state taxation of cloud computing

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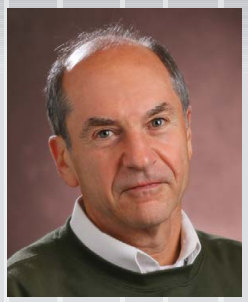


The advent of cloud computing and its profound reshaping of the architecture of computer networks and their applications raise a broad array of troublesome issues relating to security, privacy, technical standards, intellectual property, and, most importantly for present purposes, the taxation of global digital commerce.

Because cloud computing is still a relatively novel development, even in this era of rapid technological change, tax laws have barely begun to address its implications. We nevertheless believe that a discussion of state taxation of cloud computing will, at a minimum, provide readers with an overview of cloud computing and identify the principal consumption tax issues that it raises for digital commerce.

Editor's Note: The following article on state taxation of cloud computing draws from the extensive treatment of that topic in Taxing Global Digital Commerce (*2013*), *co-authored by Distinguished Research Professor and Shackelford Distinguished Professor Walter Hellerstein, which relies, in turn, on an article published in 117* Journal of Taxation *11 (July 2012) that he co-authored with Georgia Law 2007 alumnus Jonathan G. "Jon" Sedon, who is currently a senior manager at KPMG specializing in state taxation. These excerpts are reproduced with the permission of the respective publishers, Kluwer Law International and Thomson Reuters/WG&L. The detailed references from the original publications have been omitted.*

WHAT IS CLOUD COMPUTING?

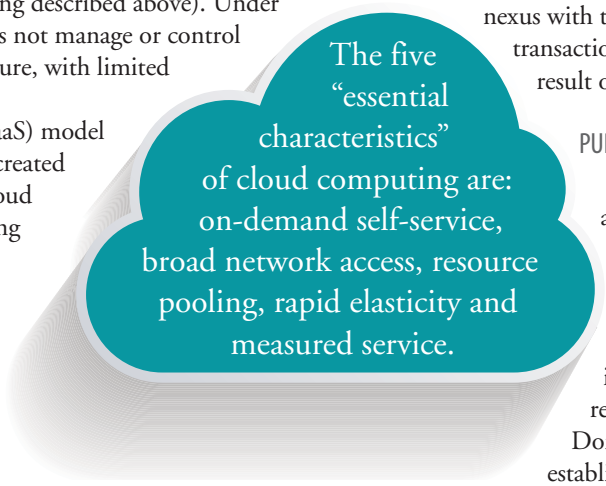
According to the National Institute of Standards and Technology (NIST), cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

The five "essential characteristics" of cloud computing are: on-demand self-service, broad network access, resource pooling, rapid elasticity and measured service.

As the NIST further observes, however, cloud computing is "an evolving paradigm."

There are three "models" of cloud computing.

The Software as a Service (SaaS) model allows a customer to access a provider's applications on a cloud infrastructure (i.e., the collection of hardware and software that enables the essential characteristics of cloud computing described above). Under the SaaS model, a customer does not manage or control the underlying cloud infrastructure, with limited exceptions.



The Platform as a Service (PaaS) model allows a customer to deploy its created or acquired applications on a cloud infrastructure using programming languages, libraries, services or tools supported by the provider. As with the SaaS model, the customer does not manage or control the underlying cloud infrastructure. However, the customer has control over the deployed applications and, potentially, configuration settings for the application-hosting environment.

The Infrastructure as a Service (IaaS) model allows a customer access to processing, storage, networks and other computing resources, where the customer can deploy and run software, including operating systems and applications. Under the IaaS model, the customer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage and deployed applications.

Providers of SaaS and PaaS are often called "application service providers." The term "application services" generally refers to services that allow customers to access software on the provider's system, typically by means of a Web browser.

SALES AND USE TAXATION OF CLOUD COMPUTING

Cloud computing raises a host of sales and use tax issues for both providers and purchasers of cloud computing services.

The initial question, at least from a practical perspective, is whether there is personal jurisdiction over (or nexus with) one or both of the parties to the cloud computing transaction, a question that may turn on the jurisdictional implications of the cloud computing transaction itself.

If the provider or purchaser[1] has nexus with the state (whether as a result of the cloud computing transaction or other activities), the next question is whether the transaction is taxable in that particular state. To answer this question, a series of additional inquiries is necessary, including whether the particular cloud computing transaction is a type of good or service subject to sales and use tax, whether a taxable "sale" or "use" has occurred, and where the taxable "sale" or "use" occurs.

Jurisdiction to tax the parties to the transaction: Nexus

The threshold question confronting both purchasers and providers of cloud computing services is whether they have nexus with the state in which the cloud computing transaction may be deemed to occur, whether as a result of the transaction itself or otherwise.

PURCHASER'S NEXUS

From the purchaser's perspective, there are at least two issues to consider.

First, if the purchaser is considered to own or lease tangible personal property in a state in which it would not otherwise have nexus as a result of a cloud computing transaction, it arguably satisfies the physical-presence requirement that the U.S. Supreme Court's Dormant Commerce Clause jurisprudence has established for the states' ability to enforce sales and use tax collection obligations.

Needless to say, whether an interest in tangible personal property causes the purchaser to have nexus in a particular state is fact-sensitive. On the one hand, a taxpayer that leases dozens of servers in a particular state almost certainly has created nexus with that state, as would a taxpayer that leases any other type of tangible property in the state.

On the other hand, we doubt that a taxpayer that purchases software application services, and acquires no interest in the servers on which the software is hosted, would establish even a *de minimis* physical presence in the state where the software is hosted.

Even if the purchaser's own activities do not create nexus in the state, the purchaser of cloud computing services must consider whether the service provider's activities create nexus for the purchaser. This could occur, for example, if the cloud provider performs activities in a state on behalf of the purchaser that are significantly associated with the purchaser's ability to establish and maintain a market in the state for its sales.

[1] Although the purchaser's nexus with the state may be of little significance in the Business to Consumer (B2C) context, because individual consumers are no more likely voluntarily to remit a use tax on the purchase of cloud computing services than they are to remit a use tax on the purchase of a book from Amazon.com, in Business to Business (B2B) transactions a business with nexus in the state may well take its tax payment and collection obligations seriously, particularly if it is a large business that is routinely audited by state taxing authorities. Moreover, the purchaser of cloud computing services in a B2B transaction may also be a seller in a B2C transaction, so that it must be attentive to the possibility that a purchase of cloud computing services in the B2B transaction will trigger tax collection nexus with respect to a B2C transaction in the same state.

The taxability of cloud computing transactions for sales and use tax purposes is in principle no different from the taxability of transactions involving other goods, services or intangibles under the sales and use tax.

PROVIDER'S NEXUS

Providers of cloud services face thorny nexus issues as well.

We doubt that software in digital form, even if characterized by a state as tangible personal property for sales or use tax purposes, becomes tangible personal property for purposes of the U.S. Supreme Court's physical-presence test, thereby providing a basis for imposing sales or use tax collection responsibility upon the provider at the "location" of the software.

If, however, the provider owns servers or leases server space, the issue becomes more difficult, because servers are indisputably tangible.

Texas has relied on the existence of an in-state server in asserting sales tax collection obligations upon Internet sellers. Other states appear to be divided as to whether maintenance of an in-state server creates nexus, with some states drawing a distinction between "maintenance" (no nexus) and "ownership" (nexus) of the server. In some states, there is an ambiguity in their position, because it is not entirely clear whether the reference to the "taxpayer's server" is to a third-party's server used by the taxpayer, the taxpayer's own server, or both.

Taxability

The taxability of cloud computing transactions for sales and use tax purposes is in principle no different from the taxability of transactions involving other goods, services or intangibles under the sales and use tax.

Accordingly, the taxability of a cloud computing transaction in a state depends on whether there is (1) a sale or use of (2) a taxable good, service or intangible (3) in the state.

The challenge in analyzing cloud computing transactions is that these complex and unfamiliar transactions often do not fit easily into existing statutory classifications that determine taxability in a state.

TANGIBLE PERSONAL PROPERTY, SERVICE OR INTANGIBLE?

Historical Background: Taxation of Software

Before we turn to the appropriate classification of cloud computing transactions, it will be instructive briefly to review the states' experience in taxing computer software.

Such a discussion is warranted for several reasons.

First, the struggles states have had with classifying computer software as tangible personal property, a service or an intangible are analogous to the struggles states are now having – and will increasingly confront – in classifying cloud computing transactions.

Second, state guidance with respect to the taxability of certain cloud computing transactions (generally, SaaS/hosted software) often turns on the question of whether the service should be characterized as computer software.

Third, the history of state taxation of computer software may provide a roadmap for the future of state taxation of cloud computing.

Here, as in other contexts, "a page of history" may be worth a "volume of logic," as U.S. Supreme Court Justice Oliver Wendell Holmes Jr. once wisely observed.

In 1976, the first state supreme court to consider the taxability of computer software, which was then embodied in tangible magnetic tapes, held that its sale did not constitute a sale of tangible personal property. In that case, the Tennessee Supreme Court reasoned that what was sold was "information" and that the magnetic tapes transferred were simply "a method of transmitting … intellectual creations from the original to the user" and that it was "merely incidental" that the intangible information was transmitted by a tangible medium.

Other courts, however, focused on what was in fact delivered. In determining that a sale of computer software delivered via magnetic tape constituted a sale of tangible personal property, for example, the Vermont Supreme Court observed that the tape could be "seen, weighed, measured, and touched ... ." The court rejected the taxpayer's argument that the result should be different because the taxpayer might have acquired the same programming in a different manner that would have led to different tax consequences.

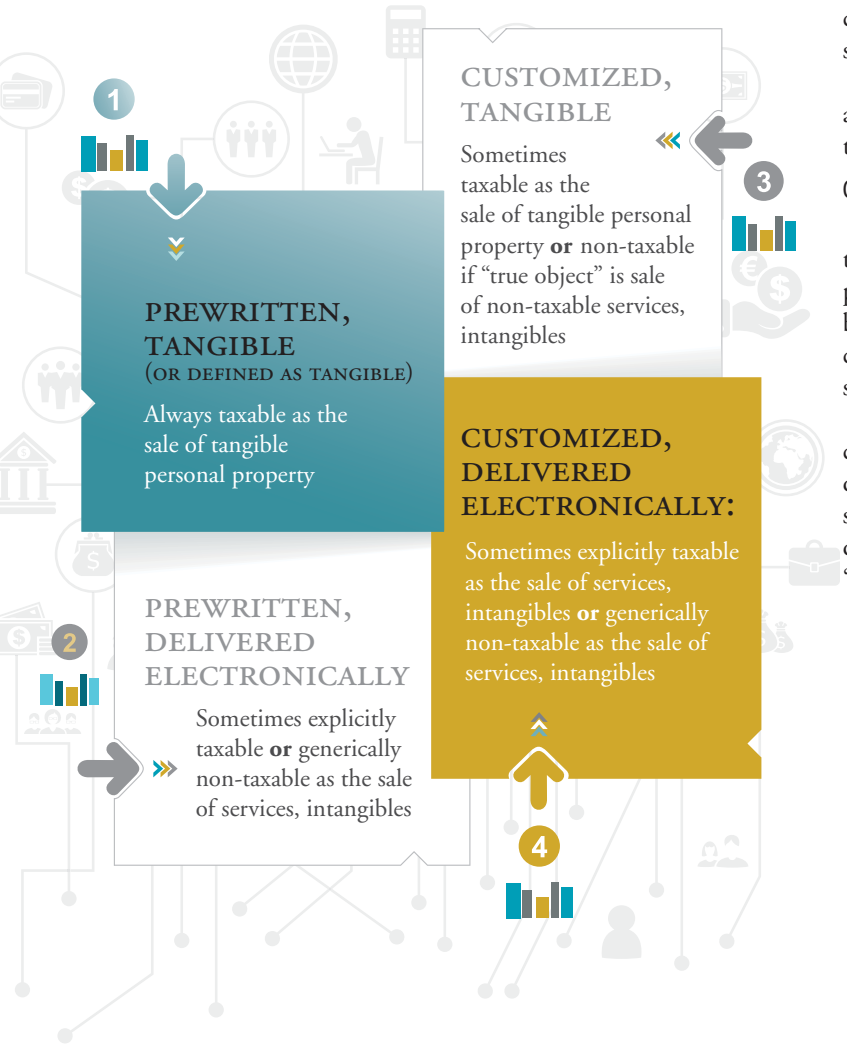
As state law and jurisprudence evolved, some state taxing regimes drew a distinction between "canned" software (i.e., pre-packaged or off-the-shelf software) and "customized" software (i.e., software created to meet the needs of a particular customer).

Every state now taxes prewritten software, at least if delivered in tangible form, but many states exempt customized software as non-taxable services or intangibles. When prewritten software is delivered electronically, some states tax it – indeed, they often define electronically delivered prewritten software as tangible personal property, although other states tax electronically delivered canned software without pretending that it is tangible.

If software is characterized as tangible personal property (whether or not it is in fact tangible), familiar tax consequences ordinarily follow. It will be taxable, like all tangible personal property, unless specifically exempted from tax, and its sale will qualify for a sale-for-resale or related exemption if the software is resold or directly used in producing other property for sale.

If the software is not characterized as tangible personal property, it will be taxable only if it is specifically enumerated as a taxable service or intangible, and the availability of sale-for-resale and related exemptions becomes more problematic.

Within this framework, computer software can be placed in one of four general categories, with the following tax consequences:



Insofar as the states approach taxation of cloud computing transactions through the lens of their laws governing the taxation of computer software, this framework may assist in understanding the states' analysis of cloud computing transactions.

Cloud Computing as Canned/Prewritten Computer Software

One of the most puzzling trends in the taxation of cloud computing is how casually state taxing authorities have concluded that certain cloud services constitute canned or prewritten computer software and thus generally are classified as tangible personal property under the state statutes.

All cloud services deliver more than just the use of software – the cloud provider's operating system, servers and other hardware usually are vital to the provision of cloud services. Yet the state taxing authorities that have deemed cloud computing services to be canned or prewritten computer software have done so with little or no analysis of the underlying service offering.

For example, the taxing authorities in Arizona, New York, Pennsylvania and Utah have summarily concluded that various cloud services constitute canned or prewritten computer software.

Even if certain cloud computing services may be characterized as canned or prewritten computer software, they may not be taxable in some states if they are delivered electronically.

Cloud Computing as a Taxable/Non-taxable Service

If a state does not characterize a particular cloud computing transaction as involving a taxable sale of tangible personal property, the rationale underlying the state's position often will be the state's conclusion that the cloud computing transaction constitutes a service. The question then becomes whether the service is taxable or not.

The Texas Comptroller has addressed a variety of cloud computing transactions on numerous occasions in order to determine whether they constitute taxable "data processing" services under Texas law. For example, the comptroller has determined that each of the following cloud services constituted "data processing:"

- voice recognition software provided over the Internet that turns clinician dictations into formatted draft documents.
- access to a website design center that allows a customer to design, provide and test content, and to have administrator functions.
- a Web application used to record and manage business transactions, from customer relationship management to enterprise resource planning.
- a Web-based reporting system that allows customers to enter data from remote locations and retrieve reports from customers' offices.
- application software that, upon a customer entering a SKU (used to identify the item purchased or sold) along with one or more addresses, provides a corrected address, taxability information, and properly calculated taxes.
- an Internet-based application that reads information contained in a communication (such as a fax, letter, voice call, email, etc.) and generates a summary report.
- a Web portal to facilitate the exchange of information between insurance carriers and their insurance agents.

Connecticut subjects "computer and data processing services" to sales tax. The phrase includes "providing computer time, storing and filing of information, retrieving or providing access to information, designing, implementing or converting systems providing consulting services, and conducting feasibility studies." Accordingly, a legal ruling determined that online data storage services were subject to sales and use tax.

Other states have concluded that certain cloud transactions constitute non-taxable services, based largely on the determination that they involve the sale of services rather than the sale of tangible personal property. Once that determination has been made, the sale of the cloud computing service, like the sale of most services in most states, is not taxable because there is no enumerated taxable service classification into which the cloud computing transaction falls.

DOES CLOUD COMPUTING INVOLVE A TAXABLE "SALE" OR "USE?"

Cloud computing can raise difficult questions as to whether the transaction in question constitutes a taxable "sale" or "use."

A "sale" for sales tax purposes is typically defined as "[a]ny transfer of title or possession, or both, exchange, barter, license, lease, or rental, conditional or otherwise, in any manner or by any means whatsoever, of tangible personal property for a consideration."

Assuming that a cloud computing transaction involves "consideration" for "tangible personal property," there may be a question whether there is a "transfer of title or possession."

One of the most perplexing issues with respect to sales and use taxation of cloud computing transactions is the determination of where the sale or use occurs, the "sourcing" issue.

For example, on several occasions, the Tennessee Department of Revenue concluded that a service that allowed customers to access software remotely over the Internet did not constitute a "sale" because there was no "transfer."

On the other hand, the New York Department of Taxation and Finance concluded that the access of a taxpayer's software by its customers constitutes a "transfer of possession" because customers gain "constructive possession" of the software and have "the right to use, or control or direct the use" of the software.

The Utah Tax Commission similarly determined that fees received for "Web services" constituted a sale because the company at issue "in substance grants subscribers the right to use the Company's proprietary software under a lease or contract."

Even if no "transfer" occurs, one might consider certain cloud computing transactions to constitute taxable "licenses," "leases" or "rentals" of tangible personal property.

For example, the Arizona Department of Revenue has characterized hosted software transactions as "leases" or "rentals" of tangible personal property.

The Wisconsin Tax Commission has likewise suggested that sale of application services may constitute the lease of tangible personal property.

WHERE DOES THE SALE OR USE OCCUR?

One of the most perplexing issues with respect to sales and use taxation of cloud computing transactions is the determination of where the sale or use occurs, the "sourcing" issue.

Recall that most states that have determined that a particular SaaS/hosted software transaction is subject to sales or use tax have done so on the theory – and fiction – that the transaction constitutes the sale of tangible personal property, based on the determination that the transaction involves canned or prewritten software, which is treated as tangible personal property.

Location of the Server

Several states have determined that hosted software transactions should be sourced to the location of the server on which the hosted software is stored.

For example, prior to a change in the law, the Utah State Tax Commission concluded on several occasions that sales of hosted software should be attributed to the state where the server that housed the software was located.

In a Tennessee ruling, the Department of Revenue concluded that although the granting of a license to use computer software constituted a taxable "sale," a taxpayer's remote access of software located on a server outside of Tennessee was not taxable by Tennessee.

Determining the source of sales of cloud computing services by reference to the server on which software is located has its advantages.

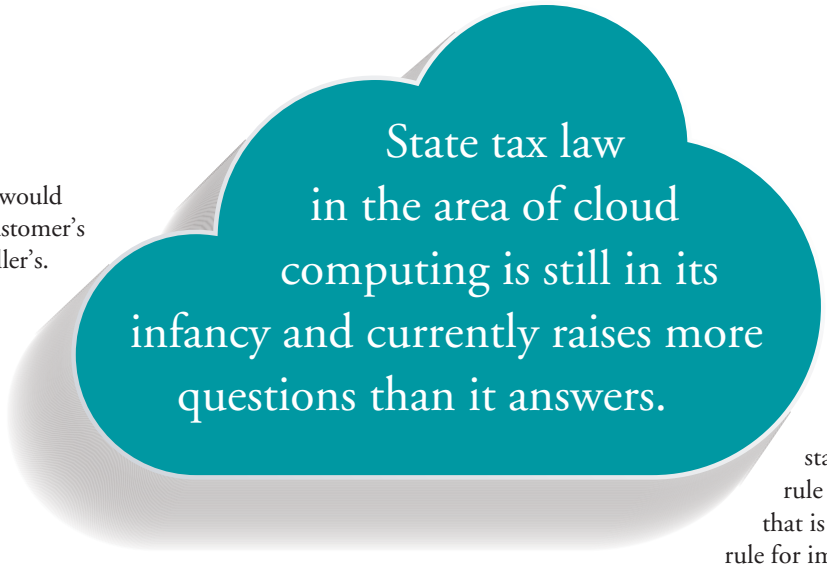
First, any serious issue over whether the seller has nexus with the state will probably be avoided if the seller has tangible personal property in the state (e.g., a server).

Second, the location of the server is likely to be known by the seller.

Third, the location of the server may be a single location, at least with regard to a particular customer.

Collectively, these features tend to support the "location of the server" regime from the standpoint of administrative ease, although, as we have already observed, the "single location" assumption may be problematic because of the widespread use of multiple servers in cloud-based applications.

Whatever its administrative advantages, however, the "location of the server" regime makes no sense from a tax policy standpoint, assuming that the retail sales tax should reflect the destination principle.



The destination would ordinarily be the customer's location, not the seller's. The location of a server (or other hardware of the seller) is likely to correspond to the customer's location only in unusual circumstances and is thus a poor choice for attributing sales of cloud computing services, aside from its administrative benefits.

Accordingly, in that context, the sourcing issue is a difficult one in large part because the application of the traditional rules for determining where a sale of tangible personal property occurs can be awkward at best when applied to cloud computing.

Traditionally, sales of tangible personal property are sourced to their "destination," which normally means the place of "delivery" or where title passes. However, when software or hardware is accessed remotely, where delivery occurs is not self-evident.

Two different sourcing regimes have emerged among states with respect to cloud computing transactions: location of the server on which the software is located and location of the user.

Location of the User

A number of state taxing authorities have attributed hosted software transactions to the location of the customer.

New York has considered the source of hosted software sales on several occasions. In each case, the Department of Taxation and Finance determined that the situs of the sale was the location of the customer's employees who used the software. In the event that the customer's employees who used the software were located both in and outside New York, the department concluded that tax should be collected based upon the portion of the receipts attributable to the customer's employee-users located in New York.

Utah enacted a law addressing the source of sales of computer software when there is no transfer of a copy of the software to the purchaser. Such sales are generally sourced based upon "an address for or other information on the purchaser if (a) the address or other information is available from the seller's business records; and (b) use of the address or other information from the seller's records does not constitute bad faith."

A Utah letter ruling addressing the sale of hosted software summarized this law as providing that the locations of sales are based on the addresses of the purchasers. Guidance promulgated by the Arizona Department of Revenue likewise reflects the view that fees derived from sales of hosted software should be sourced to the location of the consumer.

Just as the "location of the server" regime had its advantages and disadvantages, so the "location of the user" regime has its advantages and disadvantages, although they are largely the "flip side" of the server regime.

First, from a tax policy standpoint, the customer-location rule reflects the destination principle that is widely accepted as the appropriate rule for implementing the retail sales tax and other consumption taxes.

Furthermore, sourcing hosted software to the customer's location would result in equivalent treatment between cloud computing and transactions involving the sale of prewritten computer software in tangible form.

There is no policy justification for taxing our purchase of say, tax compliance software that is delivered on a disc (or, indeed, downloaded onto our computers) at our locations while not taxing our purchase of an "online" version of the same tax compliance software, which involves the use of hosted software in the "cloud."

Second, at least in circumstances in which the customer owes use tax and is responsible for and likely to be compliant with its own tax obligations – namely, in the Business to Business (B2B) context – the customer will be in a position where it can source the tax to its proper location, which it is likely to know.

Nevertheless, the "location of the user" regime is not without its own problems.

The seller might not have the requisite information to determine the purchaser's location, particularly if the "user" for purposes of the sourcing rule is the location of the ultimate user rather than the purchaser.

Furthermore, even if the seller has the requisite information about the purchaser, if the seller has no nexus with the state, tax collection of Business to Consumer (B2C) transactions relying on purchaser compliance is likely to be no more effective in the cloud computing contexts than in other contexts.

"Taxing honesty" has not proven to be a winning tax strategy.

CONCLUSION

State tax law in the area of cloud computing is still in its infancy and currently raises more questions than it answers.

As the law matures, many of these questions will no doubt be resolved, ideally in a way that reflects sound tax policy and administration.

If that goal is going to be achieved, it is essential that the state tax questions raised by cloud computing be resolved within a meaningful analytical framework.