Increasing Oracle SOA Suite 11g's Performance, Availability, Security and Scalability with Radware's Application Delivery Solution

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SOA SUITE

The Challenge
Businesses that rely on Oracle SOA Suite 11g must guarantee uninterrupted and top performing services to ensure productivity is not degraded and eliminate business loss. To address these business requirements, IT must ensure that the Oracle SOA Suite 11g applications are "always up" – today and in the future.

The Solution
Radware's ADC solution ensures 24x7 availability for Oracle SOA Suite 11g applications, through advanced intra-site and inter-site redundancy schemes and smart load distribution. Radware ADC's embedded application acceleration functionality enables faster application response time while increasing the efficiency of the Oracle SOA Suite infrastructure by offloading its servers processing. In addition, it also provides seamless and easy SOA Suite 11g infrastructure scalability supporting current and future network capacity requirements in an efficient and cost effective manner.

Joint Solution Benefits
- Full availability of all Oracle SOA Suite 11g based applications
- Improved productivity through uninterrupted and fast responding applications across the organization
- Superior scalability by allowing the transparent addition of servers to an existing Oracle SOA Suite 11g deployment while it is in production, without any service interruption
- Pay-as-you-grow approach preventing overspending on the ADC solution through software license based upgrade mechanism allowing reduced OPEX with a seamless, fast and easy upgrade path

Radware's certified application delivery solution for Oracle SOA Suite 11g ensures high availability, improves application performance and enables higher user productivity while significantly reducing TCO

Oracle SOA Suite 11g is a key member of the Oracle Fusion Middleware family of products, which as a whole provide a complete, open, interoperable and best-of-breed middleware platform for the enterprise. It helps customers rapidly design and assemble, deploy and manage highly agile and adaptable business applications. Oracle SOA Suite 11g is a 100 percent standards-based, hot-pluggable infrastructure that interoperates with existing IT investments, thus lowering upfront costs.

By deploying Radware's certified application delivery controller (ADC) solution in conjunction with Oracle SOA Suite 11g , organizations can further enhance the benefits of their middleware SOA platform and enjoy uninterrupted service and faster response time, resulting in significant improvement in end user experience. Furthermore, Radware's certified ADC solution provides increased SOA Suite 11g infrastructure efficiency, leading to higher productivity and reduced TCO.

The Challenge: Ensure Scalability, Availability, Fast Response Time for SOA Suite 11g Applications at All Times, Even When Under Attack

In today's competitive business landscape, the "always up" and highly performing requirement for enterprise business applications, such as those provided over SOA Suite 11g middleware, has a strong business justification. A large supply order that can't be executed on time due to application availability issues, may lead to production delays and result in significant monetary loss.

Another aspect of ensuring uninterrupted availability of Oracle's SOA Suite 11g applications is security. Remote access to business applications is a common requirement of most organizations, which also poses a challenge of how to cost-effectively protect applications from various security threats such as DoS attacks, unauthorized

access or content theft. Ensuring user sessions are well encrypted, without exhausting the Oracle 11g infrastructure resources, is another challenge to be considered when deploying an SOA Suite 11g infrastructure.

Additionally, the need to efficiently scale-up SOA Suite 11g based applications, to support additional services, increased capacity, and more concurrent users is a challenge that all IT organizations must address when planning and deploying an Oracle SOA Suite 11g infrastructure, to avoid future performance degradation or alternatively, complex and costly upgrade projects and unnecessary downtime.

The Solution: Radware ADC for Ensuring Oracle SOA Suite 11g High Availability While Improving Performance and User Experience

Radware's certified ADC solution for Oracle SOA Suite 11g is designed to provide organizations with highly available business applications, fastest response time, and best user experience, through its intelligent load balancing algorithms, advanced application health monitoring, inter site load balancing, application acceleration functionality and solution scalability.

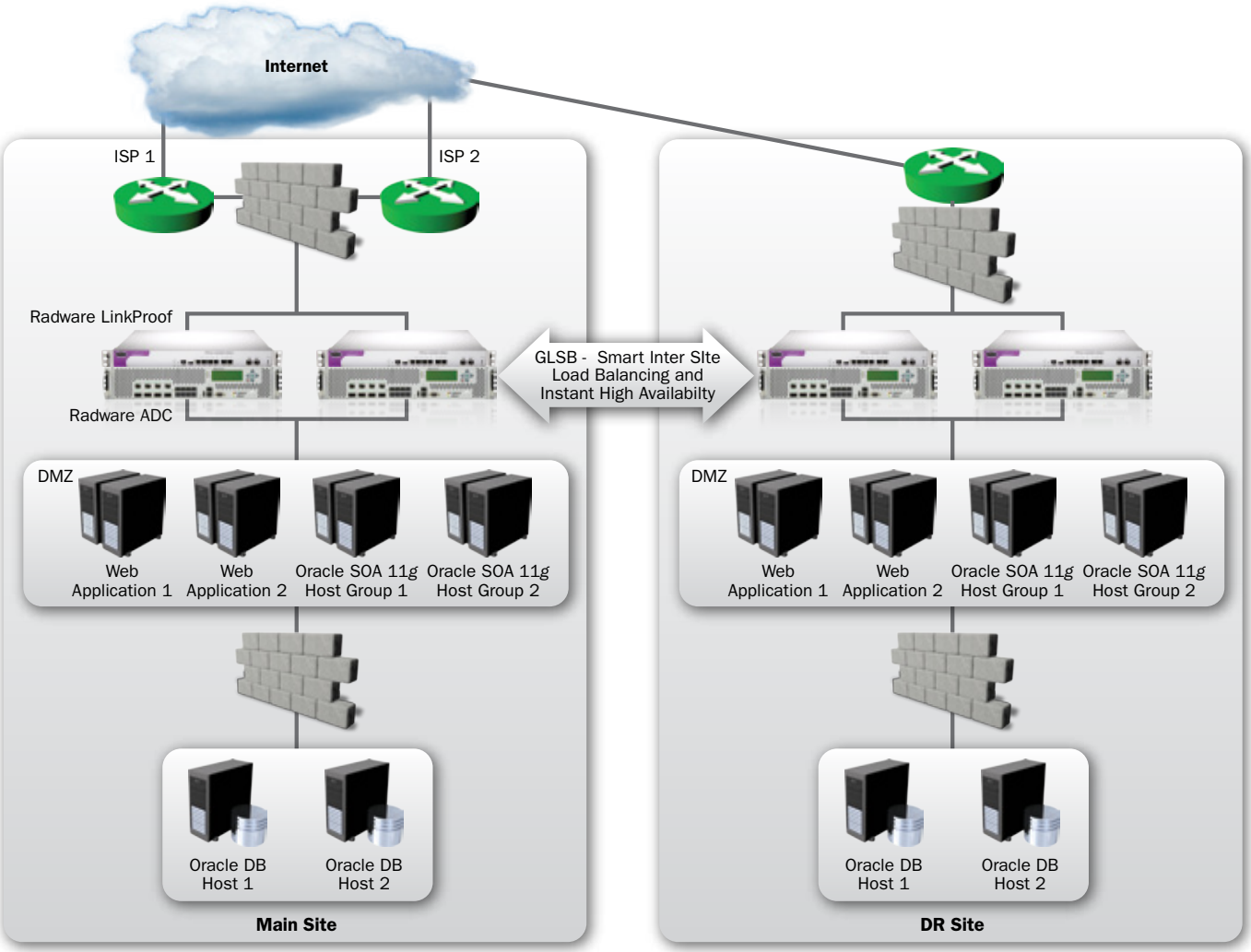

Figure 1 - Radware ADC Solution for Oracle SOA Suite 11g Diagram

Guarantee 24/7 application availability with optimized performance: Radware ADC's load balancing capabilities combined with advanced application level health monitoring ensures optimized user experience under different network and infrastructure conditions and scenarios. By monitoring load, health and the response time of the different SOA 11*g* application servers, user sessions are seamlessly redirected to the most available and fastest responding server. The result is faster response time from the available application server resource pool, at any given time.

This functionality ensures seamless bypassing of server failures at the hardware layer, OS layer and application layer, without forcing the client application to approach failed servers before reaching available servers from the pool.

Seamless and effective disaster recovery support: For globally dispersed Oracle SOA Suite 11*g* solution deployment - such as global organizations with geographically-dispersed branch offices or even multiple data centers - Radware's patented Global Sever Load Balancing (GSLB) technology increases application availability and optimizes performance per user via fastest transaction completion.

Each site with Oracle SOA Suite 11*g* resources and Radware's ADC solution shares health check and load information with the other sites, so that in case of a complete SOA Suite 11*g* application outage in one of the sites, Radware's GSLB technology ensures service continuity, by seamlessly redirecting users to the remaining functioning organization's sites data centers.

Accelerating application response time while offloading servers: Radware's ADC solution provides several technologies for application acceleration which are specifically applicable for Oracle SOA Suite 11*g* and result in improved application server performance and efficiency. By caching and compressing session information, users can experience faster response time (especially if users are connected from behind slower WAN links), while reducing the load on the SOA 11*g* servers.

Additionally, one of the most CPU intensive tasks for applications such as Oracle's SOA 11*g* is SSL termination of user sessions. Radware's ADC solution is a purpose-built appliance, optimized for SSL session termination processing, and hence can offload this task from the SOA 11*g* web tier servers. By offloading the SSL processing from the servers, more processing resources remain available, to take on additional users and functionality, resulting smaller solution footprint, requiring fewer servers, and corresponding spending – leading to reduced TCO of the overall solution.

Flexible, cost-effective scalability: As the SOA Suite 11*g* based applications' usage grows, providing an increasing number of services to a growing number of users, additional infrastructure capacity must be added to support this growth. Radware's ADC solution enables adding more capacity to the SOA Suite 11*g* infrastructure in minutes, by simply informing the ADCs of the new resource available. New user session requests are instantly routed to the newly added SOA Suite 11*g* server resource, without requiring any modification to the network infrastructure, application infrastructure and most importantly – without having to change the end-user client devices software and configuration and without causing a second of downtime.

Furthermore, Radware ADC solution provides organizations with the ability to seamlessly scale up on demand the ADCs supporting the Oracle SOA Suite 11*g* infrastructure. By leveraging Radware's industry-unique "Pay-as-you-Grow" approach, no forklift upgrade is required to support growing SOA Suite 11*g* server capacity requirements, thus eliminating downtime by providing a seamless, easy and quick upgrade path. This creates more savings on

OPEX and enables organizations to pay for the exact throughput capacity they need today on their ADC solution, and scale on demand when they need more, through a simple license key insertion. This eliminates any costly upgrade projects and associated downtime.

Securing Oracle's SOA Suite 11*g* applications: Organizations that provide access to their SOA Suite 11*g* applications, to remote offices and commuters, must also provision their infrastructure with protections against security threats such as DoS attack. Furthermore, part of Oracle's Maximum Availability Architecture (MAA) best practices require that external access to SOA application will only be carried out over HTTPS.

Radware's ADC solution inherently provides application level DoS attack mitigation, specifically protecting the Oracle SOA Suite 11*g* servers. Radware's ADC also prevents users from accessing the 11*g* applications over clear text HTTP connection, and redirects them to the HTTPS instead. As mentioned before, the ADC also terminates the SSL connection with the user, and communicates with the SOA Suite 11*g* application server in clear text HTTP – offloading the SSL CPU intensive task from the server.

Features and Benefits

Using Oracle SOA Suite 11*g* and Radware ADC solutions, customers can receive the following key business benefits:

- A complete highly available and highly-performing SOA Suite 11*g* infrastructure - by leveraging Radware ADC solution capabilities, such as server health monitoring and smart load balancing
- Seamless multi-site load balancing through Radware's patented global server load balancing functionality, enabling transparent disaster recovery fail over and active-active site backup
- By using the Radware ADC with its content caching and compression features in conjunction with Oracle SOA Suite 11*g*, end-users connected over slow speed WAN connections (such as over cellular networks), can benefit from faster response time and a noticeably improved Quality of Experience (QoE)
- Support for a larger number of users with smaller and more cost-effective infrastructure, by offloading resource intensive server tasks to the Radware ADC, such as SSL termination and thus supporting more users per server
- Seamless scalability – Radware's "Pay-as-you-Grow" approach enables adding more capacity to the solution, with no service interruption or system reconfiguration, via Radware's On-Demand Switch platforms
- An Oracle certified solution, fully tested and validated. A technical integration guide providing step-by-step configuration guidelines can be found on the Radware website.

About Radware

Radware, the global leader in integrated application delivery solutions, assures the complete availability, performance and security of business-critical applications for more than 10,000 enterprises and carriers worldwide. With Radware's comprehensive APSolute suite of application front end, access and security products, companies can drive business productivity, improve profitability, and reduce IT operating and infrastructure costs by making their networks "business-smart."

About Oracle

Oracle is the world's largest business software company, with more than 320,000 customers—including 100 of the Fortune 100—representing a variety of sizes and industries in more than 145 countries around the globe.