



# ORACLE E-BUSINESS SUITE 11i

## Secure and Optimize Oracle 11i E-Business Suite with F5 Solutions

### Executive Summary

With F5 Networks' solutions and the Oracle® E-Business Suite 11i, organizations can achieve high availability, scalability, optimal performance and enhanced security for enterprise applications and services. With the multi-tiered architecture of Oracle E-Business Suite, F5 Networks Application Delivery Networking devices provide a secure, fast, and highly available platform for Oracle 11i deployments.

With BIG-IP Local Traffic Manager (LTM) features such as Fast Cache, Intelligent Compression and TCP Express, F5 accelerates and optimizes the performance of Oracle's enterprise applications, while F5's FirePass SSL VPN controller provides the remote workforce with intuitive, secure access to Oracle E-Business Suite 11i applications and business information from any device, in any location. F5's WAN optimization devices further enhance Oracle 11i deployments, providing LAN-like performance over the WAN. For comprehensive security, the BIG-IP Application Security Manager (ASM) provides application-specific protection, ensuring that the critical information contained by Oracle 11i is protected by more than just a simple firewall.

These solutions enable customers to achieve higher uptime, and better performance and security for their Oracle-based applications, while increasing the return on investment of their e-business infrastructures.

F5 Networks has teamed with Oracle to enhance application robustness through their Maximum Availability Architecture (MAA), Oracle's complete High Availability (HA) blueprint. MAA is a validated technical architecture that incorporates Oracle's leading HA technologies and best practice guidelines. And as a Member Partner of the Oracle PartnerNetwork, F5 is working with Oracle to help ensure reliable and scalable enterprise applications and Web services. Specific to the development of MAA, F5 supplies Oracle with proven expertise in Application Traffic Management along with F5's market-leading solutions.

### Challenges

Oracle's E-Business Suite 11i is a comprehensive business system solution that provides customers flexible deployment scenarios to allow for unlimited scale and reduced administration. By allowing customers to break out application functions and distribute them among clustered systems, organizations can quickly and easily model their infrastructure to their needs. However, to get the most out of this flexible solution, integrating an application traffic management device is essential for directing client requests, thereby enhancing the availability, scalability, reliability, and performance of these multi-tiered, business-critical deployments.

Many organizations face the additional challenge of enabling their mobile employees and partners to access enterprise applications easily and securely from a variety of devices and locations. These organizations seek a remote access solution that will enhance business processes without burdening network administrators and resources.

Web applications are now the main entry point for hackers, costing companies hundreds of millions of dollars a year. Accordingly, new regulations such as the Basel Accords, HIPPA, and SB 1386, are making the security of personal customer data a key imperative. Organizations are looking for complete security solutions that can intelligently protect their applications from these types of targeted attacks.

### Solution

F5 Networks' BIG-IP product is a perfect solution for Oracle E-Business Suite 11i deployments, providing high availability, enhanced security, scalability and performance, while helping to reduce costs and increase ROI. In a typical multi-tiered Oracle E-Business Suite deployment, the Application tier allows for different types of application services to be started or shutdown, so specific application functions can be assigned to a particular server. This is an ideal scenario for the BIG-IP solution's Pools and Rules functionality. Each cluster of servers can reside in an application-specific pool, and a rule can be created to send requests to specific pools, based on the data that resides in the header or content of a request. This feature allows requests for specific application services to be directed to the most appropriate and available resources.

For Oracle E-Business Suite applications requiring secure traffic, the BIG-IP solution provides integrated SSL acceleration, encryption, and decryption capabilities. By offloading these processor-intensive SSL transactions from the servers, organizations greatly improve the performance of the Oracle E-Business Suite deployments, allowing the applications to focus on the business functions they provide. The BIG-IP solution also provides a number of different options for persistent connections. For example, the BIG-IP cookie persistence feature guarantees session persistence for Oracle application functions that require client requests to

### About Oracle

Oracle Corporation is the world's largest enterprise software company, providing enterprise software to the world's largest and most successful businesses. Oracle is the first software company to develop and deploy 100 percent Internet-enabled enterprise software across its entire product line: database, server, enterprise business applications, application development, and decision support tools.



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## Solution - Continued

be routed to the same application server to support middle tier processing. And with the Universal Inspection Engine and iRules™, the BIG-IP product is the first completely adaptable application management solution that can switch and persist on all types of IP applications and their payloads, allowing the product to support the complex security and high availability requirements of today's Web services, enterprise and mobile applications -- making them simpler to implement and maintain. The result is a dramatic gain in operational efficiencies and cost-savings.

The BIG-IP LTM system introduces a suite of optimization and accelerations features designed to give organizations an incredibly powerful platform that is changing the way they conduct business with Oracle E-Business Suite applications. At the heart of version 9 of the BIG-IP system lies the unique TMOS architecture, providing the enterprise with a unified system for optimal application delivery. TMOS, acting as a full server proxy, offloads and manages traffic control, freeing server resources and increasing server capacity for any application running through the BIG-IP device.

The BIG-IP system's TCP Express feature provides a number of enhancements and optimizations to TCP handling. Utilizing independent client and server side TCP stacks, the TCP Express features bridge the gap between client and backend servers, optimizing each connection independently. This functionality also enables the BIG-IP device to shield and transparently optimize non-compliant TCP stacks running across servers within the corporate data center, thus providing dramatic performance improvements for Oracle E-Business Suite 11i deployments. TCP Express also ensures that both client and server are transmitting data at the optimal rate, thus reducing user download times, improving bandwidth link utilization for a site, and minimizing errors associated with lost and reordered packets. The BIG-IP Intelligent Compression module proficiently compresses a broad variety of content types including HTTP, XML, JavaScript, and J2EE applications using industry-standard GZIP and Deflate compression algorithms.

F5's WAN optimization devices further enhance web application performance from any location to improve interactive performance, decrease download times for static and dynamic data, reduce bandwidth usage, and lower the cost of delivering web applications. The F5 WANJet device employs adaptive TCP optimization (which combines session-level application awareness, persistent tunnels, selective acknowledgements, error correction, and optimized TCP windows) to fully utilize available bandwidth. This enables WANJet to adapt, in real time, to the latency, packet loss, and congestion characteristics of WAN links, and accelerate virtually all application traffic. The WebAccelerator device enhances web application performance from any location to improve interactive performance, decrease download times for static and dynamic data, reduce bandwidth usage, and lower the cost of delivering web applications. The WebAccelerator device includes a specific application profile for optimizing Oracle Portal.

This integrated solution also allows an organization to use lower cost hardware to easily scale their deployments as network traffic increases. With the BIG-IP system, scaling is as easy as adding another server where resource demand is greatest. Once the resource is added to the BIG-IP configuration, traffic is directed to that resource. This allows organizations to save money by purchasing lower cost servers and deploying them where they are needed, as opposed to using a larger, more expensive server running all of the Application tier functions.

F5 also provides a complete, flexible, easy to manage web application security solution for Oracle 11i deployments. The ICSA-certified BIG-IP Application Security Manager (ASM) enhances F5's robust application delivery networking solutions through secure application layer filtering, resulting in best-in-class security technology on a powerful traffic management platform. The ASM hides the web infrastructure so that hackers can't tell which servers are running on the network. It strips out identifying OS and web server information (such as version strings, messages, signatures, and fingerprinting) from message headers, conceals any HTTP error messages from users, and removes application error messages from pages sent to users while checking to ensure no server code or private HTML comments leak out onto public web pages. The BIG-IP ASM identifies, isolates, and blocks sophisticated attacks without impacting legitimate application transactions.

When organizations want to extend access to Oracle E-Business Suite 11i resources to remote users, F5 Networks' FirePass SSL VPN provides secure access to application as easily as from inside the corporate LAN. Once authenticated by FirePass, users pass through the corporate firewall and are able to access applications and data from any device in any location without having to re-authenticate when accessing multiple resources. The FirePass controller not only delivers and secures access to Oracle E-Business Suite applications, but also allows for granular control of access to intranet resources on a group basis. For example, employees can be provided access to all intranet sites while partners are restricted to a special web host. And the FirePass controller's compression capabilities provide additional performance enhancement and server offload while securely delivering business-critical content.

For Oracle 11i deployments in multiple data centers, the BIG-IP Global Traffic Manager (GTM) enables the transparent delivery of applications and web services across multiple sites, ensuring global business continuity and Oracle application availability. The BIG-IP GTM dramatically improves performance and client experience by directing users to the best site on a global basis. The BIG-IP Global Traffic Manager is the only solution that tracks application state and provides the intelligence to deliver a superior client experience. Organizations gain improved infrastructure scalability, lower TCO, and fewer support calls.