

Bankruptcy in the Cloud: Effects of Bankruptcy by a Cloud Services Provider

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Insolvency lawyers often refer to bankruptcy as a lagging economic indicator. This is surely true when considering bankruptcy's or insolvency's effects on cloud computing. Many of the offerings that fall within the ambit of "cloud computing" are very new. Therefore, few bankruptcy cases or failures of cloud services providers are available to provide lessons on dealing with such a situation. Still, at this early stage, it may be helpful to explain the bankruptcy-related principles that "could" come to bear "if" a company within a particular cloud computing environment should fail or seek bankruptcy protection.

The Danger

Though "the cloud" and the proliferation of remote services is recent, the basic idea of having part of our technological lives in the hands of remote providers is far from new. Accordingly, there are examples of the very real danger of relying too heavily on these remote services.

Consider, for example, a bankruptcy case that shook the San Francisco Bay Area years before the boom of Silicon Valley erupted. In those days, the Bay Area legal community had just begun to become dependent on a new technology called "e-mail." Many providers of email hosting services were aggressively marketing to sign up subscribers. One provider was particularly successful in signing up lawyers and law firms as their subscribers.

The subscribers were so enamored with this new service that they did not consider what would happen if their provider ran into financial trouble. The provider, of course, was not very forthcoming, either, about its financial strength. It didn't tell its subscribers that it was throwing so much money into advertising and promotion that it was unable to ever get profitable. As is inevitable in that situation, it began having trouble paying its vendors. One of those vendors was its network interface provider (the provider of the telephone lines over which all the email traffic flowed between the provider's facilities and its customers).

Ultimately, the phone company wouldn't wait any longer. It cut off service. In a literal instant, tens of thousands of lawyers, doctors and others in the Bay Area lost their email capability and lost access to stored e-mail messages. The provider had gone completely dark with the flip of a switch. Most of those customers never got their stored messages back and had to spend weeks or months to arrange alternate service. The cost and disruption was astronomical.

Cloud Computing Participants

That example shows how 'Cloud' computing is a very apt label when considering the impact of bankruptcy, because any user of cloud services will be dependent on a potentially vast network of relationships that will be opaque to that individual participant. The bankruptcy of any one member of that network could reverberate throughout the environment and impact remote participants in many indirect ways.¹ Therefore, to provide context for discussion of the potential impacts of bankruptcy, this article will highlight some of the different potential participants and their relationships. Of course, as the cloud computing industry develops and becomes more sophisticated over time, the variations in type and number of participants in any particular network will grow and diversify. However, describing a few basic sets of relationships should exemplify the potential effects of bankruptcy. Therefore, following are examples of the sets of relationships that should be kept in mind when considering the impacts from the bankruptcy on each of the three traditional cloud computing environments.

Infrastructure as a Service (IaaS)

From the bankruptcy perspective, this form probably presents the least complexity. In this environment, the IaaS provider is essentially offering its users only a hardware (server) environment, loaded with virtualization software to allocate the hardware resources among customers, and network connections. Accordingly, the participants in an IaaS environment whose bankruptcy could impact the user (who will be referred to as an "at-risk provider") would include:

1. **Direct Provider.** The entity managing the hardware and infrastructure ("Direct Provider") for its users, who then install their own operating systems and applications and may have some access to manipulate the allocation system and network environment.
2. **Software Providers.** Unless the Direct Provider developed its own proprietary software, it is likely to be a licensee from developers of the software necessary to make the environment function. Some of this software might be "shrink wrap" or "off-the-shelf" where a one-time license fee is paid in advance and the developer does not have significant ongoing support duties to the Direct Provider. However, in light of the sophistication needed to operate an IaaS service, it is far more likely that the critical software (such as the virtualization software) will be custom-designed, and the

Direct Provider will owe ongoing license fees and be dependent on the continuing support of the developer for smooth functioning of the system. Examples of this software on which an infrastructure host might rely are Xen[®] by Citrix or Hyper-V[®] by Microsoft.

3. **Network Providers.** In today's global computing environment, there will likely be any number of intermediate Internet and other network providers between the Direct Provider with whom the user contracts and the user, and those networks must remain functional for the user to access and utilize the IaaS service.

Platform as a Service (PaaS)

In the PaaS environment, there are probably not any additional classes of participants whose bankruptcy would impact the user of the PaaS service. A PaaS provider only provides operating system software and, occasionally, hardware access. The PaaS provider's customers use their own application software, data, etc. Since the user must rely on the Direct Provider and its software and network providers for the operating system and, perhaps, other application and interface services, the number of software and network providers involved in any given PaaS cloud environment will probably be much larger.

Software as a Service (SaaS)

The situation changes dramatically, however, in the SaaS environment. In this environment, the user's "Direct Provider" is not the infrastructure host, but an application software offeror. The network then expands because the user must rely on the continued operation and security of:

1. The application software developer;
2. Other software developers from whom it licenses key components and tools for functioning of its applications;
3. The infrastructure host on whose servers the software is loaded for use;
4. Any software providers to that host; and
5. The network providers between the software developer and the host and between the host and the user.

Other Constituencies

Listed above are the primary at-risk providers in a cloud environment whose bankruptcy could impact (or devastate) a cloud user. In addition, if any of the above participants experiences financial difficulties, each one may have obligations to several other constituencies whose attitudes, rights and responsibilities will have serious effects on how such financial difficulties are resolved. These other constituencies include:

1. The cloud service provider's landlord or mortgage holder, unless the provider owns its facility outright. Consider the impact if a cloud service provider gets behind on its rent and the landlord exercises a right to lock the provider out of its building or to seize the provider's assets.
2. Software licensors of a cloud service provider. Consider the power of a key software licensor over an at-risk IaaS, PaaS or SaaS provider when the provider misses license payments, thereby triggering a right to terminate the license. Many software programs in recent years even have built in triggers that disable them unless a renewal license code is entered. In addition, if the software is of a type that requires ongoing provider support, that support will surely be disrupted if the licensee (the provider to the user) stops making payments.
3. Utility providers may also discontinue access to power if their service fees are not paid.
4. While other constituents can exist, it should be sufficient for purposes of this article to mention one other group: personal property lessors and secured lenders. Many server hosts do not own the servers they offer for use by their customers or use themselves to provide their services. They lease those servers or use asset-based lending from companies such as G.E. Capital to finance the acquisition of the equipment. Consider the impact, again, if payments are missed on one of those leases or secured loans, giving the lender/lessor the right to repossess and sell the equipment on which the user depends.

Thus, a user considering entering a cloud-computing environment must consider the financial strength and contractual and legal protections offered by the direct provider with whom it engages. The user must also consider the strength of other participants in the network and the protections afforded to the Direct Provider in its relationships with the entities on whom it depends, dependencies that can exist in multiple layers.

Key Bankruptcy Case Considerations

So, with that background in mind, the following section outlines some key principles of bankruptcy law that would govern if a participant in a cloud network were to seek formal protection under the Bankruptcy Code.²

Automatic Stay

When a cloud services provider in financial trouble files a petition for bankruptcy protection, rather than simply shutting down its operations, the filing of the petition activates the automatic stay set forth in Section 362(a) of the Bankruptcy Code. In these difficult circumstances, a bankruptcy filing is better for the user and others doing

business with the troubled entity because the stay prohibits any party doing business with the debtor company from taking most actions adverse to its viability.³ Accordingly, for a time at least, landlords cannot lock an IaaS host out of its facility, utility or network providers cannot terminate service, and software licensors cannot terminate necessary licenses. In addition, legal activities must immediately become concentrated in the bankruptcy court, so that all parties involved will have a single forum where their voices can be heard, and heard in the context of the debtor provider's overall circumstances.⁴

"Faced with a Chapter 7, don't wait to arrange an alternate provider and orchestrate a smooth migration. Get immediate control of your data, etc., and figure out later how you will start using it again."

There are exceptions to the automatic stay, and affected parties have rights to have a bankruptcy court terminate it, some of which will be discussed later in this article. However, because the stay is immediate and automatic, it gives the parties breathing room to assess their situations and start developing strategies for dealing with the difficulties facing them.

Type of Case

A company within a cloud network may seek Bankruptcy Code protection in two ways. It can liquidate under Chapter 7 or it can attempt to reorganize under Chapter 11.⁵ Besides the automatic stay, the most critical determinate of the level of disruption that users will experience probably is the filing choice made by a troubled company.

Chapter 7 Liquidation

Broadly speaking, when a company files a bankruptcy petition under Chapter 7, the company ceases operations and all management is shifted from the shareholders and board (if a corporation) or members and managers (if a partnership or limited liability company) to an independent Chapter 7 trustee chosen randomly from a panel of standing trustees in the federal court district where the case is commenced. All authority of the previous management to operate the business ceases instantly upon filing of the petition. Literally, if a user phones any (now former) employee two seconds after the petition is filed, even the CEO, the caller will be told (assuming that the CEO answers at all) that "I don't have any power to do anything for you; here is the new trustee's phone number."

Once in place, the trustee's sole job is to sell the "debtor's" assets and gather as much cash as possible for

the "estate's" creditors. If a trustee is sufficiently sophisticated and moves quickly enough, he or she could seek authority to continue the company's service to customers for a limited period of time so that the liquidation is orderly.⁶ However, unless the trustee (a) is immediately apprised that the debtor operates a cloud service on which many customers rely for continuous access, (b) understands instantly what is required to maintain smooth operations, (c) seeks immediate court authorization, and (d) has been turned over sufficient funds from the debtor to pay the costs of maintaining operations, disruption and even complete termination of service *will occur*. Chapter 7 trustees do not have access to governmental or other funds to operate their trusteeship practices or their debtor's businesses. In any given case, the trustee only will have available the funds the debtor had at the time of filing the petition, and usually the debtor would not have filed under Chapter 7 if it had the funds to pay its bills.

Fortunately, because the automatic stay will require landlords, equipment lessors, network and utility providers and licensors, for the most part, to go to the bankruptcy court and obtain permission before taking action against the debtor company, there may well be a short time, even in a Chapter 7 case, where a cloud system will continue operating. In many respects, the length of that time will depend on the degree to which the system is automated. In other words, as long as the system only needs network access, functioning machines and electric power, the bankruptcy filing would not instantly cut off service.

The difficulty comes when human intervention is required. The stay may temporarily stop a network provider from cutting off access, but it does not force employees to come to work and maintain a server installation if they are not going to be paid. If the party filing bankruptcy is a software provider with support duties to the customers, its employees will not be required to continue providing customer support.

It is rare for companies of any significant size, such as would probably be true of most cloud services providers, to suddenly liquidate and file for Chapter 7 protection. Usually, management of these companies will have sufficient foresight to be able file for reorganization under Chapter 11, where the operations can be maintained (for a longer time at least).

Nevertheless, if a company files for Chapter 7 protection, users of a cloud system can expect to have at most sixty days, on down to just a few days, to take steps to protect themselves. Regardless, the best protection available to an end user may have nothing to do with asserting legal rights – that step may be to log into any remote system and offload every piece of data and/or code that is humanly possible to another location. Don't wait to arrange an alternate provider and orchestrate a smooth migration. Simply put, get immediate control of your data, etc., and figure out later how you will start using it again.

There is serious risk in this drastic situation that it could become irretrievably lost.

Chapter 11 Reorganization

Chapter 11 reorganizations are what most non-bankruptcy practitioners envision when they hear about bankruptcy. In a Chapter 11 reorganization, the filing of a petition does not, in and of itself, alter the company's normal operating pattern.⁷ Generally speaking, the limitations mentioned in Section 1107 (quoted on Footnote 7) refer to limitations on actions outside the ordinary course of business, such as secured borrowing or sales of the business or major assets. Thus, until financial circumstances force a different outcome or parties interested in the case convince the bankruptcy court to alter the pattern, the debtor company is permitted to continue operating in the ordinary course of business until it is prepared to present its plan for reorganizing its affairs and restructuring its obligations.

Accordingly, for customers of a participant in a cloud network, the focus of concern shifts in Chapter 11 more toward the effect on the ongoing relationship and the customer's legal rights and solutions and away from the immediate, emergency damage control necessary if a troubled provider files under Chapter 7 or announces an impending non-bankruptcy shut-down of operations.

The basic process in a Chapter 11 case is for the debtor to have a breathing spell from creditor action by virtue of the automatic stay while it decides (or attempts to decide) how to restructure its business and negotiates with its creditors and contract counterparties to restructure its debts and contractual arrangements. These restructurings are then embodied in a Chapter 11 plan that is voted upon by creditors and, if it meets the standards of the Bankruptcy Code, approved (confirmed) by the bankruptcy court.⁸

During the operational period while a debtor is reorganizing, it can take certain actions outside the ordinary course of business if they are approved by the bankruptcy court. The two key actions a debtor might take are (a) the sale of assets (which could even be the entire company or a major business segment) and (b) the assumption or rejection of executory contracts (such as leases, licenses, and other arrangements such as network provider and user agreements). In terms of affecting a customer's relationship with the debtor company, these are the two key areas to monitor between the petition filing and proposal of the Chapter 11 plan. They will be discussed more fully in the remainder of this article.

For now, it suffices to say that, if any participant in a cloud network files for protection under Chapter 11, all other participants who directly or indirectly rely on that debtor participant should monitor the progress toward formulation of the debtor's Chapter 11 plan, because that plan will define what permanent changes will be made

to the relationships between that debtor provider and the parties participating in its cloud network.

Asset Sales in Chapter 11

The "reorganization" of a debtor company's affairs can take other forms than formulation of a Chapter 11 plan. The most common form is for the debtor to use the breathing spell provided to it to find a buyer for the business, or a major unit of a multi-function company, and use other provisions besides the plan process to gain court approval for the sale. In bankruptcy parlance, this is called a "363 Sale," named for Section 363 of the Bankruptcy Code which sets forth the primary rules governing the power to sell a company's assets outside of the plan process and outside the ordinary course of business.⁹

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The basic rule for a Section 363 sale is rather straightforward. A debtor may sell all or some of its assets if it demonstrates to the bankruptcy court that the sale is in the best interests of the company and its creditors. This would be no different from a company selling its assets outside of a bankruptcy case, except that the Bankruptcy Code gives the debtor two important powers: (a) the power to sell assets free and clear of liens and interests and (b) the power, mentioned above, to reject or assume and assign executory contracts.

These two powers are significant because they alter basic principles of state law which would otherwise protect parties affected by the sale. Traditionally, for example, if a lender holds a security interest in all the servers owned by an IaaS host, the sale of the servers as part of a sale of the business would not eliminate that lien and the lender can demand immediate full payment before the debtor company can pass clear title. Also, under traditional law, a host who leases the facility housing the servers would be prevented from assigning the lease unless the landlord agreed (usually for a large fee, deposit or other conditions).

Sale Free and Clear of Liens

However, if certain standards are met to assure that the secured lender is not materially damaged, a Chapter 11 debtor can transfer clear title to those servers and, with court approval, do so over the objection of the secured lender and without immediately paying the full amount of the related debt.¹⁰ This can benefit the debtor's customers because it permits a sale that would continue the service from being derailed by unreasonable lenders.

Assumption and Assignment of Executory Contracts

Somewhat akin to the ability to sell assets free of liens is the power granted to Chapter 11 debtors to “assume and assign” executory contracts.¹¹ Even if a real estate lease, network services agreement or any other type of contract contains a prohibition on assignment, a debtor may assume (accept all the terms of) and assign the contract to, for example, a purchaser of its business over the landlord’s or other counterparty’s objection.¹² [Note: As will be discussed in the next section, this power does not extend to nonexclusive patent and copyright licenses, which means that it does not apply to most software licenses that would be encountered in the cloud computing environment.]

“Any customer investigating a potential provider should obtain representations of the provider’s plans and procedures to protect its customers in the event it experiences financial difficulties.”

This power to assign contracts means that, if a participant in a cloud network enters Chapter 11 and can find a buyer to take over the operation, no landlord, network services provider or other participant in the network will be able, in most circumstances, to arbitrarily prevent the success of the sale. Again, like the power to sell free and clear of liens, this benefits customers of the debtor company because it enhances the opportunities for a buyer to take over the operation and continue servicing the customers as before the debtor experienced its financial difficulties.

Unique Power of Software Licensors

As just noted, the power to assign contracts does not extend to nonexclusive patent and copyright licenses. Bankruptcy and appellate courts have universally held that a licensee may not assign nonexclusive patent and copyright licenses without the licensor’s consent. Therefore, if an IaaS host is a nonexclusive licensee of, for example, virtualization software critical to operation of the cloud network, the Bankruptcy Code cannot be used to permit assignment of that license to a buyer over the objection of the licensor. This author will leave to the intellectual property lawyers the question whether a software package can ever be based only on the licensor’s trade secret rights, and not copyright. For bankruptcy law purposes, it is sufficient to understand that software licensors generally will have a great deal of power over a licensee’s ability to sell its assets or, in some jurisdictions such as the 9th Circuit, to reorganize and exit from a Chapter 11 case, since the debtor cannot even retain those types of licenses unless the licensors consent.¹³

Therefore, when negotiating such licenses, it is critically important to pay particular attention to the assignment provision and for the potential licensee to negotiate hard for the right to assign the license. In this author’s experience, the most favorable term a licensee usually can obtain is a right to assign the license, without the licensor’s consent, to a successor in interest to all or substantially all of the licensee’s business, unless the potential assignee is a direct competitor of the licensor. Of course, in this situation, it is clearly important to include a definition of competitor that fits the particular industry. Also, if the licensee operates several lines of business, it should negotiate for the “substantially all” definition to apply only to the business unit to which the license relates.

Finally, to the extent possible, a party negotiating a service agreement with, for example, an IaaS host or an SaaS provider should obtain representations from its provider that the provider has the power to transfer its critical inbound licenses in the event that it elects to, or has to, sell its business. In fact, any customer investigating a potential provider should obtain representations of the provider’s plans and procedures to protect its customers in the event it experiences financial difficulties.

If the Provider Can’t Reorganize or Doesn’t Like Its Contracts

The other side of a cloud participant’s power to assume and assign its contracts is that participant’s power to reject executory contracts. Consider a user of an SaaS application in the cloud whose provider determines that it is losing money in providing the service to the customer. In a Chapter 11 case, that provider has the right to “reject” the contract before its term expires and, generally, the counterparty to the contract cannot do anything about it.¹⁴ The standard for a bankruptcy court to allow a debtor to reject contracts is simply the “business judgment” of the debtor, which is rarely overturned.¹⁵

Accordingly, such a user should pay close attention to the business decisions being made during any provider’s Chapter 11 case, and be on the lookout for signs that the debtor/provider may decide to shed the customer contract. Also, any signs that the reorganization attempt may fail should be red flags telling the user to start immediately setting up alternative arrangements.

If a Software Provider Files for Bankruptcy Protection

So far, the most common example this article has used is the Chapter 11 filing by an IaaS host, the provider of the servers housing a cloud network. A different Bankruptcy Code protection comes into play, however, if a provider of software critical to the cloud network gets into financial trouble, especially trouble it can’t escape. As just discussed, any debtor has the power to reject its executory contracts, and there are few practical limits on that power. Therefore, consider the predicament of an IaaS host who relies on a license from a third party for its virtualization

software (or any other critical component of its software environment) and the licensor files for bankruptcy protection under either Chapter 11 or Chapter 7.

Fortunately, the Bankruptcy Code does contain some protection for a software licensee if a software licensor is truly failing (or decides the contract with the host is a losing proposition) and, therefore, rejects the license to the IaaS host.

Under Section 365(n) of the Bankruptcy Code, a licensee has the power to make an election to “retain its rights” under the license agreement if the licensor rejects the agreement. Generally speaking, this election gives the licensee the right to retain the licensed intellectual property as long as it is willing to continue making the license payments for the remainder of the term (and any renewal option period available under the agreement if the licensee elects to exercise that option). This means that the IaaS host for example, can keep its right to use the virtualization software when the license is rejected. The licensee also may compel the licensor to turn over any “physical embodiments” of the intellectual property that the licensee needs to utilize it.

On the other hand, Section 365(n) is not a complete panacea for the licensee. While it can retain the use of the intellectual property in the condition as it exists at the time of rejection, the licensee cannot specifically enforce other terms of the agreement. Therefore, for example, there would be no duty of the licensor (or anyone who buys the intellectual property itself in a 363 sale) to provide upgrades or bug fixes. Also, any duties to maintain the software or provide technical support or training would cease.

Still, this protection does allow the licensee some very important breathing room. It means that it can still use the existing intellectual property while it searches for a replacement (or negotiates with a buyer of the software for new support services). It is critical, however, to not sleep on one’s rights. Any licensee who receives a notice that a debtor intends to reject its contract must formally appear (i.e. through counsel) in the bankruptcy court quickly and voice its election to retain its rights.¹⁶

What About My Data?

Probably the biggest concern expressed by potential users of cloud computing services is the protection of the privacy of their data stored in the cloud and their ability to recover it if the party with whom they contract (or its host provider) goes out of business. Data privacy and similar laws provide an increasing array of rules covering the treatment of sensitive confidential information. However, two bankruptcy law principles assist the user/data owner and lead to strategies that users should employ.

Property of the Estate

The first protection arises when it is clear that the user (not the cloud provider) is the legal owner of the data. Bankruptcy courts only have jurisdiction over property of the estate, i.e. property of the debtor.¹⁷ Therefore, it is critical that any agreement entered into with a cloud services provider clearly specifies what data and features are owned by the user.

“Establish means to protect (e.g. duplicate elsewhere) all information entrusted to a provider in a way that requires the least active participation by the provider for the user to recover it and continue functioning.”

This question must be carefully thought out and covered in the service agreement. It is easy to see that text a user of a cloud-based word processing application enters into the system is the user’s property. However, consider a couple of less clear questions:

1. Who owns the user’s name or the right to sell that name (or its buying habits, or the buying habits of its customers if the user itself is a seller of goods or services) as part of a customer list?
2. If the user is a software developer whose applications are housed on the servers of an IaaS provider, who owns the software code that makes the application interact with the server’s operating system?

These examples should demonstrate that any party about to post information or engage with a service provider must look very closely at all aspects of the relationship and clearly delineate in the service agreement who owns *and who has the right to control dissemination* of the information, code, etc., that will be placed in the provider’s hands.

This is also the point in the negotiations where procedures should be specified for return (and deletion from the provider’s systems) of all of the user’s information. Keep in mind, however, that any procedures which require active assistance from the provider will be at risk of failure because, when the provider runs out of money or a third party on whom it relies fails, serious practical obstacles will quickly appear. Establish means to protect (e.g. duplicate elsewhere) all the information entrusted to a provider in the way that best minimizes the need for active participation by the provider in the user’s efforts to recover its data and continue functioning.

“Personally Identifiable Information”

During the time leading up to the massive amendments made to the Bankruptcy Code in 2005, several Chapter 11 cases arose which became notorious because the debtors realized that their databases of sensitive consumer information were valuable assets that others in their industries would pay large sums to acquire. To say consumer protection advocates were highly alarmed by this development would be a major understatement.

One aspect of the alarm was raised when retail debtors were selling customer information contrary to their own privacy policies promising to consumers that “we never sell your data to third parties.” The debtors were arguing that they could do this because, at best, the privacy policy was just a contractual arrangement with the consumers that they had the power to reject just like any other executory contract. Since they claimed (successfully) that they, the debtors, owned the data once it was in their hands, they were able to sell it over the objections of the consumers.

Accordingly, some of the very few provisions added to the Bankruptcy Code that was not inserted to aid the banks and credit card companies (sorry, the author’s prejudice leaks out sometimes) were a new Sections 332 and an amendment to Section 363(b)(1) (the provision authorizing sale of estate assets). Together, these provisions granted some protection to “personally identifiable information” of consumers if a debtor proposes to sell that information to a third party.

In broad strokes, the new rules add a procedural, if not substantive, safeguard for consumers. If a debtor proposes to sell assets and has a stated policy against selling this consumer information, it must either (a) comply with the policy or (b) convince the court to approve the sale in any event.¹⁸ Before the court can approve the sale, however, it must appoint an independent “consumer privacy ombudsman” to provide the court information about the “facts, circumstances and conditions.” The ombudsman is to report on the nature of the policy, the effects on consumer privacy of the proposed sale, the financial effect on consumers, and alternatives to mitigate potential privacy losses.¹⁹

It is important to note that this ombudsman does not have the power to make any objections to the sale, *per se*, and no standard is provided for the court to make its decision whether to approve a sale. So far, only three reported cases refer to the appointment of such an ombudsman, and each of those cases only states that the ombudsman is to be appointed and present his or her findings.²⁰ No guidance has been offered yet on how courts will handle the competing goals of honoring privacy expectations and maximizing proceeds from a sale. As these situations arise, consumers (and cloud services users who input the consumer data into a cloud system) can only rely on the good sense of the bankruptcy judges

to make wise choices to protect the privacy of this information. In most cases, this reliance will be well placed, because there are many excellent and balanced judges in the key jurisdictions where these types of cases are likely to arise. However, this area is still a serious cause for concern.

Conclusion

So far, most of the providers of cloud computing services are major corporations who are financially strong and should stay that way, except for a plethora of newly-formed SaaS application providers. The strength of the major infrastructure providers lessens the concern that might otherwise exist over the issues raised in this article. Nevertheless, as the economic upheaval of the last few years has demonstrated, size is not necessarily a guarantor of financial strength. Also, cloud server hosts can suddenly become inaccessible for any number of other reasons (e.g. power outages, contract disputes, etc.). Therefore, before signing up for any cloud computing service:

1. Clearly specify in any contract the relative ownership and control rights of all data, software code, processes and everything else that you, the user, consider critical to your own business;
2. To the extent that your agreement with a cloud provider constitutes a license, specify the intellectual property of your licensor that would be transferable to you if the licensor rejects the license in a bankruptcy case, including the means by which you will obtain what you need (e.g. third party source code escrow);
3. Do as much as you can to identify all the parties in the network you enter and assess the financial strength of, not only the provider with whom you contract, but also the parties on whom it relies to bring you the services you seek.
4. Try to gain an understanding of your provider’s ability to sell or assign key assets (e.g. critical licensed software) if the provider has to sell its business; and
5. Have a redundancy plan in place to protect against the time when, for any reason, a cloud services provider on whom you rely suddenly ceases to be accessible.

If you have more questions about the bankruptcy issues raised in the cloud-computing environment, feel free to email the author at any time.

Endnotes

1. To avoid continual redundancy, when the term bankruptcy is used in the remainder of this article, it will refer to either a formal bankruptcy filing or a failure (cessation of business), unless the context otherwise requires that a distinction be made.

2. The Bankruptcy Code is contained in Title 11 of the United States Code.
 3. In pertinent part, Section 362(a) provides “Except [for a long list of exceptions], a petition...operates as a stay, applicable to all entities, of ... (3) any act to obtain possession of property of the estate or of property from the estate or to exercise control over property of the estate;...” 11 U.S.C. §362(a)(3).
 4. Section 362(a)(1) prohibits “the commencement for continuation... of a judicial, administrative or other action or proceeding against the debtor...” 11 U.S.C. §362(a)(1).
 5. It is technically possible for an individual to be a cloud participant, and protection under a third chapter, Chapter 13, is sometimes available to an individual business person. However, the likelihood of this occurring is so rare that Chapter 13 will not be discussed in this article.
 6. 11 U.S.C. §721: “The court may authorize the trustee to operate the business of the debtor for a limited period, if such operation is in the best interest of the estate and consistent with the orderly liquidation of the estate.”
 7. “Unless the court, on request of a party in interest and after notice and a hearing, orders otherwise, the trustee may operate the debtor’s business.” 11 U.S.C. §1108. “Subject to any limitations on a trustee serving in a case under this chapter, and to such limitations or conditions as the court prescribes, a debtor in possession shall have all the rights...and powers...of a trustee serving in a case under this chapter.” 11U.S.C. §1107(a).
 8. See, for example, 11 U.S.C. §§1123, 1125 and 1129.
 9. 11 U.S.C. §363.
 10. 11 U.S.C. §363(f).
 11. A large body of case law analyzes what types of contracts are “executory” or not. However, those distinctions will rarely apply in this context. Most types of contracts to which a cloud participant would be a party are clearly within the definition of an executory contract that can be affected by operation of the Bankruptcy Code. These include real and personal property leases, most software license agreements (at least the nonexclusive ones), network services agreements, and software development or support agreements. For a fairly detailed discussion of the factors in identifying whether a contract is executory, see 3-365 Collier on Bankruptcy ¶ 365.02.
 12. 11 U.S.C. §365(f).
 13. 11 U.S.C. §365(c)(1); *Everex Systems, Inc. v. Cadtrak Corporation (In re CFLC, Inc.)*, 89 F.3d 693 (9th Cir 1999); *Perlman v. Catapult Entertainment, Inc. (In re Catapult Entertainment, Inc.)*, 163 F.3d 767 (9th Cir. 1999), cert. denied 528 U.S. 924 (1999); *RCI Technology Corporation v. Sunterra Corporation (In re Sunterra Corporation)*, 361 F.3d 257 (4th Cir. 2004); *In re Patient Education Media, Inc.*, 210 B.R. 237 (Bankr. S.D.N.Y. 1997).
- For readers’ information, one aspect of the *Catapult* decision not related to the asset sales discussed in this article has been criticized by some courts, including the Southern District of New York. The *Catapult* court and others who have followed it also held that a reorganizing debtor could not even assume or retain a patent or copyright license since it was not permitted to assign the license. The Southern District, at least, has held that the prohibition under patent and copyright law to assignment of a nonexclusive license does not prevent its retention by a reorganizing debtor. *In re Footstar, Inc.*, 323 B.R. 566 (Bankr. S.D.N.Y. 2005).
14. The power derives from 11 U.S.C. §365(b).
 15. See, for example, *In re Old Carco LLC (f/k/a Chrysler LLC)*, 406 B.R. 180 (Bankr. S.D.N.Y. 2009); *Robertson v. Pierce (In re Chi-Feng Huang)*, 23 B.R. 798 (Bankr. 9th Cir. 1982); *In re Upland/Euclid Ltd.*, 56 B.R. 250 (Bankr. 9th Cir. 1985).
 16. For a more complete discussion of the rights of licensees under Section 365(n), see 3-365 Collier on Bankruptcy ¶ 365.14.
 17. See 11 U.S.C. §541 for a definition of property of the estate.
 18. 11 U.S.C. §363(b)(1)(B) states the court must give “due consideration to the facts, circumstances and conditions of the sale....”
 19. For more information on this subject, see 3-332 Collier on Bankruptcy 332 and 3-363 Collier on Bankruptcy P 363.02[7].
 20. *In re Old Carco LLC (f/k/a Chrysler LLC)*, 406 B.R. 180 (Bankr. S.D.N.Y. 2009); *In re Steve & Barry’s Manhattan LLC*, 2008 Bankr. LEXIS 4348 (Bankr. S.D.N.Y. 2008); *JS Marketing. & Communications, Inc. v. Qwest Corp. (In re JS Marketing. & Communications, Inc.)*, 48 Bankr. Ct. Dec. 41 (Bankr. D. Mont. 2007).

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