the need to either purchase or decommission physical servers.

Cloud hosting of a business website, for example, can benefit from physical redundancy and easy scalability so high periodic demands, such as “Cyber Monday” for ecommerce sites, will not slow down, or completely take down, a website.

What might be most important when it comes to utilizing an IaaS is the lack of a single point of failure. Even if an entire server goes down or there is another type of hardware failure, the redundancy offered by IaaS makes sure a business’ systems continue to run smoothly.

## WHAT IS CLOUD COMPUTING?

## Benefits of Cloud



### BENEFITS OF CLOUD

## Cost savings (predictable costs)

The IT department of any company requires a large budget. Many of these costs can be greatly reduced when the decision has been made to move to a cloud system. One of the biggest positives when joining the cloud revolution is the greater predictability of monthly technology costs. For example, upgrade fees for software on a locally-hosted server can seem never ending. As a result, a business may be stuck on the same software version for years until the buying and upgrading cycle comes around again in the budget. However, if a business moves to a cloud system, a standard monthly fee will cover server patches as well as other software that runs in the cloud, such as if a business uses Salesforce. The responsibility of software updates and server software management is the responsibility of the cloud vendor. This equates to no downtime and a predictable single monthly line in the IT budget. This is smart for the IT department from a resource standpoint, as well as an overall cost savings for the business.

## Cost savings (reduced capital expenditures)

Capital expenditures are a huge part of an IT annual budget. Businesses today rely heavily on their technology to stay competitive, innovative, and profitable. When utilizing a locally-hosted system, spare rack servers must be on hand in case a server goes down. Backup systems and procedures need to be rigidly followed. As servers become outdated, they need to be replaced. Businesses that have moved to the cloud appreciate the consistency and predictability of paying a fixed monthly cost for IT needs such as these. Ultimately, companies only pay for what is required. This avoids the need to pay for both hardware in use and backup equipment. The cloud provides a secure and stable environment, thus avoiding disruptions to the business, as well as a predictable monthly cost.

## Saving space

A server room can take up a physical space of anywhere from a few hundred square feet, to the entire floor of an office building, to its own building. And just like a physical file cabinet, servers can fill up fast requiring a capital expenditure for more racks, which will require a larger physical space for your server room. As a result, a business may need to eliminate cubical or office space. When a business decides to utilize cloud space, the physical location that previously held the server room can be better utilized based on the specific needs of the business, thus ending a seemingly never-ending space cycle.

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## BENEFITS OF CLOUD

## Flexibility

One of the biggest advantages of joining the cloud revolution is the flexibility it provides. As space requirements change, it is much easier, and quicker, to adapt a cloud environment as opposed to a traditional on-site server room. It all comes down to the IT specifications and space needs of the business. The IT team just needs to work with the cloud provider to determine exactly what is needed and the business only pays for what is used. This is a major paradigm shift from standard IT resource management. The cloud provider is a partner with local IT and can communicate on a technical level to understand the business and provide exactly what is needed at any given time.

## Remote access

The days of employees working 9:00 a.m. until 5:00 p.m. Monday through Friday are long gone. Now employees travel all over globe and working anywhere from home, to the airport, to a hotel room, and more. Prior to cloud architecture, employees would use a VPN type of connection and then use that to connect to a server located in the home office. This could prove to be an exercise in frustration. Oftentimes when the connection would work, it was incredibly slow. Email would often not synchronize completely, which regularly led to missing critical business information and attachments that wouldn't download. In the cloud, because employees are always accessing information remotely, there is no issue accessing a server from any location. Most importantly, the local IT team still controls file and server access in order to make sure employees only have access to what is required for their job responsibilities.

## Reliability

Reliability and redundancy go hand-in-hand when considering any IT solution. No matter what, the business must be confident that regardless of the situation, the data stored on servers, whether in house or in the cloud, will be available for use. A cloud solution will be built to eliminate single points of failure throughout the entire infrastructure. If a software issue occurs or a user deletes a key file, the system can be restored or repaired in less time using a cloud structure than an IT team would be able to in a traditional server room setting. This ultimately means less business interruption and is a smarter way overall to conduct business in an around the world, 24-hour work day.

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## BENEFITS OF CLOUD

# Cloud Technology

## Servers: Understanding virtualization

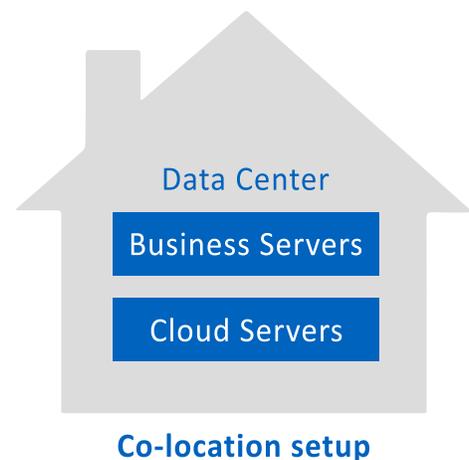
At the core of a Cloud system lies the server. A cloud server is actually a virtual server dedicated to one business that runs on a larger hardware platform. Each cloud server system however is private to the specific business and is completely secure with its own firewall. Most importantly, it offers scalable bandwidth as business needs change. These virtual server solutions can easily host applications such as Microsoft Exchange, SharePoint, and SQL, as well as other common business applications.

## Servers: Blades

Blade servers allow for more processing power in less rack space and require less power consumption. If additional storage is required, blades can connect to a storage pool via network attached storage (NAS), Fiber Channel, or an iSCSI storage area network (SAN). Blade servers consolidate servers into a single chassis, making it easy to manage through a single interface. For enterprise-level customers, utilizing blade servers ensures their hosting environment does not need to share computing power with multiple companies. This approach makes the most sense for businesses that require dedicated resources for database servers, database server clusters, or virtual desktop infrastructure platforms.

## Servers: Co-location

For some businesses, a co-location option makes the most sense when moving to a cloud environment. In a co-location setup, a business' locally-hosted applications or other business servers will run in the same environment as the cloud servers. This allows for both environments to be housed in the same secure data center. Additionally, this ensures servers are protected from environmental risks and that all the servers will remain thoroughly managed.



CLOUD TECHNOLOGY

## Software: Understanding Licensing

When businesses begin down the road of the cloud revolution, one of the biggest questions is related to licensing. If an application is installed in the cloud, are licenses required for each user? In a word – yes. Generally speaking, there are three different licensing models in the cloud; per user, per device, and enterprise. A “per user” model is the model most individuals are the most familiar with in that each employee is granted a license to utilize an application or connect to an operating system. A per device model provides a license for each application or operating system within a device or processor. An enterprise model covers all users and devices in the enterprise. It is important to understand the type of licensing that is required for each application and system when moving to a cloud system.

## Software products

A major plus when using the cloud is the ability to run highly complex software packages. Applications such as Exchange and SharePoint require a lot of bandwidth to be fully effective. As a result, by employees accessing these applications in the cloud instead of a local network connection, neither the application nor the network will slow down due to increased use and administration. If a company decides to have either a co-located network or choose to keep some servers locally, it will free up those resources for other applications.

## Private circuits – can they connect directly to the data center?

Private circuits are permanently connected links exclusively for use by a single business. They offer constant access between locations and are incredibly reliable. If businesses are in communication with the same locations for long periods, a private circuit may make sense instead of routing traffic over a public network. This is not a typical scenario, but one that may be worth exploring depending on the type of business and number of locations involved. Private circuits offer greater speed, reliability, and a high rate of data transmission. Access to a private circuit, however, is not always something offered by cloud providers. If this is a scenario a business may require, it is important that private circuit available is discussed in the initial provider meeting.



## Backup & Recovery

Disaster recovery has become an increasingly important part of every IT department's plan. And a big part of that plan is how backups and retrievals are handled. Historically, an IT team would handle a backup locally and would use systems such as tape that would be stored off-site. If a file required retrieval, it would involve getting those tapes back on site, loading them into the drive and determining which tape contained the needed file. While this process is useful for a single or small group of files, it does not equate to a complete disaster recovery plan. When deciding on a cloud provider, it is important to understand how their system will work within a backup strategy. It is also important to make sure when developing a cloud integration plan to ask about backup options and any additional associated costs. Again, one of the key positives of cloud storage extends to a backup system; it is easily scalable so it can adjust to the needs of the business.



Another key part of a backup and recovery plan is the level of continuity a cloud service provider can deliver. If there is a catastrophic failure, such as a natural disaster, how quickly can the cloud service provider replicate a customer's system to second location? In many businesses, uptime, regardless of the circumstance, is critical to success and staying online is what joining the cloud revolution is all about.

## Selecting a Cloud Partner

### Differences in vendors and quality of the cloud

When deciding to move to the cloud, it is always a good idea to speak with a few different providers. Each provider will have a different approach and will more than likely have different suggestions on technology and process. Two major factors that are always considered, regardless of the type of business is the balance of cost versus resiliency and uptime.

“Resilient computing” addresses concerns of how well a data center and all its included components can handle a serious interruption, whether it is a power outage, major utility failure, or some type of natural disaster. This is an important concern that needs to be understood when first meeting with a cloud service provider. That level of uptime comfort must be weighed against the costs that will be charged by the provider.

The resiliency, uptime, and cost of the cloud from the provider under consideration speak directly to the quality of the cloud itself. It is important to understand the type of hardware in use, their redundancy and business continuity plans, and support provided.

### Challenges of integrating with multiple SaaS vendors

Anytime multiple vendors need to work together on a project, there is always the possibility for confusion and duplicated efforts. The same holds true when there is a need for multiple SaaS vendors to work in a cloud environment.

In a 2012 article on TechTarget.com, Carl Lehman, who covers enterprise architecture, integration and BPM for 451 Research in New York, says a multiple SaaS integration can prove challenging. Common issues include ensuring smooth data transmission from one system to another, maintaining data exchange connections, and keeping the system’s level of security high.

Lehman advises users carefully assess the integration functionality the SaaS vendors can provide and look for creative ways to fill any gaps with the chosen provider. He strongly urges that users make certain the SaaS vendor is “capable of exposing data in a standardized way so it can be used by an integration service provider or an on-premises enterprise integration technology, like an enterprise service bus.”



Balance of Cost

VS



Resiliency & Uptime

SELECTING A CLOUD PARTNER

## Experience

It is very important to ask potential cloud vendors about their experience and what types of partnerships they have developed in the past. Have they worked with businesses in similar verticals? Do they understand the nuances of a specific industry? Can they meet any necessary regulations, such as HIPAA for health records or GLBA for the banking industry? Will they work with the local IT team to ensure a smooth transition? Most importantly, what is their customer retention? This will speak directly to their customers' overall satisfaction with their services.

## Are they a true partner?

When a business decides to go down the road of migrating to a cloud-based infrastructure, it can require a lot of time for both the business and the cloud service provider. It is important that a business feel comfortable with the provider they have selected as this will hopefully be a long-term partnership. It is important to feel confident that the provider will take the time to truly understand the business and make sure all processes are well communicated to everyone involved.

## Can they help develop an appropriate cloud plan?

While there is often a standard foundation and framework to a cloud migration, there will always be nuances and adjustments required to fit the needs of a specific business. It is important that the cloud service provider take the time to understand the needs of their potential customer and present a cohesive cloud plan for both the migration as well as on the ongoing use and maintenance of the new system.



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## Reliability

The term “reliability” has multiple meanings when joining the cloud revolution. There is the obvious reliability that directly relates to the uptime and resiliency of the hardware and systems in place. The second reliability is the company itself. Will they have support always on hand in case of a major issue? Will they work with local IT to scale the system as needed? Can they be counted on for a positive partnership? The first reliability is easy to define. The second one is about customer satisfaction and responsiveness. That is where the previously mentioned client retention rate speaks volumes.



## Cost

Total cost is always a factor in any purchasing process. It is important to remember however, all the previously mentioned items in this section when making a decision and not select a cloud service provider solely on dollars and cents. This will hopefully be a long-term partnership. And while is part of the final decision, it shouldn't be the sole driver.



## Understanding industry-accepted best practices

As technology continues to change and advance, industry-accepted best practices and standards are always evolving. The cloud service providers under consideration should be able to discuss how they work to follow those best practices. They should also explain how those best practices may affect the development of a cloud migration plan as well as on-going data management.

# The Cost of Not Joining the Cloud Revolution

Generally, there are two types of currency in business; money and time. While money is quite obvious and easy to calculate, the currency of time can be more difficult to determine. This idea can be applied to almost anything in the business world, but especially in IT. When considering a move to the cloud, there are numerous ways to determine the costs associated with a move, however, it is also worth considering what it would cost of not joining the cloud revolution.

More and more small-to-medium-size corporations are discovering that their newfound reliance on cloud services has resulted in two positives; increased savings and improved performance. When on-site business solutions are in place, there is a general comfort level, as that model has been in use for multiple situations and systems for an extended period. It has been standard business practice and everyone is aware of how the model works. Cloud-based business solutions, however, can match the benefits of the on-site model as well as provide a lower cost of ownership for the long-term.



Just like any technology change, there may be added costs initially. However, once the system is in place, the cost savings of both time and money of a cloud will show its benefits over the long term. For example, the expense of deploying and maintaining applications and server infrastructure is greatly reduced when it is moved to a cloud service provider. Instead of the local IT team of worrying about infrastructure, application costs, troubleshooting software, and manual upgrades, they are now the responsibility of the cloud service provider. Additionally, costs can be tailored to a business' specific needs. Instead of making a large upfront capital expenditure investment on hardware, clients only buy as much capacity as they need, and pay only for services used.

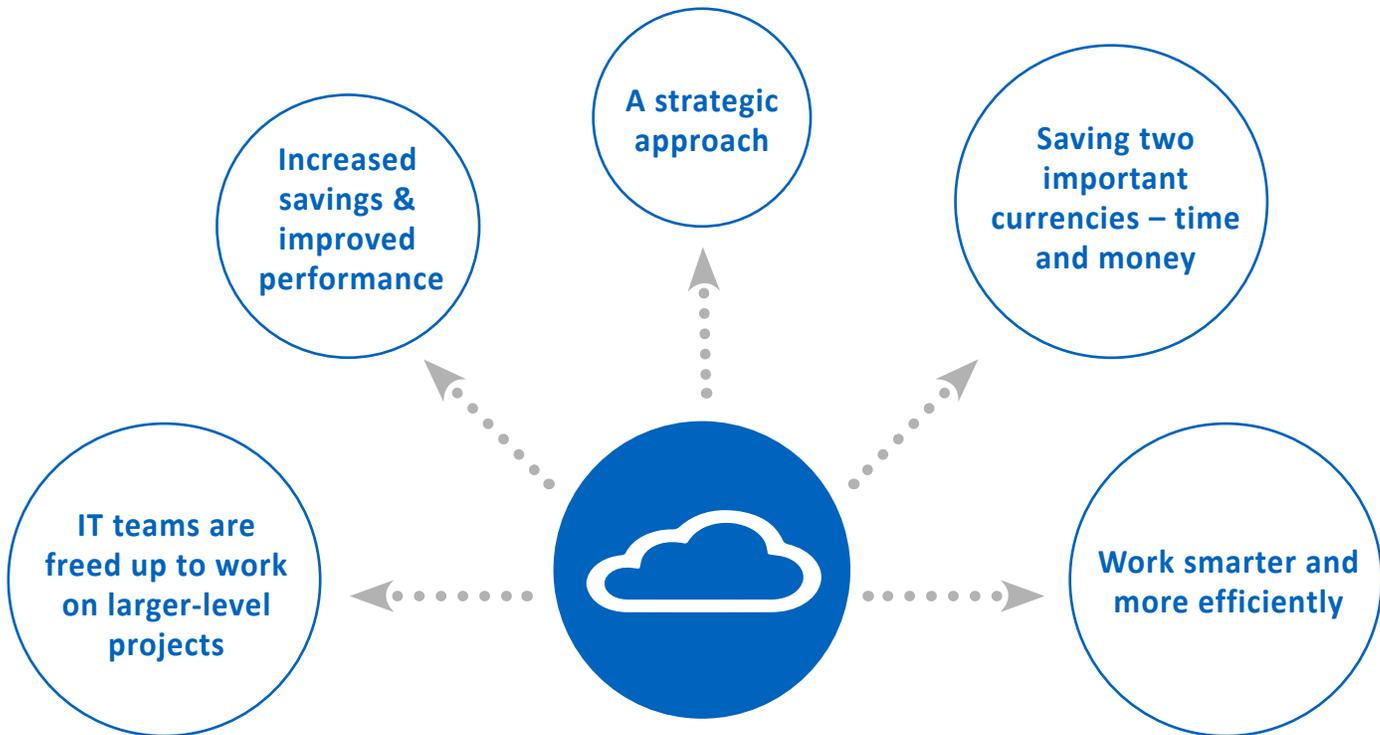
Once applications are hosted in the cloud, in-house technical employees have time available to focus on other enterprise-level projects. This also provides increased agility for all end-user employees, thus saving on the currency of time.

THE COST OF NOT JOINING THE CLOUD REVOLUTION

# Conclusion/Take-aways

Today businesses need every possible edge to be successful. That means not just core business competency, but agility, a smart approach to business, and the ability to identify an opportunity when it knocks. Today, the opportunity for many businesses is joining the cloud revolution.

According to a January 2014 article on Virtual-Strategy.com a prediction was made that in 2014, those leading cloud initiatives will drive the outsourcing of commodity IT and the role of the centralized IT department will change to be a strategic advisor. This is a key change in the way IT has worked for decades. When utilizing a cloud, IT teams are now freed up to work on larger-level projects and be that strategic advisor, instead of in their historic role of running tape backups and patching servers. This will allow not just the IT department, but the entire business, to work smarter and more efficiently, saving on those two important currencies – money and time.



CONCLUSION/TAKE-AWAYS

## How All Covered Can Help Businesses Join the Cloud Revolution

When a business decides to join the cloud revolution, All Covered can ensure success. The All Covered Cloud Servers focus on reducing an organization's need to continuously invest in IT-related hardware and software while increasing server uptime. The enterprise-grade cloud solution is fully managed and includes system and file backup, patch management, remote monitoring, event log tracking, and technical support. These systems are all hosted within the United States in a secure private cloud datacenter, which is SAS 70 Type II compliant. Each cloud server has its own dedicated firewall, allocated RAM, disk space and bandwidth, so any business can have confidence that their data will be online and available 24-7-365.

The IT experts at All Covered will safeguard business continuity via All Covered Backup for Servers. This system is designed to keep businesses online no matter what. The Cloud Backup and Disaster Recovery Solution performs backups of critical data to an on-site device, which is then replicated out to a SSAE 16 / SAS 70 Type II datacenter. By doing so, data is always safe and can be easily recovered in case of a disaster.

Access to email on a constant basis is a must today and the Cloud Hosted Exchange Services offered by All Covered provides guaranteed uptime and reliability. The All Covered Hosted Exchange goes beyond traditional email services and provides tools for true collaboration between work groups. Teams can manage tasks, share contact lists and calendars and more.

Most importantly, the experts at All Covered can provide business continuity no matter the condition, office location, or emergency. Contact All Covered toll-free at **866-446-1133** or visit [www.allcovered.com](http://www.allcovered.com) to join the revolution.



**JOIN THE CLOUD REVOLUTION.**

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