How Cisco IT Migrated TDM Local Access from SONET to OC-192 Infrastructure

OC-192 on Cisco ONS 15454 increases network speed, saves money, and improves manageability.

BUSINESS BENEFITS

- Easier expansion to new buildings
- Greater control over capacity planning
- Lower monthly costs
- Reduced footprint

"The expanded SONET footprint means we can self-manage local access capacity in more buildings, and extend the access infrastructure to unlit buildings as their capacity needs grow."

– Keith Brumbaugh, Network Engineer

When Cisco employees connect to the outside world over the WAN, public switched telephone network (PSTN), or Internet, they use a local access network to the LEC or IXC central office. Either the LEC or its customer can own the local access infrastructure, which is based on synchronous optical network (SONET) technology. For buildings with high LEC capacity needs, customer-provided access saves money. For buildings with lower capacity needs, LEC-provided access is usually more economical. Within the Cisco San Jose headquarters campus of over 40 buildings, Cisco owned the OC-48-speed infrastructure for the eight buildings with the highest capacity needs, and leased the infrastructure from SBC for all other buildings.

By 2003, 18 more Cisco buildings on the San Jose campus were using so much capacity that customer-provided access would be more economical, but Cisco could not add these buildings to the legacy infrastructure of unconnected SONET rings. The legacy infrastructure had other drawbacks as well, including high management burden, inefficient capacity planning, and large footprint and power requirements. Because Cisco shared the local access infrastructure with other SBC customers, it needed to notify SBC early if it needed more capacity, or else risk provisioning delays.

Cisco decided to migrate from its legacy SONET TDM local-access infrastructure to a unified, campuswide solution powered by the Cisco ONS 15454 Multiservice Provisioning Platform. While other Cisco locations had a local access infrastructures based on the Cisco ONS 15454 system, this would be the first that was not a greenfield deployment. Cisco IT planned the cutover carefully to ensure that critical business services remained available.

Easy expansion to additional building. Now, 26 Cisco headquarters buildings instead of eight enjoy the benefits of customer-provided access, including cost savings, simplified capacity planning, and reduced footprint.

Greater control over capacity planning. No longer reliant on the LEC's LAN capacity, the Cisco IT provisioning team can run usage and capacity reports on demand.

Reduced costs. After paying a one-time fee to the LEC for a dedicated SONET infrastructure, Cisco pays 14 percent less in monthly bills than it paid for single-building connection. Real estate savings amount to $624,000.

Cisco reduced local access costs and gained greater control over capacity management

Case Study: http://www.cisco.com/web/about/ciscoitatwork/case_studies/routing_dl10.html

FOR MORE INFORMATION

To read the entire case study or for additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT www.cisco.com/go/ciscoit

NOTE

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