

# WAN ACCELERATION PLATFORMS LOWER COSTS, IMPROVE BUSINESS PERFORMANCE FOR KIBO TECHNOLOGY FUND

## Summary

Industry: Finance

**Challenges:** Reduce infrastructure investments and increase the speed of the existing wide-area network (WAN) rather than replace old business process servers

**Network Solution:** Juniper Networks WX100, WXC250 and WXC500 Application Acceleration Platforms

**Results:**

- Reduced IT investment and annual server maintenance costs
- Accelerated application response times from nearly two minutes to just 10 seconds
- Decreased business process (BP) server management workloads while increasing productivity

The Kibo Technology Fund, headquartered in Pusan, South Korea, provides technology guarantees and assessments for new companies. By helping streamline the funding process for newcomers in the technology field and strengthen the capacity of technological innovation, Kibo Technology Fund seeks to take the lead in acquiring the potential for national economic growth.

When the Kibo Technology Fund discovered that business process (BP) servers implemented in sales agencies throughout South Korea weren't performing up to expectations, they had a decision to make: replace the servers, or deploy WAN accelerators from Juniper Networks® to boost performance. The company opted for the WAN acceleration solution, and the IT department hasn't regretted that decision.

Since the WAN accelerators were introduced, Kibo Technology Fund has saved more than \$800,000 (USD) – money that would have otherwise been spent on the new BP servers. Not only that, the company has also seen response times for remote and branch office users accessing the central server drop from nearly two minutes to just 10 seconds, dramatically improving productivity while reducing frustration.

The decision to deploy WAN acceleration solutions came in 2005, when Kibo's IT team was phasing out local BP servers deployed in sales offices back in 2001. The company was faced with a decision: incur the costs associated with replacing and supporting the distributed servers in each office, or reduce costs by adopting a centralized model using far fewer servers, all deployed in a single location?

According to Sa-Ik Song, head of Kibo's IT Operation Team, supporting the distributed servers had always been a challenge, and upgrading each of these devices would have required an \$811,000 (USD) capital investment. While they realized there would be a performance impact, given the anticipated savings, the company opted for the centralized model, reducing the total server count from 56 to just 12.

It didn't take long to discover what that performance impact would be. Soon after the server consolidation, users in sales offices – accustomed to virtually immediate response times from their local servers – reported that response times for a single transaction now took anywhere from one to two minutes. Needless to say, productivity suffered, and Kibo began looking for solutions. Before long, the company determined that WAN acceleration technology was the answer.



## Solution

“After deciding to deploy WAN accelerators, we began testing different products from different vendors,” says Song. Ultimately, Kibo went with the Juniper Networks WX Series and WXC Series Application Acceleration Platforms because the solutions proved most cost-effective during benchmarking tests and, unlike the other vendors, provided integrated Quality of Service (QoS) capabilities for prioritizing mission-critical applications.

“We found that Juniper’s WAN accelerators were the most reliable solution in many aspects such as function and cost,” Song recalled. The detailed, accurate management capabilities delivered via the WX Central Management System™ (WX CMS™) software confirmed the decision.

With the help of strategic partner Global Telecom, a Juniper reseller, Kibo has deployed nearly 60 Juniper application acceleration platforms across the corporate enterprise: two WX100s and four WXC500s in the corporate data center, and 51 WXC250s in sales offices throughout Korea. With the Juniper solutions in place, response times for users accessing the centralized BP servers over fixed-capacity WAN links dropped to just 10 seconds, restoring productivity to pre-server centralization levels. Plus, by centralizing the servers in a single location, the company avoided an additional \$50,000 (USD) in maintenance and management costs – on top of the \$811,000 (USD) capital savings.

“Now that the WAN accelerators have been deployed, response times have improved up to 10 times,” says Song. “This is what I like most about the WAN accelerator solution: it has completely dispelled our concern about the speed of the system.”

Currently, not all of the systems of the company are linked to the WAN accelerators. Some locations within the company’s sales agencies are still using BP servers so that the company can go back to the previous system in case something goes wrong. However, Kibo Technology Fund does not expect any significant trouble since it was able to set up the WAN accelerators quickly, easily and without any serious trouble. Staff from both Global Telecom and Juniper stood by to ensure a successful implementation and carried out an education program for the safe operation of the system. In the future, Juniper and Global Telecom plan to provide additional support when and if Kibo finds it necessary.

## The Benefits

The Juniper WX Series and WXC Series provide the foundation upon which Kibo Technology Fund will continue to build and grow, enabling the company to establish itself as a technology leader in the finance industry.

Based on the unique WX Framework™, which integrates all the attributes required to optimize and accelerate applications over the WAN, the Juniper WX Series and WXC Series provide a cost-effective solution that allows users to maximize existing resources and improve business operations without requiring additional investments in the enterprise infrastructure.

One WX Framework feature used by Kibo is Molecular Sequence Reduction™ (MSR™), Juniper’s flagship compression algorithm that delivers up to a 10-fold increase in WAN capacity. The MSR technology scrutinizes every file sent over the WAN looking for redundant data flows; if it recognizes a pattern it has seen before, it replaces the repetitive data with a label before sending the file to its destination, dramatically reducing WAN traffic volume. Because these repetitive patterns are removed from the flow, far less traffic traverses the WAN, reducing contention for limited resources and improving overall application performance.

The WXC Series platforms also leverage the Network Sequence Caching technology which, like MSR compression, identifies redundant patterns at the IP layer and replaces them with labels for transmission across the WAN. However, unlike the MSR technology, which operates entirely in memory, the sequence caching technique uses onboard hard drives to retain and recognize particularly large patterns over longer periods of time. As a result, sequence caching technology can detect patterns separated by hundreds of gigabytes of data or last seen days or even weeks earlier, reducing traffic volume even more and increasing WAN capacity by up to 100 times.

Kibo has found the WX Framework’s QoS technology particularly useful for prioritizing mission-critical applications and preventing less-important traffic from consuming an inordinate amount of bandwidth. According to Song, prior to the WX Series and WXC Series platform deployment, FTP traffic represented a significant percentage of WAN traffic and consumed a corresponding amount of bandwidth, sometimes at the expense of more important material work. “With the Juniper QoS feature, however, we can limit FTP to 50 percent of available bandwidth while prioritizing business traffic such as GroupWare, ensuring it always has sufficient bandwidth,” says Song. “This results in faster response times.”

To keep tabs on all the Juniper WAN acceleration platforms – as well as the applications running through them – Kibo Technology Fund is using the WX CMS management software, which provides unparalleled visibility into WAN performance. The software helps the IT organization understand which applications consume the most bandwidth, which offices and individual users are the heaviest application users, and how the applications are actually running over the WAN – information they can use to make informed product deployment, application roll-out and other decisions.

Song says that Kibo has been so pleased with the software, he plans to upgrade to the next version of the WX CMS solution when it becomes available. In fact, the Juniper implementation has gone so well, the company plans to introduce Juniper network and security products into the infrastructure in the near future.

Kibo Technology Fund is the first financial institution in Korea to implement WAN acceleration technology in all of its offices. “The financial industry considers safety the most important

factor in business operation,” says Song. “Therefore, financial institutions would hesitate to introduce products or technologies that are not yet verified. There was some concern about deploying WAN accelerators at Kibo Technology Fun, but we successfully completed the implementation with active support from Juniper and Global Telecom.” Song predicted that Kibo’s WAN acceleration deployment would serve as an example that other financial institutions will follow.

### 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](http://www.juniper.net).

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