

Product Brief

Proven Value with the Oracle Database Appliance

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Abstract: *The Oracle Database Appliance offers a simple to use, affordable solution for departmental deployment and small- to mid-sized organizations. To confirm the benefits of the Oracle offering, ESG interviewed a customer who recently deployed the appliance. As a result of implementing the Oracle Database Appliance, their experience with the tools and features were met and exceeded the expectations of the organization, both in cost savings and in better overall use of IT manpower.*

Overview

While Oracle has long offered Oracle Exadata to serve the needs of larger enterprises, the Oracle Database Appliance now offers that same high availability, service, and reliability to small- and mid-sized markets. All of this functionality, along with the Oracle Database Appliance's unique 'plug and play' approach to implementation/configuration, makes this the ideal tool for departmental deployment and small- to mid-sized organizations.

To illustrate the proven benefits of the Oracle Database Appliance, this case study will focus on one organization that recently chose to go the database packaging route. The study highlights the challenges facing the organization, and illustrates how the Oracle Database Appliance offered the tools and features that exceeded the expectations of the organization, both in cost savings and in better overall use of IT manpower.

What is the Oracle Database Appliance?

Packed in a 4RU chassis containing two server nodes with integrated networking and storage, this new addition to Oracle's cadre of appliance software is, basically, a **cluster in a box**. With "touch of a button" configuration/implementation options, one-click full stack patching (one button patching of the entire system including firmware, OS, database software), and ease of maintenance and support, it offers mid-sized organizations and independent software vendors a straightforward database deployment option and a means of implementing a "pay as you grow" approach to data management. With phone-home capability built in, customer support and troubleshooting just got easier. Its price point is also quite enticing—around \$50,000 for a single hardware system with licenses starting at \$47,500.

ODA Value Validated

In order to get a better view of the real advantages of the Oracle Database Appliance, ESG interviewed an early adopter of the product.

Challenge

CallSource, Inc., a midmarket organization based in Westlake Village, CA, develops and markets call tracking and recording software products that allow companies to measure phone lead and advertising effectiveness. For example, if an auto dealership publishes a CallSource issued toll-free number online, via a television or print ad, Callsource provides the tracking and reporting mechanism to let that auto dealership know which channel was most effective. CallSource delivers their offerings via the cloud in a Software-as-a-Service (SaaS) deployment model, receiving more than 500,000 calls in a single day. They are currently running two distinct Oracle databases—one to process more than 700,000 transactions per day and the other (a data warehouse) for reporting purposes.

The mission-critical, custom-developed transaction processing Oracle application was running on an Oracle 10g R2 Enterprise Edition database in a double-node Real Application Cluster (RAC) configuration for high availability. The customer leveraged SAN-attached storage with a fiber optic Brocade switch. The servers were three years old and were up for replacement. This gave CallSource the opportunity to evaluate its options which included upgrading the current servers leveraging the same architecture, upgrading to an Oracle Exadata, or trying the recently announced Oracle Database Appliance.

CallSource was also facing performance issues due to the outdated server technology as well as an increase in transaction volumes from additional product offerings and a successful business. It significantly invested in resources dedicated to managing and maintaining their current configuration. Just to replace the current server, leveraging their current reference architecture and resource costs, CallSource would have had to invest more than \$200,000 USD. Even though the IT team had conducted a Proof of Concept (POC) with the Oracle Exadata Database Machine and saw a 25X improvement in key business processes and queries, the premium option came with a premium price tag that was out of their budget range.

Solution

When CallSource's Chief Technology Officer, Jason Scinocca, first considered the recently announced Oracle Database Appliance (ODA), the packaging, performance and price tag seemed to meet the immediate needs his organization faced. After running his POC, he found the ODA was:

- **Easy to deploy.** With its wizard-driven installation user interface, the Oracle Database Appliance was up and running in just over two hours. Because all of the components were delivered in a single integrated server, storage, and networking chassis, CallSource avoided a several month process of architecting, designing, ordering, and configuring the implementation that would have required looking up hardware and software compatibility lists from Oracle.
- **Easy to manage.** CallSource outsources their DBA support team. During the installation, the ODA provides the administrator with options to install (Enterprise Edition, RAC single node, RAC clusters) and a choice of Database Class Options (database configuration options that are templated for optimizing performance based on best practices for each type of workload). This resulted in very little that needed to be tweaked once the installation was complete. Future patches for the appliance will include updates for the entire stack—firmware, OS, infrastructure, and database, eliminating time spent on managing patch dependencies. CallSource estimates that they will be able to reduce the amount of money spent on their outsourced DBA by more than half.
- **Easy to diagnose and support.** Diagnostics and support of the Oracle Database Appliance is also a snap, because its built-in failsafe technology does most of the work. It can identify problems, suggest remedies, and simplify collection of diagnostic information to facilitate support. Its automated service request capability “phones home” when a hardware or software issue occurs, enabling support teams to know about an issue as soon as it occurs and begin immediate corrective action. During the beta testing process, the team encountered an error that caused the ODA to phone home. Oracle support was quickly notified and a patch was issued to address the error.
- **Easy to scale.** The Oracle Database Appliance enables an organization to set up the system with as few as 2 processor core licenses, then scale up to as many as 24 as business needs increase, all without the need for hardware upgrades. CallSource's ODA configuration started with 24 processors enabled across both server nodes in the Oracle Database Appliance, which was set up in an active-active failover configuration via Real Application Clusters (RAC). Based on future expectations of CallSource's business growth and a correlating volume of transaction throughput and data, scalability is an important consideration.
- **Affordable, with improved performance.** During the POC, the team imported their terabyte-sized data set into the ODA using Oracle Data Pump. A custom report that typically required the support team to run during off peak hours would take one day to run on the weekend. Running the same report on the ODA completed in 5.2

minutes. While the ODA does not have the columnar compression¹ or the smart scan features that Oracle Exadata offers, it did improve performance of key business processes and queries by a respectable 7X. This performance improvement is significant enough to justify moving forward with the ODA. The team runs a second Oracle database instance used primarily for reporting to offload the production database environment. With the optimized CPU settings and the kernel adjustments, not to mention the solid-state drive (SSD) cache, and the improvements in performance at an affordable price point for their production instance, the team is re-evaluating the need for its second database instance and are considering consolidating to a single Oracle database instance on the appliance.

Test Results in Summary

The results achieved by Callsource after installing the Oracle Database Appliance in its testing environment were immediately evident. CallSource was able to:

- Cancel its planned purchase of several very large X86 servers (\$250K).
- Eliminate SAN (FC switches and storage) from its production database reference architecture.
- Lower its overall power consumption.
- Lower its operating expenses, since it no longer needed to use valuable manpower for mundane tasks such as system tuning and tweaking.
- Eliminate patch tracking and the need to match hardware compatibility lists.
- Drastically improve the performance of one of the longest running reports from one full day down to minutes.

CallSource's CTO summarized his experience by referencing the simplicity of now managing a high availability Oracle RAC configuration. Considering the amount of effort it would have taken his team to evaluate all of the other architectural options, Mr. Scinocca stated, "while one premium storage vendor is good for this feature, and another midmarket storage vendor option is cheaper for this feature, the headache associated with the prep work required to rebuild a RAC configuration with all of the proper compatibility lists has been essentially eliminated." The Oracle Database Appliance has already allowed CallSource to reduce several months of planning down to 2 weeks.

The Bigger Truth

While all IT organizations are looking for ways to simplify data maintenance, the specific needs of larger enterprises and mid-sized organizations vary dramatically. Large enterprises can easily muster resources with specialized talents and devote time and funds to the installation and customization of complex systems, but mid-sized companies need an appliance that offers the same level of high availability, but with a more "out-of-the-box" experience. They want an appliance that is easy-to-configure and built to support the needs of their organizations as they grow and expand—that is, an appliance that allows them to turn on features as they are needed and that adds processing capabilities without the need for costly hardware upgrades while offering automated "phone-home" support.

With its "touch of a button" configuration, high availability option, easy full-stack patching, and up-to-24 processors that can be turned on and licensed when needed, the Oracle Database Appliance offers a **cluster in a box** that allows organizations to effectively manage current database needs while planning for future growth, maximizing response times, and enhancing overall customer satisfaction.

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¹ Both Exadata and ODA can leverage Oracle Advanced Compression. Exadata offers an additional advanced columnar compression feature that is not available on the ODA.