

## CWDM & DARK FIBER LIGHTS UP CISCO DATA CENTER IN TOKYO

*By combining two data centers, Cisco has slashed monthly costs while increasing bandwidth.*

In 2003, Cisco Japan IT decided to combine two data centers serving sales offices in the Tokyo districts of Akasaka and Shinjuku. A single, dedicated facility would allow Cisco Japan IT to engineer a higher level of availability with more robust redundancy and also provide more flexibility in moving sales offices, if and when needed. Situating the dedicated data center outside the expensive city center would also reduce physical leasing costs.

### Business Benefits

- Lower telecom leasing costs
- Route diversity ensures continuity
- Quick deployment of additional channels when needed
- Simpler management, reducing IT labor requirements
- Scalable bandwidth for new apps and demonstrations

“Adding a Gigabit of bandwidth takes only about five seconds and costs about \$750.”

-- Greg Duncan, Cisco IT Manager, Japan

Although a dedicated data center appeared to be a good solution, the cost of providing reliable connectivity between the data center and the two sales offices seemed prohibitive. With circuits required, the one-million-yen-per-month Gigabit Ethernet lease cost would triple to approximately \$27,000. To provide viable connectivity between the new data center and the two sales offices, Cisco Japan IT needed a high-speed, low-cost solution that would be both reliable and easy to manage.

Cisco Japan IT found several carriers in Tokyo receptive to leasing dark fiber and at prices far lower than the current managed Gigabit Ethernet services. In addition, the Cisco coarse wavelength-division multiplexing (CWDM) gigabit interface converter (GBIC) solution was recently made available – a solution that provides economical optical bandwidth scalability with little or no management requirements.

As a result of the decision, Cisco has reduced its monthly cost from US\$27,000 for traditional leased Gigabit Ethernet service to US\$9900 for dark fiber using CWDM technology. Bandwidth can be doubled, tripled, or even quadrupled without additional fiber by adding relatively inexpensive CWDM GBICs and OADM modules. And total route diversity has eliminated single points of failure and ensures high availability between sites.

“If we had chosen to lease Gigabit Ethernet circuits from a service provider, we would have a single provider with the risk of a single point of failure,” says Zhengming Zhang, Cisco IT network engineer. “Now we have the best of both worlds.”

*Fail safe operations, unlimited bandwidth, and easier management at lower cost.*

Case Study: [http://www.cisco.com/web/about/ciscoitwork/case\\_studies/optical\\_dl1.html](http://www.cisco.com/web/about/ciscoitwork/case_studies/optical_dl1.html)

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