



BRINGING HOME THE CLOUD:

**Practical Considerations in Choosing
an Infrastructure-as-a-Service
Solution for Your Business**

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Introduction

The cloud has long been a metaphor for the Internet. More recently, “cloud computing” has emerged as a Web-based model enabling access to a shared pool of configurable IT resources, such as servers, networks, applications, storage and services.

Cloud computing is rapidly growing in popularity principally because it is a convenient, cost-effective way to add capacity or capabilities on demand, without having to invest in new infrastructure, license new software, or train personnel. Small to midsize businesses, in particular, are attracted to the advantages of migrating all or part of their IT infrastructure to the cloud.

For many businesses, however, the idea of putting their sensitive data “out there” on the Internet is a little scary. Security worries, along with concerns over performance in a cloud-based environment, remain the biggest psychological obstacles for businesses that otherwise see the obvious advantages of cloud computing solutions.

The reality is that companies needn’t have these concerns — at least when working with the right solution provider. Cloud solutions can be configured for the highest levels of security and performance. This white paper is intended to provide guidance for companies interested in achieving the benefits of cloud computing without the risks.

I. The Upgrade Treadmill: Distractions and Risks

Technology advances. Routine upgrades ensue. These time-consuming distractions are the bane of every in-house IT function — especially when there are more important things to do.

Indeed, today’s IT departments are under more pressure than ever to take on a strategic role in their organizations. IT professionals are being asked to directly impact their company’s profitability — and to do so with fewer resources.

Providing assistance with strategic business initiatives while maintaining infrastructure and software has become a common job description — and juggling act — for the IT professional. Even the most efficient IT departments are frequently distracted by infrastructure updates and maintenance.

Security concerns have sidetracked many IT departments as well. External pressures from regulatory bodies and other stakeholders calling for improved security have driven many businesses to bring on an in-house specialist to cover this base. Such experts drain resources from a business's more strategic projects.

Finally, there is the issue of capital investment risk and the hesitation this causes. Binding IT decisions about infrastructure are difficult to make. They're often capital-intensive purchases that might soon be obsolete. As a result, many companies try to make do with outdated infrastructure — which brings its own risks and inefficiencies.

An increasing number of small and midsize businesses see themselves as facing two equally unpleasant choices:

1. Dedicate the bulk of their IT resources to constantly updating their servers, networks, storage, software and security; or
2. Continue using outdated infrastructure, with all its inherent inefficiencies, until reaching a crisis point.

Neither of these options is attractive to businesses that want to worry less — not more — about infrastructure.

II. The Allure of Cloud-Based Solutions

Fortunately, cloud computing offers another alternative.

Small and midsize businesses must be nimble in today's economy — which is why they are increasingly drawn to cloud-based services that offer flexibility for a company's changing needs. Through cloud-based solutions, businesses have the opportunity to achieve a Fortune 500-caliber IT functionality without the fixed costs and staffing requirements.

Here are six key benefits of cloud computing:

1. **Lower costs.** Because computing resources are distributed to applications on demand as needed, utilization of resources is more efficient, reducing costs.
2. **No capital expenditures.** Businesses can pay as they go, rather than making significant, risky capital investments.
3. **Easy scaling.** Businesses can also pay as they grow, adding CPU, RAM and storage as it's needed. You also don't have to worry about hiring staff.

4. **Increased storage.** Companies can store more data than on in-house systems.
5. **Faster deployments.** A new server can be dialed up in an instant, making it fast and easy to deploy new applications.
6. **Redundancy.** With a cloud solution, a company can get automatic failover from one hardware platform to another, as well as Fortune 500-level disaster recovery.

Cloud computing enables companies to expand and contract their IT capacity and functionality in line with their changing needs. The costs and emotional toll of the cycle of staffing, laying off and re-staffing can be as significant as the capital costs of buying new servers and software. Compare those IT headaches to the ease of changing your capacity or level of service with one mouse click or phone call.

III. Overcoming Concerns with Cloud Computing

Security. Privacy. Performance. These are the top concerns most companies voice when transitioning to the cloud.

Information Week recently published a survey that showed that businesses' biggest issues with cloud computing were: "Security defects in the technology itself" (54 percent), "Unauthorized access to or leak of proprietary information" (51 percent), and "Unauthorized access or leak of customer's information" (49 percent).

Are these concerns legitimate dealbreakers? They shouldn't be. Let's look at the issues of data security and user privacy a little more closely.

1. **Different clouds for different needs.** When businesses worry about cloud computing solutions, they are often envisioning a system with no more security than a public Web site. The reality is far different. The best vendors offer public cloud, secure cloud and private cloud solutions configured for the security level that your business and data require.
2. **Hybrid solutions for added security.** Are you particularly concerned about a specific system or type of data? The best providers offer a hybrid model, where your most sensitive documents and programs can remain on a dedicated server — so you achieve the benefits of the cloud without sacrificing any peace of mind.
3. **Regulatory concerns.** HIPPA, FERPA and other government regulations require companies to maintain stringent security procedures. For this reason, many healthcare providers and others have incorrectly concluded that the cloud is not an option for them. However, the best cloud providers offer options that meet and exceed all regulatory requirements.
4. **Clouds as a security upgrade.** Even so-called "public clouds," which offer less security than secure or private clouds, are a security upgrade for many small and midsize busi-

nesses. That's because many cloud providers have dedicated resources focused entirely on keeping sensitive information secure. This includes monitoring and intrusion control systems — which most smaller companies don't have and can't afford.

5. **Holding your provider accountable.** A key to easing concerns over security is for the business to hold their solution provider accountable. Make sure that specific security needs are contractually provisioned. This ensures that their skin is in the game.

Moving to the cloud means that you can upgrade your services at any time. If you're concerned about the risks, you can transition over slowly — starting with a small number of applications and less-sensitive data. You can continue the transition as you become more comfortable with the benefits and security of the cloud.

IV. Infrastructure-as-a-Service Solutions by ATS Technical Services

ATS Technical Services has created solutions specifically designed to overcome the most common concerns with cloud computing — while maximizing the benefits. Our team is focused on providing the safest, most effective cloud solutions for your business — it's our full-time job. That's why we offer unique private and secure cloud solutions that allow you to maintain full control over your data.

There are many organizations that offer public cloud solutions — companies such as Amazon, RackSpace and Microsoft use shared resources to deliver the benefits of cloud infrastructure and software. For companies that have sensitive consumer data, public cloud solutions are not the optimal choice. These solutions utilize shared storage space where information is distributed via the public Internet.

For our clients that list safety and security as their top concerns, ATS offers solutions that allow their businesses to take advantage of the cloud while retaining on-site components. ATS offers hybrid solutions built to the customer's requirements, including solutions that are specific to the storage of electronic medical records. These solutions can include a private cloud solution, secure cloud solution or combination of ATS's other services.

ATS works with a variety of customers in different fields. Each has an individual set of requirements when searching for a cloud product. Small to midsize businesses can benefit from our enterprise-level cloud services at affordable prices. Maintaining and storing copies of important documents and records can improve the efficiency of public records offices. Educational institutions can standardize access to shared software while storing sensitive student data. Our EMR program can help healthcare companies provide more complete documentation and clinical reporting while receiving higher Medicare and Medicaid reimbursements.

Whatever your business, migrating to the cloud without expert help can be a challenge. ATS offers consulting to each of our clients. This allows us to work together to determine the optimal combination of services, develop a plan of action or assist with implementing your new cloud services. No high fees or significant upfront costs. We're devoted to providing you with the highest quality solutions without the exorbitant fees.

We realize that each of our customer's needs is unique. ATS offers a variety of a la carte services to empower your company to customize your cloud solution to meet your needs.

Private Cloud: ATS's private cloud solution offers the highest level of safety and security while including many of the benefits of a cloud solution. If your company is wary of implementing a cloud-based solution, a private cloud will allow you to keep all of your sensitive information on site. ATS will install a super-server private cloud infrastructure. Your office will be able to utilize server and desktop virtualization, data storage, software provisioning and system usage monitoring while keeping your private data in-house. Your company will benefit from reduced costs, efficiency and flexibility without moving sensitive data offsite.

Secure Cloud: Our secure cloud solution provides all of the benefits of a cloud-based infrastructure and software with top-of-the-line security. ATS's solution is completely customizable. When using our secure cloud, your company's storage and processing will occur in strictly mapped private space guarded with secure access points and encrypted communication. You'll have all of the benefits of using cloud-based infrastructure and software — round the clock access to your information from anywhere with Internet access without the security concerns of using a public cloud solution.

Infrastructure Hosting: Reduce your costs. Redirect the focus of your IT department. Move your servers and connections to one of our secure data centers. Your servers will receive expert care, ensured uptime and consistent updates. Redundant backups, user connectivity and security measures are standard services implemented by members of our team. Access your servers and data from your personal computer, thin client, smartphone or Internet service at any time. You'll immediately notice lower hardware and network maintenance costs while improving your data's security.

Disaster Recovery: A shocking 40 percent of U.S. businesses are not prepared to retrieve their data within 24 hours of a major disaster. Recovering your data after a disaster is essential for your business's health. ATS helps your company plan the process, policies and procedures for data recovery after a major disaster. The process starts with reliable remote data backup. Reducing the daily backup data by up to 500 times using patented de-duplication technology allows our software to transfer quickly across the network to a stored disk. If disas-

ter strikes, rest assured that your data is backed up with a plan for quick recovery.

Managed Backup and Storage: Fast. Reliable. Encrypted. Cost-effective. Secure. ATS makes the data backup and recovery process painless. The days of using tapes and discs to back up your information are over. Our patented software reduces data by up to 500 times before it's transferred. This leads to faster transfer times across the network. Restoration of data is almost instantaneous in the event of an emergency.

Software-as-a-Service: Email. Word Processing. Spreadsheet. Database. Payroll. Whether they're on the road, at home or in the office, your employees will have access to all of your software applications and data via our user-friendly panel.

EMR Implementation: Our ATS private healthcare cloud solution meets HIPAA's stringent requirements. Our EMR program focuses on creating better documentation and clinical reports while simplifying the process of sharing medical records. This will reduce the costs of paper, storage, transcription and file management while moving towards an automated process. Our top-notch security and reliability ensures that your patient's information is safe and always available. An additional benefit? Your practice will be eligible to receive the maximum Medicare and Medicaid reimbursements. After 2015, you'll avoid Medicare and Medicaid penalties.

Hybrid Solutions. ATS offers hybrid solutions that enable you to keep your most sensitive data on dedicated servers in our data centers, while migrating the rest to the cloud. Our Tier 4 data centers offer round-the-clock on-premises support with 99.999 percent uptime. We invest heavily in arming our facilities with the highest level of security and resiliency. Each of our facilities is equipped with redundant power, air, telco, core firewalls, enterprise class Cisco LAN and redundant WAN. Commercial power feeds, four 2,500 and one 2,000 kVA transformers, and 25 hours of power with diesel generators are utilized at each of our centers.

Conclusion

Moving your business's IT infrastructure and software to the cloud can provide many benefits, including more efficient operations, reduced costs and elastic services. And if you choose the right solution from the right provider, there is no need to compromise security or performance.

Perhaps you are concerned about the migration itself. You might think such a transition is synonymous with hours of support, expensive consultants and a steep learning curve. This isn't the case. Our team makes the transition as simple and efficient as possible. No surprises. No complicated setup. We listen to your unique concerns and issues. Our services can extend from providing recommendations to system implementation.

ATS Technical Services delivers the highest levels of performance, scalability, security and redundancy in infrastructure-as-a-service solutions, offering enterprise-level infrastructure at a price that small and midsize businesses can afford. With a focus on security, usability and affordability, ATS Technical Services is primed to help businesses like yours with their migration to the cloud.