

Tech Potpourri

Stirring Up Something Good

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Your Information Is in the Cloud ... Now What?

Is your head in the clouds? If anything, 2011 has been the “year of the cloud,” with plenty of weather and climate metaphors making their way into IT lingo, technology publications and vendor websites. You might have heard of, or are already using, software or services delivered via the cloud, the “false cloud,” private clouds, shared clouds or elastic computing clouds. And it’s almost “virtually” certain that some visionary is already hard at work building the “Hey you,

get off of my cloud!” cloud, which will no doubt be available through “Silver Lining Solutions” or “Partly Cloudy Software Systems, Inc.”

But other than a chance for technologists to flex their creative-writing muscles, is the cloud anything more than just a fresh coat of lipstick on last decade’s idea of software-as-a-service (SaaS), the application service providers (ASP) of the ‘90s or even the time-sharing of the ‘60s?



CLEAR SKIES, FULL HEARTS, CAN'T LOSE

The answer is yes. What has come to be called the cloud does indeed represent a new software delivery model, one that offers new and real advantages to IT and business users alike. For those that set up and manage software, the benefits of the cloud commonly include easier deployment, better availability, improved disaster mitigation, smoother upgrades and more flexible licensing options. For lawyers and other users, cloud-based software typically makes it easier to access information and resources wherever they are, often via devices including desktop computers, tablets and smartphones.

But challenges await any organization pursuing this loftier approach. Before taking flight, firms will be well-served to understand and plan for the common pitfalls and tradeoffs that await them. And if your firm is already working with cloud systems, the information management challenges outlined below will likely resonate, and the available solutions offer a more effective response strategy.

OBSCURED BY CLOUDS? (CLEARING THINGS UP)

To better understand how the cloud impacts legal IT, let's start with a basic definition of the term. The cloud is both a software delivery model and an architectural approach. Like some other models, delivery is via a remote environment. However, a software application that's moved to a remote data center, managed by a vendor, and delivered using a traditional client-server model is not qualified to call itself part of the cloud club.

While simplified definitions can often spur debate, a reasonable way to characterize cloud solutions is "software delivered as a service under a multitenant and services-oriented architecture."

- **Multitenancy:** This architecture enables multiple organizations (and their users) to be served by a single instance of the software, each virtually isolated from the other to protect data privacy and integrity. In practice, this means that you'll access the product by logging in to a general website that's the same for all of the vendor's customers.
- **Service-Oriented Architecture:** This applies to the means by which the software enables IT organizations and other systems to remotely interface with it to access data and perform other functions. Typically, this is accomplished using a standard Web services API model and a protocol like Simple Object Access Protocol (SOAP), an approach many on-premises noncloud applications can also take.

There are plenty of other technical minutiae to discuss and debate about what defines something as a cloud application. But these two elements bear directly on understanding the

impact of cloud computing on a firm's ability to integrate cloud software into their environment and business processes, while minimizing pain for IT teams and end users.

SO IS CLOUD CITY FOR YOU?

Many organizations decide that they belong among the clouds given the many advantages providers frequently offer over more traditional approaches, including:

- **Faster Implementations:** Usually delivered with no client software to install or configure, implementations are often faster than with traditional applications.
- **Simpler Updates:** Again, with no on-premises software for organizations to maintain, and a multitenant architecture, it's much easier for the vendor to push out updates more efficiently and with minimal disruption.
- **Easier Administration:** The remote nature of the solution means no investment in servers or server administration and maintenance.
- **Broad Accessibility:** Particularly relevant as mobile devices like tablets continue to proliferate, cloud services commonly enable access using any compatible, Internet-enabled device.

LOOKING AT CLOUDS FROM BOTH SIDES NOW

But there are always trade-offs. In the case of cloud software, two areas posing new challenges for firms relate to risk management and integration. For risk issues, the storage of sensitive client and firm information outside the direct control of the firm poses new burdens. Care must be taken to evaluate the vendor's security measures. Moreover, if a vendor is located in a different geography, roadblocks could arise in terms of compliance with local laws and regulations.

For example, several London-based firms have expressed concerns about storing information with U.S.-based vendors, where laws like the Patriot Act give government agents the ability to demand that vendors provide access to the information stored by law firms, without any notification or opportunity for challenge. Similarly, in the European Union, directives on data privacy restrict the movement or storage of data across international boundaries.

In the U.S., the American Bar Association and several state bar associations are actively exploring, debating and, in some cases, drafting new ethics rules that address how cloud software affects a lawyer's professional responsibility standards.

Many industry observers believe that cloud vendors will enhance their software to add optional safeguards like encryption in response to market pressures driven by risk and compliance

concerns. In practice, the integration challenges facing firms adopting cloud solutions pose much greater operational challenges, and frequently include unexpected surprises.

JUST A LITTLE RAIN CLOUD...

If your firm isn't prepared to deal with less control and power over its applications, you might be in for some unexpected turbulence. Several factors contribute to this loss of power. For one, cloud systems are administered directly by vendors. This means that the benefits a multitenant architecture provides for implementations, upgrades and uptime come at the cost of one-off product configurations or customizations. Finally, and most important, firms are limited by the scope provided to them by whatever Web service's API functionality is made available (which can be tightly constrained).

The net result is that when moving to cloud systems, firms risk unexpected gaps in functionality, business process efficiency and user satisfaction. Fear not: Many of these issues can be addressed with an "eyes open" approach to adoption that includes strategy, skills and a toolset specifically aligned to address common cloud integration challenges. But before exploring this approach, consider a few examples of pitfalls that could await those flying blindly toward the cloud:

- **Business Intake:** In many organizations, upon new matter creation, lawyers are accustomed to — and expect — real-time creation of workspaces in the document management system, assignment of secretaries to related matters and updates to their "favorite" or quick-access matter lists.
- **Personnel Intake:** Firms are increasingly streamlining provisioning processes so that accounts are created and updated immediately as individuals join or move within the firm, and so that access is revoked immediately when they leave. This similarly requires real-time propagation of information across systems, based on changes to the firm HR software or master data directory.

Without a way to integrate information smoothly and automatically, firms are left with manual data entry and processes. This could be quite painful, inefficient and error-prone when taking on hundreds of matters with a lateral or merger, or keeping mailing lists, intranet directories and other systems up-to-date as individuals change roles or locations.

ADVANTAGES OF STAYING ON THE GROUND

The reason these surprises crop up is that the experience firms have working with traditional software products don't necessarily carry over. When systems are onsite, IT has more integration options. If an application vendor provides an

insufficient API, or no API at all, most organizations have database administrators and developers who can build scripts using tools like Microsoft Data Transformation Services (DTS) or SQL Server Integration Services (SSIS) to move the information in and out of the system.

And, of course, firms that use a dedicated integration platform have additional advantages and expectations, including faster project execution, leveraging prebuilt templates and code-free connectors, and automated error-checking, logging and alerts.

CAN WE CONNECT WITH THE CLOUD?


The cloud poses problems because firms are much more dependent on the native access capabilities offered by remote systems. Unlike locally managed software, there are fewer "workarounds." For example, an enterprise-grade cloud application should provide an object-oriented Web service API accessible via either SOAP or Representational State Transfer (REST); but some might only support basic flat-file import/export for data movement, a serious warning flag.

Furthermore, even if a cloud system offers a modern API, before signing up as a customer, firms should carefully evaluate how broad and deep its methods are (native functions and capabilities). Consider how you need to integrate the system into your environment and map the business processes and information you need to move to and from the system — both today and in the future. Areas you should understand about the cloud system and API include:

- **What the API will and won't let you do**
- **What level of real-time access to data the system will provide, if any**
- **How the software handles updates**
- **To which data elements the software's API restricts customer access (through means such as encryption, binary storage or other proprietary barriers)**
- **If the system supports industry master data management standards and practices**
- **The vendor's API roadmap and how it maps to your long-term needs and objectives**

BUILDING BRIDGES

As previously discussed, most firms have in-house technical staff with some level of traditional integration skills. And there



are two basic approaches you can take to connecting cloud-based services with the processes and products that live on the ground.

The first is custom development, leveraging in-house resources or consultants. If you're planning to travel this path, make sure that your teams (and partners) are up to speed with the latest technical knowledge they'll need to be effective and efficient. There are several buzzword-compliant areas to navigate for Web service success, including: SOAP, XML, HTTP, REST and ODATA, along with several other emerging and evolving standards and protocols.

Because these are not necessarily areas many DBAs have vast experience with, some firms opt to invest in hiring Web development specialists, or in training to add C# and Visual Studio skills to the repertoire of DBAs already versed in SQL script design and development.

Alternatively, given the growing complexities involved, firms are increasingly opting to move away from decentralized scripts to a unified approach. Leveraging a dedicated integration platform allows organizations to focus on delivering user-facing solutions instead of writing code — and to avoid significant investments in training existing, or hiring additional, IT staff.

These platforms accomplish this by abstracting the complexities of the underlying cloud protocols and languages so that IT can focus on designing business logic and data flows instead of custom code. This approach also enables organizations to combine design, management and monitoring of data movement through a single interface.

The net result is that existing IT resources can more quickly execute and maintain integration projects, without having to master every nuance and detail of the cloud development.

LITTLE FLUFFY CLOUDS

In technology, very little is certain. But it's safe to assert that the cloud is here to stay — the idea of outsourcing deployment and management of software systems really is almost as old as modern computing itself. Of course, just as time-sharing and application service provider models influenced present approaches, one day the cloud might find itself replaced by even loftier metaphors and architectures.

But, taken as a whole, the advantages of the cloud can dramatically outweigh the disadvantages. That's why major software vendors have moved or are increasingly moving in this direction. And it's why IT teams see real gains in efficiency, cost management and their ability to provide even more value to management and end users by incorporating cloud services.

As long as firms choose cloud providers wisely and build a solid strategy for integrating remote services and information with their existing people, processes and information, the sky's the limit. **ILTA**