

WHITE PAPER

Delivering Profitable DCI Services

There is a major transformation occurring in the IT space: Enterprises are shifting more of their IT spending from private cloud toward hybrid and public cloud services. This shift will trigger new spending on managed Data Center Interconnect (DCI) services, which are forecast to reach \$4B globally by 2018, with a growth rate over 10 percent.¹

Companies once known only for connectivity services are now building a new, profitable revenue stream based on the shift of IT resources into the cloud. For these companies, accelerating time to migrate data (typically 50 Tb or more) from their enterprise customer's Data Center (DC) to a cloud DC is a huge challenge. Traditional IP networks that connect enterprises to cloud DCs typically operate at 1 Gb/s or less. At that rate, uploading 50 Tb of content would require weeks.



Figure 1. Cloud DC migration device

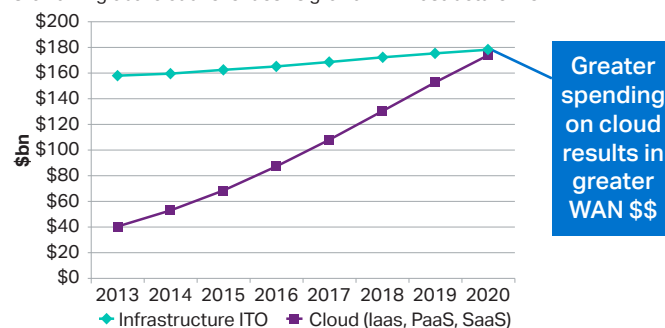
One cloud provider's solution to this challenge was to introduce a solution from the retail side of their business. They introduced a cloud DC migration service that was based on a hard drive. Using this solution, an enterprise would manually transfer 50 Tb of content onto one or more hard drive devices (Figure 1),

ship these devices by truck to the cloud provider, then upload the content into the cloud provider's DC. One challenge posed by this solution is that, while the transport time is reduced, the enterprise still requires several weeks to manually transfer the content onto the hard drives to ensure the data transfer is secure and reliable. Therefore, this approach only reduced the transport time from enterprise to cloud DC, but shifted much of the heavy lifting to the enterprise.

There is another, more efficient approach to addressing the limitations of current IP networks. Technology innovations allow the network to deliver dynamic services that enable an enterprise to request on-demand 10/40/100 Gb/s high-performance connections. These could be delivered via a dedicated DCI network to handle such short-term but high-bandwidth applications such as data migration to the cloud. This paper outlines the drivers and requirements for a DCI service to address these applications leveraging a DC Connect Fabric.

Cloud IT spend to equal Private IT by 2020

Growth in global cloud revenues vs growth in infrastructure ITO



Source: Ovum: Ethernet Services Forecast Report: 2015–20, Sept 2015

Figure 2. Forecasted cloud IT growth rate

¹ Ciena estimate based on the Ovum report: "Opportunities for Optical Data Center Interconnect", 2015.