



LOCATION, LOCATION LOCATION

WHY PROXIMITY TO THE FASTEST NETWORKS MATTERS IN DATACENTERS

In the world of digital data, your competitive edge is directly a function of your proximity to the most powerful resources. The design of your digital infrastructure should take into account the physical location of your servers as well as their capacity for storage and business continuity/disaster recovery options. Optimizing location optimizes a number of other factors, including speed of data transmission, network latency, and data security.

Any accolades that your datacenter could list about its digital data performance mean very little if you do not know why proximity is important. For most online industries, like finance, entertainment, and health, latency is one of the most important concepts in digital data, it explains many of the other topics that occur within data optimization.

la·ten·cy

COMPUTING

the delay before a transfer of data begins following an instruction for its transfer.
"poor performance due to network latency"



"SIMPLY REPLACING TRADITIONAL HARD DISK DRIVES WITH FLASH DRIVES ONLY MOVES LATENCY PROBLEMS INTO A DIFFERENT LOCATION..."

LATENCY 101

WHY LATENCY MATTERS

Latency refers to the time between a signal output and the moment that signal reaches the end user. The increase in transmission performance that occurs from lower latency usually creates a competitive edge. Basically, if your information can always reach its destination faster than your competitors' information reaches theirs, you are on the leading edge of your industry.

Even using fiber and light-based signal, data travels at a finite speed, meaning that longer distances equate to higher latency, all else being equal. The farther away your provider is, the more latency that data will incur.

THE MODERN CUSTOMER AND LATENCY

Regardless of how robust your online services may be; speed is the number one determinant of your web traffic. 40% of people simply click away from any site that takes too long to load. How long is too long? 47% of modern consumers think

that two seconds is their limit. Studies also show that a one second delay will reduce your overall conversions by around 7%. If a site makes \$100,000 daily, every second of delay in site load has the potential to cost a business \$2.5 million on an annual basis.

In short, customers expect a rapid response time regardless of service quality.

Even though networks are still the slowest part of the service pipeline, far too many business people focus on IOPS (input output operations per second related to things like storage, RAM, and CPU speed) rather than looking at the holistic picture of wait time, which includes latency. Most businesses and industries tend to think that IOPS is the most important aspect of the three legged stool of IOPS, bandwidth and latency. As flash storage becomes more prevalent in the overall storage infrastructure, latency will become even more important to consider than it currently is, and the need to dwell on IOPS will fall to near zero.

CARRIER HOTELS

CARRIER HOTELS - WHAT THEY ARE AND WHY SHOULD I CARE

A carrier hotel is generally another name for a major Internet Exchange (IX), although "carrier hotel" carries some extra weight. The name comes from the fact that many data streams come through this single location, usually traveling to other destinations. A true carrier hotel is the most powerful data transportation tool in the modern market. If your local

datacenter were a regional airport, a Carrier Hotel is Heathrow.

Internet Exchange, and the colocation centers that built up around them, first became prominent during the dot com boom of the 1990s, after the Telecommunications Act of 1996.

Today, with the increasing evolution of virtual companies and businesses that would rather

outsource data hosting and outsource hardware asset costs, carrier hotels are once again proving to be a necessity, especially in major commercial hubs.

Colocation centers first became prominent during the first dot com boom of the 1990s, after the Telecommunications Act of 1996. With the creation of more virtual companies and businesses that would rather outsource data hosting away from their physical hardware, carrier hotels are fast becoming a necessity, especially in major commercial hubs.

Within these IX buildings, viable colocation centers are also known for offering more robust security features than a company might be able to easily produce on its own. Data is stored in a climate controlled environment that protects the physical integrity of the servers, reducing the instance of any mechanical problems or additional latency. If you need any installation, update and maintenance services, these can be automated as well through a managed partnership.

THE MEET ME ROOM

At the heart of any successful IX is the Meet Me Room, a place where all members of the community go to physically interconnect their networks. The Meet Me room is a lobby for providers to connect between different networks, expanding and bolstering the power of those networks across longer distances. As you can imagine, the

closer that *your* servers are to the Meet Me Room, the faster the network performance for your data and business.

WHAT MAKES A TRUE CARRIER HOTEL?

The term "carrier hotel" is often misunderstood. It is not a direct synonym for a colocation center, so don't be fooled. Since they are where the backbone providers come to hand off MASSIVE network trunks, Carrier hotels are much more powerful. Consider that carrier hotels have the power to give you combined access at highest speeds to the networks of AT&T and Verizon if such a venture was necessary. Compared to the average provider count in the 80-100 carriers range, a single colocation center with a few providers does not compete for flexibility, power, and speed.

Many colocation center administrators will try to convince clients they have the same amount of strength as a carrier hotel because they have many colocation centers under their umbrella. This is not true. There are only a few true carrier hotels in the United States. Depending on your definition of strength, you can limit the number of true carrier hotels in the United States to

five - The Infomart in Dallas, 111 8th Avenue in New York City, 60 Hudson Street in New York City, One Wilshire, Los Angeles, and the Westin Building Exchange in Seattle. ColoCenters is in the Westin building, *directly* below the Meet Me Room.





THE IMPORTANCE OF SPEED

SPEED
PRIORITY

DATA
PRIORITY

DATA
VIABILITY

UNLIMITED
SCALE

LOWER
COST

Nanoseconds make the difference between success and failure in many industries like financial services, consumer gaming, and e-commerce. The delivery time of data for a trade or the execution and deployment of a certain strategy in business may depend on a hair trigger split second, and companies need to know that their data will be in the right place at the right time.

WHAT DOES ALL OF THIS MEAN FOR YOUR BUSINESS?

The Business Advantages of Proximity to the Internet's Core Carriers

- **Data speed** - You will never have to worry about losing prospects or customers to a slow site load. Proximity means priority, so you automatically have preference over your competition online when you do business with datacenter serviced inside a carrier hotel.
- **Data priority** - Your data center should maintain industry leading uptime and provide your data with proximity, so you can rest assured that your data will get through even if there are hiccups or bottlenecks in any system.
- **Data viability** - Your data will be received at its endpoint as it was intended - no anomalies or unexpected mistakes from cross connects.
- **The ability to scale** - This ensures that your data speed, priority and viability remain at industry leading levels no matter your scale. Unexpected spikes in activity will not require you to limit your traffic or otherwise change your customer facing business practices.

- **Lower cost** - Proximity to one of the five largest hubs means that you get the same services that others get for less money, leading to positive ROI because the system does not have to go through any added rigors to access, move and verify your data streams.

SUMMARY

The goal of this white paper was to teach you why latency and proximity to carrier hotels matter. At ColoCenters, for the past 20 years, we've been one of the leading colocation providers in the Pacific Northwest. Located in the Westin Building Exchange carrier hotel in Seattle, on the floor right below the Fiber Meet-Me Room, only 10 inches separate our client servers from the premier data handoff point for the entire Pacific Northwest, Northern California, Western Canada, Alaska, Idaho, Wyoming, Colorado, and the Northern Pacific Rim. We specialize in providing optimized data colocation services for companies at the enterprise scale. Our clients save money while maintaining 99.99999% uptime and increasing the speed of network and overall stability.

Come to us with your questions, your plans and your business needs. We are ready to provide you with the robust infrastructure that modern business requires to build and expand. Take advantage of the proximity that we have to a powerful Internet exchange and the successful strategies that we have cultivated around this advantage. The infrastructure for the future of your business is already here - all that you have to do is say you want in.

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