

# HONG KONG'S LARGEST DATA CENTER IMPROVES CAPACITY AND MANAGEABILITY WITH M SERIES MULTISERVICE EDGE ROUTERS

## Summary

**Industry:** Internet Data Center

**Challenges:**

- Legacy routers running out of memory
- Bandwidth capacity
- Bandwidth management

**Selection Criteria:** Performance and reliability

**Network Solution:** Juniper Networks M7i and M20 Multiservice Edge Routers

**Results:**

- Enhanced router memory capacity capable of capturing all Internet routing tables
- Data center can now connect to more upstream providers
- 1Gb line-rate throughput capacity supports all levels of bandwidth demand for data center servers
- Juniper Networks Junos operating system provides more protection to the routing device from DDOS threats
- Legacy routers retired; all bandwidth management now handled by M Series Multiservice Edge Routers

With three data centers around Hong Kong and more than half the local hosting market, iAdvantage is the standout provider of colocation and facilities management in the territory. The firm was founded in 1999 by the Sun Hung Kai group, one of the territory's biggest conglomerates.

## The Challenges

As market leader in a major regional business center, iAdvantage serves customers with stringent requirements, such as online banks and high-traffic mass media. For example, two of Hong Kong's biggest financial information providers are colocated at iAdvantage, said Ben Li, iAdvantage vice president technology. Their business is transmitting sensitive stock market information and they need extremely reliable infrastructure.

For a data center it is important to be able to manage the facility's data throughput, says Mr. Li. This enables it to supply bandwidth to customers according to the level they have ordered.

Mr. Li said that some time ago his team discovered that some of the legacy routers were having difficulty in keeping up with the traffic coming into the center. The equipment memory could not keep up with the hundreds of thousands of Internet routing tables.

## Selection Criteria

iAdvantage wanted a robust, scalable solution to ensure not only consistent traffic handling but investment protection. The legacy system was simply not up to the task.

"If your router has limited memory, you can't handle the traffic," Mr. Li said. The company's bandwidth management device had also reached its limit, forcing network managers to bypass it.

Because of these emerging problems, the system had trouble meeting the requirements of customers, so Mr. Li and his team set about finding a new solution for the center. His engineers went to the laboratory where they ran stringent tests on multiple router solutions.

## The Solution

"After three months' testing, we finally chose Juniper," said Mr. Li. "Definitely performance was the top consideration. It was the primary reason for choosing Juniper." He said Juniper Networks® Junos® operating system also provided more protection to the routing device from Distributed Denial of Service (DDoS) threats. During the tests using another routing solution, engineers found that "without careful configuration, the CPU was too busy during DDoS attacks."

This discovery was a serendipitous result during the evaluation process, when iAdvantage saw that the M Series was able to withstand a burst network attack, such as can happen during DDoS, and still maintain normal operations. In contrast, iAdvantage knew from experience that its legacy routers would have already been at 100% CPU utilization without even being able to provide control to the router console.

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Ben Li,  
VP Technology, iAdvantage Ltd.

## The Results

The switch to the Juniper platform has solved three major issues for the data center, said Mr. Li. First, it now has the memory capacity to capture all Internet routing tables and enable the center to connect with more upstream providers.

Second, it has the speed to support all levels of bandwidth demand for servers in the center, with a Gigabit line-rate throughput capacity.

Third, it has revitalized bandwidth management capability. iAdvantage was able to abandon its legacy solution and "put all the management on the M20 box," says Mr. Li.

"Because we could manage all the bandwidth, we could start with a new solution for our customers. If they're using more than they should get, we can contact them and offer an upgrade."

## 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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