



Cloud ERP – The Benefits, Risks, and Pervasive Hype

Introduction

In the business software market, software sellers are increasingly making their applications available in the 'Cloud'. This paper mostly explores the potential benefits and pitfalls for those seeking to purchase *Cloud ERP* access.

There are also large potential benefits to ERP sellers in offering *Cloud ERP* as compared to on premise ERP. This is especially true for those offering a *Cloud ERP* in which customers share a common application (called 'Multi-tenant'). In general it is significantly easier for the ERP seller to manage and update a multi-tenant cloud environment, instead of hundreds or thousands of individual installs. **This ERP industry self-interest is significantly driving the Cloud phenomenon and is a large reason behind the hype about *Cloud ERP*.** Hype from the sellers and from many analysts that are effectively paid to sing the same song. As this paper will explain, the hype is often not tightly aligned with the best interests of the buyer.

This white paper is **not** anti-cloud ERP. It is a paper about the realities of *Cloud ERP* and intends to educate readers on the broader options they have—for which most are unaware.

Cloud ERP Attributes

Before evaluating or purchasing access to any *Cloud ERP*, it's important to understand the following information. *Cloud ERP* typically has the following attributes:

- IT infrastructure: ERP application hardware and infrastructure managed by others.
- Application upgrades and patches: ERP application maintenance managed by others.
- Access options: ERP application accessed remotely through a web browser.
- Cost and terms: ERP access offered through a periodic subscription or lease cost—no software licenses are owned. Commercial terms reflect this 'utility style' offering.

An ERP that meets all four of the attributes above and offers no other options for ERP access is called a 'Pure-play *Cloud ERP*' in this white paper. However an ERP

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arguably should be considered *Cloud ERP* depending on what portions of these attributes interests a specific buyer.

The four attributes above are simple enough to understand, however, there are assessable benefits and risks with each of these attributes. This paper will explore these and address the excellent options buyers have to pick portions of 'Pure-Play *Cloud ERP*' offerings that make sense and reject the rest.

Now further details on the four typical *Cloud ERP* attributes.

IT Infrastructure: ERP application hardware and infrastructure managed by others: Possible hardware hosts might be the ERP seller, another professional hosting firm, or the ERP buyer's corporate IT function. If the ERP hosting hardware/infrastructure and management practices are sound with any hosting entity, the ERP user will experience little to no difference.

Application upgrades and patches: ERP application maintenance managed by others: Application hosts might be the ERP seller, another professional contractor who specializes in hosting the particular ERP, or the ERP buyer's corporate IT function, directly or with contract management from the ERP seller or knowledgeable contractor.

Access Options: ERP application accessed remotely through a browser: An ERP does not need to be purely browser-based to be accessed remotely. Portions can be accessed through a browser, through thin-client or other techniques. Some involved functions may not effectively supported by a browser interface, although this list is getting smaller as web-interface development tools mature and Internet speeds increase.

Cost and terms: ERP access offered through a periodic subscription or lease cost: Pure-play *Cloud ERP* is nearly always offered this way and these sellers have significant technical and financial barriers to any other arrangement for reasons explained later in this document. However *Cloud ERP* that can be offered in a single instance (in which the buyer does not share with other companies) can allow access through a perpetual license that is owned by the buyer.

The following sections explain major factors that can affect how a particular buyer of ERP will interpret and evaluate the four attributes above and if they proceed to purchase access to some form of a *Cloud ERP* offering.

Day-to-day Access to *Cloud ERP*

A businesses' ERP is a critical application supporting critical processes. If a modern and well-implemented ERP is suddenly 'unavailable,' it will effectively shut down the business and may cause permanent damage to the business's viability. Buyers should obviously be diligent in containing aspects of the 'ERP deal' that jeopardize or confuse legitimate and defensible access to and control of the ERP. This is especially true for *Cloud ERP*, as factors that endanger legitimate buyer access and control are significantly higher than with perpetual ERP licenses owned and typically run by the buyer.

This section lists the key areas to consider when arranging proper buyer's access and control with *Cloud ERP*. It's important to understand the sellers of *Cloud ERP* have many options and little risk in granting more control and options to the buyer. However in doing so, they increasingly give up the one-sided commercial controls and options to raise access prices as they wish. Therefore a buyer has to push quite hard to get matters corrected for a reasonable purchase arrangement.

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Cloud ERP Performance: 'Cloud' ERP offerings frequently claim unlimited scalability of their application to meet the various demands of customers. 'Scalability' means that ERP users can add as many new users as they like and the application will remain fast and dependable. Stated or implied in this claim is that the ERP user who purchases and maintains their own hardware have fewer options and more obstacles for broad and instantaneous scalability. This point of view has some merit, as the Cloud-based ERP seller plan for hundreds, if not thousands, of different companies using the ERP and this volume holds planning and management advantages and economies of scale. However, effective application speed and dependability can be achieved by those who directly control their ERP hardware and infrastructure (on-premise or not) with professional planning and management.

Furthermore, *Cloud ERP* sellers have no incentive to have over-capacity, but make hardware and software (operating systems, virtualization, and other infrastructure software) investments to support reasonable customer needs, not unlimited needs. The pure-play cloud offerings would therefore have limitations if demand exceeded the plans or there were other issues with the *Cloud ERP* provider.

IT Infrastructure Risk - Less is More: A key *Cloud ERP* attribute is that the computer hardware holding the ERP application and data is managed by another entity. Bandwidth and the speed of light make the location of the ERP hardware insignificant on first look. However, increased distance does introduce more IT and communication infrastructure, all of which is subject to compromise due to cyberattacks, natural disaster, terrorism, failed commercial enterprises and more. The application should therefore be hosted closer, not farther.

Further, to effectively run an ERP in the 'Cloud', many business and utility entities are involved to hopefully deliver fast and dependable Internet access for a specific ERP installation. The risk of managing complexity with multiple independent business involved should be assessed by ERP buyers as they contemplate *Cloud ERP* and a hosting partner.

Commercial Terms: *Cloud ERP* sellers tend to have the attitude that they're selling a monthly high-tech service such as internet access or web hosting. Contracts governing access to *Cloud ERP* often reflect this attitude with a stunning disconnect from the realities of the commercial relationship and the critical commercial controls a buyer should legitimately possess when arranging dependable access to ERP. In most *Cloud ERP* contracts, the providers can 'turn off the switch' to the *Cloud ERP* for effectively any alleged breach. Practically, the ERP sellers would not 'turn off the switch' as a first recourse, but the presence of this option creates an intimidating environment in which the buyer has no effective options but to bow to the will of the seller. With typical commercial terms, the buyer has no easy way to exert themselves in a commercial dispute—except the radical step to select, pay for, and implement another ERP. [See our white paper on ERP contracts.](#)

Innovative and respectful sellers of *Cloud ERP* will take the above issues seriously and should find ways to offer a commercial relationship that protects buyer's legitimate interests. Unfortunately, many *Cloud ERP* sellers are immersed in a culture of one-sided commercial relationships in which the buyer has no serious options but to bow to the will of the seller. Many buyers have blindly accepted this type of commercial relationship, which is one key reason this situation has become worse in recent years. However, new buyers are becoming increasingly

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aware of the commercial terms risk of the typical *Cloud ERP* offering and are pushing back. At Engleman Associates, we see this with most clients when they're educated about the risks and their options. Enough of this pushback will be the basis for eventual fundamental changes to the *Cloud ERP* industry direction and attitude.

Back-up Options to Access the ERP: As described above there are reasons the ERP might not be available to the ERP users, perhaps for extended periods. Because of this, it would be prudent to have a replication server on-site so operations can continue if the *Cloud ERP* is unavailable. It's not technically difficult for sellers to build such a back-up process, but it's rarely done and in our experience never proactively offered by the pure-play cloud vendors. The key reason is the pure-play *Cloud ERP* culture believes they offer a utility or service for a subscription price. Their business development approach asserts that 'Cloud Computing' is the obvious way of the future and completely dependable and safe, so the buyers don't need to think in terms of such back-up options. Also the existence of such a back-up plan weakens the one-sided control the *Cloud ERP* sellers have created and want to protect, as significant revenue and ERP company valuations are tied to it.

The items to consider in arranging dependable access to *Cloud ERP* are somewhat involved as this section points out. And in the aggregate these items are important to work through and for your company to develop a point of view on acceptable risk and to have the risk items seriously addressed by the *Cloud ERP* sellers. This line of questioning should uncover options the sellers have to mitigate or remove some of the concerns and the buyer may find a subset of *Cloud ERP* sellers that take such matters more seriously.

Cloud ERP Costs—Initial and Ongoing

Cloud ERP is usually offered in a subscription or leased model. In our view this is mostly because the sellers believe:

- They offer a service and not a product. This is reflected in the commonly used alternate name for Cloud business applications, which is 'Software-as-a-service' or SAAS.
- The periodic ongoing payment will be more attractive to buyers than the typically larger upfront initial amount for perpetual ERP licenses (note: Cloud offerings may also have large upfront costs).

Notwithstanding the typical subscription or lease arrangement offered in *Cloud ERP* offerings, the *Cloud ERP* sellers do offer, or can be competitively pushed to offer, other arrangements—including perpetual licenses in the 'Cloud'. A buyer has compelling reasons to own the ERP licenses, regardless of who hosts the ERP. Key reasons for direct ownership of ERP licenses are:

- **Control:** Provides an increased level of control to the application and critical business data if there's a commercial dispute (especially if not hosted by the ERP seller but another commercial entity or the buyer).
- **Cost reduction options:** Ongoing cost of upgrades and support can usually be reduced or stopped if the buyer determines these items are losing value or the ERP user is planning to migrate away from the ERP in the foreseeable future. With *Cloud ERP*, periodic payments are mandatory

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until the buyer stops ERP usage. And because they are mandatory, there are little to no reasons for the seller to discount—but instead raise prices.

- **An asset:** The ERP license is owned and has value—even if accessed in the Cloud. This point could be material for a future company buyer who generally understands that with the subscription approach the buyer owns nothing and has tenuous commercial controls.

Establishing a target cost of a Cloud subscription

Notwithstanding the benefits listed above to own ERP licenses, a buyer may still agree to a subscription pricing arrangement, especially if they mitigate some or all of the various 'pure-play *Cloud ERP*' weaknesses detailed earlier.

Whether Cloud or on-premise ERP, they're usually offered in functional modules and user types. Therefore, the process to determine what functionality and quantity of user types is needed is generally the same, regardless of the delivery model. To establish a target subscription or lease price it's usually helpful to conduct the following process:

1. Establish aggressive pricing objectives for ERP and database perpetual licenses and maintenance ([see our paper on this topic](#)). Add the original license objective costs with 10 years of the objective maintenance costs (with a 5% maintenance cost escalation per year).
2. Estimate costs over ten years to purchase, maintain, and replace hardware and IT infrastructure for an on premise ERP, services and internal staff to support, and any other related costs that are believed would be incurred, that otherwise would not be if using a *Cloud ERP*.
3. Add the costs from items (1) and (2) above and divide by 120 months. This results in a monthly amount that intends to include all costs that effectively covered in a *Cloud ERP* offering.
 - a. Note: The ten year (120 months) timeframe is used because it's a reasonable time cycle on which companies change ERP. In reality many companies would use ERP over a longer period of time and if such a longer time frame is used, this will lower the monthly offer price to subscribe to *Cloud ERP*.
4. The amount calculated in step #3 is the monthly amount that reflects the cost of the single buyer. The ERP seller and hosting entity typically maintain hundreds of companies using the ERP and have serious economies of scale. The numbers calculated in step #1 and #2 above will provide a good sense of the portion of costs that are hardware and support. This portion is what is subject to the economies of scale and is the basis for a further discount being placed on the number calculated in step #3. 25% is not unreasonable in most cases.
5. The resultant amount from step #4 tends to be considerably less, often up to 50%, than the list price subscription or lease payment for a multi-tenant *Cloud ERP* access plan. The cost difference would be even greater if a buyer wants to access the *Cloud ERP* in a single-tenant mode which the cost estimate developed in steps #1 to #4 actually should reflect.

Be aware that most pure-play *Cloud ERP* offerings will lead with generalized statements that the cost to access their ERP is less expensive than classic on-

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premise ERP. This is rarely true over the life of the ERP usage if the onsite ERP is purchased correctly and maintained effectively.

The key point of this exercise is that the retail subscription or lease pricing is more easily challenged if there is a defensible method to establish comparable costs with another ERP access approach.

Cloud ERP Development Limitations

Pure-play *Cloud ERP* is typically offered in a shared company environment called multi-tenant. That is groups of customers running from one instance of the software and common hardware and IT infrastructure. This is compared to a single-tenant setup, in which the buyer has their own instance of the software running on their own physical or logical server(s). Compared to a modernized ERP being hosted in a single-tenant environment, the multi-tenant approach usually has limitations in how the ERP can be further configured to meet the buyer's needs.

Most pure-play *Cloud ERP* sellers promise seamless and regular upgrades and fixes to the application. This claim is reasonable as everyone is on the same ERP version with the controlled configuration options and highly controlled application environment. This controlled and standardized environment enables significant efficiencies for the ERP sellers, including tamping down the sources of many problems caused by user's ability to more deeply configure the ERP. This control is the only way a multi-tenant environment can effectively work—at least at the time of writing this paper. This standardization however likely introduces limitations for the ERP buyer who have less options to configure and tune the multi-tenant *Cloud ERP*. To underscore this point, Engleman Associates, Inc. has directly observed many ERP projects in recent years in which a modern ERP was implemented by highly prepared ERP buyers. 'Modern ERP' means it's highly configurable and we have observed a significant need for this configurability to better meet the legitimate functional, workflow, and metrics needs of the buyers. 'Configure' means using the built-in development tools to conduct application enhancements in a development layer that rides over the ERP's native functionality and core code. Development means adding data fields, data tables, modify existing data fields and tables, add and modify forms, creating business logic, creating security rules, and other application adjustments.

Implementation of Cloud ERP

Whether ERP software is deployed in the 'Cloud' or 'on-premise', this has no connection to what effort will be needed to implement the business software (except setting up some hardware and installing the ERP with an on-premise project). The main factors affecting implementation effort are capabilities and complexity of the ERP application, strength of the implementer; and readiness, talent, and capacity of the buyer to lead the ERP implementation effort. Any claims of 'easier implementation' from any software vendor for their *Cloud ERP* solution, if true, can only mean less functionality or fewer configurability options compared to other ERP solutions without such limitations.

Conclusion

Everything is going to the Cloud. So say the pure-play *Cloud ERP* sellers and many of their industry analyst friends. And the ERP sellers that started with on-premise ERP must believe many of their prospects think this, as nearly all have

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created 'Cloud versions' and many have Cloud lingo in their branding. However, as this paper points out, this unquestioned 'Cloud movement' is not quite the nirvana many proclaim and the term 'Cloud' may actually be the more typical meaning of obscurity, danger, and lack of direction. You know, 'Head in the clouds' or 'There are dark clouds of the horizon'. But they also say 'every cloud has a silver lining'. The point of this paper is to highlight the 'silver lining' benefits and point out the problems and how to contain them.

The current negative aspects for how some *Cloud ERP* is sold will likely be phased out over time in favor of more fair default terms. This opinion is based on many ERP selection projects at Engleman Associate, Inc. in which most ERP buyers, once briefed, immediately understand why the 'typical *Cloud ERP* deal' is not good. Most of these buyers do a good job in pushing back to arrange appropriate terms and costs with the finally selected ERP. Having a competitive buying environment is usually quite important to reach desired results—as the sellers typically need to see the buyer knows what they are doing and be concerned that the other finalist ERP sellers are potentially delivering on the buyer's objectives.

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