Practical Cloud Computing Today—
Private Cloud ERP in a Hybrid Cloud Deployment

An Oracle Accelerate for Midsize Companies briefing—November 2011
Executive Overview

Cloud computing has been a hot topic for almost a decade, but adoption of cloud-based solutions—especially enterprise resource planning (ERP)—is still not widespread.

Cloud computing is simply a usage-based IT deployment model for companies that don’t want to acquire and maintain the resources needed to host—and often, manage—their IT applications and related infrastructure.

Midsize companies in most global markets are currently in a major cycle of ERP replacement driven by economic conditions and increasingly complex operating requirements. With all the buzz around cloud computing, one would expect to see a dramatic surge in the deployment of cloud ERP.

However, adoption of cloud ERP has stalled due to lingering concerns. Several of these concerns relate to the technical and functional issues associated with cloud solutions in general, such as security and control. Others are worries that are simply associated with any potentially resource consuming IT project.

Oracle’s strategy is to offer a broad portfolio of software and hardware products and services to enable public, private and hybrid clouds, empowering customers to choose the right approach for their unique requirements.

Unlike competitors with narrow views of the cloud, Oracle provides the broadest, most complete, and integrated cloud offerings in the industry.

This briefing focuses on the current ERP cloud computing landscape from the perspective of Oracle midsize customers who have deployed cloud-based ERP when replacing legacy solutions.

Each chose to deploy Oracle ERP in a hosted private cloud as part of comprehensive hybrid cloud strategy—a mix of public cloud, private cloud, and On-premise solutions (see, “Understanding ERP Deployment Models”).

Guided by a new breed of IT management, these companies are realizing the benefits of cloud computing while mitigating or eliminating operational concerns. Primary benefits include:

- The ability to redefine the cost structure of IT to a more usage-based model
- The transformation of internal IT’s role from maintenance functions to more strategic activities
Understanding ERP Deployment Models

Determining the optimal ERP deployment model for a specific organization starts with understanding the options.

THE BASELINE: THE TRADITIONAL ON-PREMISE MODEL

In this traditional model, the customer purchases both the software and the hardware. The software is installed along with the necessary IT infrastructure on the customer’s premises.

Generally, midsize companies contract with the software solution provider or consulting partners to set up the IT infrastructure, implement the applications, and train internal resources for post go-live activities. Often they retain a carefully measured and variable level of contracted services to manage technical functions that don’t require a full-time resource, and to augment internal bandwidth when needed.

TRENDING UPWARD—CLOUD COMPUTING MODELS

Every cloud computing model starts with the hardware installed and maintained off premise, removing that responsibility from the end customer.

In the public cloud model, customers share a common infrastructure. Individual customers do not own the hardware or software licenses but instead pays ongoing fees based primarily on level of usage. Application setup and management services are provided for a fee by the cloud operator. Individual customers typically have a very limited role in application configuration and management. Overall costs per customer may be higher or lower than a traditional on-premise deployment, depending on many variables.

In the private cloud model, each cloud is operated solely for one customer. Each customer owns the hardware and the software licenses. However, since a cloud provider commonly hosts multiple private clouds, the provider can quickly add hardware, personnel, and services as needed. Some infrastructure costs are spread across multiple customers. Each customer decides to what degree they will manage and configure the applications, ranging from 100 percent with internal resources, to completely outsourcing these roles to the cloud provider or a partner.

PRACTICAL TODAY—HYBRID CLOUD DEPLOYMENTS

Hybrid cloud strategies are a blended approach—a combination of private, public, and even on-premise deployments. This combination can vary greatly from one customer to the next, depending on needs and aspirations.

The most successful hybrid strategies are those that effectively take technology out of the decision-making process when additional solutions are being considered. Ideally, business owners can have the ‘best-fit’ solutions without worrying about how they will be deployed.
The Cloud and the Current ERP Replacement Cycle

Companies in most global markets are currently in a major cycle of ERP replacement. Recessionary conditions worldwide influenced many business leaders at midsize organizations to postpone major IT decisions. But some of them can’t wait any longer. The current improved—yet uncertain—economic climate rewards companies that are flexible, agile, and innovative. It punishes those that have stagnated.

Emerging midsize companies compete in the same conditions and for the same customers as large enterprises. For many, the ERP replacement cycle is being driven by the need to replace outdated legacy systems not equipped to handle the demands of global supply chains and multi-currency, multi-country operations.

ERP replacement projects provide a logical opportunity to consider not just new solutions but also new deployment models. IT leaders at midsize companies looking to replace their enterprise applications want new solutions to be better, faster, easier, and cheaper. They also seek to insure that IT resources fully meet the always-changing needs of employees and customers.

Cloud computing is founded on the principles of lower costs, elasticity of resources, decreased time to value, and reduced complexity. These tenets align well with the typical goals of ERP replacement projects at midsize companies. Also, cloud deployment models have matured to a level that most IT leaders are at least talking about them.

from, "2011 State of Cloud Survey", Symantec

All in all, it makes sense that cloud models will be considered in the ERP replacement strategies of some midsize companies. Cloud ERP is most appropriate for companies where business leaders desire to change the cost structure of IT and transition internal IT human resources to more strategic roles.
Cloud Computing Can Transform IT

When midsize companies replace disparate legacy systems with comprehensive cloud-based ERP solutions, the role of internal IT resources must be reconsidered. Chances are, the IT staff has been focused on maintaining the status quo of outdated or inadequate systems.

Once the decision is made to consider cloud-based IT systems, executive leadership needs to make an assessment of organizational readiness:

- With new systems in place, what do we want the role of IT to be?
- How will current resources fit into the new model?
- What is our plan for retraining or reassigning resources?
- What new skills do we need to acquire?
- And perhaps the hardest question to ask: do we have the right IT leadership to guide our company through this transformation?

Midsize companies must bring in new, experienced leadership or challenge existing IT leadership to effectively answer these mission-critical questions.

The larger the IT organization the easier it is to retrain and reassign resources. For companies with smaller IT groups the situation is a bit different. The skills, talents, and learning abilities of each individual must be assessed in alignment with the plan. Midsize companies that switch to cloud-based ERP will almost always radically transform the roles of IT staff. Usually, it involves a shift in mindset from maintenance to enablement.

All hardware issues would now be handled by the cloud provider. The organization would have greater access to managed services—a deep and talented bench of solution experts. This would make it easier to build a team of third-party and internal resources managing applications and middleware. The elasticity of managed services enables the team to accommodate spikes in demand and fluctuations in internal staff levels.

Ultimately, internal IT staff is positioned to become business analysts who match the needs of the organization with the capabilities of the IT solutions deployed.

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“By moving to a private cloud environment hosted by Oracle, we’ve taken our focus completely away from hardware and infrastructure maintenance. We are now internally 100% focused on business process optimization.”
—Gary Marshall, CIO, Taconic Farms
Cloud Computing Changes the IT Cost Structure

As previously defined, cloud computing is a usage-based IT deployment model. Cloud computing changes the structure of IT costs via several essential characteristics:

- **Resource pooling**—the sharing of resources:
  - Physical—including facilities and hardware
  - Human—including a broad range of roles such as consultants, network administrators, database administrators, and applications managers

- **Elasticity**—quick and ready access to human and physical resources that scale up or down based on need

- **Measured services**—costs tied to usage

Just how much these characteristics change the cost structure depends on the choice of cloud deployment model and the degree to which customers contract for services.

Unlike an on-premise model, cloud customers do not invest capital in facilities or hardware for hosted solutions. Depending on the model, software may be purchased or subscribed to. In all models, the customer will most likely contract for human resources to a much greater degree than they would in an on-premise model.

The Oracle customers featured in this briefing purchased ERP software licenses in the same manner as in an on-premise model. Some have also deployed subscription-based public cloud solutions such as Oracle CRM On Demand. Each has considerably changed their IT cost structure via resource pooling, elasticity, and measured services.

All facility, hardware, and technical maintenance activities are purchased via contracted services. Application maintenance and implementation cost models vary with each customer based on which services have been contracted to their hosting provider or a partner.

These customers share the benefits of reduced capital expenditures and more predictable IT costs tied to usage. They also are experiencing higher levels of service than they would be able to deliver with internal resources at a similar cost.

“The cost of cloud ERP is significant. But we are global organization that needs critical IT support 24/7 for 365 days. When you try to translate that need to an on-premise deployment model the cost goes exponentially higher. You can have people on call but will they all have the necessary skills? And what do you do with those people when you don’t need those skills full time?”

—SK Mohanty, Sr. Director of IS, OpenTV
Overcoming ERP Cloud Concerns

The current trend is for companies to experiment first with standalone or ‘point’ cloud solutions purchased by informal buyers without the knowledge of IT. Cloud ERP adoption has slowed due to lingering concerns relating to:

- Security
- Upgrade control
- Industry functionality
- Solution integration
- Competing priorities

However, as the case studies in this briefing illustrate, cloud ERP can be a relatively simple and straightforward deployment option. Each featured customer has overcome cloud ERP concerns by:

- Crafting a cohesive and comprehensive cloud computing strategy
- Choosing a ‘best of all worlds’ approach—
  - Top Tier ERP in a private cloud
  - An overarching hybrid deployment model
- Selecting the appropriate hosting provider and partners

OVERCOMING CONCERNS—SECURITY

Security still ranks as a top barrier to cloud solution adoption. Most experts agree that this concern can easily be addressed.

- “Organizations are not exposing themselves to greater security risks by moving data to the cloud. In fact, an organization’s data is likely to be more secure in the cloud because the vendor is a technology specialist whose business model is built on data protection.”—Elisa Bertino, Research Director—Center for Education and Research in Information Assurance, from Channel Insider

In the United States, the generally accepted source of data center security requirements is the ANSI accredited Telecommunications Industry Association (TIA). Companies deploying public or private cloud ERP must choose a hosting partner matched to their organizational needs. Oracle data centers carry a Tier 4 rating—TIA’s highest.

Additionally, operational security should be addressed via service level agreements with hosting providers and consulting partners to establish standards for avoiding data breach or loss.

Before dismissing cloud computing options for security reasons, IT leaders must ask: could we cost-effectively match internally the security and service level standards of top quality data centers and consulting partners?
OVERCOMING CONCERNS—UPGRADE CONTROL

With public cloud ERP solutions, multiple customers share the same instance of the software. Upgrade policies and requirements vary with each provider but, by design, all customers will be on the same software version. When upgrades are made to that instance, all customers must move to the newer version.

> “The desire to control upgrades has overtaken security as the biggest factor preventing the consideration of <public cloud> ERP.” —from Security Issues in Cloud ERP, www.erpcloudnews.com, Oct. 6 2011

With private cloud ERP, each customer owns a single instance of the software. Therefore, they have the freedom to take each upgrade when it makes sense—the same as if the software had been deployed on-premise.

Private cloud ERP often enables companies to take upgrades more frequently. Midsize companies with legacy on-premise deployments often fall behind on taking upgrades because of the time, money, and resources required. In a hosted model, customers would have greater access to skilled and knowledgeable consulting services who could reduce or eliminate those barriers. Upgrade decisions could then be based strictly on an ROI analysis of cost vs. benefits.

OVERCOMING CONCERNS—INDUSTRY FUNCTIONALITY

ERP is complex, spanning a wide range of business process requirements. Cloud computing technologies are still in a steep curve of maturation. ERP solutions built strictly for public cloud deployment are in early development stages when compared to established ERP suites that have been evolving for decades.

Growing midsize companies competing in global markets need the same deep and broad capabilities as large enterprises. These capabilities may not be available in public cloud ERP based on each customer’s industry and geographical needs.

> “The biggest customer concern for NetSuite* is a functionality battle. Sometimes [companies] may get so big in an area that we do not have deep vertical functionality.” —Zach Nelson, CEO, NetSuite, “Will businesses opt for SaaS in next ERP lifecycle?”, computerweekly.com, June 4, 2011

Once again, private cloud ERP removes this concern because customers are free to choose Top Tier enterprise applications. They would deploy the same applications in their private cloud as they would if adopting an on-premise model.

*NetSuite is a leading public cloud ERP provider
OVERCOMING CONCERNS—SOLUTION INTEGRATION

Successful global commerce is powered by flawless Business-to-Business (B2B) and Business-to-Consumer (B2C) communication. B2B and B2C interactions usually require applications outside of ERP that are unique to an individual company’s industry segment or competitive differentiators.

IT staff at midsize companies are accustomed to getting things done with limited resources. Integrating disparate applications across diverse deployment models may be the most challenging issue they face.

- “43% of 314 respondents are using SaaS applications. But when we asked them to rate their satisfaction with nine aspects of these apps, deployment simplicity came out on top—and ease of integrating these services with on-premises systems and data sources landed at the bottom of the list.”—InformationWeek Analytics 2011 Enterprise Applications Survey

Top Tier ERP providers build middleware solutions to handle the most complex integration needs of their small, medium, and large enterprise customers. Once more, by deploying Top Tier ERP in a private cloud, customers would be well positioned to leverage those complementary solutions. Additionally, they would have direct access to consulting resources who work with those middleware solutions on a full time basis.

OVERCOMING CONCERNS—COMPETING PRIORITIES

The internal IT resources of companies considering an ERP replacement are typically focused on just keeping things running. They rarely have excess capacity. Their skill sets and experiences are matched to legacy solutions which are often outdated, customized, or Tier 2 and 3 solutions with very limited corresponding talent pools.

- “When IT rates its own performance... Keeping the lights on? Top notch. In providing quality systems and keeping them running, 20% even say they’re excellent. With keeping costs down, it’s a similar story... But it goes downhill from there, as IT teams move away from operational standards and more toward business and innovation goals.” —from, “Outlook 2011: IT Trends to Watch”, analytics.InformationWeek.com

Deploying Top Tier ERP in a private cloud would open the door to a large pool of consulting and operational talent. Customers could match their implementation and managed services needs to the available services of their hosting provider and partners based on internal strengths and bandwidth.

Post go-live, most technology and hardware activities would be handled by the hosting provider. Each customer could retain managed services for application and infrastructure management based on their changing needs.
Taconic Farms: Enabling IT Innovation via Cloud Computing

- Hudson, NY, USA
- www.taconic.com
- ~1,000 employees
- Life Sciences

Taconic recently deployed Oracle ERP, Business Intelligence, and CRM solutions via Oracle On Demand as a major first step toward transforming the role of IT within the organization. Eventually, all of Taconic’s applications solutions—including those of 3rd party vendors—will be on a single framework of Oracle database and middleware technologies hosted by Oracle On Demand. With Oracle responsible for all technology management and maintenance functions, Taconic’s internal IT staff can increasingly focus on providing vision and guidance to business managers seeking business process innovation.

**Strategic Goals:**
- “one company; one set of processes”
- Adopt industry leading practices enabled by SOA applications
- Configure, not customize when leading practices don’t fit business needs
- Transition IT staff from system support and maintenance to a team of IT business analysts

**HYBRID CLOUD COMPUTING MODEL**

**Current**
- Oracle E-Business Suite (ERP) and Daily Business Intelligence Hosted by Oracle (Private Cloud)
  - Technology managed by Oracle
  - Applications by managed Taconic
- Oracle CRM On Demand hosted by Oracle (Public Cloud)
  - Technology managed by Oracle
  - Applications managed Taconic
- Some legacy applications hosted and maintained On-premise by Taconic until capabilities are transitioned

**Long Term**
- Provide end users with a complete library of IT services enabled by a limited number of SOA Applications
- Consolidate to a single Database and Middleware hosted and managed by Oracle in a Private Cloud
- Outsource all IT infrastructure management to Oracle, including integrations to 3rd party solutions
- Manage application configuration with internal IT resources skilled in analysis and consulting

“The cloud is for my hardware provider to figure out. What makes money for Taconic is using the applications. The value proposition for IT is found in our ability to leverage the capabilities of the applications to reorchestrate the business processes - do more things our customers want, while reducing costs, and increasing the speed and agility of doing business.”

—Gary Marshall, CIO
Open TV deployed Oracle E-Business Suite in the Summer of 2008, going live in less than 90 days. The aggressive project deployed 12 different modules, five sets of books, six different order types, and 48 different entities hosted by Oracle On Demand. The IT team took this opportunity to establish a flexible framework for application integration. As a rapidly growing High Technology firm, they need to be able to quickly adopt new solutions that offered best practices, especially in processes that had not yet been automated. The established framework allows business owners to pick the right solution for their needs without worrying about how it will be deployed.

**Strategic Goals:**
- Adopt solutions offering best practices without having to be concerned about deployment model
- Minimize the use of internal IT resources for the deployment and maintenance of enterprise applications
- Focus internal IT resources on strategic initiatives and integration strategies

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**HYBRID CLOUD COMPUTING MODEL**

**Current**
- Oracle E-Business Suite (ERP) hosted by Oracle On Demand (Private Cloud)
  - Technology managed by Oracle
  - Applications managed by OpenTV
- Public Cloud solutions for Payroll, HR, and CRM
- On-premise solutions for non business applications such as file sharing, desk top office products, and engineering applications for a development platform

**Long Term**
- Transition legacy On-premise solutions to best practices solutions with a preference for Cloud based deployments
- Maintain the integration support On-premise

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“**It’s hard for companies with big investments in IT infrastructure to fully leverage the benefits of Public and Private Cloud deployments. The best time to build a flexible framework for Cloud Computing is when a company is just starting out or replacing legacy ERP systems.**”

—SK Mohanty, Sr. Director of Information Systems
**Oracle On Demand**

Oracle On Demand offers a broad hosting and managed services portfolio supporting database, middleware, and enterprise and industry specific applications. We offer a choice of deployment options:
- Remote management of customer On-premise solutions
- Partner hosting and management
- Hosting and management at Oracle data centers

Oracle On Demand has over 440 managed applications customers world wide.

Learn more:

**Oracle Fusion Applications**

Designed from the ground up using the latest technology advances and incorporating the best practices gathered from Oracle's thousands of customers, Oracle Fusion Applications are 100% open-standards-based business applications that set a new standard for the way we innovate, work, and adopt technology.

Learn more:

**Oracle Cloud Computing**

Oracle’s strategy is to offer a broad portfolio of software and hardware products and services to enable public, private and hybrid clouds, enabling customers to choose the right approach for them.

Learn more:

**Oracle Public Cloud**

The Oracle Public Cloud, announced in October of 2011, provides new services that give customers and partners subscription-based access to Oracle’s industry-leading enterprise applications, middleware, and database.

Read the Press Release:

Visit the Oracle Public Cloud website:
[cloud.oracle.com/mycloud](http://cloud.oracle.com/mycloud)
Oracle Accelerate for Midsize Companies

Midsize companies face the same challenges as large enterprises—global supply chains, multi-currency operations, and fickle customers to name a few. But they do so with fewer resources so they need faster, cheaper implementations that speed time to value.

WHAT IS ORACLE ACCELERATE?
Oracle Accelerate—
- is Oracle’s approach to providing business software solutions to midsize organizations

Oracle Accelerate Solutions—
- include Oracle’s enterprise-class software delivered with Oracle Business Accelerators by expert implementers

Oracle Business Accelerators—
- are rapid implementation tools developed by Oracle and its partners to deliver industry-leading practices in low cost implementations

ORACLE AND MIDSIZE COMPANIES
- Over 250,000 midsize companies run Oracle Database, Middleware and Applications
- Over 37,000 midsize companies run Oracle Applications
- 162 Days average time to go live on Oracle ERP Applications

THE ORACLE ACCELERATE DIFFERENCE

Three major attributes distinguish Oracle Accelerate from other enterprise software provider solutions:

Enterprise Class Applications
- Flexible, Configurable, Scalable
- Deep Industry Capabilities
- Foundation for Innovation and Growth

Implementation Simplicity
- Targeted, Fast, Efficient
- Industry Leading Business Processes
- Rapid ROI via Flexible Deployment Options

Expert Partner Ecosystem
- Experienced, Focused, Connected
- Tailored Solutions for Midsize Companies
- Trusted by Thousands of Customers Globally

ORACLE ACCELERATE AND ORACLE ON DEMAND

Oracle Accelerate Solutions and Oracle Business Accelerators are often used by Oracle and its partners to deploy Oracle enterprise applications in hosted environments, both at Oracle data centers and partner hosting facilities.

Find an Oracle Accelerate Solution for your industry and geography: [www.oracle.com/accelerate-solutions](http://www.oracle.com/accelerate-solutions)
Get Involved. Stay Connected. Learn More

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