

*Is a  
Cloud  
ERP Solution  
Right for  
You?*

**By Spencer Arnesen, CPA**

There's been a lot of hype recently about how cloud software solutions are the wave of the future. In the consumer environment, you can use applications in the cloud to download and listen to music from Apple; watch movies from Netflix, Amazon, or Hulu; or use a cloud-based e-mail address such as Gmail, Hotmail, or Yahoo! Mail. The cloud is also making significant headway in the corporate world.

Over the past two decades of providing independent software selection consulting, my company has seen many technology changes. The cloud is now at the forefront of these changes. For example, we've seen cloud software for customer relationship management (CRM), such as Salesforce.com, Microsoft CRM, and more, and Human Resources (HR)/payroll, such as ADP, Ultimate Software Group, PDS, and more, become widely accepted and implemented by our clients. Now we're seeing a high level of interest for enterprise resource planning (ERP) software in the cloud because almost every client is at least considering a cloud ERP solution.

Is cloud ERP right for your organization? Despite the media barrage, the reality is that cloud ERP is right for some organizations, while on-premises ERP software best fits the requirements of others. This means that if you're looking to replace your ERP software, you now have another evaluation point to consider as you move through the software selection process.

This article will help you identify the information you need to gather so you can objectively evaluate whether a cloud ERP solution is right for you. We'll look at how the cloud is shaping up in the ERP market, define how ERP vendors are approaching the cloud, identify security and cost considerations, and outline the general pros and cons of both cloud and on-premises ERP implementation.

## What Is the Cloud?

Although there have been numerous articles about this "new technology" in an array of publications, the cloud is actually just another software delivery method. Though technology has advanced significantly over the last 40 years, this approach to using software is reminiscent of the old service bureau days in the 1970s where companies would outsource computing power on large mainframes. It's interesting to see the full-circle evolution of enterprise software from being outsourced, to in-house implementation, and now going back to an outsourced model again.

Before we look at what's happening with the ERP vendors in the cloud, we need to define the three ERP software delivery methods:

**1. On-Premises Software.** This is the traditional method of implementation where you buy the software license and install the software on your in-house hardware. Your internal IT staff maintains the software and handles upgrades. In some cases, you can outsource support of the software to a third-party IT service provider even though the software is installed on your hardware.

**2. Hosted Software.** This is an outsourced model where you buy the software license, but the hosting (including all hardware), maintenance, and upgrades are handled by a third-party company. In the early 2000s this model was called application service provider (ASP). Hosted software is a single-tenant scenario. In other words, you own the software and have dedicated servers that run your specific solution that you access via the Internet. You have full control over the software and can upgrade or not as you choose.

**3. Cloud (also known as Software as a Service).** The cloud model is similar to the hosted model except that it's a multitenant scenario. This means that the cloud provider will put many different companies on the same software and servers, with each company's information separated by security. The software vendor handles all hardware, maintenance, and upgrades, and the system is accessed through the Internet. While you can configure the software for your organization, the ability to make more company-specific customizations that affect the source code may be limited because the vendor has to maintain the software for many different customers. Also, you're required to upgrade when new updates are released so the vendor can keep all of its customers on the same version.

It's important to note that, at the current time, some ERP vendors' marketing materials claim they have a cloud solution when they really offer a hosted solution or a single-tenant solution in a hosted environment, which is a common strategy for traditional vendors in the process of moving to the cloud.

## How ERP Vendors Are Developing Cloud Software

Depending on the history of the software vendor and product, there are different approaches to developing a cloud-based ERP solution. The vendors can be divided into two main groups:

**1. Traditional ERP Software Vendors.** These are

vendors that have been providing ERP software for many years in the traditional on-premises manner and are in the process of developing hosted or cloud solutions as the market moves to a cloud environment. They're doing this in one of two ways: modifying their software technology to fit a cloud model (which is the direction Microsoft Dynamics is going) or building a separate cloud solution from the ground up (which is what SAP did with Business ByDesign). In general, the on-premises ERP software providers have mature functionality but have varying levels of cloud technology offerings.

**2. Cloud ERP Software Vendors.** These are newer software vendors, such as NetSuite, Workday, Intacct, Acumatica, Plex, and others, that have developed a cloud solution from the ground up. These companies are in the process of building functionality and require an Internet connection to access the system. Though some of them may not have a large installed base at the present time, they don't have to support older versions (like the traditional ERP vendors) because all clients are maintained on the latest version.

A number of cloud ERP companies have entered the market over the past few years that have been built by veterans of the traditional on-premises ERP market and are making a new start. They include Workday (former PeopleSoft employees), FinancialForce (former CODA employees), and Acumatica (former Solomon employees). For example, Workday is repeating a deployment strategy that worked well for PeopleSoft in the 1990s, which is to start with an HR/payroll solution and then develop a financial/ERP software solution by targeting sectors such as healthcare, higher education, government, services, and manufacturing.

## State of the Cloud ERP Market

As I mentioned earlier, ERP solutions continue to mature as time passes, but here's the state of the cloud ERP market as of the beginning of 2013:

**1.** In general, cloud ERP vendors are still building out functional capabilities as compared to traditional ERP vendors that have spent decades developing their systems. We've found that, at the time of this writing (January 2013), there's a tradeoff between deeper functionality and cloud technology. This functional gap is narrowing rapidly, but you should do a thorough functional review when evaluating cloud ERP solutions.

**2.** Some cloud ERP vendors are taking a hybrid approach to development by using a cloud engine such as Salesforce.com to jump-start their development and

building their solution on top of this engine.

**3.** On-premises vendors are still in the process of modifying their technology to serve a cloud environment. For many of them, timing to release a cloud solution will depend on their approach. Some vendors are working on modifying their solutions, which is the faster development scenario, while others are building cloud solutions from the ground up, which will take more time but allow them to start fresh with the latest technologies.

**4.** At this time, the majority of cloud ERP installations are in smaller companies because they have basic functional requirements, typically don't have a large investment in IT infrastructure, and have relatively few users. This is changing as acceptance moves up-market and larger companies implement cloud ERP solutions.

**5.** The cloud vendors are able to implement faster than on-premises vendors because their solutions are simpler and they don't usually offer the sophistication or flexibility that on-premises vendors do.

## Security Considerations

One of the biggest impediments to the adoption of the cloud model in the ERP space is concern for security. Reports of security breaches of credit card and personal customer data at large online companies have contributed to this concern. The good thing is that, at this time, we aren't aware of any specific case where sensitive data was exposed from a cloud ERP provider. Still, companies have been concerned that putting financial and operational information in the cloud increases the possibility of exposing sensitive data to hackers and outside entities.

To address this concern, cloud vendors have put significant resources into improving the security of their systems. Many cloud ERP vendors are adopting compliance with Statement on Standards for Attestation Engagements No. 16 (SSAE 16), "Reporting on Controls at a Service Organization," which replaced Statement on Auditing Standards No. 70 (SAS 70), "Service Organizations." This attest standard developed by the American Institute of Certified Public Accountants (AICPA) includes requirements for in-depth audits of internal controls over data and network security, backup and restoration procedures, and system availability. Because cloud ERP vendors can't afford to lose data for their clients, their focus on security is typically much higher than if you were to set up security for an in-house/on-premises solution. Nevertheless, the strategy for maintaining security varies by vendor, so be sure you review the security policies of the cloud ERP

vendor before signing the service level agreement (SLA).

For larger organizations that want to take advantage of the benefits of cloud technology but are still concerned with regulatory compliance, security, and control issues, there's a growing trend to form a "private cloud." This involves a single company or group of companies with common requirements that set up a cloud to deploy software solutions that are accessed only by that private group.

## Cost Considerations

Cloud vendors claim that companies will realize significant cost savings by using cloud solutions. But whether that's true for your company requires an individual cost analysis. Moving to a cloud ERP simply means that you're moving cost from an in-house expenditure to an outsourced expense, which is similar to buying a car (on-premises and hosted) vs. riding a city bus (cloud). This also has an impact on the financial statements because instead of setting up a capital asset for on-premises ERP that's depreciated over time, companies can expense the annual service fees of a cloud ERP provider.

The cost savings that cloud vendors tout comes from the fact that the initial up-front license fees are lower and that many internal costs can be eliminated to support the ERP system. These internal costs include IT infrastructure, hardware, and the time required for personnel to support the on-premises ERP system and install periodic upgrades. The actual cost of these items varies widely by company, so you'll need to look at the specific internal cost for your company to determine how much savings you could realize by implementing a cloud ERP solution.

Let's look at the main components of external (out-of-pocket) costs for implementing an on-premises solution vs. subscribing to a cloud solution.

### On-premises Software Cost:

- ◆ Software License (One-time cost—based on a concurrent or named user model.)
- ◆ Software Maintenance and Support (Annual cost—typically 18%-25% of the software license cost.)
- ◆ Implementation Services (One-time cost—typically one to two times the cost of the software license, and it includes training. You may also have implementation services for upgrades, which may occur about every three to seven years.)
- ◆ Hardware (One-time cost—frequently costing only 5% of the total cost of the software, implementation, and periodic upgrades.)

- ◆ Maintenance and Support Personnel (Annual cost—either outsourced or in-house personnel to maintain the system.)

### Cloud Software Cost:

- ◆ Software Subscription Fee Modules (Annual/monthly cost—based on the modules or areas of functionality used.)
- ◆ Software Subscription Fee Users (Annual/monthly cost—based on the number of named users that will be accessing the system.)
- ◆ Implementation Services—Implementation Cost (One-time cost—typically one to two times the cost of one year of annual subscription fee.)
- ◆ Support (Annual cost—similar to on-premises software with different levels of annual phone and software support.)

Keep in mind that a major upgrade may be required with an on-premises scenario, usually between years three and seven. Depending on the software you select and the specifics of your implementation, this upgrade can be easy with minimal impact on your organization, or it can be costly and disruptive. On the other hand, cloud vendors don't have this issue because all customers are automatically upgraded with every release (whether they want to upgrade or not). These upgrades usually aren't as difficult because the vendor handles most of the upgrade activities for all of their customers at the same time. Make sure that you discuss the impact of upgrades when you go through the software selection process. A good way to get additional information in this area is to conduct reference checks by asking current customers about the impact of upgrades on their organization.

In working with our clients, we've found that the initial cost to purchase the software license and implement a cloud solution generally is less than the initial outlay for an on-premises solution. But the ongoing annual fees the cloud vendor requires are typically higher than the annual maintenance fees of purchasing an on-premises license. We recommend that, at a minimum, you do a five-year cost comparison that clearly identifies both the internal and external costs for both options.

If you have cash flow issues, moving to a cloud solution may be helpful because the up-front cost is lower and payments are spread out over time. If your needs dictate an on-premises ERP solution, you should explore software lease options that let you implement on-premises yet have a cost and payment structure that's spread over time, similar to a cloud payment plan.

## Cloud ERP Pros and Cons

In general, cloud ERP vendors have the latest technology and are currently building new functionality into their offering. They don't have the baggage of supporting an installed base with old versions and can be nimble in their development. Because many cloud solutions aren't as functional or as complex as the on-premises vendors and limit software customization, implementation can be faster. Internal cost also is lower because you don't have to buy server hardware or have significant technology infrastructure.

On the other hand, because the software is less mature, you may have to wait for key functional upgrades to become generally available.

Probably the biggest drawback of a cloud solution is that you're completely dependent on the cloud vendor. If you or the vendor loses connection to the Internet, if you miss your monthly or annual payment, if there's a natural disaster, or if the vendor goes out of business, you could lose access to the system. The SLA that you sign with the cloud provider will dictate the terms of the agreement for the ERP service. Make sure that you carefully review how the vendor will support you in the event of possible system interruptions, ownership and retention of data, as well as what happens if you choose to leave the vendor's solution. Be aware that leaving a cloud solution is rarely discussed by the cloud providers. In what format will you get your proprietary data? Will the vendor support you as you migrate off their service and implement a different solution?

Now let's look at some of the pros and cons of cloud ERP solutions.

### Pros:

- ◆ It's modern technology with new functionality. The vendor doesn't have to support any old versions of the software.
- ◆ Solutions are faster and easier to implement. Systems

aren't as complex and may be more intuitive and configurable.

- ◆ The first-year cost is lower.
- ◆ There's no hardware or infrastructure cost.
- ◆ It has scalability. You can add or reduce users as your needs change, which works especially well for seasonal businesses or companies on a high-growth path.
- ◆ You're always on the latest release. There are no big upgrade scenarios.
- ◆ You own the data (but not the software) and can leave the vendor at the end of the subscription term.
- ◆ The software is easily accessible anywhere through a browser.
- ◆ The vendors have put a heavy investment in security and backup infrastructure.
- ◆ The vendor provides technical resources.
- ◆ Software fees are expensed rather than set up as an asset and depreciated.

### Cons:

- ◆ At this time, cloud ERP solutions are still building out functionality as compared to the traditional on-premises software vendors.
- ◆ There are many new and small cloud ERP vendors that are entering the market because of the opportunity to start with a fresh ERP solution. Capitalization and viability may be an issue for some of them.
- ◆ The majority of the current cloud ERP users are smaller companies, so some vendors may not have the sophistication or capacity to work with larger, more complex organizations. This is changing because larger companies are now implementing cloud ERP solutions.
- ◆ Though configuration of cloud ERP is available to all customers, major customizations usually aren't allowed so the vendor can maintain the upgrade path.
- ◆ Customers are required to upgrade to the latest version of every release.
- ◆ Annual subscription fees are higher than annual maintenance fees for on-premises solutions.
- ◆ A consistent connection to the Internet is required. If you lose connectivity because of a natural disaster or cyber attack or if the vendor goes out of business, you may have no access to the system or data.
- ◆ Cloud security varies depending on the vendor and is outside your control.
- ◆ You're contractually committed to the cloud ERP vendor for a specified time period.
- ◆ It may be difficult to leave the vendor and migrate

your data to a new system. Though you own the data, the software vendor owns the data structure, rules, reporting tools, and audit trail information to view and analyze the data effectively.

- ◆ Depending on the terms of your agreement, you must keep vendor payments current or you may lose access to the system.

## On-Premises ERP Pros and Cons

On-premises ERP solutions typically have deeper functionality because they're more mature solutions and offer significant modification and customization capabilities to fit unique requirements. The software license and on-premises installation allow you to have more control over the software, which means you can run the software even if you lose Internet connection, decide to stop paying maintenance, or the vendor goes out of business.

On the other hand, on-premises implementations require hardware and infrastructure maintenance, a much larger initial cash outlay for the license and implementation, and you have to implement periodic upgrades. Let's look at some pros and cons of on-premises ERP software solutions.

### Pros:

- ◆ There's deeper functionality as of the time of this writing.
- ◆ There's more flexibility to make company-specific configuration and customization.
- ◆ Installation on proprietary company servers enables use of the software even if you lose connectivity to the Internet, stop paying annual maintenance, or the software vendor goes out of business.
- ◆ Upgrades aren't required—you can maintain older versions. But many vendors will only support the current version and one or two previous versions.
- ◆ Long term, the out-of-pocket recurring annual maintenance cost is lower than the annual subscription cost of a cloud ERP solution.
- ◆ You can implement in a hosted environment that allows you to outsource the hardware and maintenance of the software but still maintain control. You can move from a hosted environment to an on-premises environment.

### Cons:

- ◆ You have to buy and maintain internal hardware and infrastructure.
- ◆ The initial cost for the first year is higher, but lease

arrangements may help with cash flow issues.

- ◆ Flexibility also creates complexity. Configuration and customization require longer implementation time frames.
- ◆ You must plan for and implement upgrades. Customizations may make upgrades more difficult.
- ◆ Many solutions require IT resources (either internal or outsourced) to maintain the system.
- ◆ You must develop, provide, and maintain data security internally. This may include securing equipment, backup facilities, and disaster recovery.

## What's the Answer?

Is a cloud ERP solution right for your organization? The answer depends on resource availability, functional requirements, IT infrastructure, and the total cost of ownership for the software and delivery options at your organization. In our independent software consulting experience, we've found that there's no one-size-fits-all scenario. In general, we've seen that if companies require deep functionality, have specialized requirements that require customization, need to maintain complete control of the software, don't have a reliable and fast Internet connection, and/or have a strong IT infrastructure and support, then on-premises or hosted solutions are most likely to be the best fit. On the other hand, if a company has relatively standard functional requirements, a reliable and fast connection to the Internet, a need to quickly scale up and down the number of users, and/or a desire to outsource IT infrastructure and support, then a cloud solution fits well. Either way, make sure you have someone with experience in software licensing, hosting, and cloud agreements review the contract documents prior to signing an agreement to protect your interests in the contract.

In the future, ERP in the cloud will mature and gain significant market share, but on-premises ERP solutions won't disappear. The bottom line is that companies now have multiple viable ERP implementation options, so you should make an objective evaluation of both cloud and on-premises/hosted ERP solutions to make the best decision for your organization. **SF**

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