

The Right Colocation Provider Can be a Strategic Differentiator

Table of Contents

Introduction 3

Multiple Trends Drive Demand for Colocation Services..... 3

A Successful Colocation Strategy Depends on Choosing the Right Provider 4

Summary 6

About Juniper Networks 6

Introduction

Data has become the lifeblood of today's ultra-competitive, digital economy. Proliferating mobile devices, the Internet of Things, social networking, cloud computing and video streaming combine to generate staggering amounts of data on a daily basis. To transport, store, analyze and deliver all that information, service providers and enterprise organizations need more and more network connectivity and bandwidth. They also need more and bigger data-center capabilities.

Yet both groups recognize that it makes more financial and competitive sense to adopt a colocation strategy than to keep building their own data centers. After all, colocation delivers a broad array of benefits, including:

- immediate access to important domestic and international networks, content providers and Internet Service Providers
- rapid acquisition of network-interconnection services, including multiple high-speed upstream connections which minimize downtime
- fast entry into critical markets
- reduced capital expenditures and
- reliable networking, power and physical security for cost-effective business continuity and disaster-recovery, as well as compliance with industry standards such as Health Insurance Portability and Accountability Act (HIPAA) and Payment Card Industry (PCI) 3.0.

Nevertheless, just as no two organizations seeking colocation partners are alike, colocation providers vary widely, too, in terms of data-center space and power, size of geographic footprint, types of connectivity and ability to customize solutions.

However, zColo customers emphasize that the critically-important factors they always keep in mind when evaluating potential colocation-provider partners are:

- Carrier Neutrality
- Network Connectivity
- Cloud Computing
- Location
- Bundled Solutions (from a single provider)
- Expert Support

When evaluating potential colocation provider-partners, most leading organizations bring their own unique requirements to the table, but each one expects to see demonstrated capabilities in these six critical areas.

Multiple Trends Drive Demand for Colocation Services

The colocation data center market is growing exponentially, according to a recent [report](#) by 451 Research, with global annualized revenues expected to climb 63 percent by 2017, to \$36 billion. During that same period, the market's global footprint will increase by nearly 75 percent, to almost 150 million square feet.

Several trends are prompting organizations across many industries to move part or all of their IT infrastructure off-premises to colocation facilities. According to [Synergy Research Group](#), service providers in the broadband, content, social-networking and cloud markets account for more than 60 percent of expenditures on retail colocation in the United States, while enterprises account for the rest.

Service providers want to position themselves to scale quickly and securely to satisfy the growing business and consumer demand for their offerings. Taking advantage of the appropriate colocation facilities is a faster and far more cost-effective way to achieve that scalability than building their own data centers.

In addition, cloud companies and financial-services organizations, along with providers of content such as video and gaming services, want to extend their data-center capabilities as close as possible to their

customers. By reducing geographical distances between their data centers and their customers, these companies can reduce transport latency and thereby ensure high quality of service. Moving data-center capabilities closer “to the edge” also helps these organizations move quickly into new markets, expand their customer base and reduce transport costs. As is the case with broadband providers, moving into the right colocation facilities is a faster and more cost-effective way to achieve their business goals.

On the enterprise side, many companies, rather than continuing to invest CapEx dollars in expanding their own data centers, prefer to outsource those capabilities so they can focus on their core businesses. Closely linked with that trend is the corporate move to cloud computing, especially by those companies using a hybrid public-private cloud approach and multiple cloud providers, many of which reside in multi-tenant colocation facilities.

Another trend is the rapid evolution of the Internet of Things, or the interconnection of billions of devices, across nearly all vertical sectors, from communications and manufacturing to real estate and automobiles. The resulting generation of massive amounts of data clearly requires significant data-center support.

Collectively, all of these trends fuel the need for various types of network connectivity and the insatiable corporate and consumer appetite for bandwidth. In turn, these requirements drive the need for more and bigger data-center capabilities. In attempting to satisfy that requirement, service providers and enterprises alike are discovering that it often makes far more financial and competitive sense to adopt a colocation strategy than to build and expand their own data centers.

A Successful Colocation Strategy Depends on Choosing the Right Provider

Organizations that adopt colocation strategies vary widely according to, for example, the industries in which they compete, their business models, their strategic objectives, their CapEx/OpEx budgets and their size. Similarly, colocation providers are not all alike; their capabilities vary widely according to not only their space and power offerings but also the size of their data-center geographic footprints, the types of connectivity they offer and their ability to provide customized solutions.

Consequently, there is no one-size-fits-all approach to selecting a colocation provider that can satisfy a particular company’s unique requirements. However, there are some broad but critically-important factors that leading organizations always consider when evaluating potential colocation-provider partners:

- Carrier Neutrality
- Network Connectivity
- Cloud Computing
- Location
- Bundled Solutions (available from a single provider to achieve efficiencies and cost-savings)
- Expert Support

Carrier Neutrality for Maximum Network Connectivity - An online global [survey](#) of more than 1,000 organizations, conducted last year by Forrester Consulting on behalf of Digital Realty, revealed that the most important factor in choosing a colocation provider is connectivity—meaning network connectivity options, carrier availability and carrier density.

According to an [article](#) in the Data Center Journal, a colocation provider should be able to offer customers “the option of choosing from a wide range of network providers that offer competitive prices, as well as the ability to eliminate cost based on proximity. This benefit can be particularly important to enterprise companies with high or unlimited bandwidth needs.”

To give customers flexible connectivity choices, a colocation provider must be 100-percent carrier-neutral, thereby allowing each customer to select the mix of carriers necessary to support its unique and changing business requirements, including performance and price. To deliver maximum operating flexibility and network reach, a colocation partner also should be able to provide connectivity to IP peering, Ethernet, video and financial exchanges.

In addition, a carrier-neutral colocation provider that provides the broadest-possible range of in-house connectivity ensures that customers can obtain the economic benefits of in-house connectivity, along with all-important redundancy and resiliency for their IT infrastructures and around-the-clock network security.

As for the types of connectivity leading organizations look for, they want a colocation provider that connects to the major carrier hotels and Internet gateways. Such connectivity includes in-suite interconnections in the meet-me room, which allow customers to cross-connect, via fiber, Ethernet, DS1 and/or DS3 facilities, to dozens, even hundreds, of operator networks. In addition, customers want in-building interconnections, via extensive fiber-riser systems that provide deep reach with carrier hotels. By providing such systems, a colocation provider enables customers to connect to third-party providers that maintain their points of presence (PoPs) on a different floor or suite within the same facility.

To deliver even more connectivity options, a carrier-neutral colocation provider can leverage its own network as well. Such a strategy enables the provider to bundle its colocation space/power solutions with network connectivity to deliver end-to-end solutions, tailored to each customer's specific requirements.

For example, zColo takes advantage of its parent company's national and metro fiber networks to provide a full suite of solutions, from in-suite to cross-country in-house connectivity, each of which is designed to deliver maximum cost-efficiency.

Powered by advanced equipment from Juniper Networks, the network extends over 83,000 connected route miles, serves 319 geographic markets in the United States and Europe and connects to nearly 16,000 buildings, including 756 data centers, 45 of which are zColo facilities.

Using its metro fiber networks, a colocation provider can extend a customer's reach from that provider's suite into other major carrier hotels and data centers in the same market. For example, a customer may be a tenant in one of the colocation provider's facilities in Chicago and, via the provider's metro fiber network, establish a virtual presence in Chicago's major traffic exchange point.

Similarly, a customer can take advantage of the colocation provider's fiber network to connect IT and network deployments from across multiple data centers and/or within a single market, connect its primary data center and disaster-recovery data center via dark fiber interconnects.

Support for Cloud Computing - As more and more organizations consider cloud computing to be a vital part of their IT infrastructure, they look for a colocation provider that offers the capabilities they need to support their cloud strategies.

"Colocation continues to be the bedrock for much of Cloud 2.0," says Katie Broderick, research director for 451 Research, in that organization's latest quarterly DatacenterKnowledgeBase [release](#). "The global colocation market is the physical (facilities and networking) underpinning of both enterprises' off-premises computing, and hosting and cloud service providers' value-add services."

Specifically, a colocation provider can offer private connectivity to major cloud providers, effectively serving as "a gateway to hosted private cloud or to a hybrid cloud," according to a TechTarget.com [article](#). In both cases, the colocation provider can help the customer "mix and match a hybrid cloud stack, with multiple connections for public and private cloud elements," as well as achieve availability, recovery point and recovery time objectives.

[Analysis](#) by the Gartner Group suggests that customers partner with a colocation provider that offers capabilities very similar to those offered by cloud providers but does not own the cloud platform itself. These include one or both of the following solutions:

- 1) a private or public infrastructure-as-a-service (IaaS) solution hosted directly by the colocation provider and offered in addition to colocation services
- 2) a direct connection to a third-party private cloud provider or hosting provider located within the same data-center facility.

Because many colocation customers rely on multiple cloud providers, partnering with this type of colocation provider enables them to reach all their cloud-based applications, scalably, reliably and securely, as well as to achieve their disaster-recovery objectives for both their cloud and non-cloud operations.

Location - Core Internet functionality is expanding rapidly beyond the major urban markets, which in the United States includes coastal cities such as Los Angeles, Miami, New York and Seattle, where trans-Atlantic and trans-Pacific fiber-optic cables land. Pushed mainly by content providers, the Internet now is moving into Tier-2 markets—cities that are more broadly distributed geographically. Among these markets in the U.S. are Austin, Chicago, Dallas, Denver and Minneapolis.

According to datacenterHawk, a Dallas-based technology company which tracks and analyzes data-center trends centers, data-center professionals in the second quarter of 2015 searched for colocation solutions most often in the established colocation markets of Northern California, Dallas/Ft. Worth and Northern Virginia. However, colocation seekers showed an increased interest in mid-sized markets, specifically Minneapolis and Austin, TX.

In a [posting](#) about the change, David Liggitt, datacenterHawk president and CEO wrote that secondary markets “have also received a decent amount of colocation development activity over the last twelve months, offering users the ability to keep IT infrastructure closer to strategic business locations.”

Service providers of all stripes, along with enterprise organizations—particularly small and mid-sized companies—are pushing the Internet expansion across a broader geographical base. According to a recent [report](#) by Ovum, the global analyst firm, the enterprise migration to the cloud is not the only factor affecting data centers and the associated demand for colocation services. “The explosive growth of video is...fundamentally changing how networks are constructed.”

Leading Edge Design Group, a data-center builder, says on its [Website](#) that Ovum’s findings underscore the fact that content providers now want “to deliver content to users as efficiently as possible. In many cases, this means by having the content reside in a data center close to the end user.” That, in turn, may point to “a future of something different – a large number of smaller data centers deployed in strategic geographic locations, enabling content providers to deliver content to users with minimal latency.”

Along with content providers such as Netflix, Apple and Facebook, financial-services companies increasingly want to push their content into these markets and for the same reasons: to reduce latency, ensure their users obtain high-quality, reliable access to that content and speed up transactions. Of course all of these organizations also want to reduce their content-transport costs.

Consequently, rather than build their own data centers to achieve their business objectives, they want to partner with colocation providers that are in the right geographic locations, with the necessary density and can offer connectivity, scalability and reliability, as well as square footage and power.

Bundled Solutions - Content providers in particular are seeking a colocation partner that has not only the broadest-possible footprint across many markets, even beyond Tier-2 markets, but also the ability to package customized solutions. If, for example, a content company needs colocation space and services in three specific markets, that company likely will prefer to partner with a single colocation provider, rather than with two or three.

To provide one-stop shopping for customers with diverse, location-specific requirements, a colocation provider can leverage corporate assets to bundle a solution tailored to a specific customer’s unique needs. For example, zColo offers a broad product portfolio which includes physical infrastructure (leased dark fiber infrastructure, mobile infrastructure for tower/small-cell backhaul and interconnect-oriented colocation.

The product portfolio also incorporates fiber-based metro, regional and long-haul fiber networks which deliver wavelength, Ethernet, IP, SONET and IaaS services. By mixing and matching components from this extensive portfolio, a single colocation provider such as zColo can deliver customized solutions that are cost-effective, flexible and scale readily to accommodate growth.

Expert Support - To ensure the reliability and performance of their equipment, networks and applications, colocation customers expect on-site “remote hands” support. A colocation provider’s team of certified and professionally-trained technicians effectively functions as an extension of each customer’s own IT organization, monitoring and troubleshooting customer equipment and applications. Providing around-the-clock coverage, the remote-hands team assists with resolving emergency-maintenance issues; installation and replacement of coaxial and fiber-optic cables; collaborative testing of equipment; components replacement; and visual surveillance.

Summary

With massive amounts of data fueling today’s digital economy, service providers and enterprise organizations are under constant pressure to expand the number and capacity of their data centers. They also are under pressure to reduce their CapEx budgets and free up their IT staff to focus on core business operations.

To achieve all three business goals, many service providers and enterprise organizations are seeking to partner with a colocation provider. When it comes to selecting the right colocation provider, they look for a partner that can deliver not only square footage and power but also a broad geographic footprint, a wide variety of connectivity and the ability to customize solutions. Equally important, they want a partner in colocation, connectivity and cloud solutions that is positioned to grow with them, helping to achieve their strategic objectives today and well into the future.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.