

Hong Kong's Largest Data Center Improves Capacity and Manageability with M-series Routers



Industry: Internet Data Center

Company:
iAdvantage Ltd.

Challenges:

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

Network Solution:
Juniper M7i and M20 routers

Selection Criteria:
Performance and reliability

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 JUNOS™ platform provides more protection to the routing device from DDOS threats
- Legacy routers retired; all bandwidth management now handled by Juniper M-series routers

"After three months' testing, we chose Juniper. Definitely performance was the top consideration."

Ben Li,
VP Technology,
iAdvantage Ltd.

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.

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 collocated 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.

CORPORATE HEADQUARTERS
AND SALES HEADQUARTERS
FOR NORTH AND SOUTH AMERICA
Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or 408.745.2000
Fax: 408.745.2100
www.juniper.net

EAST COAST OFFICE
Juniper Networks, Inc.
10 Technology Park Drive
Westford, MA 01886-3146 USA
Phone: 978.589.5800
Fax: 978.589.0800

ASIA PACIFIC REGIONAL
SALES HEADQUARTERS
Juniper Networks (Hong Kong) Ltd.
Suite 2507-11, 25/F
ICBC Tower
Citibank Plaza, 3 Garden Road
Central, Hong Kong
Phone: 852.2332.3636
Fax: 852.2574.7803

EUROPE, MIDDLE EAST, AFRICA
REGIONAL SALES HEADQUARTERS
Juniper Networks (UK) Limited
Building 1
Aviator Park
Station Road
Addlestone
Surrey, KT15 2PG, U.K.
Phone: 44.(0).1372.385500
Fax: 44.(0).1372.385501

Copyright 2007 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, NetScreen, and ScreenOS are registered trademarks of Juniper Networks, Inc. in the United States and other countries. JUNOS and JUNOSe are trademarks of Juniper Networks, Inc. All other trademarks, service marks, registered trademarks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

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 the Juniper JUNOS™ platform 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 router 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.

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."

For More Information

To find out more about Juniper Networks products and solutions, visit <http://www.juniper.net>.

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.

