

GMARKET ENSURES SECURE, FUTURE-PROOF SERVICE WITH 10 GIGABIT-CLASS FIREWALLS

Summary

Industry: E-commerce

Challenge: To reduce Ethernet switching complexity and enhance network services, while ensuring scalability and reduced administrative overhead

Selection Criteria: Juniper Networks Junos operating system features, performance, track record, fast deployment

Network Solution: Juniper Networks MX960 3D Universal Edge Router

Results: Significant improvement in performance and scalability, with more streamlined topology and management

Gmarket, an online shopping mall established in April 2004, has been growing in tandem with the Korean electronic commerce marketplace, handling an increasing number of customers and Web-based transactions. It services millions of visitors on a daily basis, and has evolved from carrying simple text or images to include RSS feeds and multimedia content aimed at attracting more customers. These enhancements, coupled with the growth of visitor numbers, resulted in exponential traffic increase that the company's network infrastructure struggled to cope with. An upgrade was in order.

Challenges

Gmarket used to have dedicated switches connecting each telecommunications link to the Internet data center. However, this architecture made it difficult to make changes to the network or to expand it to handle growing traffic. Moreover, traffic would sometimes converge on a single link, resulting in a bottleneck in the overall network.

What Gmarket needed was a structural improvement in order to enhance the efficiency and performance of its network environment. To address this, the company decided to deploy large-capacity backbone routers.

"By centralizing our numerous distributed lines onto a backbone router and redistributing them, we expect to increase expandability," said Mr. Kiseok Lee, group manager, system operation group at Gmarket. This solution would also be more cost efficient said Mr. Lee.

"When lines are provisioned from the Internet data center and service providers, the pricing is based on each port," said Mr. Lee. "Hence it is more cost-efficient to use one large-capacity line than several low-capacity lines."

Selection Criteria

Gmarket began to evaluate solutions for a backbone router and put the Juniper Networks® MX480 3D Universal Edge Router to the test. "We believed in the technological and support capability of Juniper Networks and performed the test on an MX480 for a month in order to verify the performance and reliability of the device," said Mr. Lee. "Our staff gave Juniper high points for reliability and performance," he said. He also credited the excellent reputation of both Juniper Networks routers and Junos® operating system with helping him decide to go with a solution from Juniper Networks.

But Gmarket decided not to deploy the MX480 that it had tested, instead choosing Juniper's higher-capacity MX960. While the six-slot MX480 would have been "more than enough" to meet the requirements of Gmarket's existing network environment, the company decided to deploy MX960 routers to handle future expansion needs. "Considering Gmarket's transaction size, which is showing a growth rate of more than 40 percent annually, we chose MX960 routers because our emphasis was on expandability, which is enabled by high port density," said Mr. Lee.

Although the MX Series was a new product line when Gmarket tested it, with no existing reference sites, it was a risk Gmarket was willing to take.

"A high-performance enterprise such as Gmarket must respond quickly to market changes," said Mr. Lee. "We have to be daring in making deployment decisions when required."

Gmarket was also confident with Juniper's excellent reputation as a provider of high-performance networking solutions.

Solution

Gmarket became the first customer in Korea to deploy Juniper Networks MX Series high-capacity backbone routers. The MX960 routers selected by Gmarket provide a maximum of 12 slots to support 480 Gigabit Ethernet ports, or 48 10 Gigabit Ethernet ports. The management and security features of the MX960 enable Gmarket to enhance its network structure and implement policy changes more easily, while offering increased protection of the network through the application of access control lists.

"The MX Series was selected for its ease of manageability and its powerful Junos operating system."

Kiseok Lee,
Group Manager,
System Operation Group for Gmarket

Results

"The MX960 routers have played a major role in the enhancement of our network structure, providing reliability and performance that has exceeded our expectations," said Mr. Lee. "In addition, we were able to improve manageability and we expect the routers to help us strengthen the security of our network."

Next Steps and Lessons Learned

Having completed the task of improving its network structure, Gmarket's next objective is to better utilize the various functions of the MX960, including ACL and the filtering and rate limits, to further enhance network security.

"Today, malicious attacks including distributed denial of service (DDoS) are increasing rapidly," said Mr. Lee. "While Gmarket already has various security devices in place, it is necessary for us to ensure more holistic and comprehensive security through the implementation of a hierarchical security solution."

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

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