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# Understanding ERP Deployment Choices

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# Abstract

The rapid evolution of global business has changed the way companies are approaching the deployment of ERP. Today's need for agility and responsiveness has increased the demand for deployment choices; the constraints of early ERP systems—monolithic, highly customized, and expensive to implement and maintain—have become increasingly pronounced in markets where change is accelerating, and the ability to respond nimbly and effectively to change is a strategic imperative.

ERP systems were once deployed as monolithic systems running in local data centers. Implementing ERP was a landmark event: rare, disruptive, and often feared as an unavoidable hassle. In the current business environment, such a jolting and inflexible event is unwarranted. Today, there are a multitude of ERP deployment strategies: single-system, cloud-based, operational, peer, hybrid, and multi-level approaches. Advances in ERP system design, the advent of cloud computing, and the ongoing evolution of business are among the key factors driving this proliferation of choices.

Companies now need to evolve quickly, which means being able to move some or all business operations to an existing or new ERP instance quickly and inexpensively, anywhere in the world. Small companies are increasingly likely to become multi-national as emerging markets take on larger roles in revenue growth. Larger companies continue to optimize and innovate through organic development, as well as through mergers and acquisitions.

In this increasingly competitive environment, the ERP deployment choice is a significant advantage for companies seeking an agile response to constantly changing and often-volatile market conditions. In particular, cloud-based ERP systems are increasingly seen as an effective means for companies to economically deploy new ERP or expand IT operations as their commercial reach broadens globally.

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# ERP Deployment Choice

The intrinsic complexity of ERP systems, combined with widely varying business practices and rapidly evolving technical considerations, can make the choice of a deployment model difficult or confusing. Cloud computing offers those implementing ERP with a range of options when deciding on deployment. The three most critical aspects of choosing a cloud ERP deployment strategy:

• Licensing

• Management

• Isolation

Software as a Service (SaaS) is typically, though not always, a specific combination of these aspects: subscription licensing, vendor management, and shared resources.

**License**
Perpetual or Subscription

**Management**
Customer or Vendor

**Isolation**
Separate or Shared

*Critical Aspects of Cloud ERP Strategy*

## Licensing

Approaches to licensing software have changed dramatically in recent times. For many years, ERP vendors have offered to host ERP systems for their customers using a business model called Application Service Providor (ASP) or Hosting. ASP is essentially the same as a traditional software project, except that the software is installed on machines at the vendor rather than the customer. Typically, for a monthly fee the vendor maintains the system and manages backups, upgrades, and other procedures. Like on-premise deployments, ASP agreements involve licensing software perpetually, which means the customer has a permanent right to use the software, even if the agreement for the vendor to host the solution ends. Subscription licensing means that the customer only has the right to use software for a set duration, after which the subscription must be renewed. Subscription licenses avoid substantial up-front costs for licenses, as well as (typically) annual maintenance charges for receiving updates. Subscriptions consolidate the license, maintenance, and many other costs into a monthly fee. Perpetual licenses for large solutions such as ERP have traditionally been significant capital expenditures, amortized over several years. Subscriptions require a smaller cash commitment and are usually funded as an operating expense, which lowers the barrier of entry for many companies. However, for systems such as ERP that have a very long project lifecycle (i.e., seven or more years), subscription license costs may eventually overtake the cost of a perpetual license.

| | On-Premise | Managed Hosting | SaaS Single-Tenant | SaaS Multi-Tenant |
|---|---|---|---|---|
| License Owner | Customer | Customer | Vendor | Vendor |
| Maintenance Fee | Yes | Yes | No | No |
| Hosting Fee | No | Yes | Yes | No |
| Expense Type | CapEx | CapEx/Opex | OpEx | OpEx |
| Data Isolation | Physical | Physical | Physical | Logical |
| Customization | Yes | Yes | Yes | Ususally Limited |
| Upgrades/ Updates | Customer | Co-Managed | Vendor | Vendor |

## Management

Managing a production ERP system in a larger company generally requires dedicated staff and very good IT skills. ERP systems are obviously mission-critical; therefore, maintaining the system and having disciplines and procedures for backing up data are extremely important. ERP systems licensed on-premise place the system maintenance burden squarely on the customer. Managed hosting (ASP) shares maintenance responsibilities: the vendor manages tasks requiring physical access to the hardware (such as backups), while the customer installs upgrades and customizations.

Subscription-based systems put the management and maintenance responsibility solely on the vendor. This is by design, because cloud-based solutions share software and infrastructure across customers, which keeps costs down and system reliability up. Subscription customers have less control of how frequently the software is updated or when changes are applied, but vendors provide better services because they can improve the system almost continuously.

## Isolation

Sharing resources keeps service costs down and makes it easier for vendors to improve offerings over time. However, sharing data is obviously not desired. Cloud ERP vendors ensure that data is well partitioned, carefully delineated to avoid having data belonging to one system tenant (i.e., customer) seen by another. Partitioning data on shared hardware and software is the typical practice for subscription-based solutions running on multi-tenant systems.

ERP customers in regulated industries, such as medical products, may require certifications of their ERP systems. In these cases, system changes have to be audited and managed according to strict requirements. Consequently, it is impractical for the ERP vendor to retain full control of the system.

Cloud ERP vendors generally offer a "single-tenant" version of the solution, which runs on dedicated hardware or on infrastructure highly isolated from other tenants. Having a single-tenant option is also useful for ensuring that performance remains high during peak processing. Single-tenant subscriptions carry a higher price to offset the additional resources required of vendors; sometimes this is charged as a separate monthly premium.

## Portability

Providing the opportunity to migration from one deployment model to another (such as moving from cloud to on-premises), or even within a deployment model (such as migrating from single tenant cloud deployment to multi-tenant cloud deployment) is central to the concept of application portability. Because business needs and technical preferences can vary wildly over the life of a typical ERP deployment it's preferable to choose an ERP solution that provides the ability to easily 'port' or migrate from one deployment model to another. Understanding in advance any limitation of this portability is critical, as some vendors restrict your deployment to just a single model.

# Conclusion: The Advantages of Flexible Deployment

By utilizing an ERP solution that is available as on-premise or cloud-based, your organization can leverage choice for agile response in today's rapidly changing business environment.

What this means for today's businesses:

- The ability to deploy ERP on-premise, in the cloud, or in any combination

- Greater adaptability in fluid, dynamic, and always evolving value networks

- Faster deployment of solutions, faster upgrades of implemented solutions, staying current with technological advances

- Enhanced support of business growth; improved ability to scale up or out to meet emerging opportunities and minimize risk

- Powerful yet intuitive tools for easy configuration to specific business needs

Increasingly, companies will find cloud-based ERP an excellent option. Smaller companies implementing their first ERP system will find subscription SaaS the most cost effective way to deploy a world-class ERP solution. Larger companies that are expanding operations world-wide can use cloud ERP to replicate business processes consistently around the globe.

The growing momentum of cloud-based ERP is well documented. Most companies are beginning to realize that cloud-based ERP typically provides higher reliability and lower management costs than on-premise deployments, and the speed and ease of cloud-based deployments stand in stark contrast to the somewhat daunting memories of early ERP deployment. What's more, cloud-based ERP allows organizations to better leverage their IT assets on strategic projects to drive revenue growth.

All in all, yesterday's ERP is not today's; flexible deployment, much of it cloud-based, will be the hallmark of ERP systems in the immediate and near future.

## About Epicor

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