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Verizon: Forget DOCSIS 3.0, You'll Witness 100Gbps Networks by 2009

Verizon Business will deploy ultra-high-speed networking over its routers

100Gbps sounds appealing, doesn't it? Verizon

Verizon Busines will take networking to higher peaks in 2009, with the advent of its newest offering: 100Gbps data rates across its major routers in the United States. Fred Briggs, Verizon Business' executive vice president of operations and technology, claims that the company will implement the new speeds across its hardware connecting New York, Washington D.C., and Chicago until the first three months of 2009. The networking gear that allows the company to provide ultra-fast data rates had been tested last year, when they streamed a live feed at 502 kilometers."The 100Gbps test showed us that we could deploy 100Gbps on routes and not disrupt current wavelengths," claimed Joseph Cook, Verizon Business' vice president for global network engineering. This type of networks are an evolutionary update to the currently implemented 10 Gigabit Ethernet. More than that, deploying 100Gbps speeds had been on the IEEE's roadmap since 2006. Verizon is the first Internet service provider that has demonstrated a native 100Gbps network. Previous attempts have been made by Level3, but its network was a non-native one, comprised of 10 links with 10GBps capabilities each, that can be scaled up to 100Gbps if the network needs the data transfer boost.According to the company officials, Verizon will also deploy the ROADM solution (reconfigurable optical add/drop multiplexers), a technology that would allow it to manage the network's bandwidth remotely. The ROADM will be deployed in about 18 U.S. markets within the first three months of 2009. "It's this technology that will handle Ethernet for us," Briggs says of ROADM. "We will be able to manage it through this device." Regular networks are not appealing anymore, with the advent of more and more bandwidth-intensive services, such as high-definition TV over IP, voice-over-IP telephony or high-definition content websites. Verizon will continue updating its existing infrastructure to the optical mesh technology, that will dramatically decrease the network's downtime as a result of outages. The mesh technology would automatically route network traffic through alternate network segments that are not affected. "The optical mesh gives us more consistent latency for customers and helps us protect against multiple failures," Briggs says. "If you cut one path on a SONET ring, then by definition, the second path is physically longer, and depending on the route it uses, that may add between 10 to 30 milliseconds of latency. Also, SONET rings are wonderful things, but if you have two failures along a SONET ring, then you're down."