



ENTERPRISE RESOURCE PLANNING

Description of the Application

Enterprise Resource Planning (ERP) software aims to bring many different departments and functions within an enterprise onto a single computer system. The goal of ERP solutions is to streamline the entire order fulfillment process, creating real-time information that can be shared and accessed through all the functional areas of an organization. ERP solutions typically span many different types of applications, including financials, manufacturing, order processing, databases, and human resource packages. These solutions are transaction based and usually access a common database to share data and eliminate errors.

From ordering parts to reporting profits to Wall Street, ERP solutions represent the central nervous system of an enterprise's operations.

Challenges to the Application Type

Fundamentally, ERP software can be very complex and difficult to implement. Typical deployments take 12 - 24 months, because of the number of systems that need to interoperate, as well as process changes these new systems require within an organization.

Like other applications, ERP vendors have migrated their solutions to take advantage of lower cost and distribution benefits of running these applications over the public network (such as Intranets and Extranets). With greater distributed access to employees and business partners, Web-enabled ERP solutions must provide new levels of reliability, performance, and security.

While ERP software already requires significant planning and a complex deployment, there are several other challenges that organizations must address to build a network infrastructure capable of handling critical ERP applications:

Providing high availability - Because ERP software links many critical systems of an organization, failure to any one piece can have an extremely broad impact across an enterprise. Organizations should seek to build redundancy in every system, especially back-end databases that serve as the central data repository.

Providing scalability - ERP software also extends the reach of information within an enterprise, giving more people access to critical data for planning and reporting. ERP solutions must scale to new levels to support broader internal and partner access.

Enhancing security - Creating a private network where enterprises can share information with suppliers and customers is not a difficult task. However, utilizing the public network for these purposes requires enhanced security. Organizations need a way to securely connect their ERP systems. Solutions should support SSL (Secure Sockets Layer) and VPN (Virtual Private Network) deployments without jeopardizing the performance or scalability of the application.

Providing disaster recovery - ERP systems should be included in an organization's disaster recovery plan, including redundant network connections, a fail-over site, backup systems, and database synchronization tools.

F5 Solution Overview

With powerful local and global traffic/application management products, F5 Networks offers valuable benefits for getting the most from any ERP deployment. The BIG-IP product's advanced feature set allows organizations to gracefully extend scalability of their enterprise applications and optimize network performance through intelligent Layer 7 management.

The BIG-IP system offers substantial improvement in efficiency with bandwidth reduction and TCP optimization, while enhancing the secure delivery of web applications. And with the FirePass controller SSL VPN, organizations can extend secure access to the enterprise's ERP applications for all remote and internal users.

F5s TMOS acts as a full TCP/IP proxy with independent optimization of client-side and server-side connections. Utilizing this TCP Express functionality, the BIG-IP system eliminates the need for clients and servers to negotiate the lowest common denominator for communications, dramatically improving network efficiency and end user performance.

TCP Express optimization also enables the BIG-IP system to act as a bridge or translation device between all clients and back end servers. Even when organizations are utilizing legacy servers and applications, the BIG-IP system mediates between non-optimized or otherwise incompatible devices to optimize network communication. This solution provides organizations with tremendous cost savings and scalability as well as an unparalleled ability to translate communication improvement capabilities across their entire infrastructure.



ENTERPRISE RESOURCE PLANNING

Solution - Continued

As the global leader in SSL (Secure Sockets Layer) for network devices, F5 Networks provides customers with solutions to ensure that their sensitive information is protected as it travels over the network, with 40-60% better performance than software-based security.

TCP Express optimization also enables the BIG-IP system to act as a bridge or translation device between all clients and back end servers. Even when organizations are utilizing legacy servers and applications, the BIG-IP system mediates between non-optimized or otherwise incompatible devices to optimize network communication. This solution provides organizations with tremendous cost savings and scalability as well as an unparalleled ability to translate communication improvement capabilities across their entire infrastructure.

F5 Networks' FirePass controller SSL VPN extends this level of performance and access securely to remote users. The FirePass device provides access to internal web servers, as easily as from inside the corporate LAN. It also delivers granular access control to intranet resources on a group basis. For example, the FirePass controller can provide employees with access to all intranet sites while partners are restricted to a specific web host.

Benefits

Maximum Availability - Because every minute an application is down or not responding properly can cost an organization thousands of dollars, deploying the BIG-IP system is essential for providing organizations with business-critical availability. Through the use of its advanced health checking capabilities, the BIG-IP device can recognize when a resource is unavailable or underperforming and direct traffic to an available resource. With the BIG-IP product, all of your applications can achieve 99.999% uptime, while reducing operational complexity and costs.

Simple Scalability - The BIG-IP system provides a highly scalable solution that allows the enterprise to meet growing organizational demands on web and application resources. If one service is nearing capacity, scaling it is as simple as adding another instance of the service to your network and then to the BIG-IP load balancing pool. The BIG-IP solution allows organizations to scale their applications horizontally, providing considerable cost savings.

Increased Server Efficiency - The BIG-IP system's HTTP caching functionality provides tremendous scalability and cost benefits by offloading repetitive traffic from web and application servers. The caching function of BIG-IP v9 uses the available system memory (RAM) to store copies of frequently-requested content. Then, acting as a full proxy, the BIG-IP system delivers the content so that it is not continually re-served from the server, application and database tiers. F5 Networks' Fast Cache also provides the flexibility and control needed to extend caching on a per application basis, adapting to an organization's specialized caching needs. With this level of control, the caching functionality of BIG-IP v9 dramatically reduces server utilization while it delivers content to the client quickly and efficiently.

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. With Intelligent Compression, organizations can reduce their bandwidth bills by up to 80% while speeding up end user download times over slower/low bandwidth connections.

The BIG-IP system also provides granular traffic management, enabling you to control rate classes on any traffic variable. By allowing bandwidth to be distributed among similar priority applications, the system supports improved resource sharing. The BIG-IP system also offloads the high overhead of SSL (Secure Sockets Layer) processing for applications like Microsoft Outlook Web Access that use SSL.

TCP Optimization - TMOS provides a full TCP/IP proxy that allows for independent TCP optimizations on the client and server sides of a connection. The BIG-IP system's unique TCP Express ensures that both client and server are transmitting data at the optimal rate and thus simultaneously reduces user download times, improves bandwidth link utilization for a site, and minimizes errors associated with lost and reordered packets. These dramatic WAN optimization and client performance improvements can not be found in other networking devices or server operating systems.

The BIG-IP system also offers unparalleled ability to translate these capabilities across the entire enterprise infrastructure. Because organizations often can not afford to upgrade legacy servers and applications, the BIG-IP system mediates between devices, transparently optimizing non-compliant TCP stacks running across servers within a corporate data center. The net result is that the BIG-IP solution improves the performance of the network while masking its inefficiencies and reduces cost and complexity by reducing the need to update servers.

Enhanced Network Security - The BIG-IP device provides organizations with the ability to enforce, fortify, accelerate, and secure delivery of their applications and web services. With features like DoS and SYN attack prevention, Packet Filtering and protocol sanitization, organizations can protect themselves against the heaviest of attacks and control the information traversing in and out of their sites. By offloading SSL encryption and critical security functions (processor and server intensive operations), the BIG-IP solution maximizes application availability and reduces administration overhead, improving return on investment.

ENTERPRISE RESOURCE PLANNING

Benefits - Continued

Using the BIG-IP system's enhanced Universal Inspection Engine (UIE) and TCL-based rule language (iRules) capabilities, an enterprise can filter and block application level attacks and threats. The combination of these two features also provides unmatched control over and protection of application traffic, allowing administrators to create and implement a policy that is in line with their corporate security guidelines.

Secure Access from Anywhere - F5 Networks' FirePass Controller enables enterprises to provide secure, reliable and intuitive remote access to corporate applications and data using standard web browser technology. This award-winning SSL VPN solution provides complete cross-platform support without resource-draining client software installation and configuration or changes to server-side applications.

The FirePass Controller extends support for any IP application to Apple Macintosh, PocketPC and Linux clients, in addition to Microsoft Windows, and expands client and application security for web, email and file application access. It also offers the only open API and SDK that enables third-party application vendors to build seamless, secure remote access into their client applications.