

WHITE PAPER

# Driving Multi-Tenant Data Center Integration and Federation

Booming demand for accessibility and performance in Multi-Tenant Data Centers (MTDCs) is driving demand for advanced Data Center Interconnect (DCI) technologies.

As the migration to cloud services continues to pick up steam, MTDCs are growing in popularity as a way for a wide range of organizations to reduce capital costs required by traditional data center operations. These operators support carriers and other large enterprises in running mission-critical applications in the cloud. MTDCs have been built specifically to accommodate the needs of the modern IT infrastructure. Because these facilities are equipped with a wide variety of high-bandwidth, competitively priced communications networks, and because they spread capital and operational costs across a large community of customers, MTDCs typically help clients lower costs, especially capital IT expenditures, and even ongoing operating expenses.

However, within MTDCs today, difficulties delivering dedicated bandwidth to current customers, along with long lead times for network orders, static bandwidth, and bandwidth contention issues are growing challenges.

On-demand Economy Drives DCI  
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MTDC operators are in search of solutions to help them accelerate time to market. Their constituents, including carriers and enterprise customers, want higher performance, lower costs, and more on-demand capabilities. These customers typically do not rely on Internet connectivity due

to strong requirements for security, low latency, deterministic operations, and dedicated capacity, all of which are needed to maintain high levels of performance and availability.

This special report highlights primary advances in DCI and Data Center Federation (DCF) that are helping to meet the booming demand for connectivity and accessibility inside and across multi-tenant data centers.

## Size and Scope of MTDC Operations

The use of MTDCs is growing in popularity as these facilities alleviate capital costs for their tenants/customers. According to analysis from 451 Research, more than 1,000 MTDC operators own almost 4,000 data center facilities worldwide. 451 Research predicts the global MTDC colocation market's annualized revenue will reach more than \$36 billion by 2017, up from roughly \$25 billion in 2015. 451 Research also estimates that the global market for MTDCs will grow in terms of total operational square feet of data center space, from 108.9 million square feet in 2015 to a projected 150 million square feet of space by the end of 2017.<sup>1</sup>

Mobility, the Internet of Things, streaming video, gaming, services such as SaaS, IaaS, and content delivery all depend on high-performance networks. In many cases, the best way to improve network performance is to push content and processing closer to the network's edge. This is likely to drive demand for more MTDC facilities in smaller markets to offer additional interconnection options. In fact, 451 Research predicts the overall hosting market opportunity could reach \$59 billion by the end of 2016, likely exceeding server sales worldwide.<sup>1</sup>

<sup>1</sup> 451 Research, 2015: Market forecast for Multi-Tenant Datacenter Global Providers, Jeff Paschke, Research Director, Multi-Tenant Datacenters – Global Markets; [www.451research.com](http://www.451research.com)