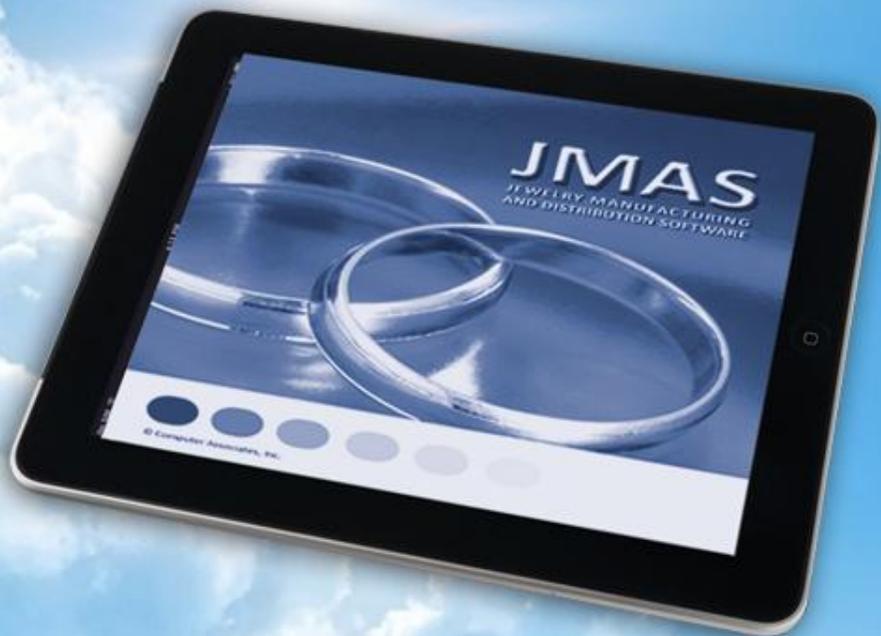


Cloud Tutorial

Understanding the Cloud and How Can It Help Your Business



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CAi
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Benefits of Cloud Computing

What is the Cloud?

The easiest way to understand the cloud is to think of it as a utility, such as electricity. When you plug a device into a wall outlet, electric devices work. You didn't generate the electricity yourself. In fact, you probably have no idea where it comes from. You simply pay your monthly utility bill, plug an electric device into the power outlet, and that's essentially all that matters.

Cloud computing works on the same principle. Through an internet connection (the equivalent of an electrical outlet), you can access whatever servers, applications, files, or data you have prearranged with your cloud hosting provider --anytime, anywhere, from any device.



The potential benefits of this approach are enormous. To stick with the electricity analogy, if your current network is self-contained on-premise, you're running the equivalent of your own generator. And with that comes a load of responsibility: Generators break, they need to be replaced, they run out of fuel, they need to be serviced, and--if demand for power increases--new ones need to be bought and brought online.

The cloud eliminates all these responsibilities to the end client because, just like power companies, cloud providers are the ones who are responsible for all maintenance, infrastructure, and repair. They are responsible for meeting surges in demand, and ensuring that service is reliable.

The analogy to electricity is a little simplistic, because cloud computing actually represents more than one type of service. Indeed, it might be more appropriate to compare cloud computing to *all* the utilities hooked up to your house: electricity, water, and gas. In the case of cloud computing, there are three basic types of service: Co-Location (Colo); Software as a Service (SaaS); and Platform as a Service (PaaS). Computer Associates offers all three.

Why should I move my business to the Cloud?

From an accounting standpoint, you eliminate the capital expense and deployment fees incurred with a new server (or servers) along with the necessary operating system and common applications which typically are re-purchased every time you replace each device. Instead, you transition into an operational expense that is planned, predictable, and budgeted.

From a technology standpoint, you no longer need to worry about power outages, hardware failures, offsite backup, and warranty maintenance fees. Additionally, you eliminate the fees associated with operating system licensing.

From a business standpoint, you avoid costly downtime and the need to maintain application updates across multiple systems. You gain the ability to work and access from anywhere and save thousands on deployment and maintenance costs. The only real responsibility you have is getting on the internet from a suitable workstation.

Is it less expensive?

When you take into consideration the cost of hardware, power, software licensing, setup, support, maintenance, downtime, and add the benefit of location flexibility and business continuity, most companies realize significant overall savings. The more services transitioned to the cloud, the less on premise hardware that requires management and the more the savings.

Cloud User Options

Since the traditional server model is no longer necessary, most clients find their storage needs greatly decreased as they are no longer required to back up multiple servers, entire operating systems, or even old, unused data. In fact, conversion to the cloud is a great time to clean up the network. While we find that most clients fit into our base offerings, there is always a unique need for different options, among which include:

- Additional Storage and Backup
- Premium Access for Graphics Driven Users
- Non-user company contacts

Support Management

By leveraging a combination of cloud technology, we are able to provide our clients with the newest technology platform, allowing them to be more productive without a constant outlay of capital expenses. Our engineers use cutting edge tools to proactively identify potential problems and address them before they cause downtime. By offering our solutions on this fixed fee model, we are incentivized to ensure that you have trouble-free operations and minimal downtime, driving efficiency and profitability in your company. In fact, the more reactive service we are called upon to perform, the less profitable our solutions become. We call it "having skin in the game" since our goals are 100% aligned with yours.

Cost Advantages of the Cloud

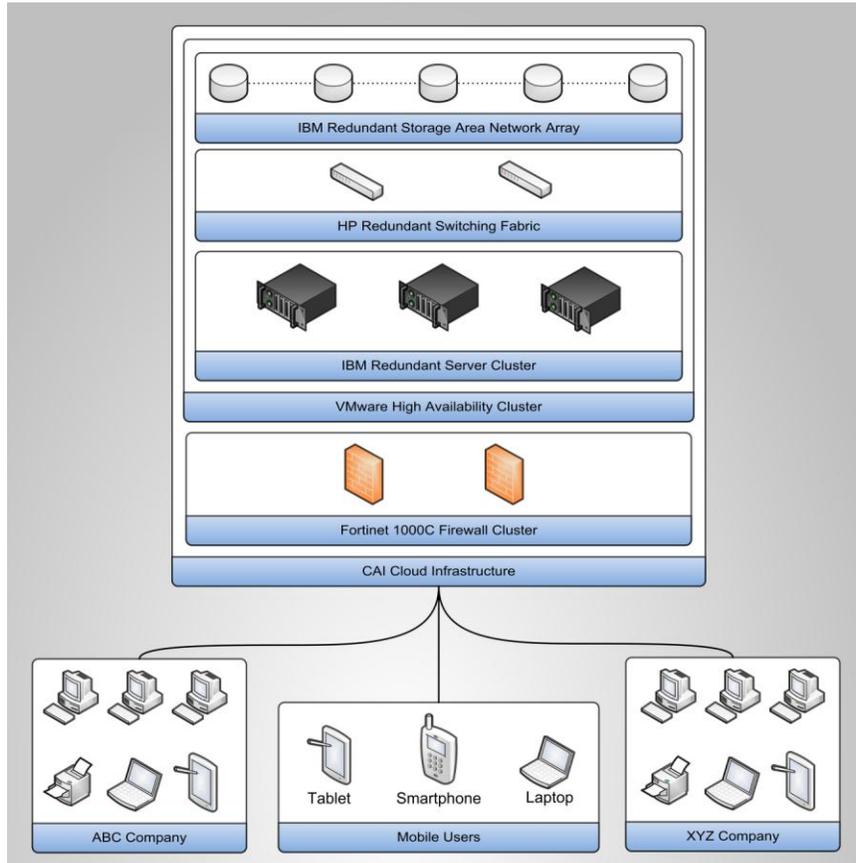
- Minimize the interruption to business a systemic failure typically causes.
- Available on a subscription basis...one low monthly fee.
- Reduce hardware CapEx and stop worrying about the costs to house the server securely and maintain it.
- Reduce in-house IT support costs.
- Free your business from the need to build costly information technology infrastructures that add no value to your core mission.
- You pay only for the storage resources you need.

Computing Advantages of the Cloud

- Minimize the interruption to business a systemic failure typically causes.
- Your cloud-based apps are available anytime and anywhere you can access the Internet.
- Your apps and data are hosted in our highly secure, redundant datacenter and accessed via a secured connection.
- CAI Cloud (datacenter) features a state-of-the-art infrastructure built on best-of-breed hardware and software solutions offering the highest levels of redundancy, security and performance.
- Offers computing scalability, flexibility and maximum 99.999999 up time.
- You can scale the solution and bandwidth as your business changes.
- CAI's Network Operations Center (NOC) is staffed by technical experts 24x7 in order to provide the proactive monitoring and around-the-clock support your dedicated physical and virtual Cloud-based services demand.
- CAI cloud servers are maintained to the highest standards including full patch management to guard against damaging computer viruses and other malware.
- You get real-time data backups. In the case of an outage, you can immediately access the backup servers that will automatically sync with the main ones as soon as they are up.
- CAI Cloud is supported by industry-leading service level agreements.

Do I still need my desktop?

You can access your cloud services from any device. That includes your current desktop, a "thin client", your home iMac, Windows Phone, Droid, or even that new iPad you just got! In fact, our motto is "Anywhere, Any Time, Any Device."



CAI Cloud Infrastructure At A Glance



CAI Cloud Solutions

Managed Co-Location (Colo) Cloud-Hosted Server

Your server and software at our location.

Under this 36-month program, CAI's Network Technicians will move **your existing ERP server** to our secure datacenter, proving power resilience, temperature control, fire detection systems, state-of-the-art physical security systems and all other advantages of this location. **Your monthly fee includes:**

- SAS 70 Type I & II Hosting Infrastructure
- Meets GLBA, SOX, HIPAA, and PCI DSS Compliance Standards
- Redundant internal connection routing, Power Supply and Generator Backup
- Secured Locked Cabinet (Full or Half-size Configurations)
- Custom Cage Solutions
- Server Management Services
 - Server Monitoring
 - Patch Management
 - Antivirus, Spyware and Malware Security
- Offsite Backup Management & Server Replication

Platform-as-a-Service (PAAS)

Your ERP software on our server at our location.

Under this 36-month program, CAI's Network Technicians will move **your current CAI-licensed ERP software and other mission-critical software** to **our server** located at the datacenter described above. **Your monthly fee includes:**

- Redundant High-Availability VM Hosts with back-end SAN
- Redundant internal connection routing, Power Supply and Generator Backup
- Server Management Services
 - 24/7 Server Monitoring
 - Patch Management
 - Antivirus, Spyware and Malware Security
- Onsite Backup with Offsite Server Replication

Software-as-a-Service (SAAS)

The ERP software and server at our location for one monthly fee.

Under this 36-, 48- or 60-month program, and **for a single monthly fee**, the CAI ERP software is hosted on our server located at the datacenter. The SAAS solution provides all of the features of the PAAS cloud solution outlined above.

CAI Cloud Services

Total Server Care

- Standard Antivirus/Antispyware w/outbreak support
- 24x7 NOC monitoring
- Alert analysis, filtering, and review by NOC team
- Security patch management (Microsoft OS only, non-service pack)
- Remote access software for timely troubleshooting and remediation
- SNMP and POSIX monitoring of network devices
- Proactive notification of server critical events
- Backup status monitoring (Symantec/Veritas Backup Exec)
- Enhanced backup status monitoring for AMBaR customers
- Monthly status reports

Scope of Work

Moving your company IT to the cloud can be a little like living through a home renovation. There can be very unpleasant surprises along the way if the process isn't carefully detailed in advance, and if the people you contract with are not highly detail oriented, and technically top-tier.

Moving to the cloud, even with all of its attendant benefits, may turn your anxiety dial up a notch or two. It's almost unavoidable. But you should know that handling migrations is something we do every day, and do very well.

Our migrations teams are authorities on the subject and work as a dedicated migrations department. "Dedicated," meaning that this is all that they do, though it also describes their level of commitment to making the move as close to flawless as can be.

The following migration map is one that we have perfected over the years at CAI. It keeps surprises to a minimum, and guarantees a high level of involvement, and understanding, for each of our clients.

1. Project Scope and Evaluation

Before we set off on a journey, we need to know where you are headed. You will be working with a CAI Business Development Executive. The goal is to make sure that all of your IT choices reflect the goals of your business. The first step in the migration process then is to review this list and reaffirm exactly what your objectives and needs are.

2. Transition Team Launch

As the name suggests, this is where our transition team reviews the migration in detail and discusses how best to accommodate your particular needs throughout the transition. We might learn, for example, that the best time for the migration to take place is evenings rather than weekends. Weekends may be your busiest time. This step helps us to specify what will happen when.

There may be variations in the migration needs of each of your offices. Whatever your concerns, whatever your priorities, everything is noted and built into our approach. There are always questions, not only during our Team Launch meeting, but throughout the entire migration process. No question is too small or unimportant. The more you know, the more comfortable you'll be. The more we know, the smoother things will go.

3. Discovery and Analysis

Once we know where we're headed we need to know where you presently stand. To answer that question we execute a comprehensive IT environment inventory. We note such things as the scope of your IT assets—servers, data, printers, applications—where they're currently housed, how they are configured, what their interdependencies are, and their level of stability.

We look at where your users are located and appraise your connectivity to ensure that their applications work flawlessly in the cloud.

We might discover that some of your applications are "vintage" and recommend upgrades. Or they may be applications that we know to have built-in shortcomings, even though they're new. This can be an ideal time to fine tune a number of things to maximize performance. Discovery and Analysis is a critical step. It's essential that it be handled in a detailed and systematic fashion, and your involvement is invaluable.

4. Planning and Scheduling

A migration can be as quick as two weeks, or take up to eight. This depends on the size and complexity of the job. Each step of the physical transition is scheduled in advance. Each member of our team is briefed on what they'll be doing each day of the migration. Our process, while detailed, actually helps us to complete our migrations more quickly than the industry norm. We're also very good at staying on schedule.

5. Provisioning Solutions

Here's where the solution is built. Servers. Storage. Disaster Recovery. Everything that was specified is implemented. Standard applications are the first thing we pre-install. Next, we provision your custom business applications.

Your user and group accounts are then created. We have a dedicated department that handles the deployment and management of client-specific applications. If needed, or if you prefer, your vendors or consultants can be engaged at this stage.

We're particularly careful to note what permissions each person should have and in which departments they reside.

This is the stage of your migration where we train your IT Director, or whomever you designate as Transition Manager, in portal use and management. If there are multiple people in your company who should have these skills, we can train them as well. Their knowledge will span everything they need to know to simplify their jobs, including managing account permissions and portal content.

6. Testing and Training

Before going live, your applications have to be tested in their new environment. The goal is to resolve any software hiccups that may arise prior to going live. In most cases we use a copy of your real data to run these tests. Complex applications are tested the same way. We take a snapshot of real data and then work with it in a test environment.

For larger deployments, we create a User Acceptance Group. We give this group User Acceptance Training, and then we set them loose to explore, play with, and use the portal every way they can think of.

We ask them to give your data, applications, and portal collaboration capabilities, everything that's at their disposal a workout. When everything works like a dream, you'll give us the go-ahead.

Prior to going live we offer training sessions for everyone in the company. These require one hour time blocks and can be done remotely.

7. Cutover

We're getting very close now to taking you into the cloud. During Cutover we migrate your company assets, such as your email, applications, database, and document management systems to an CAI Data Center from your in-house servers or from another provider.

In most cases, this information is transferred electronically. Occasionally it requires a physical transfer prior to loading. Anything we ship on physical media is encrypted, and we send duplicates using two different carriers, ensuring against loss and migration delay. Many clients are particularly concerned about losing email data during a migration. We take email as seriously as every other IT asset. All mail traffic will be queued for a short duration. Nothing is lost or returned. If you need extra assurance as to how thorough we are, we'll be happy to detail this process with you.

8. Go Live Task Force

This is your first day as a company with The Power of the Portal. To help make everyone's transition as smooth as possible we assign a Go-Live Task Force. This is a group of extra technicians standing by on our end. Depending on how large or complex your migration happens to be they'll be ready to assist throughout your inaugural day, or for some days afterward.

9. Analysis and Review

This is a step we undertake internally. Each quarter our team meets to discuss our migration process. Our approach and people are quite polished, but Analysis and Review helps guarantee that we remain top-tier.

To find out more about what the cloud can do to enhance your business, contact Bob Casale at 800.422.4782 or rcasale@caisoft.com, or go to www.caisoft.com/jmas.



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