

INFOBRIEF

Fewer Pizza Boxes: How Virtualization Creates Opportunities for Service Providers

For the uninitiated, the term 'pizza box' is common industry slang for rack-mounted Customer Premises Equipment (CPE), so-called because of their similarity in terms of size and shape of to the boxes used by pizzerias. Those CPE boxes contain the networking gear service providers put into a customer premises to deliver a service, traditionally Ethernet connectivity. Other terms for that equipment include Network Interface Devices (NIDs), and Network Terminating Equipment (NTE). Functions deployed in the larger context of CPE include firewalls, routing, and encryption—functions enterprises need to use their WAN assets efficiently and safely—but that all comprise part of CPE.

Much of this equipment can now be virtualized—that is, delivered as software. This means CPE is undergoing a fundamental change. Instead of multiple pizza boxes that represent the various physical functions needed, software-based functions can be located in different locations, depending on the specific function.

The Market for Networking Services Remains Strong

To take the analogy one step further, the market for bandwidth continues to grow like that for pizza on the day of a big game. If Ethernet services serve as an example of where the market is heading, revenue is growing at a CAGR of 10.7 percent, on average, in all regions of the world, for a projected total of more than \$53 billion in 2017.¹

The market for Ethernet access devices—hardware-based or virtual—is another indicator of this market strength. IHS

predicts the market for Ethernet access devices, which includes both mobile backhaul and customer premises equipment as well as wholesale services (in which one carrier sells services to another carrier), will climb from around \$1 billion today to almost \$1.4 billion by 2020.²

The challenge for service providers is that, while the market for bandwidth is growing, it is becoming a commodity. This means competition is often based on price, and as the cost per bit decreases, service provider revenues flatten out, while costs can continue to rise. To combat this phenomenon, operators are offering value-added services beyond basic connectivity. While bandwidth remains the principal service offered, enterprises are interested in outsourcing other functions as billable services to free their IT departments from managing day-to-day network operations and focusing instead on supporting IT services critical to their company's line of business.

Some value-added managed services network operators deliver to their customers include³:

- Virtual Private Network (VPN) services, valued at \$29 billion
- Managed security, valued at \$19 billion
- WAN optimization, a \$3 billion market
- Software-defined WAN services, valued at \$2.3 billion

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¹ Ovum: Ethernet Services Forecast Report: 2015–20, September 2015.

² IHS: Ethernet Access Devices (EADs) Biannual Market Tracker, March 2016

³ Ciena MSP Consulting, by analysis and compilation across analyst/supplier/customer data, including Gartner, appliance vendor financial reports, Infonetics, Frost & Sullivan, and Doyle Report/Silverpeak.