

Introduction to Cloud Computing for CLE Professionals

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Cloud Computing for CLE Professionals

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Cloud Computing for CLE Professionals

I. CLOUD COMPUTING:

A. Definitions Related to Cloud Computing:

1. **SaaS or Software As A Service:** Rather than purchasing and installing software on a computer or server, SaaS is simply accessed via a web browser. Your data is stored in the vendor's servers in a data center (see paragraph 6 below) rather than in your office. There are a ridiculous number of definitions of SaaS, but I think this one sums it up succinctly without using 15 more acronyms requiring definitions:

“Generally speaking, it's software that's developed and hosted by the SaaS vendor and which the end user customer accesses over the Internet. Unlike traditional packaged applications that users install on their computers or servers, the SaaS vendor owns the software and runs it on computers in its data center. The customer does not own the software but effectively rents it, usually for a monthly fee. SaaS is sometimes also known as hosted software or by its more marketing-friendly cousin, 'on-demand.’”¹

To be clear, this means that you do *not* have the software installed on your computer - it is accessible only via a browser on the Internet. Further, your data and/or documents are located on the vendor's servers and not on your computer or server.

2. **PaaS or Platform As a Service:** PaaS is a derivation of SaaS that allows users to *rent* hardware, operating systems, storage, and network capacity over the Internet access. Salesforce.com is a great example of this with their Customer Relationship Management (CRM) product. Salesforce's platform allows outside developers to create add-on applications that integrate into the main application and are "hosted" on the company's infrastructure. For example, Advologix² is a legal case management system that was built on the Salesforce.com platform.
3. **IaaS or Infrastructure as a Service:** In most cases, this means renting access to a server located in a data center (see paragraph 6 below). The server provides processing power and electronic storage, both of which are accessed via the Internet. The server is available on-demand and the provider is usually responsible for maintaining the server, providing backup and technical support.

¹ *Software as a Service (SaaS) Definition and Solutions*, by Meridith Levinson on May 15, 2007, www.cio.com, see <http://tinyurl.com/24cofbx> for full article.

² See www.advologix.com

4. **Hybrid Approaches:** Of course, there are slight variations on these ideas. With pure SaaS, you don't own anything except your data. However, services like Hosted Exchange³ are a little different. In that case, you can own the application necessary to view the data (Outlook), it's installed on your computer, you own the data, and you can access/view the data offline regardless of whether you continue to subscribe to the service. You are necessarily also renting a server with Hosted Exchange so it has aspects of SaaS and IaaS.
5. **Co-location:** You can also buy your *own* server and install it in a data center (see paragraph 6 below).
6. **Data Center:** Here's a good definition from www.cio.com:

"Known as the server farm or the computer room, the data center is where the majority of an enterprise servers and storage are located, operated and managed. There are four primary components to a data center:

White space: This typically refers to the usable raised floor environment measured in square feet (anywhere from a few hundred to a hundred thousand square feet). For data centers that don't use a raised floor environment, the term "white space" may still be used to show usable square footage.

Support infrastructure: This refers to the additional space and equipment required to support data center operations — including power transformers, your uninterruptible power source (UPS), generators, computer room air conditioners (CRACs), remote transmission units (RTUs), chillers, air distribution systems, etc. In a high-density, Tier 3 class data center (i.e. a concurrently maintainable facility), this support infrastructure can consume 4-6 times more space than the white space and must be accounted for in data center planning.

IT equipment: This includes the racks, cabling, servers, storage, management systems and network gear required to deliver computing services to the organization.

Operations: The operations staff assures that the systems (both IT and infrastructure) are properly operated, maintained, upgraded and repaired when necessary. In most companies, there is a division of responsibility between the Technical Operations

³ Microsoft Exchange is Microsoft's server application for backing up and sharing email, contacts, calendars, tasks and other information in Microsoft Outlook. It provides centralized data storage, sharing abilities, plus synchronization with various phones and other devices. Hosted Exchange is essentially renting this service by paying a monthly fee per user.

group in IT and the staff responsible for the facilities support systems."⁴

In plain English, a data center is a secure physical facility which houses the computers of one or more enterprises. Depending upon what "Tier" a data center is rated for, it may have redundant components, backup generators and multiple uplinks (internet connections). There are 4 Tiers and Tier 4 guarantees 99.995% uptime.

B. Is Going to the Cloud All or Nothing? Absolutely not. For example, I could be using hosted Exchange (with Outlook) while running Word, Excel & PowerPoint locally. If you rent a cloud server, programs like Citrix XenApp⁵ provide a delivery mechanism so that regular shrink-wrapped software you own can be delivered to you through the Internet. So I could run my accounting software from a cloud server via Citrix XenApp, while every other program I use is running locally.

C. Advantages of SaaS:

- 1. Up Front Price Advantage:** Let's say you want to start using a case management application for your practice. If you were to buy one such as Time Matters, you would have to pay for the software outright along with the annual maintenance contract which is mandatory (\$905 for the first license and \$525 for each license thereafter). You may have to buy a file server or otherwise upgrade your hardware in order to run the program. For an example cost, a new server plus installation and setup could easily run \$5,000 - \$8,000. Therefore, buying software may turn out to be quite expensive. In the alternative, you could begin subscribing to something like www.rocketmatter.com in which case you would pay \$59.99 for the first user per month and \$49.99 per user for the next 5 users per month. You wouldn't have to buy a server and you probably wouldn't have to upgrade any of your existing equipment assuming you already have high speed Internet access.
- 2. No Hardware Required:** If you already have a computer and high speed Internet access, then you probably don't need anything else from a hardware perspective.
- 3. Works in Apple or Windows:** Since these applications are browser based, they will usually work with both Apple and Windows computers.
- 4. Updates Included:** Most cloud application include all updates which are installed for you.

⁴ See http://www.cio.com/article/499671/Data_Center_Definition_and_Solutions

⁵ See <http://tinyurl.com/dv3jx> for more information about XenApp.

5. **Technical Support Included:** With most cloud applications, you get “free” technical support included with your monthly subscription fee. Of course, purchased software also provides technical support but it is often an extra fee on top of the original software purchase price.
6. **Access From Anywhere:** As long as you’re using a computer with internet access, you can probably use your cloud applications. You wouldn’t need a VPN, gotomypc or any other type of additional remote access application to accomplish this.
7. **Share Applications Among Users Spread Out Geographically:** For people with multiple offices or who wish to work from multiple locations, cloud applications provide a lot of flexibility. Of course, there are other ways to gain access to programs besides subscribing to cloud applications, but this feature is obviously built in to cloud apps without buying anything else.
8. **Data Backup Provided:** Since your data is stored on the host company’s servers, they almost always provide backup services along with that so that there is little (if any) risk that you would lose your data or access to your application due to a physical hardware failure.

D. Disadvantages of SaaS:

1. **Nearly All Cloud Applications Are Inferior To Their Shrink Wrapped Counterparts:** We have tested dozens of cloud applications and have found only a few that are as functionally complete as server or PC based software. For example, Google Docs⁶ is virtually useless for drafting legal documents. You can’t even do something as basic outline automatic paragraph numbering. Even the Microsoft Word Web App is pathetically inadequate compared to the desktop version of MS Word. So for something as fundamental as word processing, there are no cloud options which are even close to the functionality built into MS Word 2010.
2. **Give Up Integration:** As an example, as a practicing attorney, if I have a case management system like Amicus Attorney, it can integrate (share data) with Microsoft Word, my accounting program (PCLaw, Tabs, Timeslips, QuickBooks, etc.), and my document management program (Worldox). It can synchronize with Microsoft Outlook. All of these things are possible because Amicus Attorney and all of the other programs I mentioned are installed on my computer and server. In other words, they’re not in the cloud. So let’s say I decided to try an cloud based case management program instead of Amicus Attorney (there are many to choose from). Since the case management program isn’t installed on my server, it can’t integrate with Word, my accounting program or my document management program; and it certainly can’t synchronize with

⁶ See www.docs.google.com

Outlook. It also cannot sync its calendar, contacts or tasks with any smart phone. So now I am forced to enter everything at least twice and maintain two separate databases of client data. Obviously, this destroys the efficiency I had when everything was installed locally.

3. **More Expensive Over Time:** These technology rental programs were not designed by the vendors to take less money from you. To the contrary, they are generally designed to take more money from you over a longer period of time. Here's a great quote on the subject:

"The tech press is full of people who want to tell you how completely awesome life is going to be when everything moves to 'the cloud' – that is, when all your important storage, processing and other needs are handled by vast, professionally managed data-centers.

Here's something you won't see mentioned, though: the main attraction of the cloud to investors and entrepreneurs is the idea of making money from you, on a recurring, perpetual basis, for something you currently get for a flat rate or for free without having to give up the money or privacy that cloud companies hope to leverage into fortunes."⁷

In almost every case we've looked at, the subscription model becomes more expensive than buying an equivalent program outright by about the 18th month (sometimes sooner).

4. **Difficult To Leave the Vendor:** Let's say you're using an on-line document management service and you're unhappy with it or are just tired of paying the monthly fee and want to bring your documents back in-house. How do you get all of your documents back, how long will it take and how much will it cost? You would obviously have very little leverage.
5. **You May Not Be Able To Use The Data You Get Back:** Your SaaS vendor may store your data in a proprietary structure or database. Therefore, if you stop using the vendor and get your data back, you may not be able to do anything with it since you no longer have access to the vendor's software. Further, you may or may not be able to import the data into another system. Even if the vendor gives you back a non-proprietary database like SQL, do you have any idea what to do with it? If not, you'll have to find someone to help and it's not likely to be inexpensive.

⁷ Doctorow, Cory, "Not every cloud has a silver lining - There's something you won't see mentioned by too many advocates of cloud computing – the main attraction is making money from you" The Guardian - guardian.co.uk, September 2, 2009, <http://www.guardian.co.uk/technology/2009/sep/02/cory-doctorow-cloud-computing>.

6. **No Offline Access:** If all of your documents, accounting or practice management data is only accessible via an Internet connection, then what happens if the connection goes down; or you're simply in a situation where there is no internet access (like a plane)?
7. **Vendor May Increase Prices:** Nearly every SaaS vendor reserves the right to adjust prices periodically. If they do, for the reasons outlined above, you may feel you have no choice but to pay whatever they're asking. Here's an actual example:

"We're all for startups trying to make money, but we also recognize a good old 'bait and switch' tactic when we see one. Case in point: on-demand help desk software maker Zendesk, which has just emailed its customers to let them know they're raising their prices – resulting in a 300+ percent increase in monthly fees for some. The announcement, which was also posted on the company's forums, comes in the form of an introduction of new product features, with the new pricing scheme mentioned underneath (never a good sign). The startup claims the new pricing plans are being offered in response to 'customer requests for different packaging and features'. But judging from the commentary on the forum entry and on Twitter, we're not so sure that's really the case."⁸

8. **Vendor Service Disruptions:** The following quote from an article by Jon Brodtkin published September 10, 2011 on ARS Technica explains this risk best:

"Outages are becoming a distressing fact of life for Microsoft's cloud e-mail customers, and users of other cloud services such as Google Apps. Two weeks of e-mail glitches plagued Exchange Online customers using Microsoft's Business Productivity Online Suite (BPOS) in May. Office 365, the successor to BPOS which launched in late June, suffered an e-mail outage in August and then again last night and this morning. Google Docs suffered an outage this week, and Amazon's Elastic Compute Cloud infrastructure-as-a-service platform was plagued by outages and lost customer data in April and August. The latest Microsoft outage was caused by what the company vaguely called a "DNS issue" and affected not just Office 365 but also the consumer services Hotmail and SkyDrive. The outages were spread throughout the world. Taken together, the outages may put second thoughts in the minds of IT executives considering the

⁸ *Zendesk Raises Prices, Pisses Off Customers*, by Robin Wauters on May 18, 2010 for TechCrunch, see <http://techcrunch.com/2010/05/18/zendesk-pricing/> for full article.

move from locally hosted Exchange servers to Microsoft's cloud, to Google Apps or to Amazon's cloud."⁹

9. **Upgrades Are Forced On You:** Having been in the legal tech industry for a lot of years, I can promise you that there are lot of upgrades people don't want. Whether it's case management, accounting or even a word processor, sometimes the "upgrades" introduce big changes you're not comfortable with. Furthermore, there have been plenty of examples when an upgrade breaks a feature that worked perfectly before. With cloud applications, the upgrades are performed without your knowledge or consent and you may not be happy with the result.
10. **Vendor Bankruptcy:** Particularly in this economy, online vendors can end up in bankruptcy. What happens if a Bankruptcy Trustee now has possession of all of your important information?
11. **What If You Have Internet But Still Cannot Get Access?** This is most easily illustrated by a recent blog post I read from C. C. Chapman (see <http://tinyurl.com/zastat>):

"Yesterday I woke up in NYC and went about my day. Part of every day is checking my e-mail, calendar and other things. I do almost all of this using Google products. My phone kept saying that I had the wrong password for my e-mail which was confusing, but I just sort of shrugged and told myself that I'd check my e-mail later in the day.

But, it kept doing it and it wasn't until I got to the train station that I was able to get on a computer and was then told by Google that my account had been temporarily disabled due to a "perceived violation of either the Google Terms of Service or product-specific Terms of Service."



I tried going through their SMS code verification as well as every other way I could go and still nothing.

This morning I asked about this on Twitter and someone showed me that Chris Brogan¹⁰ is going through the EXACT same thing.

⁹ *Office 365, Google Docs Go Down Again, Could Give Pause To The Cloud-Wary*, by Jon Brodtkin, September 10, 2011, see <http://tinyurl.com/3gfh7w>

A hack? Something bigger broken at Google? I don't know what it is, but I just want my stuff to work. I forgot how much I rely on Google. Time to make backup plans because I'm realizing that up until now I haven't had any and that is a bad thing!"

12. **Bandwidth Caps:** Many Internet Service Providers (ISPs) are imposing maximum GB download limitations on their customers per month. As you'll read here (<http://tinyurl.com/3ny9uk4>), these limitations may act to cut your access off to your cloud applications and/or force you to pay far more per month than you expected.

¹⁰ See <http://tinyurl.com/zasn1t> for Chris Brogan's post entitled "When Google Owns You - a New Chapter", April 22, 2010.

II. ETHICAL ISSUES FOR ATTORNEYS PRESENTED BY MOVING TO THE CLOUD:

While this session at ACLEA is geared toward CLE professionals, I know that many CLE Professional are lawyers or obviously provides services for lawyers, so I am including this chapter just for your information as an "extra". CLE professionals are obviously not bound by these ethical rules/issues.

A. Applicable Rules of Professional Conduct: Below is just the text of the rules applicable to this discussion and a few references to the American Bar Association Model Rules.¹¹

1. **ABA Comment 8 to ABA Rule 1.1:**¹² To maintain the requisite knowledge and skill, *a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology*, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject. (emphasis added)

2. **Arkansas Rule 1.6:**

(a) *A lawyer shall not reveal information relating to representation of a client unless the client gives informed consent*, the disclosure is impliedly authorized in order to carry out the representation or the disclosure is permitted by paragraph (b).

(b) A lawyer may reveal such information to the extent the lawyer reasonably believes necessary:

(1) to prevent the commission of a criminal act;

(2) to prevent the client from committing a fraud that is reasonably certain to result in injury to the financial interests or property of another and in furtherance of which the client has used or is using the lawyer's services;

(3) to prevent, mitigate or rectify injury to the financial interest or property of another that is reasonably certain to result or has resulted from the client's commission of a crime or fraud in furtherance of which the client has used the lawyer's services;

(4) to secure legal advice about the lawyer's compliance with these Rules;

¹¹ See <http://tinyurl.com/4omg5ch> for the full text of all of the ABA Model Rules.

¹² Rule 1.1 Competence: A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.

(5) to establish a claim or defense on behalf of the lawyer in a controversy between the lawyer and the client, to establish a defense to a criminal charge or civil claim against the lawyer based upon conduct in which the client was involved, or to respond to allegations in any proceeding concerning the lawyer's representation of the client or,

(6) to comply with other law or a court order.

3. **ABA Rule 1.6:**

(a) *A lawyer shall not reveal information relating to the representation of a client unless the client gives informed consent*, the disclosure is impliedly authorized in order to carry out the representation or the disclosure is permitted by paragraph (b).

(b) A lawyer may reveal information relating to the representation of a client to the extent the lawyer reasonably believes necessary:

(1) to prevent reasonably certain death or substantial bodily harm;

(2) to prevent the client from committing a crime or fraud that is reasonably certain to result in substantial injury to the financial interests or property of another and in furtherance of which the client has used or is using the lawyer's services;

(3) to prevent, mitigate or rectify substantial injury to the financial interests or property of another that is reasonably certain to result or has resulted from the client's commission of a crime or fraud in furtherance of which the client has used the lawyer's services;

(4) to secure legal advice about the lawyer's compliance with these Rules;

(5) to establish a claim or defense on behalf of the lawyer in a controversy between the lawyer and the client, to establish a defense to a criminal charge or civil claim against the lawyer based upon conduct in which the client was involved, or to respond to allegations in any proceeding concerning the lawyer's representation of the client;

(6) to comply with other law or a court order; or

(7) to detect and resolve conflicts of interest arising from the lawyer's change of employment or from changes in the composition or ownership of a firm, but only if the revealed information would not compromise the attorney-client privilege or otherwise prejudice the client.

(c) *A lawyer shall make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation of a client.*

4. **Arkansas Comment 17 to Rule 1.6:** When transmitting a communication that includes information relating to the representation of a client, the lawyer must take reasonable precautions to prevent the information from coming into the hands of unintended recipients. *This duty, however, does not require that the lawyer use special security measures if the method of communication affords a reasonable expectation of privacy. Special circumstances, however, may warrant special precautions.* Factors to be considered in determining the reasonableness of the lawyer's expectation of confidentiality include the sensitivity of the information and the extent to which the privacy of the communication is protected by law or by a confidentiality agreement. A client may require the lawyer to implement special security measures not required by this Rule or may give informed consent to the use of a means of communication that would otherwise be prohibited by this Rule.

5. **ABA Comment 18 to Rule 1.6:** Paragraph (c) requires a lawyer to act competently to safeguard information relating to the representation of a client against unauthorized access by third parties and against inadvertent or unauthorized disclosure by the lawyer or other persons who are participating in the representation of the client or *who are subject to the lawyer's supervision.* See Rules 1.1, 5.1 and 5.3. *The unauthorized access to, or the inadvertent or unauthorized disclosure of, information relating to the representation of a client does not constitute a violation of paragraph (c) if the lawyer has made reasonable efforts to prevent the access or disclosure.* Factors to be considered in determining the reasonableness of the lawyer's efforts include, but are not limited to, the sensitivity of the information, the likelihood of disclosure if additional safeguards are not employed, the cost of employing additional safeguards, the difficulty of implementing the safeguards, and the extent to which the safeguards adversely affect the lawyer's ability to represent clients (e.g., by making a device or important piece of software excessively difficult to use). *A client may require the lawyer to implement special security measures not required by this Rule or may give informed consent to forgo security measures that would otherwise be required by this Rule.* Whether a lawyer may be required to take additional steps to safeguard a client's information in order to comply with other law, such as state and federal laws that govern data privacy or that impose notification requirements upon the loss of, or unauthorized access to, electronic information, is beyond the scope of these Rules. For a lawyer's duties when sharing information with nonlawyers outside the lawyer's own firm, see Rule 5.3, Comments [3]-[4]. (emphasis added)

6. **Ohio Rule 1.6:** Ohio's rule is textually quite a bit different from the ABA's model rule, but 1.6(a) still stipulates that "A lawyer shall not reveal

information relating to the representation of a client, including information protected by the attorney-client privilege under applicable law, unless the client gives informed consent..."

7. **Arkansas Rule 5.3:** With respect to a nonlawyer employed or retained by or associated with a lawyer:

(a) a partner, and a lawyer who individually or together with other lawyers possesses comparable managerial authority in a law firm *shall make reasonable efforts to ensure that the firm has in effect measures giving reasonable assurance that the person's conduct is compatible with the professional obligations of the lawyer;*

(b) *a lawyer having direct supervisory authority over the nonlawyer shall make reasonable efforts to ensure that the person's conduct is compatible with the professional obligations of the lawyer;* and

(c) a lawyer shall be responsible for conduct of such a person that would be a violation of the rules of professional conduct if engaged in by a lawyer if:

(1) the lawyer orders or, with the knowledge of the specific conduct, ratifies the conduct involved; or

(2) the lawyer is a partner or has comparable managerial authority in the law firm in which the person is employed, or has the direct supervisory authority over the person, and knows of the conduct at a time when its consequences can be avoided or mitigated but fails to take reasonable remedial action.

8. **ABA Rule 5.3:** With respect to a nonlawyer employed or retained by or associated with a lawyer:

(a) a partner, and a lawyer who individually or together with other lawyers possesses comparable managerial authority in a law firm shall *make reasonable efforts to ensure that the firm has in effect measures giving reasonable assurance that the person's conduct is compatible with the professional obligations of the lawyer;*

(b) *a lawyer having direct supervisory authority over the nonlawyer shall make reasonable efforts to ensure that the person's conduct is compatible with the professional obligations of the lawyer;* and

(c) a lawyer shall be responsible for conduct of such a person that would be a violation of the Rules of Professional Conduct if engaged in by a lawyer if:

(1) the lawyer orders or, with the knowledge of the specific conduct, ratifies the conduct involved; or

(2) the lawyer is a partner or has comparable managerial authority in the law firm in which the person is employed, or has direct supervisory authority over the person, and knows of the conduct at a time when its consequences can be avoided or mitigated but fails to take reasonable remedial action.

9. **ABA Comment 3 to Rule 5.3:** A lawyer may use nonlawyers outside the firm to assist the lawyer in rendering legal services to the client. Examples include the retention of an investigative or paraprofessional service, hiring a document management company to create and maintain a database for complex litigation, sending client documents to a third party for printing or scanning, *and using an Internet-based service to store client information. When using such services outside the firm, a lawyer must make reasonable efforts to ensure that the services are provided in a manner that is compatible with the lawyer's professional obligations.* The extent of this obligation will depend upon the circumstances, including the education, experience and reputation of the nonlawyer; the nature of the services involved; the terms of any arrangements concerning the protection of client information; and the legal and ethical environments of the jurisdictions in which the services will be performed, particularly with regard to confidentiality. See also Rules 1.1 (competence), 1.2 (allocation of authority), 1.4 (communication with client), 1.6 (confidentiality), 5.4(a) (professional independence of the lawyer), and 5.5(a) (unauthorized practice of law). *When retaining or directing a nonlawyer outside the firm, a lawyer should communicate directions appropriate under the circumstances to give reasonable assurance that the nonlawyer's conduct is compatible with the professional obligations of the lawyer.*
10. **Ohio Rule 5.3:** With respect to a nonlawyer employed by, retained by, or associated with a lawyer, all of the following apply:
- (a) a lawyer who individually or together with other lawyers possesses managerial authority in a law firm or government agency shall *make reasonable efforts to ensure that the firm or government agency has in effect measures giving reasonable assurance that the person's conduct is compatible with the professional obligations of the lawyer;*
 - (b) *a lawyer having direct supervisory authority over the nonlawyer shall make reasonable efforts to ensure that the person's conduct is compatible with the professional obligations of the lawyer;*
 - (c) a lawyer shall be responsible for conduct of such a person that would be a violation of the Ohio Rules of Professional Conduct if engaged in by a lawyer if either of the following applies:
 - (1) the lawyer orders or, with the knowledge of the specific conduct, ratifies the conduct involved;

(2) the lawyer has managerial authority in the law firm or government agency in which the person is employed, or has direct supervisory authority over the person, and knows of the conduct at a time when its consequences can be avoided or mitigated but fails to take reasonable remedial action.

B. Other Authorities:

1. **American Bar Association's Standing Committee on Legal Ethics and Professional Responsibility Forma Opinion 95-398:**

"...[I]n this era of rapidly developing technology, lawyers frequently use outside agencies for numerous functions such as accounting, data processing, photocopying, computer servicing, storage and paper disposal and that lawyers retaining such outside service providers are required to make reasonable efforts to prevent unauthorized disclosures of client information."

"A lawyer who gives a computer maintenance company access to information in client files must make reasonable efforts to ensure that the company has in place, or will establish, reasonable procedures to protect the confidentiality of client information. Should a significant breach of confidentiality occur, the lawyer may be obligated to disclose it to the client."

2. **American Bar Association's Standing Committee on Legal Ethics and Professional Responsibility Forma Opinion 08-451:**

"A lawyer may outsource legal or nonlegal support services provided the lawyer remains ultimately responsible for rendering competent legal services to the client under Model Rule 1.1. In complying with her Rule 1.1 obligations, a lawyer who engages lawyers or nonlawyers to provide outsourced legal or nonlegal services is required to comply with Rules 5.1 and 5.3. She should make reasonable efforts to ensure that the conduct of the lawyers or nonlawyers to whom tasks are outsourced is compatible with her own professional obligations as a lawyer with "direct supervisory authority" over them. In addition, appropriate disclosures should be made to the client regarding the use of lawyers or nonlawyers outside of the lawyer's firm, and client consent should be obtained if those lawyers or nonlawyers will be receiving information protected by Rule 1.6."¹³

3. **State Opinions on Cloud Computing:** All of the following permit cloud services and impose a reasonable care standard. However, the specific duties imposed on lawyers varies from opinion to opinion.

a. Alabama Ethics Opinion 2010-02

¹³ See <http://tinyurl.com/celuw4g> for the full text of the opinion.

- b. Arizona Opinion 09-04
- c. California Opinion 2010-179
- d. Iowa Opinion 11-01
- e. Maine Opinion 194
- f. Massachusetts Opinion 12-03
- g. New Jersey Opinion 701
- h. New York Opinion 842
- i. Nevada Opinion 33
- j. North Carolina 2011 Formal Ethics Opinion 6
- k. Oregon Opinion 2011-188
- l. Pennsylvania Opinion 2011-200
- m. Vermont Opinion 2010-6

C. Conclusions: You obviously have a duty to protect confidential information pursuant to Rule 1.6. It's permissible to use cloud providers but they are to be treated as a nonlawyer employed by you under Rule 5.3. As such, you need to make reasonable efforts to ensure that your data will remain confidential. I think the standard is best summarized by the aforementioned Nevada Formal Opinion 33:

"The previous ABA opinions and the new comments to Rule 1.6 clearly evidence the ABA's policy to treat electronic client communications and information according to existing rules and not to hold an attorney responsible for a breach of client confidentiality, or for storing client information in such a manner that the breach is possible, so long as the attorney:

1. Exercises reasonable care in the selection of the third party contractor, such that the contractor can be reasonably relied upon to keep the information confidential; and
2. Has a reasonable expectation that the information will be kept confidential; and

3. Instructs and requires the third party contractor to keep the information confidential and inaccessible."¹⁴

D. Meeting the Reasonable Care Standard: In exercising reasonable care, the following are some questions and considerations you need to address before deciding to use any particular service.

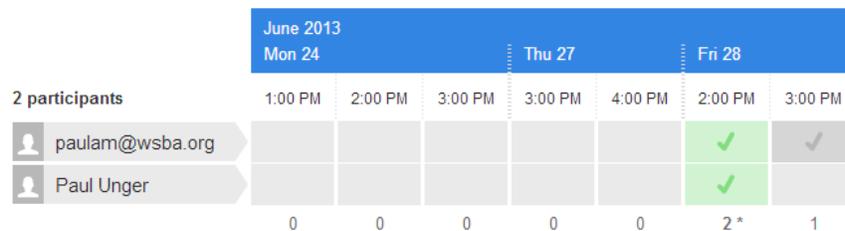
1. Where is your data stored? If it is to be moved, do you have the right to approve the transfer if it is going to be moved to another state or country?
2. What is the provider's disaster-recovery or avoidance plan?
3. How often are backups of the data made, where are they stored, and are multiple past versions maintained or only the most recent versions of your data?
4. Who (if anyone) from the provider has access to your data? What level of access does each person have? You need to make sure that the provider understands that the data is to be kept confidential and I would recommend a written instruction to that effect.
5. Is the data encrypted (not readable) when it is being transferred to the vendor and when you're accessing it from the vendor?
6. Be sure that the vendor is not claiming any ownership rights in your data.
7. What Tier is the datacenter where you data is being stored certified for? You want your data hosted in a Tier 4 certified data center. An explanation of the data center tier system can be found here: <http://tinyurl.com/8rvrzou>.
8. Is the cloud vendor contractually obligated to notify you in the event of a security breach?
9. Can you download your data at any time? If you decide to stop using the service, are they obligated to provide your data to you? If so, in what format and within how many days?
10. How long has the provider been in business and what is its financial health? What happens if the provider closes down? How will you get your data?

¹⁴ State Bar Of Nevada Standing Committee On Ethics And Professional Responsibility Formal Opinion No. 33, February 9, 2006. See <http://tinyurl.com/9tt3ljn>.

III. CLOUD APPLICATIONS: This is just a sampling of what is available.

A. Group Calendaring: As a CLE professional, you probably find yourself having to organize meetings with multiple organizers, writers, authors or presenters. Do you ever feel like you are herding cats when trying to organize a good meeting time for a bunch of people?! These cloud-based programs help you schedule meetings and other appointments with people outside your own organization's email and calendaring system. These programs are very simple, quick, and many are free or at little cost. Usually the paid subscriptions are very inexpensive and offer direct integration with Outlook, which means no switching between your **calendar** and **the application**.

Invitees receive an easy chart show available times and simply checks the times he/she is available. Other invitees can see the results immediately in a consolidated view.



A screenshot of a Doodle poll result grid. The grid shows the availability of 2 participants for various times on June 28, 2013. The participants are paulam@wsba.org and Paul Unger. The times are 1:00 PM, 2:00 PM, 3:00 PM, 3:00 PM, 4:00 PM, 2:00 PM, and 3:00 PM. The number of participants for each time slot is shown at the bottom: 0, 0, 0, 0, 0, 2*, and 1.

	Mon 24		Thu 27		Fri 28	
2 participants						
paulam@wsba.org					✓	✓
Paul Unger					✓	
	0	0	0	0	0	2* 1

1. **Doodle:** www.doodle.com
2. **WhenIsGood.com:** www.whenisgood.com
3. **ScheduleOnce:** www.scheduleonce.com
4. **TimeBridge:** www.timebridge.com

B. Secure File Sharing:

1. **DropBox:** One of the most impressive services I've seen, DropBox gives you file sync, file sharing, online backup, web access to your files from a computer or smartphone and security. See www.dropbox.com.

2. **SpiderOak:** See www.spideroak.com - similar service to DropBox except that it is more secure because your data is encrypted even on SpiderOak's servers.
3. **Microsoft SkyDrive:** 25 GB free! See <http://tinyurl.com/2acvfzz> for more information.
4. **Syncplicity:** See www.syncplicity.com.
5. **Box.com:** www.box.com
6. **Sugar Sync:** See www.sugarsync.com. This service offers online backup of your files and file synchronization among multiple PCs and smartphones. You can access your files anywhere you have Internet access thanks to apps for BlackBerry, iPhone and Windows Mobile.
7. **ShareFile by Citrix:** www.sharefile.com - This is a fantastic service that allows you to create virtual "rooms" for others and share documents with them securely. You decide what rights each user has to the collection of documents. Simple and powerful.
8. **TrueShare:** www.trueshare.com - Similar to ShareFile, a little less expensive, a little more difficult to use.
9. **FileGenius:** www.filegenius.com - similar to TrueShare and ShareFile.

C. Document Management: Document management applications provide an electronic filing system for documents you've created in-house, documents you receive (they must be scanned), notes, emails & attachments to emails. Good document management systems provide things like full text searching (find any document by the words contained inside it rather than what it is called), security, versioning (you can save dozens of versions of the same file with a full audit trail)

1. **NetDocuments:** www.netdocuments.com - extremely sophisticated and well established document management application.
2. **SharePoint:** <http://tinyurl.com/b57xjhs> - SharePoint is an online collaboration tool developed by Microsoft. It is often used as a content management system for Intranets. SharePoint allows teams within an organization to share information anywhere there is Web access. With SharePoint, users can set up websites to share documents, manage projects and publish information. SharePoint also has many social media capabilities, such as blogs, wikis, microblogging and discussion boards.¹⁵

¹⁵ *What is SharePoint?* by Ryan Goodrich, TechNewsDaily, January 30, 2013, see <http://tinyurl.com/co8zyc>

3. **Filocity:** www.filocity.com - includes document management & project management.
4. **Box Document Management:** see www.box.com/business/document-management/
5. **DocumentTree:** www.documenttree.com

D. Anti-Spam and Email Security: Google Message Security Powered By Postini is **anti-spam** software that actually screens your email before it gets to you. It also removes viruses from email. Best of all, it actually works and is uncannily good at keeping the junk out of your inbox. Unfortunately, Google has stopped selling Postini service as a stand-alone application and now makes it available only through Google Apps. If you have Microsoft Exchange or Lotus Notes, you can still use Postini even though it's a part of Google Apps. The only drawback is that stand-alone Postini used to be \$2/user/month and now as part of Google Apps, it's \$5/user/month. Not a big deal really, AND you get all of the other Google Apps benefits (see paragraph III.K. below for more information about Google Apps).

E. Project Management:

1. **Basecamp:** www.basecamphq.com
2. **Onit:** www.onit.com
3. **PBWorks:** www.pbworks.com
4. **Zoho Projects:** www.zoho.com/projects

F. Task & Note Management:

1. **Evernote** - www.evernote.com - designed for note taking and task lists.
2. **Remember The Milk** - www.rememberthemilk.com

G. Remote Access Services: These services allow you to "take over" another computer via the internet.

1. **LogMeIn:** FREE - www.logmein.com - there is also a Pro version which costs \$12.95/month and provides a slate of additional features.
2. **Gotomypc.com:** www.gotomypc.com. Take over any other PC via the Internet. Unlimited remote access to your PCs from any other Internet-connected computer; ability to swap host PCs at will; unlimited software and service upgrades; unlimited technical support and maintenance. Absolutely amazing service which we highly recommend.

3. **WebEx PCNow:** Securely connect from a remote PC, Mac, or mobile device. Instantly access files, programs, and your remote webcam. Share your screen for collaboration, support, or training.
4. **Legal Workspace:** www.legalworkspace.com

H. Encrypted Email:

1. **Dialawg:** www.dialawg.com - encrypted email specifically designed for lawyers
2. **RPost:** www.rpost.com - registered email service which can prove delivery + encrypted email
3. **Hushmail:** www.hushmail.com
4. **Symantec Desktop Email Encryption:** See <http://tinyurl.com/bcjuawp> for more information.
5. **EchoWorx Encrypted Mail:** www.echoworx.com/products/encrypted-mail
6. **SenditCertified:** www.privacydatasystems.com and note that they offer discounts through several bar associations (including the Ohio State Bar Association).
7. **ZixMail:** www.zixcorp.com/products/zixmail
8. **YouSendIt Pro or Pro Plus:** The basic YouSendIt plan is free and offers no security options. The Pro and Pro Plus options give you the ability to password protect any email attachments, but not the email itself. YouSendIt's primary purpose is to allow you to email extremely large attachments (up to 2 GB) without it being rejected by the recipient's email server.

I. Backup Services:

1. **Mozy Pro:** <http://mozy.com/pro> - \$3.95 + \$0.50/GB per month. Therefore, to backup 40 GB of data would only cost \$23.95 per month.
2. **Mozy Home:** <http://mozy.com/home> - \$4.95 per month - unlimited storage.
3. **Carbonite:** www.carbonite.com - \$54.95/year - unlimited storage.
4. **iBackup:** www.ibackup.com - at the time of this writing, 100 GB is \$9.95/month or \$99.50 per year paid in advance.

5. **SOS Online Backup:** www.sosonlinebackup.com - pricing determined by how much data you intend to backup. 40 GB is \$72/month or \$720/year (\$60/month if paid in advance). Highly rated service.

J. Web Meeting Services:

1. **GoToMeeting** (www.gotomeeting.com)
2. **WebEx MeetMeNow** (www.webex.com):
3. **Adobe Acrobat Connect** (<http://tinyurl.com/2nbcwt>)
4. **Microsoft Office Live Meeting** (<http://tinyurl.com/yyugt2>): Very inexpensive - contact www.EventBuilder.com.
5. **Join.Me** (<http://join.me>) - FREE!

K. Google Apps for Business: If you are on a limited budget, Google Apps Premier Edition costs only \$50/year and provides:

1. **Gmail for business:** Gmail for business offers 25 GB of storage per user, powerful spam filtering, sync with BlackBerry, iPhone and Android smartphones, sync with Outlook, and a 99.9% uptime SLA.
 - a. **Email, IM, voice and video chat:** Each user gets 25 GB of email and IM storage (50 times the industry average).
 - b. **Anytime, anywhere access to your email:** Gmail is securely powered by the web, so you can be productive from your desk, on the road, at home and on your mobile phone, even when you're offline.
 - c. **Sync with Outlook & BlackBerry:** Get the benefits of Apps on familiar platforms.
 - d. **Search and find emails instantly:** Spend less time organizing email and find emails quickly with Google-powered search for your inbox.
 - e. **Get less spam:** Powerful Gmail spam filtering helps you stay focused on what's important. Postini filtering lets you customize your spam protection.
2. **Google Calendar:** A web-based calendar application that enables employees to work together efficiently and helps minimize costs and IT hassles.

- a. **Easily schedule appointments:** Overlay multiple calendars to see when people are available. Google Calendar sends invitations and manages RSVPs.
 - b. **Integrate with your email system:** Google Calendar is integrated into Gmail and interoperable with popular calendar applications.
 - c. **Share project calendars:** Calendars can be shared company-wide or with select co-workers. A range of sharing permission controls help maintain security and privacy.
 - d. **Access with your mobile device:** View and edit event details, add new events, and invite guests on mobile devices like the BlackBerry and iPhone. Even receive calendar notifications via SMS.
 - e. **Publish calendars:** Publicize external company events by publishing a calendar to make it searchable in the Google Calendar gallery. Easily embed calendars into web pages.
3. **Google Docs:** Web-based documents, spreadsheets, and presentations that let users edit the same file at the same time so you always have the latest version.
- a. **Anytime, anywhere access to your work:** Google Docs is securely powered by the web, giving you the flexibility to be productive from your desk, on the road, at home and on your mobile phone, even when you're offline.
 - b. **Works across operating systems:** Google Docs works in the browser on PC, Mac, and Linux computers, and supports popular formats such as .doc, .xls, .ppt, and .pdf.
 - c. **Secure access controls:** Administrators can manage file sharing permissions system-wide, and document owners can share and revoke file access at any time.
4. **Google Sheets:** Manage spreadsheet data faster with click-to-edit charts and discussion style comments.
5. **Google Slides:** Create presentations together, embed videos, and never press save again.
6. **Google Drive:**
- a. **Access Your Files Anywhere:** Google Drive on your Mac, PC or mobile device (or your browser) gives you a single place for up-

to-date versions of your files from anywhere. In addition to any file type you choose to upload, Google Docs are also stored in Google Drive.

- b. **Bring Your Files To Life:** Share individual files or whole folders with individual people, your entire team or even customers, vendors and partners. Create and reply to comments on files to get feedback or add ideas.
 - c. **Buy What You Need & Grow Flexibly:** Start with 5 GB of included storage for each of your users. Need more? For as little as \$4/month for 20 GB, administrators can centrally purchase and manage up to 16TB (Yes, that's 16,000 GB!) of additional storage for each user
7. **Google Sites:** Google Sites is an easy way to create secure web pages for intranets and team projects. No coding or HTML required.
- a. **Organize information in a central place:** Use Google Sites to centralize documents, spreadsheets, presentations, videos, slideshows and more to help keep teams organized.
 - b. **Anytime, anywhere access:** Google Sites is securely powered by the web, so you can access company pages from your desk, on the road, at home and on your mobile phone.
 - c. **Works across operating systems:** Google Sites works in the browser on PC, Mac and Linux computers.
 - d. **System and site-level security controls:** Administrators can manage site sharing permissions across the business, and authors can share and revoke file access at any time.

L. **Instant Messaging:**

1. **What It Is:** Typically abbreviated as IM, this is a type of communications service that enables you to create a kind of private chat room with another individual in order to communicate in real time over the Internet. It's analogous to a telephone conversation but using text-based, not voice-based, communication. Typically, the instant messaging system alerts you whenever somebody on your private list is online. You can then initiate a chat session with that particular individual. IM systems often also include video (users can see each other via webcam), file-sharing/transfer capabilities, and phone (users can talk to each other using microphones connected to or built into their computers).
2. **Why IM Is A Valuable Communication Tool:** When you and your colleagues are spread out geographically, this can be invaluable (and it's typically free). For example, someone in one office might need a quick

answer from someone in another office. It's often difficult to reach someone on the phone and email queries are easily lost among the torrent of daily incoming email that each person has to deal with. This is when instant messaging is the perfect solution. With one click, the individual who needs an answer can determine if the person they need to communicate with is online and available. If that person is available, the asking individual can pop his/her question up on the computer screen of the person who can answer it. As long as the recipient can type (even if they're on the phone), they can quickly reply without interrupting what they are already doing. No phone call or email is necessary. One of our clients who started using IM commented:

"This is also critical when working with support staff who are working through issues on a phone call with an external party. By having access to the supervising attorney in real time, issues can be resolved immediately, rather than through several follow up calls or emails as questions go back and forth. I often use a paralegal in another office for litigation support and this has assisted me in working seamlessly with her, despite the fact that she is 45 miles away."¹⁶

3. **Consumer-Grade IM:** Common services include:
 - a. **AOL AIM** (www.aim.com)
 - b. **Google Talk** (www.google.com/talk)
 - c. **IBM Lotus Sametime** (<http://tinyurl.com/62nvm2>)
 - d. **Microsoft's Live Messenger**
(<http://explore.live.com/messenger>)
 - e. **Skype** (<http://tinyurl.com/3hbdr7y>)
 - f. **Yahoo! Messenger** (<http://messenger.yahoo.com>)
 - g. **Apple iChat** (<http://tinyurl.com/3lxdld6>).
4. **Secure IM Options:** Some businesses elect to deploy a secure instant messaging system. These systems are typically closed (limited to intra-company communication only), secure and can be monitored. Options include:
 - a. **Microsoft Lync:** See <http://tinyurl.com/358j58j>

¹⁶ Erin Stewart, attorney in the office for the General Counsel of the University of North Texas

- b. **IBM Lotus Sametime:** See <http://tinyurl.com/62nvm2>
- c. **IceWarp Instant Messaging Server:** See <http://tinyurl.com/66roosj>
- d. **Cisco Jabber:** See <http://tinyurl.com/65wqyf5>
- e. **Bopup Messenger from B-Labs Software:** See www.bopup.com/products/messenger
- f. **BigAnt:** See www.bigantsoft.com
- g. **Brosix:** See www.brosix.com

M. Internet Faxing Services:

1. **RingCentral:** www.ringcentral.com. With RingCentral, you get a toll free or local number; you can receive faxes on your PC, via email or with a mobile app; and you can send faxes via email or your PC from any application. Prices start at \$7.99/month for 500 pages and go up from there.

MOST POPULAR			CORPORATE PLAN
Fax 500	Fax 1000	Fax 2500	Fax ProUnlimited
500 FREE Pages included monthly**	1000 FREE Pages included monthly**	2500 FREE Pages included monthly**	Unlimited Pages** included monthly†
\$7.99 / MONTH*	\$19.99 / MONTH*	\$49.99 / MONTH*	\$39.99 / MONTH* Includes 2 fax numbers Add'l fax numbers \$4.99 / mo
FREE TRIAL	FREE TRIAL	FREE TRIAL	CONTACT SALES
BUY NOW	BUY NOW	BUY NOW	1-888-389-0854
5.9c for additional pages** Includes All Features	4.9c for additional pages** Includes All Features	3.9c for additional pages** Includes All Features	

2. **Myfax:** www.myfax.com - pricing shown below. Toll free number and faxes are emailed as PDFs attached to email.

BEST VALUE	MOST POPULAR	FAX MORE
Send 100, receive 200 free pages/month	Send 200, receive 200 free pages/month	Send 400, receive 400 free pages/month
\$10 PER MONTH	\$20 PER MONTH	\$40 PER MONTH
30 DAY TRIAL	BUY NOW	BUY NOW

3. **EFax:** www.efax.com - This is a more expensive option. Pricing shown below:

eFax Plus	eFax Pro
Annual Membership ⓘ \$14.13/mo. (Save 2 months)	Annual Membership ⓘ \$16.63/mo. (Save 2 months)
Monthly \$16.95/mo.	Monthly \$19.95/mo.
Setup fee \$10.00	Setup fee \$19.95
Receiving faxes 150 FREE pages every month! Then \$0.10/pg	Receiving faxes 200 FREE pages every month! Then \$0.10/pg
Sending faxes 150 FREE pages every month! Then \$0.10/pg	Sending faxes 200 FREE pages every month! Then \$0.10/pg

4. **GreenFax:** www.greenfax.com - Includes a local dedicated fax number for receiving faxes in the city or area of your choice. Pricing is \$12.95 per month (billed quarterly). One time setup-charge: \$10.00. Plan includes 250 inbound pages received per month. Pages received in excess of 250 per month are billed at 3 cents per page.
5. **MetroFax:** www.metrofax.com. \$7.95/month for 500 total pages.
6. **Onebox:** www.onebox.com - See their website for pricing information.
7. **faxZERO:** \$1.99 per fax