

FREE REPORT:

**“5 Critical Facts Every
Business Owner Must Know
Before Moving Their
Network To The Cloud”**

smart  **office**
CONNECT

5 Critical Facts You Must Know Before Moving To The Cloud

In this report I'm going to talk about **5 very important facts you need to know before you consider cloud computing for your company**. These include:

1. The pros AND cons you need to consider before moving to the cloud.
2. Migration GOTCHAS (and how to avoid them).
3. The various types of cloud computing options you have (there are more than just one).
4. Answers to important, frequently asked questions you need to know the answers to.
5. What questions you need to ask your IT pro before letting them "sell" you on moving all or part of your network and applications to the cloud.

What Is Cloud Computing?

Wikipedia defines cloud computing as "the use and access of multiple server-based computational resources via a digital network (WAN, Internet connection using the World Wide Web, etc.)."

But what the heck does *that* mean?

The easiest way to not only understand what cloud computing is but also gain insight into why it's gaining in popularity is to compare it to the evolution of public utilities. For example, let's look at the evolution of electricity.

Back in the industrial age, factories had to produce their own power in order to run machines that produced the hard goods they manufactured. Be it textiles or railroad spikes, using machines gave these companies enormous competitive advantages by producing more goods with fewer workers and in less time. For many years, the production of power was every bit as important to their company's success as the skill of their workers and quality of their products.

Unfortunately, this put factories into TWO businesses: the business of producing their goods and the business of producing power. Then the concept of delivering power (electricity) as a utility was introduced by Thomas Edison when he developed a commercial-grade replacement for gas lighting and heating using centrally generated and distributed electricity. From there, as they say, the rest was history.

The concept of electric current being generated in central power plants and delivered to factories as a utility caught on fast. This meant manufacturers no longer had to be in the business of producing their own power with enormous and expensive water wheels. **In fact, in a very short period of time, it became a competitive necessity for factories to take advantage of the lower-cost option being offered by public utilities.** Almost

overnight, thousands of steam engines and electric generators were rendered obsolete and left to rust next to the factories they used to power.

What made this possible was a series of inventions and scientific breakthroughs – but what drove the demand was pure economics. Utility companies were able to leverage economies of scale that single manufacturing plants simply couldn't match in output or in price. In fact, the price of power dropped so significantly that it quickly became affordable for not only factories but every single household in the country.

Today, we are in a similar transformation following a similar course. The only difference is that instead of cheap and plentiful electricity, advancements in technology and Internet connectivity are driving down the costs of computing power. With cloud computing, businesses can pay for “computing power” like a utility without having the exorbitant costs of installing, hosting and supporting it on premise.

In fact, you are probably already experiencing the benefits of cloud computing in some way but hadn't realized it. Below are a number of cloud computing applications, also called SaaS or “software as a service,” you might be using:

- Gmail, Hotmail or other free e-mail accounts
- Facebook
- NetSuite, Salesforce
- Constant Contact, Exact Target, AWeber or other e-mail broadcasting services
- Zoomerang, SurveyMonkey and other survey tools
- LinkedIn
- Twitter
- All things Google (search, AdWords, maps, etc.)

If you think about it, almost every single application you use today can be (or already is) being put “in the cloud” where you can access it and pay for it via your browser for a monthly fee or utility pricing. You don't purchase and install software but instead access it via an Internet browser.

What About Office 365 ?

Office 365 is a perfect examples of the cloud computing trend; for an inexpensive monthly fee, you can get full access and use of Office applications that used to cost a few hundred dollars to purchase. And, since these apps are being powered by the cloud provider, you don't need an expensive desktop with lots of power to use them – just a simple Internet connection will do on a laptop, desktop or tablet.

Pros And Cons Of Moving To The Cloud

As you read this section, keep in mind there is no “perfect” solution. All options – be it an in-house, on-premise server or a cloud solution – have upsides and downsides that need to

be evaluated on a case-by-case scenario. (Warning: Do NOT let a cloud expert tell you there is only “one way” of doing something!)

Keep in mind the best option for you may be a **hybrid solution** where some of your applications and functionality are in the cloud and some are still hosted and maintained from an in-house server. We'll discuss more of this in a later section; however, here are the general pros and cons of cloud computing:

Pros Of Cloud Computing:

- **Lowered IT costs.** This is probably the single most compelling reason why companies choose to move their network (all or in part) to the cloud. Not only do you save money on software licenses, but on hardware (servers and workstations) as well as on IT support and upgrades. So if you hate constantly writing cash-flow-draining checks for IT upgrades, you'll really want to look into cloud computing. Included in this report are examples of how we've done this for other clients and what the savings have been.
- **Ability to access your desktop and/or applications from anywhere and any device.** If you travel a lot, have remote workers or prefer to use an iPad while traveling and a laptop at your house, cloud computing will give you the ability to work from any of these devices.
- **Disaster recovery and backup are automated.** The server in your office is extremely vulnerable to a number of threats, including viruses, human error, hardware failure, software corruption and, of course, physical damage due to a fire, flood or other natural disaster. If your server were in the cloud and (God forbid) your office was reduced to a pile of rubble, you could purchase a new laptop and be back up and running within the same day. This would NOT be the case if you had a traditional network and were using tape drives, CDs, USB drives or other physical storage devices to back up your system.

Plus, like a public utility, cloud platforms are far more robust and secure than your average business network because they can utilize economies of scale to invest heavily into security, redundancy and failover systems, making them far less likely to go down.

- **It's faster, cheaper and easier to set up new employees.** If you have a seasonal workforce or a lot of turnover, cloud computing will not only lower your costs of setting up new accounts, but it will make it infinitely faster.
- **You use it without having to “own” it.** More specifically, you don't own the *responsibility* of having to install, update and maintain the infrastructure. Think of it as similar to living in a condo where someone else takes care of the building maintenance, repairing the roof and mowing the lawn, but you still have the only key to your section of the building and use of all the facilities. This is particularly attractive for companies that are new or expanding, but don't want the heavy outlay of cash for purchasing and supporting an expensive computer network.
- **It's a “greener” technology that will save on power and your electric bill.** For some smaller companies, the power savings will be too small to measure. However,

for larger companies with multiple servers that are cooling a hot server room and keep their servers running 24/7/365, the savings are considerable

Cons Of Cloud Computing:

- **The Internet going down.** While you can mitigate this risk by using a commercial-grade Internet connection and maintaining a second backup connection, there is a chance you'll lose Internet connectivity, making it impossible to work.
- **Data security.** Many people don't feel comfortable having their data in some off-site location. This is a valid concern, and before you choose any cloud provider, you need to find out more information about where they are storing your data, how it's encrypted, who has access and how you can get it back. You'll find more information on this under "What To Look For When Hiring A Cloud Integrator" later on in this document.
- **Certain line-of-business applications won't work in the cloud.** This can be a concern for those clients that have a specific line of business application that requires to still have an on premise server. This is where we use the hybrid Cloud/On Prem solution.
- **Compliance Issues.** There are a number of laws and regulations, such as Gramm-Leach-Bliley, Sarbanes-Oxley and HIPAA, that require companies to control and protect their data and certify that they have knowledge and control over who can access the data, who sees it and how and where it is stored. In a public cloud environment, this can be a problem. Many cloud providers won't tell you specifically where your data is stored.

Most cloud providers have SAS 70 certifications, which require them to be able to describe exactly what is happening in their environment, how and where the data comes in, what the provider does with it and what controls are in place over the access to and processing of the data; but as the business owner, it's YOUR neck on the line if the data is compromised, so it's important that you ask for some type of validation that they are meeting the various compliance regulations on an ongoing basis.

● Migration Gotchas! What You Need To Know About Transitioning To A Cloud-Based Network

When done right, a migration to Office 365 or another cloud solution should be like any other migration. There's planning that needs to be done, prerequisites that have to be determined and the inevitable "quirks" that need to be ironed out once you make the move.

Every company has its own unique environment, so it's practically impossible to try and plan for every potential pitfall; however, here are some BIG things you want to ask your IT consultant about BEFORE making the leap.

Downtime. Some organizations cannot afford ANY downtime, while others can do without their network for a day or two. Make sure you communicate YOUR specific needs regarding downtime and make sure your IT provider has a solid plan to prevent extended downtime.

Painfully Slow Performance. Ask your IT consultant if there's any way you can run your network in a test environment before making the full migration. Imagine how frustrated you would be if you migrate your network and discover everything is running so slow you can barely work! Again, every environment is slightly different, so it's best to test before you transition.

3rd-Party Applications. If your organization has plug-ins to Exchange for faxing, voice mail or integration into another application, make sure you test to see if it will still work in the new environment.

Cloud Versus A Traditional Network: A Comparison Of Costs

As we said earlier, each client has a unique set of circumstances and needs that will factor into the cost savings and benefits. But in order to give you an idea of what you can save when moving your network to the cloud, we've put together a sample business scenario we commonly find, and the savings obtained with cloud computing.

Please note we've shown this over a three-year period since that is the normal span of time when all workstations and servers need to be replaced and software upgraded; and to account for the fact that you don't have to purchase new hardware as often (which is a huge cost savings when moving to the cloud), we need to show this over a three-year period to show the true and full cost savings. If you are interested in an assessment to see if you can save money moving to the cloud, please email sales@pcworksplus.com.

Different Types Of Cloud Solutions Explained:

Pure Cloud: This is where all your applications and data are put on the other side of the firewall (in the cloud) and accessed through various devices (laptops, desktops, iPads, phones) via the Internet.

Hybrid Cloud: Although "pure" cloud computing has valid applications, for many it's downright scary. And in some cases it is NOT the smartest move, due to compliance issues, security restrictions, speed and performance. A hybrid cloud enables you to put certain

pieces of existing IT infrastructure (say, storage and e-mail) in the cloud, and the remainder of the IT infrastructure stays on-premises. This gives you the ability to enjoy the cost savings and benefits of cloud computing where it makes the most sense without risking your entire environment.

Single Point Solutions: Another option would be to simply put certain applications, like SharePoint or Microsoft Exchange, in the cloud while keeping everything else on-site. Since e-mail is usually a critical application that everyone needs and wants access to on the road and on various devices (iPad, smartphone, etc.), often this is a great way to get advanced features of Microsoft Exchange without the cost of installing and supporting your own in-house Exchange server.

Public Cloud Vs. Private Cloud: A public cloud is a service that anyone can tap into with a network connection and a credit card. They are shared infrastructures that allow you to pay-as-you-go and are managed through a self-service web portal. Private clouds are essentially self-built infrastructures that mimic public cloud services, but are on-premises. Private clouds are often the choice of companies who want the benefits of cloud computing, but don't want their data held in a public environment.

FAQs About Security, Where Your Data Is Held And Internet Connectivity

Question: What happens if the Internet slows to the point where it's difficult to work productively?

Answer: We resolve this by keeping a synchronized copy of your data on your on-site server as well as in the cloud. Here's how this works: Microsoft offers a feature with Windows called "DFS," which stands for Distributed File Systems. This technology synchronizes documents between cloud servers and local servers in your office. So instead of getting rid of your old server, we keep it on-site and maintain an up-to-date synched copy of your files, folders and documents on it. If the Internet goes down or slows to a grind, you simply open a generic folder on your PC and the system will automatically know to pull the documents from the fastest location (be it the cloud server or the local one). Once a file is modified, it syncs it in seconds so you don't have to worry about having multiple versions of the same document. Using this process, you get the benefits of cloud with a backup solution to keep you up and running during slow periods or complete Internet outages.

Question: What about security? Isn't there a big risk of someone accessing my data if it's in the cloud?

Answer: In many cases, cloud computing is a MORE secure way of accessing and storing data. Just because your server is on-site doesn't make it more secure; in fact, most small to medium businesses can't justify the cost of securing their network the way a cloud provider can. And most security breaches occur due to human error – one of your employees downloads a file that contains a virus, they don't use secure passwords or they simply e-

mail confidential information out to people who shouldn't see it. Other security breaches occur in on-site networks because the company didn't properly maintain their own in-house network with security updates, software patches and up-to-date antivirus software. That's a FAR more common way networks get compromised versus a cloud provider getting hacked.

Question: Do I have to purchase new hardware (servers, workstations) to move to the cloud?

Answer: No! That's one of the selling points of cloud computing. It allows you to use older workstations, laptops and servers because the computing power is in the cloud. Not only does that allow you to keep and use hardware longer, but it allows you to buy cheaper workstations and laptops because you don't need the expensive computing power required in the past.

What To Look For When Hiring An IT Consultant To Move Your Network To The Cloud

Unfortunately, the IT consulting industry (along with many others) has its own share of incompetent or unethical people who will try to take advantage of trusting business owners who simply do not have the ability to determine whether or not they know what they are doing. Sometimes this is out of greed for your money; more often it's simply because they don't have the skills and competency to do the job right but won't tell you that up front because they want to make the sale.

From misleading information, unqualified technicians and poor management, to terrible customer service, we've seen it all, and we know they exist in abundance because we have had a number of customers come to us to clean up the disasters they have caused.

Automotive repair shops, electricians, plumbers, lawyers, realtors, dentists, doctors, accountants, etc., are heavily regulated to protect the consumer from receiving substandard work or getting ripped off. However, the computer industry is still highly unregulated and there are few laws in existence to protect the consumer – **which is why it's so important for you to really research the company or person you are considering, to make sure they have the experience to set up, migrate and support your network to the cloud.**

Anyone who can hang out a shingle can promote themselves as a "cloud expert." Even if they are honestly *trying* to do a good job for you, their inexperience can cost you dearly in your network's speed and performance or in lost or corrupt data files. To that end, here are some questions you should ask your IT person before letting them migrate your network to the cloud:

Critical Questions To Ask Your IT Company Or Computer Consultant BEFORE Letting Them Move Your Network To The Cloud (Or Touch Your Network!)

Question: How many clients have you provided cloud services for to date and can you provide references?

Answer: You don't want someone practicing on your network. At a minimum, make sure they have 10 or more conversions.

Question: How quickly do they guarantee to have a technician working on an outage or other problem?

Answer: Anyone you pay to support your network should give you a written SLA (service level agreement) that outlines exactly how IT issues get resolved and in what time frame. I would also request that they reveal what their average resolution time has been with current clients over the last three to six months.

They should also answer their phones live from 8:00 a.m. to 5:00 p.m. and provide you with an emergency after-hours number you may call if a problem arises, including on weekends.

If you cannot access your network because the Internet is down or due to some other problem, you can't be waiting around for hours for someone to call you back OR (more importantly) start working on resolving the issue. Make sure you get this in writing; often cheaper or less experienced consultants won't have this or will try and convince you it's not important or that they can't do this. Don't buy that excuse! They are in the business of providing IT support, so they should have some guarantees or standards around this they share with you.

Question: What's your plan for transitioning our network to the cloud to minimize problems and downtime?

Answer: We run a simultaneous cloud environment during the transition and don't "turn off" the old network until everyone is 100% confident that everything has been transitioned and is working effortlessly. You don't want someone to switch overnight without setting up a test environment first.

Question: Do they take the time to explain what they are doing and answer your questions in terms that you can understand (not geek-speak), or do they come across as arrogant and make you feel stupid for asking simple questions?

Answer: Our technicians are trained to have the "heart of a teacher" and will take time to answer your questions and explain everything in simple terms.

Question: Where will your data be stored?

Answer: You should receive full documentation about where your data is, how it's being secured and backed up and how you could get access to it if necessary WITHOUT going through your

provider. Essentially, you don't want your cloud provider to be able to hold your data (and your company) hostage.

Question: How will your data be secured and backed up?

Answer: If they tell you that your data will be stored in their own co-lo in the back of their office, what happens if THEY get destroyed by a fire, flood or other disaster? What are they doing to secure the office and access? Are they backing it up somewhere else? Make sure they are SAS 70 certified and have a failover plan in place to ensure continuous service in the event that their location goes down. If they are building on another platform, you still want to find out where your data is and how it's being backed up.

Question: Do they have adequate errors-and-omissions insurance as well as workers' compensation insurance to protect YOU?

Answer: Here's something to consider: if THEY cause a problem with your network that causes you to be down for hours or days or to lose data, who's responsible? Here's another question to consider: if one of their technicians gets hurt at your office, who's paying? In this litigious society we live in, you better make darn sure that whomever you hire is adequately insured with both errors-and-omissions insurance AND workers' compensation – and don't be shy about asking to see their latest insurance policies!

Question: Do they have other technicians on staff who are familiar with your network in case your regular technician goes on vacation or gets sick?

Answer: Yes, and since we keep detailed network documentation (basically a blueprint of your computer network) and updates on every client's account, any of our technicians can pick up where another left off.

Question: Is their help desk US-based or outsourced to an overseas company or third party?

Answer: We provide our own in-house help desk and make sure the folks helping you are friendly and helpful. We consider this one of the most important aspects of customer service, plus we feel it's an important step in keeping your data secure.

Question: Are they familiar with (and can they support) your unique line-of-business applications?

Answer: We own the problems with all line-of-business applications for our clients. That doesn't mean we can fix faulty software – but we WILL be the liaison between you and your vendor to resolve problems you are having and make sure these applications work smoothly for you instead of pointing fingers and putting you in the middle.

Question: When something goes wrong with your Internet service, phone systems, printers or other IT services, do they own the problem or do they say, "That's not our problem to fix"?

Answer: We feel WE should own the problem for our clients so they don't have to try and resolve any of these issues on their own – that's just plain old good service and something many computer guys won't do.

Interested in a free evaluation of your
office to see if you are Cloud ready?

Call us today to get information you need
specifically for your office environment.

Call 814-742-9750 or email
sales@pcworksplus.com