Executive Summary

Microsoft® and F5 have collaborated on an efficient way to intelligently direct traffic for Microsoft SharePoint® Portal Server 2003 with the F5 BIG-IP application traffic management device. Microsoft and F5 have conducted interoperability testing between the BIG-IP system version 9.0 and Microsoft SharePoint Portal Server 2003. The resulting solution enables customers to achieve mission critical availability and better scalability while increasing the return on investment of their infrastructure.

With new optimization features, the BIG-IP Local Traffic Manager (LTM) provides impressive performance enhancements for SharePoint Portal Server deployment, improving application response time by over 120%. The F5 FirePass controller SSL VPN offers remote users this same level of performance and secure access to the Microsoft SharePoint Portal Server 2003 network, from any device in any location. And with F5’s WAN Optimization devices, remote users experience LAN-like performance across the WAN.

Microsoft SharePoint Portal Server 2003 enables enterprises to develop an intelligent portal that seamlessly connects users, teams, and knowledge so that people can take advantage of relevant information across business processes to help them work more efficiently. F5 Networks application delivery networking and security solutions enhance the performance of SharePoint Portal Server with mission-critical availability, intelligent traffic management, increased efficiency, strong security and simple scalability.

With its complete and integrated feature set, including Intelligent Compression, new TCP optimizations, and TMOS, version 9 of the BIG-IP system improved the response time of SharePoint Portal Server by over 120% while reducing bandwidth consumption by 75% in recent Gomez Performance Network testing of the deployment. These results are even more impressive because they represent real-world performance rather than best case claims or LAN-based testing; the Gomez Testing service uses real clients from all corners of the globe in order to provide a true representation of Internet conditions, WAN issues and other inefficiencies seen in full application transactions.

The BIG-IP system also enhances the security of the SharePoint Portal Server implementation with comprehensive authentication, authorization, auditing and payload parsing capabilities. For remote users, the FirePass controller SSL VPN provides safe and speedy access to the network and to SharePoint Portal Server resources on any device, in any location, without the financial and administrative overhead associated with IPSec VPN solutions.

Challenges

Microsoft SharePoint Portal Server deployments are critical to the business of any organization that relies on a portal solution to facilitate and support collaboration and information access. These services are expected to be highly available and to respond quickly to user requests, while remaining secure to protect the often sensitive nature of the content. Failure to meet any of these requirements can result in severe and costly consequences.

Additionally, many organizations today face the challenge of providing secure and efficient access to remote users connecting to the internal corporate network via widely disparate connection speeds. If a user connects through a high latency connection such as dial-up, the server cluster performance could be adversely impacted for other users on faster connections, as server resources are tied up with the slower connections.

Organizations are also looking for a way to provide their traveling or remote work force with an extremely secure, yet easy to use, means of accessing internal resources. Making it even more challenging are the requirements for the solution to allow access to any user regardless of location, platform or operating system.

Solution

Organizations that deploy the F5 application delivery networking devices with Microsoft SharePoint Portal Server benefit from an optimally performing, highly available, and secure solution, which provides a higher quality experience to the end user. F5 can also significantly reduce costs for SharePoint deployments in terms of reduced management hours, improved scalability, increased server efficiency and decreased bandwidth consumption.

F5’s unique TMOS architecture provides organizations with a unified system for optimal application delivery. TMOS, acting as a full proxy for SharePoint Portal Server, offloads and manages traffic control, freeing server resources and increasing server capacity for any application running through the BIG-IP device. In real-world condition testing, the BIG-IP acceleration features dramatically improve the end-user performance for SharePoint Portal Server by 125%.

Key Benefits of F5

- BIG-IP TCP Express WAN optimizations increase SharePoint Server performance by 125%
- Achieve 74% bandwidth reduction for SharePoint servers
- Reduce timeout errors for dial-up users by 85%
The power and flexibility of TMOS enables the BIG-IP device to optimize and accelerate SharePoint Portal Server deployments with features like Intelligent Compression and content spooling. Compressing a variety of file types, including HTML, XML, Javascript, and J2EE applications, the BIG-IP system provides greater than 70% savings in bandwidth for SharePoint Portal Server deployments. The BIG-IP system’s iRules policy-based engine and Universal Inspection Engine for deep packet inspection offer granular control of traffic and compression. These features enable organizations to further enhance SharePoint Portal Server deployments by allocating bandwidth for higher priority applications, controlling traffic spikes, and providing priority to traffic classes based on any L4 or L7 parameter.

Utilizing independent client and server side TCP stacks, BIG-IP TCP Express features optimize client side delivery while maintaining server-optimized connections on the inside of the network, efficiently controlling the traffic flows for SharePoint Portal Server deployments. For example, when remote users connect to SharePoint Portal servers at varying connection rates, the BIG-IP device independently handles each connection, optimizing end-user experience and server performance. The reduction in TCP errors with TCP Express improves the transmission quality of SharePoint Portal Server by 85% in real world testing.

Further optimizing SharePoint performance for end users is F5’s WebAccelerator solution. The WebAccelerator 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. When deployed in a symmetric configuration, the WebAccelerator provides the even better acceleration, above and beyond TCP optimizations and HTTP compression. And the WebAccelerator has a pre-defined optimization policy for Microsoft SharePoint Portal servers, making optimization as easy as selecting the policy from a list.

Because SharePoint deployments often contain critical, sensitive internal information, making sure that the application is secure is not only important, it can be vital to the success of the business. Failure to keep data secure can be extremely costly, not only because of the value of the data itself, but the stiff penalties imposed for failing to meet compliance initiatives such as PCI, HIPAA, SOX, BASEL II, and others.

Most of today’s Intrusion Detection and Protection Systems, and even many application firewalls, are limited to guarding against a limited list of known attacks. But with the influx of new attacks targeting applications, this type of negative security protection isn’t nearly enough. Unlike signature inspection methods, F5’s Application Security Manager (ASM) also provides a positive security model, permitting only valid and authorized application transactions, while automatically protecting critical web applications from entire classes of HTTP and HTTPS-based threats (both known and unknown) such as Google hacking, cross-site scripting, and parameter tampering. F5, through the TMOS architecture and the power of iRules, enables full bidirectional session and payload inspection to ensure valid interaction with the application across multiple protocols.

For employees who need to access portal server resources when away from the corporate LAN, F5 Networks’ FirePass SSL VPN provides secure and efficient remote access to SharePoint Portal Server. Once authenticated by the FirePass controller, users pass through the corporate firewall and are able to access portal applications and data from any device in any location. Users can access multiple resources as easily as from inside the corporate LAN, without having to re-authenticate. And for all users accessing SharePoint Portal Server remotely, FirePass controller’s caching and compression capabilities provide additional performance enhancement and server offload while securely delivering business-critical content.

The FirePass controller not only delivers and secures access to SharePoint Portal Server, but also allows for granular control of access to intranet resources on a configurable group basis using Active Directory for authentication. For example, the FirePass controller can provide employees with access to all resources while allowing partners access only to a particular directory and restricting the SharePoint resources they can access by URL.

To enhance end-point security and information protection, the FirePass device can be configured to perform pre-login checks for viruses and for anti-virus software on the client, while the FirePass controller’s Protected Workspace feature ensures that downloaded files, cookies, and cached content are not left behind on the client device. With these end-to-end security features, the FirePass controller provides comprehensive security for SharePoint Portal Server resources and for remote users.
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 with Microsoft SharePoint Portal Server 2003 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 under-performing 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.

**Increased Server Efficiency** - Because version 9 of the BIG-IP system, with its TMOS engine, is a full proxy, it can optimize any end point that connects through the system. As a full broker of communications, the BIG-IP system optimizes communication for every single end device communicating through it. This optimization can take place up and down the entire stack, from the transport layer to the protocol and application layers, taking the workload off of the servers for increased server efficiency. The BIG-IP device's TCP Express optimization also dramatically improves the reliability of WAN communications. Dial-up users connecting to Microsoft SharePoint Portal Server experience connection reliability improvements of more than 40% while timeout errors are reduced by greater than 80%.

**Enhanced Security** - The BIG-IP device includes numerous security features that enforce, fortify, and accelerate the secure delivery of applications and Web services. It provides the capability for deploying more stringent access control, secure administration, and helps resist common attacks, such as Denial of Service and Dynamic Denial of Service.

**Simple Scalability** - The BIG-IP system provides a highly scalable solution that allows enterprises 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.

**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. 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.

About F5

F5 Networks is the global leader in Application Delivery Networking. F5 provides solutions that make applications secure, fast and available for everyone, helping organizations get the most out of their investment. By adding intelligence and manageability into the network to offload applications, F5 optimizes applications and allows them to work faster and consume fewer resources. F5’s extensible architecture intelligently integrates application optimization, protects the application and the network, and delivers application reliability—all on one universal platform. Over 10,000 organizations and service providers worldwide trust F5 to keep their applications running. The company is headquartered in Seattle, Washington with offices worldwide. For more information, go to www.f5.com.

About Microsoft SharePoint 2003

SharePoint Products and Technologies facilitate collaboration within an organization and with partners and customers. Using the combined collaboration features of Windows SharePoint Services and SharePoint Portal Server 2003, users in an organization can easily create, manage, and build their own collaborative Web sites and make them available throughout the organization.

SharePoint Portal Server 2003 is a secure, scalable, enterprise portal server built upon Windows SharePoint Services that you can use to aggregate SharePoint sites, information, and applications into a single portal. All features of Windows SharePoint Services are available in SharePoint Portal Server 2003.