



What's inside:

- 2 Improving application performance and user experience
- 3 Enhancing application security
- 4 Providing unified security enforcement and access control
- 5 Enabling seamless business continuity and disaster recovery

Enhance the agility, performance and security of Oracle AS 10g with F5

Oracle® Corporation is the world's leading supplier of software for information management, and the first software company to develop and deploy 100% internet-enabled enterprise software across its entire product line. Since 2001, F5 and Oracle have collaborated on delivering market-leading Application Delivery Networking solutions. F5 is a worldwide Oracle Partner, a proud member of Oracle Partner Network (OPN), and works closely with Oracle on the development and refinement of joint solutions including their Maximum Availability Architecture (MAA). By taking advantage of F5's Application Ready Solution for Oracle Application Server 10g, an integral part of Oracle Fusion Middleware, organizations can achieve an secure and optimized platform for delivering Oracle applications across the LAN and WAN.

F5's Application Ready Solution for Oracle Application Server 10g provides a unique and comprehensive application delivery platform that helps align IT agility with business agility. F5 greatly enhances the efficiency and productivity of both the Oracle applications and the organizations who rely on these devices. Our word not enough? Oracle is one of F5's largest customers, providing application delivery networking to Oracle.com, and all of their internal and external enterprise applications for Oracle employees worldwide. F5 enables IT agility, your way.

Key benefits

Increase Oracle 10g performance

F5 WAN optimization technologies can dramatically increase Oracle 10g performance across the WAN.

Enhance Security

F5 gives peace of mind with comprehensive application-level security.

Gain Oracle 10g server capacity

Extend server capacity by offloading tasks like compression and SSL processing onto F5's unified, simple to manage platform.

Reduce bandwidth usage

Achieve 20 to 30 times bandwidth reduction for remote office users.

Increase administrator efficiency

F5's Oracle 10g-specific application templates, acceleration and security policies, and step-by-step configuration guidance help reduce deployment cycles by 1/3rd.

Increase Performance

F5 optimizes the local and global network, integrating intelligent application delivery with advanced WAN optimization technologies, providing immediate performance benefits for the end user.

Benefits and F5 value

F5's application ready solution for Oracle Application Server 10g ensures a secure, fast and available deployment, providing the following benefits to organizations, and their end users.

Improving application performance and user experience

Oracle Application Server 10g is one of the most popular applications servers on the market. Thousands of organizations have deployed Oracle 10g or are in the planning stages of a deployment. Because these applications are typically at the core of an organization's infrastructure, ensuring performance and availability are integral components of user and business productivity. Even minor degradations in the performance of the network can affect the users of Oracle applications, resulting in lost productivity when users must wait for responses from the application. F5 provides the technology that delivers fast, secure, and reliable Oracle applications that are aligned with the needs of your organization.

When deploying Oracle applications, IT application and network teams spend an enormous amount of time and effort planning how and where the applications are deployed. While the network teams work to make sure the local area network (LAN) and wide area network (WAN) can handle the weight of the applications, the application teams spend a significant amount of time, both before and after the deployment, tuning the applications to improve performance, especially when end users complain about slow or unresponsive applications. Blame is thrown back and forth between these two teams, and time and money are wasted trying to fix minor issues.

The fundamental issue is not the Oracle applications themselves, but a host of different factors dealing with network performance over the LAN and WAN. Web applications are becoming more widely distributed in remote offices and for mobile users. WAN latency, errors, network conditions, IT infrastructure challenges, and other issues prevent web applications from being delivered quickly and efficiently. And because an organization's IP network is commonly shared by a variety of other services including email, VOIP, and general internet access, these services can negatively impact Oracle applications by consuming valuable network resources. Web application architects and managers are finding it difficult, if not impossible, to meet the expectations of their users when delivering these applications.

F5's Application Ready Solution for Oracle Application Server 10g solves many of these potential issues by optimizing the local and global network, providing immediate performance benefits for the end user. F5 integrates intelligent application delivery with advanced WAN optimization technologies. This enables traditional acceleration technologies like SSL offload, compression, caching, and traffic prioritizing to combine with optimization technologies like symmetric adaptive compression and application quality of service, reducing complexity in your data center and increasing performance for your end users. These types of performance gains are generally many times greater than the gains made by manually tuning the Oracle applications.

F5's TCP optimizations further increase the productivity of the Oracle 10g applications, by isolating, controlling, and independently optimizing user and Oracle server connections. This provides the best performance for every device connecting to the network and the Oracle applications running on it. F5 eliminates the need for clients and servers to negotiate the lowest common denominator for communications. We intermedate on behalf of the client and use TCP enhancements to optimize client-side delivery while maintaining optimized server-side connections on the inside of the network.

Green Infrastructure

F5 can accelerate and secure applications while enhancing performance and availability, all on the same device. This reduces energy consumption with no additional hardware or rack space needed.

And not only does F5 make the Oracle applications more productive, but F5 also provides a variety of options that ease the burden of configuring and optimizing our devices, freeing valuable IT resources to work on other projects. As part of the Application Ready Solution, F5 has configured, tested, and tuned our devices with 10g and a number of Oracle applications and carefully documented the procedures in our deployment guides for those applications. And now this deployment guide configuration for Oracle 10g is available as an application template, which requires a minimum amount of information from an administrator to optimally configure F5 devices for Oracle 10g in just minutes. F5 also provides Oracle-specific configuration profiles and policies to make configuration incredibly simple yet powerful and flexible, making security and acceleration as simple as choosing the application from a list.

F5 provides advanced tools that make it easy to manage our devices while maintaining flexibility and control of your infrastructure. F5 devices include a graphical reporting engine to display real-time historical statistics by the hour, day, week, or month. The dashboard reports statistics on CPU and memory usage, connections, and throughput with an easy-to-read graphical view. We make security compliance easy and save valuable IT time by enabling the exporting of policies for use by offsite auditors. Auditors working remotely can view, select, review, and test policies, without requiring critical time and support from the web application security administrator.

To further improve both end user and administrator productivity, F5 can accelerate and secure applications while also enhancing performance and availability, on the same device. This provides an efficient multi-solution platform for Oracle 10g while adding security without performance reduction. Attacks are now filtered immediately and web applications are accelerated for improved user experience and application performance. Since there is no need to introduce a new appliance to the network, your infrastructure becomes a little more "green" with reduced energy consumption and no additional hardware or rack space needed. F5 enables an all-in-one appliance solution for maximum cost effectiveness.

Enhancing application security

While performance is an important aspect of an application deployment, proper application-level security can be even more critical. Too often, organizations rely on existing network security measures to provide application security. This can often be a costly mistake, especially with business-critical Oracle applications. Web applications are now the main entry point for hackers, costing companies hundreds of millions of dollars a year, with attacks that look harmless to normal network security measures. And new regulations such as the Basel Accords, HIPPA, and SB 1386, are making the security of personal customer data a key imperative. F5 has a number of ways to protect Oracle Application Server 10g deployments and other applications on the network.

Network firewalls and intrusion detection/protection systems give organizations a level of protection against general and known, signature based attacks. F5 goes far beyond what these types of security devices can offer, by providing comprehensive security for the applications themselves. While F5 analyzes and blocks known attack signatures, F5 also uses a positive security model, allowing only known, acceptable traffic to pass to the applications. Devices relying solely on a known list of signature attacks cannot defend against targeted attacks involving a malicious user seeking vulnerabilities unique to a particular application. F5 detects and mitigates patternless exploits in real time, adding accurate, complementary protection to existing firewalls and IDS devices, which cannot efficiently address HTTP and HTTPS-borne threats.

Security Compliance

F5 enables advanced, built-in security protection and remote auditing to help your organization comply with industry security standards, including PCI DSS, HIPAA, Basel II, and SOX, in a cost effective way—without requiring multiple appliances, application changes, or rewrites.

Additionally, F5 devices protect against attacks that use cookies and other tokens that are transparently distributed for their entry point. F5 devices can be easily configured to encrypt cookies used by Oracle applications, preventing cookie tampering and other cookie-based attacks. This gives organizations superior security for all stateful applications and a higher level of user identity trust.

F5 enables advanced, built-in security protection and remote auditing to help your organization comply with industry security standards, including PCI DSS, HIPAA, Basel II, and SOX, in a cost effective way—without requiring multiple appliances, application changes, or rewrites. F5 provides advanced reporting on new attacks such as layer 7 denial-of-service (DoS), brute force, SQL injection and more. With PCI reporting, F5 lists security measures required by PCI DSS 1.2, determines if compliance is being met, and details steps required to become compliant if not. In addition, F5 integrates with leading security vendors for vulnerability assessment, auditing, and real-time and database reporting to provide security breach reviews, attack prevention, and compliance.

And now, all data can be symmetrically encrypted between local and remote F5 devices, providing a new way to ensure site-to-site data security. This secure connection, or tunnel, also improves transfer rates, reduces bandwidth, and offloads applications for more efficient WAN communication. F5 also supports DNSSEC, which adds an additional layer of security and prevents DNS hijacking and cache poisoning.

F5 helps you protect your brand by shielding your websites from web scraping attacks that copy and reuse valuable intellectual property and information. By differentiating between a human and a bot behind a browser, F5 protects against automated requests to obtain data. Policies for web applications can recognize an increase in request volumes and alert F5 devices to review whether requests are desired. Known IP addresses previously found to web scrape can be blacklisted for detection and blocking.

F5 includes extremely granular endpoint security for remote users connecting to the Oracle applications on the network. Before a remote user can even log on to the F5 devices to gain access to the network, F5 can determine if an antivirus or personal firewall is running on their PC and if it is up-to-date, or enforce a specific operating system patch level, among a host of other pre-logout checks. F5 can direct the user to a remediation page for further instructions or even turn on antivirus or firewalls for the user. F5 remote access also supports two-factor authentication from leading vendors for those organizations who require more than just a user name and password for access to the network. And F5's remote access solution can be easily integrated with Oracle OID for centralized authentication.

Not only does F5 provide comprehensive application security, but we produce extremely secure devices. We ensure your Oracle 10g applications, and the information they contain, remain completely secure.

Providing unified security enforcement and access control

Protecting applications isn't the only highlight of F5's security platform. F5's Application Ready Solution for Oracle Application Server 10g provides comprehensive security policy enforcement and access control for the applications on the network.

F5 provides centralized access and application availability services to users based on the context of the user and the application they are accessing. By driving application and user identity into the network, organizations have a more centralized, repeatable and cost effective way to scale up access control services. This new simplified access management

system allows users to easily access approved Oracle applications, and networks without multiple authentications for greater worker productivity. By providing full authentication, authorization, and accounting (AAA) control directly on an F5 device, we enable you to consolidate your access infrastructure, reduce authentication and authorization costs, and scale to support thousands of users simultaneously. And F5 devices integrate with Oracle Access Manager and Oracle Internet Directory (OID) enhancing single sign on capabilities and simplifying access control.

As users roam from office to remote locations, an F5 client accesses corporate networks and applications dynamically enabling mobile users to stay connected without business productivity declining. Application acceleration and security are designed together with access to scale supporting application growth and performance. With F5, corporations stay within compliance of various local and regional regulations related to access and security reducing fine payouts and protecting the organization from data loss.

With the importance of business-to-business transactions in today's global economy, organizations often have partners, vendors, and contractors who need some level of access to their Oracle applications and the network. It is extremely important that this access is carefully controlled and can be restricted on a granular basis. Providing access can be complicated not only by the different users requiring different access levels, but also by the types of devices that need access. F5 provides a complete approach to providing access control regardless of end user, client type, application, access network or network resources, allowing your administrators and end users to be more productive.

F5 allows you to easily configure different groups of users, such as an "employee" group, and a "trusted partner" group, and restrict access based on these groups. This is extremely useful for organizations who need to provide remote access to the network and Oracle applications to their employees, but also enable contractors or partners access to a specific application. F5 centralizes access control, and makes configuring and enforcing this type of control extremely simple. F5 can gather device information (like IP address or time of day) and determine if a resource should be offered. F5 also gives control for any access network and any device, with no need to deploy multiple access control solutions for remote users, wireless LANs, and the LAN.

F5 supports virtual administration domains, allowing a single device to be managed by multiple application teams without interference. Every user can be assigned to specific administrative domains that define which objects are visible to that user. For example, the Oracle application team can be given permission to only view or modify objects that reside in the Oracle domain. This increases productivity by reducing the time spent in meetings, tracking down appropriate administrative personnel, and improving the ability of application administrators to manage applications when it's necessary. F5 helps streamline the business process and improve the productivity and efficiency of operational personnel.

Enabling seamless business continuity and disaster recovery

A number of natural and human-caused disasters in recent years has brought disaster recovery and business continuity to the forefront of the minds of IT professionals. Disruptive events, such as natural disasters, fires, power failures, terrorist attacks, human error, and computer viruses, can happen at any time. These factors can cause the productivity of entire businesses to grind to a halt, costing millions of dollars in downtime.

Today's IT managers must be prepared for unexpected disruptions and even catastrophic events that can bring down entire data centers. This is especially important considering new industry

and government rules concerning data protection and disaster recovery. Aligned with Oracle, F5 understands the mission critical business needs and the technical requirements necessary to provide business continuity today. We both recommend a set of unique, yet compatible best practices for delivering true high availability and disaster recovery for your business. F5 products are uniquely positioned to help organizations mitigate these types of disasters – ensuring that business-critical Oracle applications are always available. F5 and Oracle consistently deliver business value and business continuity.

When one of these disruptive events does happen, F5 provides extremely secure remote access to the network (including Oracle applications), ensuring that even though the physical office might be unavailable, business can continue as long as a single datacenter is still up. Not only is F5's remote access solution much easier to deploy and use than traditional IPsec technology, it can be configured to enable access to Oracle 10g applications with the click of a button, without requiring the user to pre-install or configure any software. And to provide the best possible remote user experience, F5 also provides TCP compression and additional caching to enhance performance for the remote users accessing the network.

And even a well thought out disaster recovery plan might not help if the problem happens to your ISP. F5 simplifies multi-homed deployments so you no longer need ISP cooperation, designated IP address blocks, ASNs, or reliance on complex BGP configurations to protect your network from ISP failures. With F5 technology, an organization also has the choice of aggregating multiple small connections together, rather than having to invest in a single high bandwidth connection. This frees businesses to expand their service as they grow. F5 seamlessly monitors availability and performance of multiple WAN ISP connections to intelligently manage bi-directional traffic flows to a site, providing fault tolerant and optimized Internet access. F5 devices detect errors across an entire link to provide end-to-end, reliable WAN connectivity. F5 monitors the health and availability of each connection, detecting outages to a link or ISP. In the event of a failure, traffic is dynamically directed across other available links so users stay connected.

Even a hardware failure of a single server can cause expensive downtime, until a administrator can remove the device from service. F5 makes hardware failures a complete non-issue by automatically detecting a failure, and directing traffic away from the problematic server. Once the problem has been solved, F5 devices automatically detect the server and begin sending traffic there. This is also useful for patch management or maintenance windows. Administrators can easily remove groups of devices from the F5 load balancing pool, perform patching or other maintenance while other devices remain in service. Once the maintenance is complete, those servers go back in the pool, and the remaining servers are taken down for maintenance, all with zero downtime.

F5 helps you create a strong disaster recovery and business continuity plan by ensuring that users are always connected to a site where the Oracle 10g application is available. In addition to performing comprehensive health checking of the entire infrastructure, F5 minimizes downtime and improves the user experience by determining health at the application layer for every user.

F5's Application Ready Solution for Oracle Application Server 10g: Explore it. Deploy it. And run your business with it.

More Information

To learn more about F5 and Oracle 10g, use the search function on F5.com to find these and other resources.

Application Page

[Oracle Fusion Middleware](#)

Deployment Guides

[Oracle Application Server 10g R2](#)

[Oracle Application Server 10g](#)

Oracle Solution Page on DevCentral

<http://devcentral.f5.com/Default.aspx?tabid=147>

F5 Networks, Inc. 401 Elliott Avenue West, Seattle, WA 98119 888-882-4447 www.f5.com

F5 Networks, Inc.
Corporate Headquarters
info@f5.com

F5 Networks
Asia-Pacific
info.asia@f5.com

F5 Networks Ltd.
Europe/Middle-East/Africa
emeainfo@f5.com

F5 Networks
Japan K.K.
f5j-info@f5.com

