Verizon completes industry-leading 100G Ethernet field trial

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Continuing to lead the industry in 100G technology, Verizon has completed a field trial carrying 100 gigabit-per-second Ethernet traffic on a metropolitan Ethernet infrastructure. Using Alcatel-Lucent equipment deployed in Verizon's Switched Ethernet Services network, the trial successfully transmitted data over 12.7 kilometers (7.9 miles) of field fiber in the company's Dallas area network.

Verizon SES is a next-generation switched Ethernet service enabling customers to easily interconnect their locations within a metrowide network as well as access private and public wide area networks (WANs) using optical fiber-based access. Ethernet service is well-suited for numerous customer applications, based on its ability to provide point-to-point and multipoint connectivity options combined with multiple classes of service and increments of bandwidths.

Demand for SES is increasing, driven by trends such as wireless carriers using Ethernet backhaul to stay ahead of the growing demand for high-bandwidth wireless services. Verizon currently provides links for thousands of cell sites and mobile switching offices from its advanced fiber-optic network, using Ethernet-based technology.

"With this 100G Ethernet trial, Verizon is preparing for the future and the need to meet our customers' bandwidth needs in the metro Ethernet space," said Jean McManus, executive director of technology for Verizon. "The 'network of tomorrow' will include building blocks such as 100G Ethernet that allow us to scale our switched Ethernet core as

access speeds and customer demands increase."

The trial, which ran from June 14 - 18, used existing Alcatel-Lucent 7450 switching equipment with new plug-in cards to place native 100GE traffic on a single fiber, creating the high-speed links.

"Our goal is to show 100GE can be carried on a metro network and do it with current equipment that avoids major changes - and the associated costs - to the existing network infrastructure," said McManus.

Alcatel-Lucent's 7450 ESS nodes used 100 GE service interfaces with 100GBASE-LR10 optics, which provide low-cost, high-bandwidth transport over distances of up to 10 kilometers (6.2 miles). Verizon is at the forefront of accelerating the availability and adoption of 100GE technology.

Alcatel-Lucent offers the industry's first 100GE interfaces that deliver the full range of routed and switched services for residential, business and mobile services. Deployed in networks serving metropolitan areas -- at the service edge or in the core of the network -- Alcatel-Lucent's modules extend the applicability of 100GE far beyond core transport. Combined with 100G optical transport technology, Alcatel-Lucent offers exceptional end-to-end scalability, performance and compatibility to help support bandwidth scaling and control costs -- key tenets of Alcatel-Lucent's High Leverage Network (HLN) architecture.

Verizon's SES network supports Ethernet LAN (E-LAN) and Ethernet Virtual Private Line (EVPL) metro services. E-LAN is a multipoint-to-multipoint bridging service designed for any-to-any connectivity between dedicated ports. EVPL is an all-fiber optic network service that connects subscriber locations at native LAN speeds using point-to-point Ethernet virtual connections.

This latest trial follows Verizon's deployment of the first live 100G commercial system on its European optical core network between Paris and Frankfurt as well as a series of successful 100G technology trials the company has previously completed.

Source: Alcatel-Lucent