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OPTIMIZED SOLUTIONS

An Oracle White Paper
July 2013

Increasing the Value of Siebel and Reducing Deployment Risk using Optimal Best Practices

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Executive Overview

Maximizing the value of a CRM solution is dependent upon several factors, including length of deployment, security and encryption capabilities, depth of integration, reliability, performance and serviceability. After implementation, and with growth, there may be challenges related to server sprawl, scalability, high availability and manageability. The right architecture is essential to speed deployment, reduce risk, deliver ongoing business efficiencies, and protect sensitive data cost effectively without performance penalties. The Oracle Optimized Solution for Siebel CRM strikes the right balance. It is a proven, compact, tightly integrated solution that delivers a resilient infrastructure for managing business-critical customer relationship management environments.

Introduction

Oracle's Siebel Customer Relationship Management (Siebel CRM) is deservedly considered the gold standard by which all other CRM packages are compared. Most of its favorable reputation is due to its capacity for customization and functional extensibility in order to match the very specific needs of any company.

However, the sophistication of an advanced CRM solution naturally requires experienced and skilled personnel to properly design, operate, and maintain it. Few companies retain a dedicated architectural staff equal to the unique task of designing a whole CRM solution from hardware configuration to software installation, security evaluation, and operational testing.

So while a CRM suite's power and flexibility is its greatest asset, it can also represent a risk in terms of how long it can take to go from concept to configuration to production.

CRM projects can go as long as five months according to some sources. And it's not considered uncommon for even a small deployment project to go beyond 90 days, just to get the system running in its basic form. These long deployment schedules can quickly erase any efficiencies gained from using CRM.

Furthermore, if CRM is to maximize its ROI, architecture and planning must be immaculate. Every optimization opportunity must be taken. The risk of server sprawl must be minimized, scalability potential must be considered as well as high availability. And all of this must be balanced with an eye for performance.

An often overlooked factor in designing a Siebel CRM system is the amount of customer data retained in the system and the liability such data represents, in terms of both legal liabilities and responsible practices meant to protect the company from exploitation. As a result, the proper hardware, OS or configurations, and how they can work together to increase security and reduce risk are not considered.

Oracle Optimized Solution for Siebel CRM

To address the challenges of deploying and managing CRM solutions, Oracle offers the Oracle Optimized Solution for Siebel CRM, a highly consolidated design based around Oracle's SPARC T-Series servers, the Oracle Solaris operating system, and Oracle's storage technologies..

The fundamental goal of the Oracle Optimized Solution for Siebel CRM is to provide a tightly integrated, reliable CRM package in an extremely compact package without sacrificing performance or flexibility while, at the same time, introducing better-than-default security into the configuration.

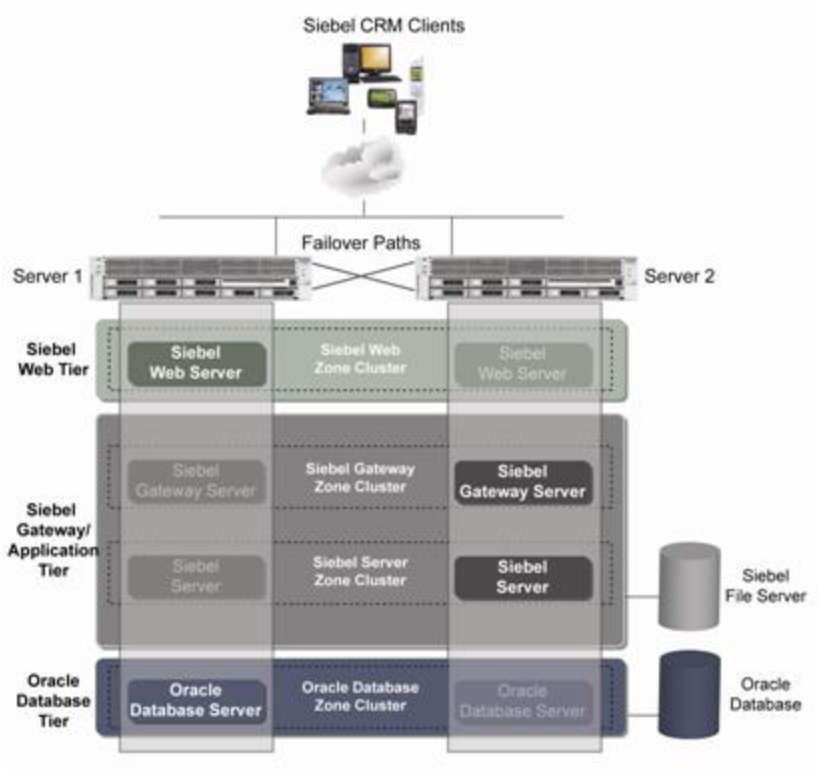

Figure 1. The Siebel CRM consolidated architecture for SPARC T-Series servers optimized for performance and low TCO.

Why Security and Encryption are Critical in CRM

Customer relationship management (CRM) is well understood among IT professionals as an application that rapidly becomes critical to the enterprise. Initially, a CRM installation is usually conceived as a tool for improving business efficiency in some singular, straightforward way. However, as the CRM system operationally demonstrates its full range of capability, the organization becomes increasingly dependent upon it. Large volumes of data eventually get moved over to the CRM systems in support of new, larger projects.

Then comes the sudden, profound realization that all that data contains a substantial amount of proprietary or sensitive information. If improperly configured for security, a CRM system could become a business liability. The very nature of CRM links an organization's prospects, customers, and strategic partners together, but requires sober consideration of issues relating to data privacy, data theft, contractual terms, and legally-mandated standards compliance.

Unfortunately, secured configurations of any enterprise software are frequently considered unconventional, unnecessary, or an impediment to administrative simplicity. Indeed, implementation of security methods, especially encryption, can introduce additional administrative overhead, require expensive additional hardware, prove an impediment for rapid deployment, or impose a massive decrease in hardware capacity.

Common Security Requirements and Their Impact on IT Systems

Below are a few of the most common security requirements and reasons why cryptographic acceleration is an important consideration for meeting these requirements.

Payment Card Industry Data Security Standard (PCI-DSS)

This standard is imposed on those accepting major payment cards and processing credit card data. One of the most overlooked requirements stated in the PCI-DSS standard is the stipulation that remote administrative consoles for managing server applications must use encryption. This seemingly minor configuration can quickly "leech" performance from the server by imposing a fairly heavy cryptographic workload if the administrative console is dynamic or highly graphical in nature. Noncompliance can result in massive fines, and more important, credit card payments can be suspended, with the likely result of a profound disruption in business.

Health Insurance Portability and Accountability Act (HIPAA)

Individual patient health information must be safeguarded against unauthorized access. HIPAA requires the encryption of any data flowing over an open network. Noncompliance can result in prison and a fine up to $25,000 per year.

Sarbanes-Oxley Act (SOX)

Sarbanes-Oxley is a legal mandate requiring all publicly held U.S. companies to adhere to certain guidelines for maintaining the security of financial information. SOX specifies the well-recognized ISO/IEC 27002 information security standard as a best practice for attaining compliance. The ISO 27002 standard advocates extensive use of cryptographic means to secure data. Noncompliance can result in extremely large fines and prison for key executives.

Technologies for Optimizing Security with Siebel CRM

The problem of how to deal with securing CRM data without greatly reducing overall performance is addressed by cryptographic acceleration built into SPARC T-Series servers. SPARC T-Series servers include a special arithmetic processing unit optimized for executing cryptography at full CPU speed. This mitigates performance concerns and eliminates the need for special-purpose equipment.

At the heart of the solution are Oracle's built-in, no-added-cost virtualization technologies — Oracle Solaris Zones and Oracle VM Server for SPARC (formerly known as Logical Domains). These enterprise virtualization technologies provide flexible deployment options and industry-leading operational efficiency. They operate with very little performance overhead because they are integrated with the underlying hardware and the Oracle Solaris operating system. Perhaps most important, Oracle's virtualization technologies are included with SPARC T-Series servers at no additional cost.

Lower Risk Through Integration and Rapid Deployment

Designed with fast service deployment in mind, the Oracle Optimized Solution for Siebel CRM eliminates the risk associated with implementing CRM solutions. Best-of-breed components — Oracle SPARC T-Series servers, Oracle iPlanet server, Oracle Database server, Oracle Solaris operating system, and Oracle Solaris Cluster — come together in the solution to deliver the most integrated and advanced tools for customer relationship management (Figure 1).

Integration for Lower Deployment Risk

Risk is inherent in any datacenter deployment effort. Having the right platform underneath it all can mean the difference between failure and success. Multiple layers of integration in the Oracle Optimized Solution for Siebel CRM take the guesswork out of component selection and configuration to lower deployment risk.

- **Complete package.** Using a complete package that is designed and tested to work together is the best way to minimize risk and ensure availability. Documented best practices ensure components are identified and verified to work together, minimizing the likelihood of errors that can cause unplanned downtime. In addition, IT organizations can take advantage of Oracle Advanced Customer Support Services to fill in any technical expertise gaps or to address specialization required to meet unusual CRM demands or requirements – such as inbound fax handling. Oracle technology experts can further support Siebel implementation and deployment activities following the best practices outlined by the solution.
- **Software consolidation.** In the Oracle Optimized Solution for Siebel CRM, the Siebel Central Services instances, Siebel application servers, and Oracle Database software are consolidated on the system, eliminating much of the integration effort and deployment time typically associated with clustered solutions.
- **Easy serviceability.** When problems arise, they must be able to be resolved quickly. Oracle Optimized Solution for Siebel CRM is designed with serviceability in mind. In-chassis system upgrades, live system board insertion and removal, and well-designed rack architecture ensure IT staff can identify issues and complete upgrades and replacements without impacting running Siebel services.

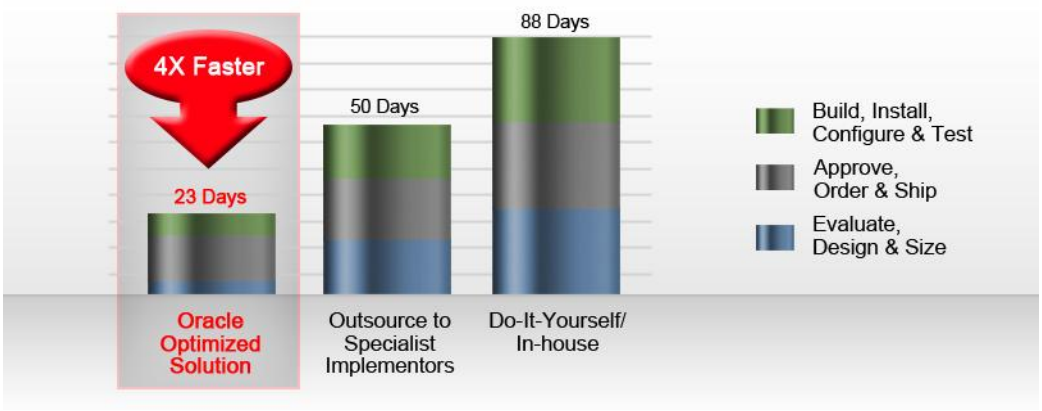

Figure 2. The Oracle Optimized Solution can be deployed up to 4x faster than other methods of implementation.

Full Redundancy for Greater Reliability

Reliability features come standard in the Oracle Optimized Solution for Siebel CRM. Every server in the cluster features automatic recovery with instruction retries, protected memory, data path integrity, and register protection to ensure systems continue to operate. In addition, Oracle Optimized Solution for Siebel CRM provides full built-in redundancy — from compute nodes to storage, network switches to network interface cards (NICs), and power distribution units (PDUs) to power supplies — to support the demands of mission-critical Siebel applications. System partitioning and electrical isolation help prevent issues in one component from affecting other components in the Oracle Optimized Solution for Siebel CRM. In addition, virtualization technologies built into the operating environment enable application consolidation without fear that services will consume system resources or otherwise impact one another. Together, these built-in technologies minimize disruption and deliver the superior availability required by 24/7 Siebel environments.

Reducing Risk Through High Availability

High Availability for Continuous Access

The Oracle Optimized Solution for Siebel CRM offers clustering technologies that can be used separately or in combination to increase the availability of Siebel deployments. Optimized to work with Oracle hardware, these technologies contribute the resilient infrastructure needed for mission- and business-critical Siebel environments and form the foundation for highly available deployments.

- **Hardware failover.** Using Oracle Solaris Cluster, the solution ensures the availability of Siebel Central Services by detecting, isolating, and containing failing hardware components, such as NICs, HBAs, networks, and storage.
- **Siebel application failover.** Agents — software programs that enable Siebel applications to take full advantage of Oracle Solaris Cluster features — specify the actions to be taken should a system or service fail or become unavailable. Agents are available for Oracle Database. For maximum uptime, agents implement automated failover for the primary Siebel application server, Siebel Central

Services, and the Oracle Database tier, as well as failover for other mission-critical production applications.

- **Virtual clustering**. Oracle Solaris Cluster supports virtual clustering, allowing virtual environments to function in the same role as physical servers. Applications that run within dedicated virtual clusters are associated with specific cluster management policies. Agent actions can be layered, such as first trying to restart the service in a different virtual environment before attempting to restart it on a different server. This helps Siebel applications achieve the required levels of service.
- **Database fault tolerance.** Oracle Real Application Clusters (Oracle RAC) is the preferred implementation option to ensure Oracle Database availability for mission-critical Siebel workloads. Oracle RAC supports the transparent deployment of the Oracle Database across all four servers within the Oracle Optimized Solution for Siebel CRM solution, providing database fault tolerance in the event of hardware failures or planned outages. When Oracle RAC is not implemented, the single instance Oracle Database can be made highly available using Oracle Solaris Cluster.

High Availability and Consolidation Versus x86

It has become a common, almost default, practice in these days of tightly constrained IT budgets to consider x86 as the basis of a new CRM project or a CRM consolidation initiative. Of course, the idea is to reduce hardware costs, but it is also because of the familiarity IT architects have with VMware, the most common virtualization product, as a tool for reducing operational overhead.

However, this approach is no guarantee of cost savings when deploying CRM. There is the matter of hidden costs in terms of space, architectural restraints, and flexibility.

VMware has become an extremely costly virtualization proposition. Its many value-added companion products, such as vCenter, the tool used for making HA possible for virtual machines, adds more licensing costs per physical footprint if deployed in a true HA fashion. For instance, in order to emulate the geographical scale of the Oracle Optimized Solution for Siebel CRM, it would be necessary to place dedicated, redundant vCenter servers at the production and disaster recovery datacenters, thus negating a significant advantage of virtualization.

Further complicating matters is the nature of operating a mission-critical Oracle Database (Oracle RAC) as a virtual machine. While it is a natural fit for Oracle virtualization technologies (since the hardware, OS, and virtualization technologies are harmonized to work with the Oracle Database in this fashion), it's not a recommended or endorsed configuration for x86 platforms, where many unknowns can be introduced.

But most problematic is the tying of server power to licensing. This licensing scheme essentially forces the user to repurchase the inherent capability of the server, making the cost per VM much more expensive and locks VMs to hardware.. The cost-saving flexibility of virtualization is now mitigated with the consideration of cost and licensing compliance.

Conclusion

The Oracle Optimized Solution for Siebel CRM offers key Oracle technologies that maximize the value of Siebel in business-critical, 24/7 environments. This compact, predesigned, pretested solution takes the guesswork out of component selection and configuration. It lowers risk through up to 4x faster deployment, multiple layers of integration, high availability for continuous access, and full redundancy. A complete package based on best practices, the Oracle Optimized Solution for Siebel CRM delivers better-than-default security without sacrificing performance or flexibility.

Optimizing the Value of Siebel Using Key Oracle Technologies
July 2013

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