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Ki-jong Kim
IT Department Manager



Top R&D University POSTECH Accelerates SAP Applications with F5 Application Ready Network for SAP



Industry

Education and research

Challenges

- Improve performance and availability of SAP ERP applications
- Protect sensitive student information
- Consolidate network functionality
- Reduce management overhead and capital expenses

Solutions

- BIG-IP® Local Traffic Manager™
- BIG-IP® Application Security Manager™
- F5® Application Ready Network

Benefits

- Increased SAP ERP application availability and performance
- Simplified administration and lower operation costs
- 98% fewer server-side TCP connections, enabling server consolidation
- Enhanced security for SAP login and personal information page updates

Overview

Pohang University of Science and Technology (POSTECH) is one of the world's leading science and technology research-oriented universities. With 3,000 students, 800 researchers, and 230 faculty members, it actively supports more than 60 research centers at its campus on the southeastern coast of Korea. In 2007, POSTECH was ranked the top university in Korea by JoongAng Daily, one of Korea's largest daily newspapers.

In support of its mission as a world-class research university, POSTECH is constantly seeking to innovate and improve its use of technology. Using F5 solutions, the university upgraded its IT infrastructure to improve the performance of its SAP applications, reduce operations costs, and ensure application security.

Challenges

POSTECH's previous set of point solutions no longer met its application delivery needs. To manage traffic for SAP ERP and its other mission-critical applications, the university was using L4 switches, firewalls, and the SAP Web Dispatcher. POSTECH's infrastructure presented several challenges, including the need to:

- Reduce operational costs for network and security gear to support SAP ERP
- Replace the SAP Web Dispatcher to improve load-

balancing scalability and simplify the architecture of the SAP landscape

- Provide excellent user performance even during traffic surges
- Offload server functions such as SSL encryption/decryption for the SAP ERP login page without making changes to the application
- Provide top-notch security for SAP ERP, webmail, and the website to protect sensitive student information

Solution

POSTECH found the fully integrated solution it needs to meet all of its SAP application delivery challenges with the combination of F5 BIG-IP Local Traffic Manager (LTM) and BIG-IP Application Security Manager (ASM).

The university used the F5 Application Ready Network (ARN) for SAP to deploy BIG-IP LTM and BIG-IP ASM with its SAP ERP applications. The F5 ARN for SAP is a complete set of resources that help simplify the design, deployment, and management of SAP applications across the network while optimizing the security, availability, and performance of the applications. POSTECH leveraged the SAP web application firewall policy that is built into BIG-IP ASM as part of this set of application-specific resources.



The integrated F5 solution provides L7 switching functionality and intelligent traffic management using the F5 iRules™ scripting language. It also offers server-side TCP offload and RAM caching as well as SSL offload and termination.

In addition to application health checking, the F5 solution provides a web application firewall, including application security policy validation, content scrubbing, SQL injection detection, security attack filtering, cloaking, and XML protection.

Benefits

As a result of implementing F5 solutions, POSTECH is able to deliver its SAP ERP applications, webmail, and website with the speed, availability, and security this top university requires, while also reducing expenses.

“BIG-IP LTM has helped to ensure high availability, load balancing, and accelerated application delivery at POSTECH. We are now able to operate our existing application servers in a stable, secure, and efficient manner,” says Ki-jong Kim, IT Department Manager at POSTECH.

Simplified deployment

The F5 ARN for SAP enabled the university's networking team to deploy and optimize its SAP applications as efficiently as possible. The rigorous testing and validation the ARN guidelines and best practices have undergone help POSTECH ensure that it is getting the most from its SAP environment.

POSTECH also benefits by using the F5 iRules scripting language to customize its traffic management. iRules enabled POSTECH to solve critical deployment issues and provide users with a seamless SAP Portal login.

Improved SAP user experience

Since the implementation of BIG-IP LTM, POSTECH has noted a significant increase in SAP ERP application availability and performance. The intelligent traffic management capabilities of BIG-IP LTM deliver a faster and more reliable experience for users.

Reduced expenses

Server-side TCP offload and RAM cache has resulted in 98 percent fewer server-side TCP connections and a reduced need for capital expenditures on server resources. In addition, the consolidation of network functionality has simplified the administration of the system and reduced operational costs.

Strong security

POSTECH is also benefitting from strong application and network security with a system that offers full proxy parsing and intrusion detection and resolution. The F5 solution provides enhanced security for users' SAP login as well as personal information page updates via SSL.

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