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Cloud Computing vs. Traditional On-Site Storage

Cloud Computing vs. Traditional On-Site Storage

Every business that achieves even moderate success understands the importance of record keeping and data storage. Data management is crucial to running an ethical and sustainable business and often offers insights that can help a business grow or become more efficient. Historically, however, proper data storage could be a real chore and was subject to risks. Before cloud computing became an easily accessible option, data storage was on-site, and it was a much more cumbersome activity than it is today.

Today, modern technology is providing alternatives to on-site storage that are faster, more efficient, cost-effective, convenient, progressive, and beneficial to your business growth. At DMS Technology, we have the cloud computing solutions and services to provide your business with all of these qualities.

About DMS

Founded 12 years ago, DMS provides strategic business IT consulting and management to Professional Firms worldwide. Over the past 12 years, we have expanded DMS to locations in New York and London as well as multiple datacenter locations across North America and Europe. DMS is a tight-knit team of business-oriented technology advisors who make it a priority to understand your unique business goals and have designed and managed technology of some of the world's most demanding firms.

Our teams at DMS specialize in business technology advising and management. Technology is as important to your company as to large, enterprise-level businesses. We deliver the same enterprise level IT consulting and management at a rate practical for your Professional Firm. Our specialized DMS Model is a proactive management plan that ensures you're investing in the most effective technology to support your business objectives and achieve optimal return on investment, without the overhead of an in-house IT staff.

We aren't your average IT company. We pride ourselves on our extensive business acumen and we deliver that knowledge to every client we partner with. We are consultants and advisors who want to help your business grow successfully. We provide added value by using business-driven technology solutions to assist in more strategic technology-related business decisions. By partnering with DMS, you'll spend less, operate more efficiently, and comply with regulations necessary for your business.

On-Site Storage: Historically,
Our Only Option

The Wave of The Future:
Cloud Computing

On-Site Storage: Historically, Our Only Option

Historically, on-site storage was our only data backup option, and it wasn't the most convenient. Sometimes, it could get as tedious as keeping meticulous physical records in case of a system failure. Anyone who went to school in the early days of cloud computing or before probably caught a glimpse of their high school or university's record storage facility; the long rows of filing cabinets practically bulging with folders filled all but the most meticulous onlookers with dread. Every network police drama has at least a scene or two dedicated to a trip to the archives to look through stacks of old files that could be stored on a single server today.

In the past, data in the sense that we think of now was not necessarily something that individuals, businesses, or even governments cared to keep track of. The Romans for example,

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Cloud Computing Allows You to Work From Anywhere

persnickety as they were about law and justice and the like, are not known to have kept detailed paper records of legal matters except in extraordinary cases - mostly due to the price and scarcity of durable paper. However, despite history's lack of attention to true data, record keeping practices go back centuries and all lead down the slow and inevitable path to cloud computing.

One of the prime examples of deliberate early on-site storage can be traced back to London's Jewel Tower, where the House of Lords began storing parliamentary records in the late 16th Century. The English record keepers went to great lengths to protect their archives, going so far as to fireproof the tower to the point that it was only one of a handful of buildings to survive a fire that burned down most of Westminster in 1834 (at which point the records were moved to a more modern structure).

On-site storage at the personal or commercial level was a bit more efficient than these medieval methods, with closets full of backup hard drives or a drawer full of thumb drives. However, these methods can feel just as tedious as their predecessors.

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The Wave of The Future: Cloud Computing

In today's world, even though cloud computing and it's off-site storing abilities have become the more commonly used method of data storage, some businesses still opt for on-site storage over off-site alternatives, accepting the inherent risks involved to save a few dollars. Resource-draining server rooms are great for managing data on a local network, but as cloud computing becomes more advanced and accessible, the disadvantages of on-site storage are becoming more palpable.

The largest risk one assumes when opting for an on-site storage plan is the risk that something catastrophic will happen that will wipe out both your primary and backup data storage options. The aforementioned English record keepers dealt with this risk valiantly, but not every business has the resources needed to devote an entire team to fireproofing a literal castle full of records.

The most obvious of these risks are fire, electrical surge, and water damage from a broken pipe or some other source. Man-made accidents can pose a risk to on-site storage options as well; a drink spilled on a server can wipe out hundreds of thousands of files in an instant,

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and in some cases, the mishandling of information or theft have to be taken into account. Any event that compromises your network could pose a threat to the integrity of your storage system, and any good business owner knows just how grave of an issue that can be.

The loss or corruption of crucial data isn't just the loss of resources that could be used to provide better services or develop better marketing strategies - it's also the loss of confidential customer data, financial records, internal and external communications, and much more. When on-site storage goes wrong, it can open up your business to legal action, investigation, and public scrutiny.

Thankfully, modern technology is providing alternatives to on-site storage that are becoming progressively faster, more efficient, more cost-effective, and better for your peace of mind. Since it took off in the late 2000s, cloud computing has become a buzzword that means so much more than just the name alone implies.

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The Wave of The Future: Cloud Computing

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The Wave of The Future:
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The Wave of The Future: Cloud Computing

As computers became a mainstay of the home and workplace alike, innovators naturally began searching for new ways to utilize technology and make the world a faster, smarter place. The last two decades have seen the capabilities of computers expand beyond what previous generations thought possible even as the devices themselves get smaller and smaller. Today, we don't think twice about accessing the internet from our phones. As our computers got smaller, however, engineers began to think big.

The question was simple: how could devices become more powerful while circumventing their hardware limitations? The conclusion developers arrived at was the beginning of cloud computing.

At first glance, it's an odd idea. Traditionally files are stored on individual devices, or on a local server. The notion that important information is floating around in a "cloud" isn't easy to process. In reality, your data isn't floating around in the sky - it's just stored somewhere other than your hard drive. Cloud storage services host your data on physical servers located

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around the world, allowing you to access it whenever you're on the internet and therefore freeing up space on your hard drive.

The [National Institute of Standards and Technology](#) has a five-part definition of cloud computing that lays out what constitutes cloud computing and what doesn't. The requirements are as follows:

- On-demand self service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured service

In basic terms, this means that in order to be considered a cloud computing service, users must be able to access the service whenever and wherever they want so long as they are on a compatible device. The cloud itself must be powered by multiple hardware platforms besides the device the consumer uses to access the cloud, and the service must be measurable, limitable, and capable of being modulated depending on the needs of the consumer at any given time.

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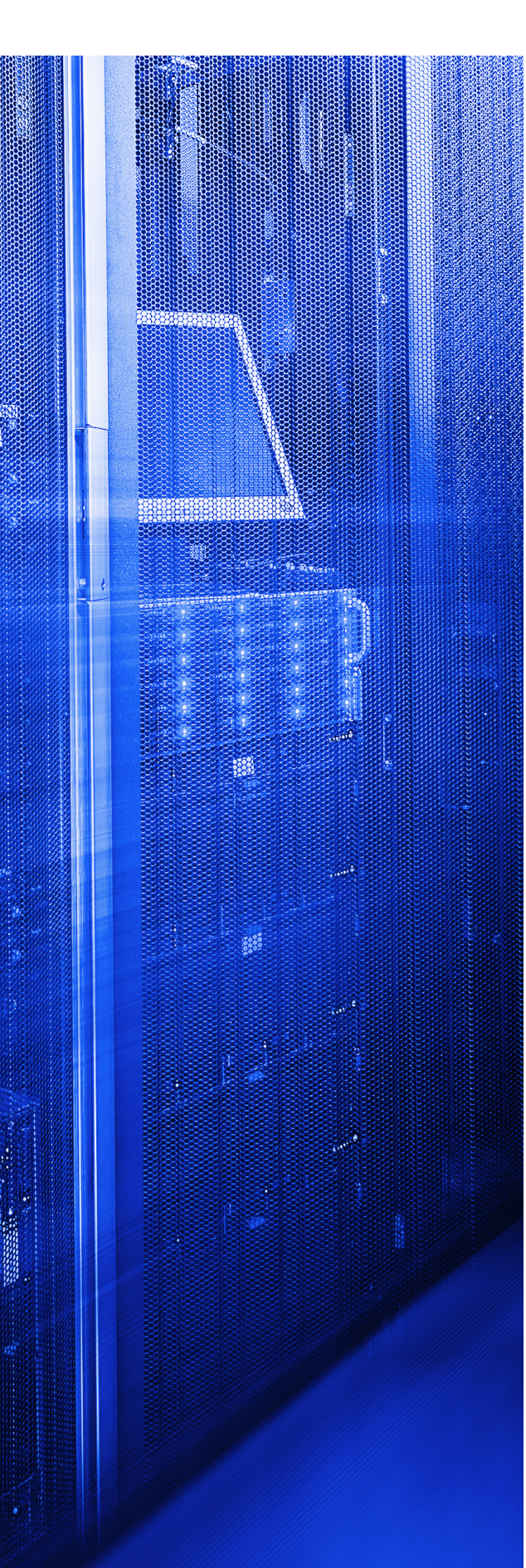
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In the workplace, cloud computing lets coworkers share and collaborate on documents faster than ever before. Services like Dropbox, Google Drive, and Box can accommodate individual storage needs or handle collaborative storage for entire companies, which can be managed and organized just like a local server. Some cloud services also allow multiple users to work on files in real time, which has numerous applications in settings requiring collaboration, particularly in higher education. Most universities now provide limited cloud storage space to students, professors, and organizations.

In recent years, innovative companies like Amazon and Google have been working to use cloud computing in different fields, such as medicine. For example, in November 2016, Amazon Web Services announced a collaboration with the American Heart Association to create a massive cloud-based data library filled with curated data sets, trends, and observations pertaining to heart disease. This is a shining example of the ways cloud computing is driving innovation.

The most encouraging thing about cloud computing is the emphasis that tech leaders are placing on its continued development: capital expenditures by the top seven cloud providers could rise by 24% to $45 billion this year. In an increasingly data-driven world, the ability to store, process, and access data off-site is invaluable.

The physical infrastructure that enables cloud computing is also increasingly impressive. Storing massive amounts of data that needs to be easily accessible at a moment's notice is

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no simple task. This has given rise to the appearance of server farms around the room. These massive, meticulously maintained warehouses full of servers are sometimes independent but often owned by major cloud service providers. For example, server farms used by Google support the company's search engine, but also manage the staggering amount of cloud data stored on Google Drive and other services.

Increased investment in cloud computing is on the verge of shepherding in a new wave of cloud applications. Some experts predict that the next generation of successful cloud computing development will be real time and predictive analytics-driven, helping companies reveal insights and potential pitfalls with their marketing and product development strategies and take some of the guesswork out of advertising. The ceiling for the cloud is virtually limitless.

Cloud computing is the wave of the future, and it has a lot to offer in both a personal and professional sense.

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–investors.com

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As discussed in the previous chapter, cloud computing is on the cutting edge of the tech world and is an invaluable tool for improving the efficiency and ease of technology in the workplace. Lost in all of these discussions about storage, analytics, and virtualization however is possibly the most fundamental benefit of embracing cloud computing: it can backup your data in real time.

Imagine, if you will, this scenario: you've been working on a report for several weeks. You crunched the numbers, you've organized your thoughts, you've thought of everything, and you're finally ready to start typing up a real draft. Everything is going well…

Until your hard drive decides to quit for good.

Everything is suddenly gone. All your music, all your pictures, all your spreadsheets, and all the hard work you've put into that report. Dread sinks in as you realize you've lost everything important.

Cloud computing changes all of this. When you work off the cloud, all of your files are automatically stored there, backing up your data and protecting your hard work from all the things that could go wrong with your computer.

The peace of mind you get from backing up your data on the cloud isn't just from the protection against computer failure - it's also a great way to ensure that your data is protected from the physical threats discussed in previous chapters. Dedicated data centers are painstakingly guarded against exposure to the elements, electrical surges, and human error so that nothing can get to your data except you.

There is also a variety of cloud deployment models to use. While the most common type of cloud is indeed a private cloud, other deployment models are becoming more common and more widely utilized. The most common example is a community cloud, which can be used by several organizations within a community; this is a popular option at universities in particular, where multiple organizations and departments use the same cloud but keep their data segregated. Public clouds are also beginning to pop up, and are

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available to the general public or a wide swath of users that may or may not be geographically close to each other. Amazon's collaboration with the American Heart Association would be one such example.

Using cloud computing at an organizational level for storage and collaboration is a perfect replacement for the near-obsolete practice of maintaining a workplace server. The cloud's freedom from physical pitfalls means that your organization's data will be protected, secure, and up to date in case of an event that wipes out your local hardware, and the requirement that users be able to unilaterally access their data from any eligible device means that integrating new devices into your network is a breeze. When properly used, cloud computing can even enable employees to work from off-site as easily as if they were sitting at their desk (but more on that later).

When deciding to backup your data via cloud computing, it's important to understand exactly what kind of backup you're choosing. Many cloud providers offer basic file-sharing services that allow users to pick and choose files to upload to the cloud and subsequently access on numerous devices. However, comprehensive backup plans offered by companies specializing in data backups get a bit more complex.

The "ideal" backup according to many experts is an image-level backup. Image-level backups essentially take a snapshot of a user's entire operating system, including the files that are stored on a device, and keep a backup copy of it so that everything

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is protected in case of a complete system failure. Once a computer is fixed or a suitable replacement is found, users can simply revert to the most recent snapshot of their device that was taken before the failure occurred. It's even possible to use the backed up OS as a virtual machine within the cloud itself. It is the effective restoration of an entire server.

The second, slightly less popular backup method is a file-level backup. It is the more intuitive of the two methods, and involves backing up files rather than an entire server. It's a great way to protect against user error and the frequency of automatic backups is user-controlled. While not as comprehensive and quick as an image-level backup, it is still a perfectly legitimate safeguard to more vigilant users.

Data security is a serious issue that is neglected by too many individuals and organizations, and it's not usually something people think about until disaster strikes. Cloud computing is the data backup technique to embrace, and is the first and probably most important benefit of embracing cloud storage. ▌

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As the world gets smaller and faster, it's difficult to spend full days in the office and still have time to take care of personal responsibilities. The ability to work from home or on the go is great for the physical and mental health of employees and allows employers to seamlessly integrate remote workers, consultants, and freelancers into the workplace. Cloud computing allows that possibility.

One example of a properly implemented work-from-anywhere strategy can be found halfway around the world in Cologne, Germany. Detecon, an international consulting firm, has only a few permanent desks and offices in its headquarters. Instead, one walks by conference rooms and collaborative workspaces. The upper floors of the building are arranged into large, airy rooms filled with large, sleek desks. Only a handful of employees are actually around, and most of them are clustered together, discussing a project or account they're working on together.

Detecon employees are encouraged to work on their laptops from home, from coffee shops, from trains, and from the offices of the clients they're working with. Detecon's rejection of the stereotypical regimented German efficiency is a wildly

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successful example of just how effective the ability to work from anywhere can be.

Statistics show that roughly 50% of American employees hold a job that is compatible with some degree of remote work, and 80-90% say they'd like the opportunity to work from home 2-3 days each week. Embracing the ability to work from anywhere doesn't make the office obsolete in any way - it simply increases the freedom of employees to work in environments where they feel relaxed, productive, and comfortable, allowing them to cut down on time and money spent commuting, or live healthier by having more time to exercise or sleep. Working remotely also greatly eliminates work/life conflicts. For those with familial responsibilities, it becomes feasible to see the kids off to school or set aside some time for meal prep a few times a week.

If you're a business owner and are still not convinced on this idea, take this into consideration: in the office, manning the ship with a skeleton crew once or twice a week is a great way to cut down on utility bills, regroup after a busy week, or prepare for the coming week.

It's also important to take security into consideration. In the office, it's easy to

manage security concerns since office hardware is mostly stationary and the flow of people in and out of the office is regulated. When working from home or in public on a personal device, it's crucial that employees understand the importance of taking steps to protect any sensitive information they might be working with. Things like monitoring security screens and training on the dangers of phishing and malware are highly recommended when allowing employees to work from anywhere. A secure cloud storage system should also require a login with each new browsing session just in case an employee's device is lost or stolen.

The ability to work from anywhere at any time also has positive ramifications on customer service. In industries where businesses work intensively alongside customers or take a particular amount of pride in great customer service, having the office on every employee's laptop means that customer service emergencies and crisis management can be a 24 hour job when absolutely necessary.

With all of these beneficial outcomes, the ability and flexibility to work from anywhere that cloud computing provides should be considered by every business that wants to move forward in this modern era.

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Embrace the Cloud With DMS Technology

Cloud computing has the ability to revolutionize the traditional workplace. With its increased flexibility, security, and collaboration, your business will reach a whole new level of productivity and efficiency. At DMS Technology, we have the cloud computing services to take you where you want to go. As business advisors and consultants in the IT industry, we know technology and how to tailor it to you and how you want to work. Ready to get started? Click the button to get in touch with us!

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