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Colocation Market Close-Up: New York City

This is the third document in the “US Data Center Colocation Overview” series.

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EXECUTIVE SUMMARY

New York City is one of the most popular cities in the United States for colocation and other data center services, with more than 40 wholesale and retail colocation providers in the metropolitan area. Forrester estimates that there are more than 2 million square feet of leasable data center space in the greater New York City metropolitan area, yet much of it within the city limits is already at full capacity. The result is that many firms are exploring options in the New Jersey area, where costs are lower, resources are more abundant, and New York City is only a few miles away.

DESPITE RISKS AND COSTS, MANY FLOCK TO NYC FOR COLOCATION

Despite high prices and higher risks, New York City (NYC) remains one of the most popular cities in the US for colocation. Why is this? One of the main reasons is that despite the risks, companies still prefer to colocate their primary or secondary data center in the same city as their corporate headquarters. NYC is the commercial capital of the US, which has created tremendous demand for data center space for both US and globally headquartered companies. In addition, NYC is a major network peering point for connections with Europe. Just as Miami is the US's network gateway to South America and the Caribbean, NYC is a gateway to Europe.

Spoiled For Choice Of Vendors, But Short On Space And Power In The City

Although there are almost 40 providers of colocation in the greater NYC metropolitan area, organizations interested in colocating data centers in the region will still find their options limited (see Figure 1). Why? Because NYC is one of the most constrained areas for space and power in the US. The US Department of Energy has identified the NYC metropolitan area as being critically congested and getting worse.¹ Power requirements are growing in the NYC metropolitan area by about 1.7% per year, meaning that the city will need to add (or gain access to) between 6,000 and 7,000 MW of electricity resources over the next two decades.² Not only is power limited, but it's also expensive. As of March 2009, the average industrial power rate in New York state is 11.09 cents per Kwh, and in New Jersey it's 9.52 cents per Kwh. Compared with the national average of 6.84 cents per Kwh, power costs in the NYC metro area can be as much as 60% higher.

Not only is power scarce and pricey, but space is as well. In the most densely populated region of the US, the demand for residential, office, and retail space has made industrial-class space very costly. As with power, space in the NYC metropolitan area becomes more abundant the further you travel from the city (see Figure 2). As facilities have been filling up within the city limits, colocation companies and end users have been looking at facilities in nearby cities in New Jersey. In recent years, cities such as Weehawken (about three miles from NYC), Secaucus (about six miles from NYC), and Newark (about 13 miles from NYC) have become important data center hubs.

Figure 1 Major Colocation Vendors In New York City

Vendor name	Number of facilities in NYC metro area	Services offered	Total square feet of usable data center space in NYC metro area
AT&T	4	Remote/smart hands, managed services, hosting	Vendor did not disclose
Atlantic Metro Communications	3	Remote/smart hands, managed services, hosting	16,500 sq ft
BT Global Services	1	Remote/smart hands, managed services, hosting	Vendor did not disclose
Cogent Communications	1	Remote/smart hands	Vendor did not disclose
CoreSite (formerly CRG West)	1	Remote/smart hands	34,286 sq ft
Datagram	1	Remote/smart hands, managed services, hosting	15,500 sq ft
Digital Realty Trust	3	None	167,000 sq ft*
Dupont Fabros Technology	1	None	171,000 sq ft coming online in 2010
Equinix	3	Remote/smart hands	250,000 sq ft
FiberMedia	4	Remote/smart hands, managed services	110,000 sq ft
FiberNet Telecom	4	Remote/smart hands, managed services	45,654 sq ft
Global Crossing	2	Remote/smart hands, managed services	Vendor did not disclose
IDC Global Networks	1	Remote/smart hands, managed services, hosting	Vendor did not disclose
iland Internet Solutions	1	Remote/smart hands, managed services, hosting	Inside a 50,000 sq ft data center
Internap Network Services	2	Remote/smart hands	45,000 sq ft
JustEdge Networks	3	Remote/smart hands, managed services, hosting	Vendor did not disclose
Level 3 Communications	6	Remote/smart hands	Vendor did not disclose
NaviSite	1	Remote/smart hands, managed services, hosting	34,000 sq ft
NTT America	1	Remote/smart hands, managed services, hosting	Inside a 50,000 sq ft data center

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Source: Forrester Research, Inc.

Figure 1 Major Colocation Vendors In New York City (Cont.)

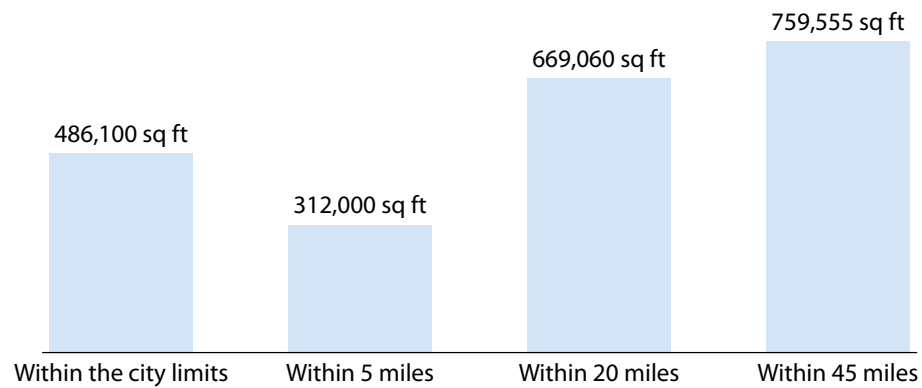
Vendor name	Number of facilities in NYC metro area	Services offered	Total square feet of usable data center space in NYC metro area
PEER 1	1	Remote/smart hands, managed services, hosting	1,500 sq ft
Quality Technology Services	2	Remote/smart hands, managed services	63,739 sq ft
Qwest Communications	1	Remote/smart hands, managed services, hosting	Vendor did not disclose
RCN Metro	3	Remote/smart hands, managed services	Vendor did not disclose
Savvis	3	Remote/smart hands, managed services, hosting	Vendor did not disclose
Sirius Telecom	1	Remote/smart hands, managed services, hosting	12,000 sq ft
SunGard	2	Remote/smart hands, managed services, hosting	94,435 sq ft
Switch & Data Facilities	4	Remote/smart hands	127,155 sq ft [†]
Tata Communications	1	Remote/smart hands, managed services, hosting	8,780 sq ft
Telehouse America	2	Remote/smart hands, managed services	247,000 sq ft
TeliaSonera	1	Managed services	Inside a 50,000 sq ft data center
Telx	4	Remote/smart hands	47,322 sq ft
tw telecom	1	Managed services, hosting	Vendor did not disclose
Verizon Business	2	Remote/smart hands	Vendor did not disclose
Xand	1	Remote/smart hands	30,000 sq ft [‡]
XO Communications	5	Remote/smart hands	Vendor did not disclose

*DRT additionally owns more than 800,000 sq ft of industrial-class space in the metro area that can be built out into data centers, much of which is leased to other providers and is also available for end users.

[†]Forrester estimate is based on the assumption that approximately 50% of a modern data center is actual usable data center space.

[‡]Xand additionally owns 50,000 sq ft of industrial-class space in the metro area that can be built out into data centers.

Figure 2 Square Feet Of Colocation Space By Distance From NYC



(Note: Numbers are not cumulative.)

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Source: Forrester Research, Inc.

In NYC, The Risks Are High, But The Networks Are Robust

Although NYC has a very low profile for natural disasters like hurricanes, earthquakes, and floods, it is also the largest US city and was recently ranked the fifth most vulnerable city in the US for a terrorist attack.³

For many, however, proximity to their business locations and hundreds of diverse and rich network connections with dark fiber far outweigh the risks. Proximity to the International Securities Exchange and Wall Street is also a requirement for many companies that colocate in NYC (see Figure 3). NYC is somewhat different from other cities in that many data centers have extensive dark fiber to important corporate addresses and other data centers, as well as fiber networks specific to the financial markets.

Figure 3 Map Of Lower Manhattan's Major Data Centers



*Reflects known data center colocation space in a 943,000 sq ft facility housing more than 150 telcos

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Source: Forrester Research, Inc.

RECOMMENDATIONS

NEW JERSEY OFFERS LOWER RISK, LOWER COSTS, AND MORE AVAILABILITY

If you need to collocate a data center in the New York City metropolitan area, make sure you take a look at the New Jersey options. Many colocation companies have been making investments in their New Jersey facilities in recent years, and large, enterprise-level data centers can be found in Weehawken, Secaucus, Jersey City, Newark, and many other cities. Building and running a high density data center is much more costly in a high-rise environment. Downtown locations are expensive, are difficult to retrofit as data centers, and must run at higher (more expensive) densities to make up for the other costs. Large data center operators find it more economical to

build in suburban locations using industrial-class space with just a couple of floors. These facilities are less likely to be out of capacity than NYC facilities and will be significantly less expensive — land and power costs in New Jersey are much lower, and industrial power rates have been falling steadily over the past year.

SUPPLEMENTAL MATERIAL

Companies Interviewed For This Document

Atlantic Metro Communications	Level 3 Communications
BT Global Services	NaviSite
CoreSite	Qwest Communications
Digital Realty Trust	Savvis
Equinix	SunGard
FiberMedia	Switch & Data Facilities
Global Crossing	Tata Communications
IDC Global	Telx
Internap Network Services	Xand

ENDNOTES

- ¹ In this report, the NYC metropolitan area is defined as the 45-mile radius of New York City.
- ² Source: “National Electric Transmission Congestion Study,” US Department of Energy, August 2006.
- ³ Source: Walter W. Piegorsch, Susan L. Cutter, and Frank Hardisty, “Benchmark Analysis for Quantifying Urban Vulnerability to Terrorist Incidents,” Risk Analysis, December 11, 2007.