

Is Cloud ERP Really Cheaper?

A Simple Guide to Understanding the Differences Between Cloud and On-Premise Distribution Software

This guide attempts to outline all of the principal considerations that go into the question of whether or not you should move your server and ERP software to the Cloud. From a cost perspective, the definitive answer is "Yes." Cost-savings aside, many additional benefits exist.

In today's complex technological environment, small and medium size distributors are asking themselves whether or not they should move their hardware and Enterprise Resource Planning (ERP) software to the "Cloud." There has been much written about the Cloud, but most small business owners are still unclear about what this means, and struggle to work through all the pros and cons of this question. What is clear is that Cloud ERP deployments are growing very quickly and taking share from traditional on-premises deployment solutions. This trend is more pronounced for the larger and more sophisticated companies, but is rapidly gaining traction at the lower end of the ERP market, too. This trend is indicative of some of the cost, operational flexibility, and ease of use advantages that the Cloud has to offer, and that savvy distributors should explore.

What is the Cloud?

The term Cloud refers to a public or private network of computing and storage devices accessible generally over the Internet.



What Kinds of Cloud Offerings Are Available?

Cloud offerings can be for infrastructure or for software. Several vendors (e.g., Amazon Web Services, Citrix, GoDaddy, RackSpace) offer infrastructure (i.e.,

computing, storage) over the Cloud. Cloud infrastructure allows small distributors to purchase computing power and/or storage that they then access by connecting to it over the Internet. Instead of purchasing a new server, for example, the user can just sign up for a contract term and rent the use of a server. All the settings, configurations, operating system updates, maintenance and upkeep of the server are done by the vendor. The user simply enters an Internet address to access and use the server. The user typically pays for the use of the server on a monthly basis over an agreed contract term.

Once a business moves its servers onto the Cloud, the next step is to move its ERP software to the Cloud. With Cloud ERP software, the ERP software vendor installs its ERP software on the Cloud server and takes care of the maintenance and upgrades of the software. As a result, the user always has access to the latest version of the ERP software, including all enhancements and new features that the ERP software publisher makes available from time to time. The user accesses and uses the software over the Internet. The user doesn't purchase a copy of the software program but rather pays a monthly subscription to the software vendor to use the software.

Why Even Consider Cloud Solutions?

Despite all of the recent focus on the Cloud, many small business owners don't understand why they should even consider moving to the Cloud. Moving to the Cloud can be thought of in two parts: outsourcing the distributor's infrastructure (i.e., servers and storage) to the Cloud and then on top of this moving the distributor's web-architected ERP software to the Cloud. The case for Cloud infrastructure or Cloud ERP software is essentially the same. **It comes down to cost benefits, lower upfront outlays, flexibility and the ability to scale up or down easily, and ease of deployment and use.** Set against these benefits are various concerns that one hears about Cloud ERP offerings, including: costs, lack of ownership of the software, ability to customize the software, security of the user's data and other concerns. Many of these concerns are not really valid and reflect a lack of understanding of Cloud offerings.

What Creates the Cost Savings for Cloud Infrastructure?

A Cloud vendor such as Amazon Web Services has huge scale and standardization efficiencies that bring down its per unit costs of servers or storage in a way that someone who purchases one server cannot even come close to matching. A Cloud services vendor purchases vast quantities of standardized servers and storage devices, and is therefore able to negotiate costs with the hardware manufacturers that are far below retail prices. In addition, Cloud vendors are able to take advantage of server virtualization, which means that the Cloud services vendor does not need a single server per task as this would result



in very low utilization levels for every given server. Instead, the servers are all virtualized (using VMware or Citrix or other products) which means they can be efficiently partitioned and optimally utilized. Some estimates have the ratio of virtual server to physical server (i.e., if each distributor had its own server) in the 5-7 times range. As technology improves, virtualization will help achieve even greater server efficiencies.

Aren't Cloud Servers More Expensive Than Purchasing My Server?

Distributors who ask this question are not properly factoring in all the costs of ownership. To compare "apples to apples", a distributor needs to account not only for the upfront cost of the server but also its usable life. Many distributors make the mistake of assuming that the server they purchased has an infinite life. In practice, given the increasing pace of technological advances, the average life of a server is about 3 to 5 years depending on the intensity and demands of the application.



Another common mistake distributors make is to ignore the cost of maintenance. As technology advances have accelerated, the number of interoperability and systems settings, remote access settings, network protocol settings, security settings, and other options have increased exponentially. In addition to the server settings, a distributor has to worry about interactions with the distributor's switch, router, firewall and external ISP (Internet Service Provider) requirements. The complexity is huge and growing. To build and maintain one's own hardware and network these days requires factoring in the cost of an IT department or at least many hours of time with an external IT consultant. There is also the hard-to-quantify cost of having one's system - and by extension, the whole business - down, and having to scramble to find the external IT consultant to get the system back up. By moving to a Cloud server, a distributor outsources all of this complexity to the Cloud services vendor. The distributor doesn't have to worry about the server the firewall, the network, the router or anything else, but instead only accesses a public URL (web address) to get onto its server.

What is SaaS and How Does This Relate to Cloud ERP Software?

SaaS is an acronym that stands for Software-as-a-Service. In a SaaS deployment, the software is delivered as a service - which means it is accessed through the Cloud and is generally billed on a subscription basis. Customers using the software really only use it as they would a service without any upfront capital expenditure investment. There are some contract requirements, but in general, a distributor on a SaaS ERP solution can terminate and move to another software solution at any time.

What are the Savings with Cloud ERP Software?

In a Cloud ERP software implementation, the software vendor achieves significant efficiencies and cost savings by managing a single version of the software, which can easily be supported, maintained and upgraded centrally rather than on multiple end-user on-premises systems individually. With Cloud ERP software, the ERP vendor has to support a single version of the software rather than multiple different versions. Similarly, it is much more efficient for the software vendor to manage one upgrade which gets released to all users than to manage multiple end-user systems on a variety of different releases. These efficiencies can then be passed on by the ERP software vendor to the distributor in the form of cost savings.

As with Cloud infrastructure, distributors often fail to take into account all the costs of owning ERP software. If a distributor owns its ERP software, it has to factor in the costs of upgrades and the costs of support for old versions of the software - which can be expensive. Also unless the user upgrades regularly, the distributor has to factor in the costs of not having access to the most current features and functionality. These days, losing sales to Amazon Supply, losing out to competitors that have a cutting edge CRM (Customer Relationship Management) system, or not being able to access the efficiencies of scanner-based warehouse operations and fulfillment, to name a few areas, can be substantial. Cloud ERP software offerings can cut out many or all of these hard-to-evaluate costs.

What are the Other Financial Benefits of Cloud Solutions?

With a traditional on-premises solution, a distributor incurs the upfront capital expenditures associated with buying hardware and servers, setting up a network and buying software. In contrast, with Cloud solutions, the distributor incurs a monthly operating expense for hardware and software. In effect, the Cloud software, offered as a SaaS solution, turns what would otherwise be start-up capital into operating expenses. The lower upfront outlays can reduce the early-stage financial risks for a growing company. For a fast-growing business, capital is often scarce and better employed with a higher return in growing the business rather than being tied up in servers, network infrastructure elements, and software, etc. The outlays for technology that run your business are substantial and, at the end of the day, are a requirement (but not the driver) of your business' success. You succeed because you know the market, you know your customers, you know how to provide the customer service your customers need, these are your success factors – not in tying up hard-to-come-by capital in technology.



What does it mean to get Automatic Software Updates with SaaS?

Most software users today recognize that software updates are a fact of life – even if only from having to deal with constant Windows updates. With a SaaS model, the distributor automatically gets software updates and can choose whether or not to take advantage of each enhancement. SaaS users value the fact that they don't have to worry about staying abreast of, scheduling, paying for, and managing upgrades of their software. With SaaS, the distributor always has access to the latest version of the software with all the latest features and enhancements. Staying current gives the distributor access to the most recent market developments which are reflected in the software. There are many examples of new market developments and improvements such as CRM (customer relationship management) functionality that SaaS users were introduced to and took advantage of sooner than other distributors.

However, some distributors insist that they want to be able to control their software upgrade process. Often, this is driven by the distributor either not having the time to deal with upgrades or having had a bad experience with an upgrade and not wanting to risk the possible disruption of an upgrade. This is a legitimate issue; however, the likelihood of disruption is much, much lower with a SaaS model since the software vendor rather than the distributor manages all the updates. Moreover, with SaaS the system is always current and gets the most recent release rather than having to be upgraded from an outdated version of the software that may introduce issues. Understanding this, most distributors would agree that if upgrades were delivered seamlessly without disruption and the distributor can choose whether or not to take advantage of an enhancement – then there is no down-side and a lot of up-side to SaaS solutions.

What about the Concern of Not Owning My ERP Software?

Many distributors are concerned about the idea of not owning the ERP software that is crucial to running their business. Many distributors have an emotional concern that their business could go down if they don't own and therefore, control their software – this is not a valid concern. The ERP software vendors are in business to have distributors use their software. They have every incentive to continue to update and support the software whether a distributor owns it or not. Indeed, one could argue that an ERP software vendor is more likely to keep the software current, up to date, fix bugs and add new features and functionality if the ERP software vendor knows that the distributor can terminate and move to another software package at any time. In addition, ERP software has become very complex and the range of third-party technologies and protocols that an enterprise application has to work with are very extensive and constantly evolving. As such, owning its ERP software doesn't really help the distributor in the event that the ERP software vendor is either unable or unwilling to support

and/or enhance the software.

Can Cloud Software Be Customized?

Many distributors that have extensive existing customizations are very wary of moving to a cloud ERP solution. In general, customization doesn't really allow a distributor to take full advantage of all of the benefits of a cloud ERP offering. However, it is not necessarily the case that you can't customize a SaaS ERP solution. Most well written ERP solutions today offer many options to configure and tailor the solution that can accommodate what users believe to be their custom requirements. If the standard configurations don't capture the user's needs, many ERP vendors are often willing to add another flag and switch to capture the user's requirement. Also cloud software doesn't necessarily have to be multi-tenant and so a customized solution may be able to be addressed in a non-multi-tenant environment. Going too far down this path though, does undercut some of the benefits of cloud software.

It is also a very worthwhile exercise for a distributor to challenge its own assumptions that its business practices are truly unique and need to be addressed through software customization. While some businesses are indeed unique, many are fundamentally very similar to other business in the same industry. Some of these perceived unique processes are simply a reflection of history rather than processes that have to be done in that particular fashion. In many of these cases a change in the distributor's business workflows or practices can produce a better result, can be done easily and avoids the need for software customization.

What about Operational Flexibility?

With a Cloud solution, a distributor has the ability to easily scale up as its business grows. Adding servers is a much simpler more straightforward undertaking in the Cloud than with an on-premises solution. If your business grows 40% in a year, you don't have to buy hardware on the assumption that you'll keep up this growth for the next five years and run the risk of getting it wrong – you can simply turn on another cloud server this year and another next year and so on. Also in an economic downturn, Cloud infrastructure can be easily downsized without significant expense unlike an on-premises solution.

With Cloud software, a distributor can be implemented substantially quicker than with an on-premises model. This ease of deployment is a significant benefit of a SaaS solution. Another key benefit of the SaaS model is that it makes it



substantially easier and less expensive for distributors to take advantage of functionality enhancements.

What about Security?

Another concern that distributors raise is the issue of security. There are some (erroneous) perceptions that having your software and data on a cloud server is



somehow less secure than with an on-premises server and an owned ERP software solution. Once you allow customers and/or other users to access your system over the Internet, you introduce security concerns. You will have these security concerns even with an on-premises system unless you completely lock it down to all external access. Unfortunately, to accomplish this, none of your customers would be able to access your system over the Internet – which in this age of Amazon Supply is not competitive.

Your IT consultant would not be able to log in remotely to your server or network to troubleshoot issues – which would substantially increase the cost of your outside IT services. Your sales personnel wouldn't be able to access your system remotely from the road – which would limit their productivity. You won't be able to allow a guest access to your network, and no laptop would be able to leave your premises, connect to any other network, then be brought back and connected to yours. This just doesn't make sense for most businesses today.

So if you have security issues anyway, is an on-premises system more secure than a cloud solution? In all likelihood, probably not. Cloud environments are extremely secure, as they have dedicated security teams and threat detection systems and have to complete annual security audits. In effect, by moving to a Cloud solution, the small or mid-sized distributor without a large security team is out sourcing the IT security concerns to data center experts.

What about Potential Loss or Compromise of Data?

There is an incorrect perception that because data is physically stored on an on-premises system that it is less likely to be lost or compromised than if it is stored on some Cloud server. The key contributor to data loss or data compromise is improper data backup and storage. Whether you have an on-premises system or a Cloud solution, you will have to back up your data. Interestingly, it is frequently the case that distributors with on-premises systems are likely to have weaker data backup procedures than those with Cloud deployments. With on-premises systems, the data backup procedures are often manual and/or have manual process elements to them – even though they don't have to be. It is these manual processes that are usually the cause of data loss. In contrast, with a Cloud solution, the backup process has to be fully automated, and thus forces

better backup.

What about Disaster Recovery?

As with data, there is a perception that an on-premises system is less prone to being taken down by some disaster. This is clearly not the case. Data centers have multiple redundant servers and the ability to switch out servers on the fly, multiple redundant connectivity paths, and multiple power systems that are engineered to withstand natural disasters. Data center outages and down-time statistics are typically very low. It would be highly unusual for a standalone distributor to be able to afford or justify the same degree of protection.

Conclusions and Recommendations

When you think about a Cloud solution, it is important that you think of it not just on the basis of its convenience. While it is definitely easier and quicker to deploy, it is much more than that.

1 The Cloud model is a different technology paradigm that already has long passed the tipping point of adoption – for the last 5 years, Cloud and SaaS deployments have been accelerating at the expense of client-server models. Microsoft is delivering all its Office applications in the Cloud – so is Google. These are consumer-facing applications that are usually the last to move, and you can see what has happened even there. Most industry analysts project that client-server models will disappear from the mainstream in a few years.

2 **There are big cost savings built into SaaS solutions both on the hardware and on the software side.** Cost savings, including total cost of ownership, startup costs, and cost of IT resources can be substantial. Cloud providers have reduced their cloud server prices continually over the past few years - and, there are huge savings in eliminating continued IT maintenance and hardware support costs. If you have no IT staff today, there is no need to hire any. If you have good IT staff on board, refocus them to take on more strategic, value-add activities than routine maintenance. Take advantage of big savings in outsourcing the costs of upgrades and maintenance of the ERP software to the software vendor. Consider the intangible but real benefit of taking advantage of new software functionality in your business much sooner with a SaaS model.

Put your capital to better use. The financial benefits of not having to pay upfront for the purchase price for the hardware, the IT networking costs and the software are meaningful. For large and small companies capital is often better deployed in growing your business than by investing in hardware, software and an IT department. Many distributors have learned the hard way that once established IT departments quickly become self-perpetuating.

- 3 The operational flexibility to scale up or down easily are very important. If you ask a distributor that has just gone through a server and network upgrade – you’d get immediate agreement on this point. And exacerbating this is the fact that server and technology cycles are getting shorter and shorter which means these transitions will become more frequent.
- 4 If you decide to go with a SaaS solution, don’t make it harder for yourself to stay current by relying upon excessive customization. Most good software has multiple different configurations that you should explore. Customizations that require the software vendor to modify its code and then have to continue maintaining that code should be avoided. Most times, if you decide you need to customize to support your business processes, chances are that your business processes could be improved.

Yes, Cloud ERP Really Is Cheaper

In conclusion, Cloud and SaaS technology is here to stay – it has displaced the older client-server technology paradigm largely because of all of the benefits it brings, including its lower overall cost. Some of the concerns raised about Cloud and SaaS ERP solutions may be valid, but are often overstated and, more often than not, based on erroneous assumptions and an incorrect understanding of Cloud technology. These concerns include lack of control, inability to customize, security, and other issues. We’ve addressed most of these points, and on balance, the issues and/or disadvantages seem to be outweighed by the advantages of a SaaS environment for ERP.