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Five Reasons Your A/E Firm Should Look to the Cloud

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Until recently, the only option an A/E firm had to deploy a new software solution was onsite using a server located in the firm's office. Over time, new technologies and the evolution of the Internet have allowed for a range of offsite deployment options. You may have heard of these options ubiquitously referred to as the cloud. This term is thrown around frequently, but just what does the cloud mean? It means that the servers and infrastructure necessary for deploying your software solution are not located in your office. Instead, the software is hosted by a server in a secure facility outside your office and accessed over the Internet.

You are likely using the cloud, and may not know it. Have you ever shared an important design document using Dropbox? Or, perhaps less productive, streamed a movie using Netflix? These are cloud services millions of people use every day. You might still be thinking: "Sure, I will share my designs on Dropbox, but why would I ever consider putting something like my company's financial information or all of our project information in the cloud?"

There are a number of great reasons to use the cloud including streamlined setup, enhanced security, zero maintenance, improved performance, and a proven disaster recovery plan. We will explore each of these benefits in detail.

Streamlined Setup

With the understanding that your software will reside on a server outside your office, you may be curious how you actually install the software.

The simple answer is you do not. Utilizing a cloud service offers you access to a team of IT experts that are available to handle the heavy lifting for you. Shedding these setup responsibilities will result in convenience, minimal IT headache, and overall time savings.

Deploying a new software solution can often require an investment in new hardware to assemble and configure, but with the cloud it's much easier. You will not need to even consider purchasing a new server or operating system. Your cloud provider's IT team will ensure that their hardware exceeds the requirements for your software solution for optimal performance. Leaving the server configuration to the experts can be a huge convenience that also alleviates the significant cost associated with a major hardware investment.

Another reason to consider placing your software in the cloud is that it requires a minimal time commitment from your company. While the technical experts responsible for hosting your data may spend up to a week ensuring an optimal setup, your team's time can be spent on more important tasks.

Even with your hardware assembled and configured, there is still more to do. We cannot forget the SQL database, which will contain the most valuable component of your software: the data. Installation and setup can be a breeze for those with the experience, but who wants to spend their nights and weekends studying database languages? Keep your focus on your business and leave these complex topics to the pros.

Accessibility is another important consideration. If you are looking to the cloud, there is a good chance your software solution was intended to be published to the web for maximum accessibility. Many firms choose not to exercise this option based on a lack of confidence in their IT infrastructure and settle for just publishing the software locally. This impacts productivity when your team is unable to access vital information from outside the office. Choosing a cloud solution will ensure that your team has access to the information regardless of their location.

With your software in the cloud, you will know everything has been deployed properly and can be accessed easily. In this winning situation, you will have more time to commit to your work and less time bogged down by complex IT issues.

Enhanced Security

There is a common misconception that relying on the cloud for your firm's vital software resources will put your organization at risk in some way. This idea stems from a natural fear of the unknown: your data resides on a server that you cannot see or touch. Keep in mind that just because you do not have any direct interaction with the hardware does not mean it is any less secure than a server in your office.

In fact, cloud solutions are typically far more secure than their onsite counterparts. Consider the location of your server. It is probably in your office somewhere an IT specialist can easily reach. This makes sense, but does it also mean any employee or guest could access it just as easily? This is far more common than you would expect. It only takes one disgruntled employee or competitor to sink your ship.

Malicious intentions aside, there are other considerations regarding server access, such as data security. A data security policy creates and maintains a safe environment for your firm's data. Without a data security policy in place, an employee could be misled into downloading a dangerous file or even mistakenly bring one into the office hidden on a USB drive. If you have mission critical data stored on your local network and encounter a virus, you risk losing this information or even worse: having it stolen. With your data in the cloud, these kinds of threats will have no bearing on the security of your firm's cloud data. Any threats to your local network will be isolated from your data in the cloud.

While proper server location and network policies are essential for security, safeguarding your connection to the server is equally as important. Many A/E firms struggle with meeting security standards due to a lack of adequate IT resources. Even if resources are not a concern, your IT team may not have the time to devote to it. A cloud hosting provider can offer a dedicated team of security experts with the sole focus of monitoring your data with security safeguards that typically exceed any on-premise solution.

Just what are these security standards that could become a drain on you staff or even end up neglected entirely? These are priorities such as intrusion prevention and detection, firewall and antivirus maintenance, and SSL encryption. While it is possible to meet proper security standards with your existing staff, your organization is an A/E firm not an IT firm. As an A/E firm, time is your only inventory. The effective management of this time determines the profitability of your firm. Keep your focus on billable activity and leave the IT to the experts.

Zero Maintenance

As we have seen in our lifetime, information technology is constantly evolving. In 1965, Intel co-founder Gordon Moore observed that the number of transistors on an integrated circuit doubles approximately every 18 to 24 months. He hypothesized that this progression would continue indefinitely. This means that the processing power of the average computer will double roughly every two years. His prediction has proven to be true and is now known as Moore's Law. This law is used to guide long-term planning and to set targets for research and development in the technology industry.

Consider how long you have had your server hardware. Following Moore's Law, we can assume that if it is two years old, it is already running at half the capacity of a server purchased for the same price today. If it is four years old, it is running at a quarter the capacity. To ensure this exponential obsolescence does not negatively impact the business, many IT departments create a hardware replacement schedule that follows Moore's Law. This usually results in replacing computer hardware every two to four years. Obviously this situation would be ideal, but can you imagine replacing your server hardware this often? It can become a major expense that restricts cash flow and impedes firm growth. Ignoring this maintenance responsibility can have an equally negative impact on productivity.

Of course, the hardware will only do what the software requires it to do. As computer hardware improves, software must evolve to leverage new technology. If software did not advance to take advantage of new technologies, hardware improvements would have no meaning. Software evolution typically results in performance improvements as well as added functionality, both of which can help streamline workflows and improve overall work quality. Trying to accomplish this without the cloud comes with a steep price tag.

Software updates are not just for new features and performance gains, but also to patch security holes. Without a consistent software update schedule your data could be insecure. Potential vulnerabilities from using out-of-date software make migrating to the latest version important. While ensuring your software is current can be time consuming, falling too far behind could put your business at risk. Many cloud offerings include automatic software updates to ensure your firm does not face potential security risks.

Unfortunately, with an on-premise solution, the burden of replacing old hardware and updating old software falls firmly on your shoulders, but it does not have to be this way. The exponential advances in hardware and software technology have also paved the way for the cloud. With your firm's software in the cloud, hardware replacement is unnecessary and software updates are typically handled for you. Just like setup and security, hardware and software maintenance may be better left to the IT experts. Many A/E firms struggle to keep up with just software updates, much less Moore's Law. Choosing to move your on-premise software solution to the cloud will eliminate the need for costly and time consuming maintenance efforts, leaving you with more time and resources to devote to your business.

Optimal Performance

In terms of computer hardware and software, performance refers to how a system accomplishes its intended tasks with respect to responsiveness and stability under a particular workload. The key attributes that are used to measure performance are resource usage, scalability, and reliability. Each of these attributes is equally important when considering the cloud.

It is important to review an application's recommended hardware rather than just the minimum requirements.

Many IT administrators will try to scrape by with the minimum, but the stresses on meager hardware configurations become apparent in long load times, freezes, and software crashes. These inconveniences can add up to a significant loss of productivity and trust in the software. Think about just the few extra seconds it may take for a report to load and multiply that by the number of employees accessing that report and how frequently it is accessed. The time can really begin to add up. Not to mention that these hiccups can create dissatisfaction with the software and discourage its use. With a cloud solution, the hardware and software systems are typically enhanced for the application being hosted. This enables performance gains that may have been too expensive to implement with an on premise solution.

If you are running into performance problems today, you will continue to experience challenges as your business grows. In the A/E industry especially, if your business is not growing it may be at risk. With such an emphasis on growth, is anyone in your company responsible for ensuring your IT infrastructure will scale with your firm? You may have in-house IT staff to maintain your systems, but ensuring your hardware and software operate sufficiently for your business today is not enough. Your IT infrastructure needs to be ready to accommodate your firm's projected growth. With a cloud solution, scalability is no longer an obstacle to business growth. Cloud servers are typically prepared to handle much more use than the average business requires and they are audited frequently to ensure optimal performance as your firm's software usage increases.

Even if your software is performing well, this fact becomes irrelevant if access to the software is unreliable. The reliability of a software solution is yet another key component of performance. Situations such as server maintenance, network or power loss, or even a server crash could leave your team without vital business information. With your firm's software in the cloud, reliability and accessibility are less of a concern. Most cloud offerings have a 99% uptime - a number that far exceeds most on-premise solutions.

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Proven Disaster Recovery

It is no secret that a natural disaster can have a devastating impact on a firm's IT infrastructure. What may be more mysterious is how a firm can mitigate that risk. Preparing for an IT disaster starts with backing up your data, but this step alone is not sufficient. It is important to backup frequently, redundantly, and remotely. Most cloud services handle this with ease.

In the event that a natural disaster or other such catastrophe damages your firm's data, you will need to restore that data from the most recent backup. This backup is a snapshot of you firm's data at the moment in time that the backup was made. The frequency that your firm performs backups can mean the difference between losing data from just the last hour versus the entire previous month. For this reason, it is imperative that you backup your data as frequently as possible. With your data in the cloud, the tedious process of constantly performing backups can be eliminated. Most cloud services guarantee multiple backups each day.

While frequent backups are important, they will not do any good if a disaster claims the device storing the backups too. This is why it is so important to create additional backups at other geographic locations. In the event of a large scale disaster like a hurricane or tornado, having additional backups stored outside your state or region is the only way your data will be safe. Unfortunately, an extensive backup solution like this comes with a large price tag.

Comparing costs like these to the cost of a cloud hosting service makes the decision to move to the cloud an easy one.

The cloud provider is responsible for the data they are hosting and must take the necessary precautions to mitigate their own risk. Most cloud software solutions offer multiple daily backups at different locations to prevent data loss in the event of a disaster. The real benefit to using a cloud solution with respect to disaster recovery is that you will never need to worry about recovering data. In the event of a disaster at your office, your firm's data in the cloud will not be impacted. Consider making the move to the cloud and mitigate the risk of data loss at your firm.

Conclusion

Hopefully we've demystified the idea of software in the cloud and offered insight into how your A/E firm stands to benefit from choosing a hosted solution. With improvements in the areas of setup, security, maintenance, performance, and disaster recovery, there are many advantages to the cloud deployment method.

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