



# Data Center Colocation

A Strategic Guide to Evolving Colocation Solutions



| Carrier Evolved

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## SUMMARY

Navigating the sea of colocation providers can be daunting. Massive Networks understands this challenge and has crafted this eBook to guide you through the maze of options, helping you find the perfect fit for your enterprise's needs. This guide dives deep into the core components of colocation, strategic benefits, and practical implementations, ensuring you make informed decisions.

It is time to look past the sleek surfaces and get to the hardware of the matter.



# TABLE OF CONTENTS

The image features a dark blue, futuristic cityscape at night. The skyline is composed of numerous skyscrapers, some of which are illuminated with lights. Overlaid on this scene is a complex digital network of glowing blue and purple lines and dots, resembling data streams or fiber optic paths. The lines are most prominent in the foreground, where they form a grid-like pattern that recedes into the distance. The overall atmosphere is one of high-tech connectivity and digital infrastructure.



## DOWN TO THE RACKS AND STACKS: COLOCATION COMPONENTS



### The Anatomy of Colocation

#### 1. The Bones - Racks, Cabinets and Space

**Racks**, **cabinets**, and **space** are undoubtedly the primary components of colocation, serving as the structures that house your data infrastructure. When selecting a colocation provider, it is crucial to consider this skeletal structure. Colocation must be built upon sturdy racks and secure cabinets, with ample space available for future growth.

##### **Rack 'em Up:**

Racks are the physical framework that securely holds our servers and networking equipment. They are essential for organizing and optimizing space within a data center. When evaluating colocation services, we need to consider the **rack's dimensions**, **weight capacity**, and **compatibility** with your equipment.

##### **Cabinet Confidence:**

Cabinets in a colocation facility are secure lockers for our IT hardware. They offer an added layer of security, protecting equipment from unauthorized access. When evaluating cabinets, consider their **size**, **scalability**, and **security** features. It is important to ensure they can accommodate the size and power requirements of your current and future hardware.

##### **Space to Grow:**

Every enterprise has unique and ever-changing technical requirements. When evaluating a data center for our colocation solutions, it is important that the provider understands this and offers **flexible** and **customizable** footprints that can evolve with your business.



### 2. The Lifeblood – Power and Cooling

Power and cooling are essential to our IT infrastructure's survival. They maintain the operational efficiency and longevity of our equipment, which is why it is so important that we carefully review potential colocation providers' power and cooling systems.

#### **Energized Infrastructure:**

Power systems in colocation centers need to be robust and reliable. It is important to evaluate the [power density](#), [redundancy options](#), and [backup systems](#) like UPS (Uninterruptible Power Supplies) and [generators](#). This ensures that your critical applications run uninterrupted, even in the event of power failures.

#### **Keep it Cool:**

Effective cooling systems in a colocation facility prevent overheating, which can lead to hardware malfunctions or reduced lifespan. They ensure that servers and networking equipment operate within their ideal temperature range, thereby maintaining performance efficiency and reliability. Additionally, sophisticated cooling solutions contribute to [energy efficiency](#), [reducing operational costs](#) and supporting [environmental sustainability](#).

Most enterprises prefer not to divert precious resources to power and cooling. We have people, ideas, and products to focus on. That is why we turn to Data Centers for our colocation needs, so providers can handle the complex task of synergizing power and cooling systems to optimize PUE ([Power Usage Effectiveness](#)), allowing us to concentrate on our business, not its infrastructure.



### 3. The Circulatory System – Connectivity and Bandwidth

Up next is the circulatory system of the colocation world, connectivity, and bandwidth. Extensive and comprehensive interconnectivity within our IT infrastructure gives our enterprise an operational edge, and sufficient bandwidth is crucial for the efficient flow of data across our networks. The integration of connectivity and bandwidth in colocation directly impacts the agility and efficiency of our IT operations, making it a critical component of our colocation strategy.

#### Check the Pulse:

Being connected is not just about being online. It is about reliably staying interconnected to multiple data streams at high speeds. This is why it is imperative to evaluate a future provider's network architecture, including [backbone access](#), [carrier diversity](#), and [peering options](#).

#### Optimize the Stream:

Bandwidth is responsible for the efficient flow of data across our networks. To ensure optimal efficiency when choosing a colocation provider, it is important to ascertain their [bandwidth capacity](#), [uplink speeds](#), [bandwidth scalability](#), and [quality of service](#) (QoS) parameters.



### 4. The Antibodies – Security

In terms of colocation, security, and compliance are our infrastructure's antibodies. They identify, neutralize, and protect our internal systems from external threats and bad actors.

#### **Fortified Security:**

Like antibodies we need potential colocation providers to constantly be on patrol. This means physical safeguards like [controlled access](#) and [24/7/365 surveillance](#), as well as advanced cybersecurity measures. These include [firewalls](#), [intrusion detection systems](#), and regular [security audits](#) to preemptively identify and address vulnerabilities.

#### **Compliance is Key:**

Our facilities and staff help our Data Center customers who must comply with their industry standards and regulations to ensure their data adheres to any legal and ethical norms they must follow. This sometimes involves being available during regular compliance audits and certification processes for our customers. Scheduling access, providing specifications on all our infrastructure, internal policies, and assisting them to coordinate onsite visits and inspections. All of which are essential to the ongoing management of your IT infrastructure.

The right blend of fortified security is the foundation of any trustworthy and resilient colocation partnership.

**With this refresher of colocation's anatomy under our belts, we can move beyond the basics and learn how to strategically leverage colocation for our specific enterprise.**



# EVOLVED INSIGHTS: LEVERAGING COLOCATION FOR STRATEGIC ADVANTAGE



For professionals well-versed in the basics of data center colocation, the emphasis transitions from grasping the concept of colocation to the strategic utilization of assets to bolster and refine their network infrastructures. This chapter offers a detailed analysis, highlighting the benefits and advanced considerations integral to making the most out of colocation solutions.

### Beyond Basics

#### The Strategic Layer of Colocation:

Colocation is not just about housing servers and networking equipment; it is a strategic decision impacting the very core of your IT infrastructure. Because of this, it is essential to understand how colocation fits into our broader IT strategy, particularly in terms of [scalability](#) and [connectivity](#).

#### Dynamic Scalability:

Scalability is more than just stacking racks. It is about how quickly and efficiently you can adapt to changing data demands without disrupting existing operations. It involves understanding the intricacies of scaling in a [multi-tenant environment](#) and how to plan for [future growth](#) effectively.

#### High-Performance Connectivity:

Colocation offers a competitive edge with [high-speed, low-latency](#) connectivity options. It is about using interconnectivity to optimize network performance, ensure reliability, and integrate with [cloud services](#) and other external networks.

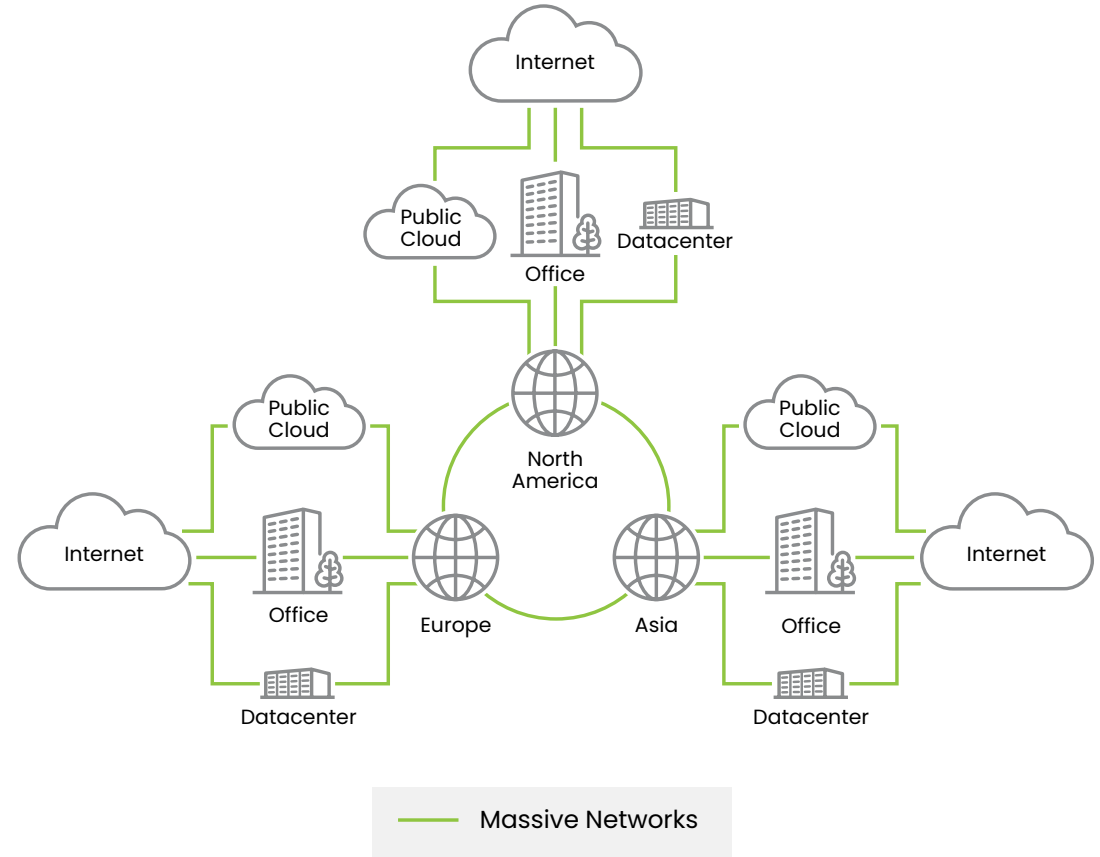


## Unlocking Enterprise Level Potential

Understanding colocation's role in enabling business agility and continuity is crucial. This section explores how colocation can act as a catalyst for business transformation, supporting **hybrid cloud** strategies, fostering **innovation**, and enabling greater **risk management**.

### Hybrid Cloud Integration:

Colocation is a fundamental component of effective hybrid cloud integration. It offers businesses a balanced blend of **on-premises control** and **cloud scalability**. By facilitating direct, secure connections to cloud services, data centers allow for seamless data transfer between different environments. This integration also optimizes security, performance, and cost-effectiveness, making colocation the strategic choice.





## DOWN TO THE RACKS AND STACKS: COLOCATION COMPONENTS

### **Innovation and Experimentation:**

Colocation solutions encourage a culture of innovation by providing the infrastructure needed for testing and deploying innovative technologies, all while mitigating associated capital risks. It offers businesses the flexibility to experiment with advanced technologies and solutions in a secure, controlled environment without the need for significant upfront investments in physical infrastructure. This setup lowers the barrier to innovation, allowing companies to adapt to emerging technologies and market trends swiftly.

### **Risk Management:**

Colocation enhances risk management strategies by offering advanced disaster recovery capabilities. By utilizing colocation facilities, enterprises gain access to geographically diverse data centers that provide redundancy and data integrity in the event of localized failures or disasters. These facilities are equipped with redundant power and cooling systems, which minimize the risk of downtime. Furthermore, the physical and network security measures at colocation centers add an additional layer of protection against data breaches and cyber threats. This comprehensive approach safeguards critical data and continuous business operations, even under adverse conditions.



**Next, let us bridge the gap between theoretical knowledge and practical implementation. In this next chapter, we will explore how colocation is used effectively in various industries and scenarios.**



# PRACTICAL IMPLEMENTATION OF COLOCATION IN VARIOUS INDUSTRIES



## Financial Services

The financial sector demands high reliability, low latency, and stringent security due to the critical nature of its operations and the sensitivity of its data. Colocation helps financial institutions meet these needs effectively.



## Healthcare

Healthcare organizations handle vast amounts of sensitive patient data and require compliance with regulations such as HIPAA. Colocation offers the secure and compliant infrastructure needed to store and manage this data.



## E-commerce

E-commerce companies rely heavily on robust IT infrastructure to manage online transactions, customer data, and inventory systems. Colocation supports the scalability and reliability needed to handle high traffic volumes, especially during peak shopping seasons.



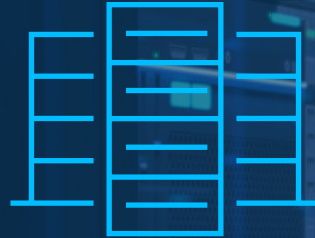
## Media and Entertainment

The media and entertainment industry requires vast storage and high-speed data transfer capabilities to handle large multimedia files and live streaming services. Colocation offers the necessary bandwidth and infrastructure to support these requirements.



## Manufacturing

Manufacturers increasingly rely on data analytics, IoT, and automation to optimize production processes and improve product quality. Colocation provides the infrastructure needed to support these technologies.



**THE FORTRESS OF UPTIME – MASSIVE NETWORKS DATA  
CENTER COLOCATION**



## THE FORTRESS OF UPTIME – MASSIVE NETWORKS DATA CENTER COLOCATION

### The Power to Perform

At the core of our data center lies a robust power infrastructure designed to sustain and protect your critical operations. We offer a versatile range of power options, including 120V, 208V, and three-phase configurations, ensuring compatibility with a wide array of equipment. Each rack is meticulously provisioned, capable of supporting up to 18kW of cooling per rack. This impressive capacity is complemented by our 2 3N+1 UPS systems, guaranteeing that even in the face of power anomalies, your operations remain seamless.

Moreover, our 2 N+ generator systems provide full fail-over capabilities, standing by to ensure that your services are never interrupted. In addition, DC power availability offers flexibility and reliability for your specific needs, making sure that your infrastructure is always supported by a stable power supply.



### A Breath of Fresh Air: Cooling and Interconnection

Massive Networks understands that power is just one aspect of the equation. Efficient and reliable cooling is equally critical to maintaining the optimal performance of your equipment. Our data centers are equipped with 2 redundant Liebert HVAC systems and 2 standby Liebert HVAC systems, providing a layered approach to cooling that ensures constant environmental control. This dual-system redundancy is designed to prevent overheating and to maintain an optimal operating temperature, even during maintenance or unexpected failures.

Interconnection within our data centers is seamless and versatile. With direct connections available to any of our national facilities, businesses can enjoy robust and reliable connectivity. Data Center Connect and path redundancy ensure that your data flows uninterrupted, regardless of the circumstances. This interconnected infrastructure guarantees that your operations are resilient against network disruptions, providing a stable and continuous link to the digital world.



## Facilities: Expansive and Flexible

The physical space in which your data resides is just as important as the power and cooling systems that support it. Our facilities are a testament to scalability and flexibility, with 15,000 square feet of data center space expandable to over 35,000 square feet. This ensures that as your business grows, your colocation space can grow with you.

Our data centers feature 42U rack units, providing ample space for your equipment. Whether you need a third, half, or full cabinet, or even custom cage space, we can accommodate your specific requirements. The 18-inch raised floors further enhance our cooling efficiency and cable management, creating an optimal environment for your hardware.



## The Pillars of Reliability

Reliability at Massive Networks is not just a promise; it is a meticulously engineered feature. Our facilities are carrier-neutral, offering multiple Tier 1 provider options. This ensures that you have a choice of premium connectivity options, enhancing the redundancy and reliability of your network connections.

The path redundancy available to any of our facilities provides additional assurance that your data will always find a route, no matter what obstacles arise. This network resilience is a critical component of our offering, ensuring that your services remain online and performant, even in the face of unexpected challenges.

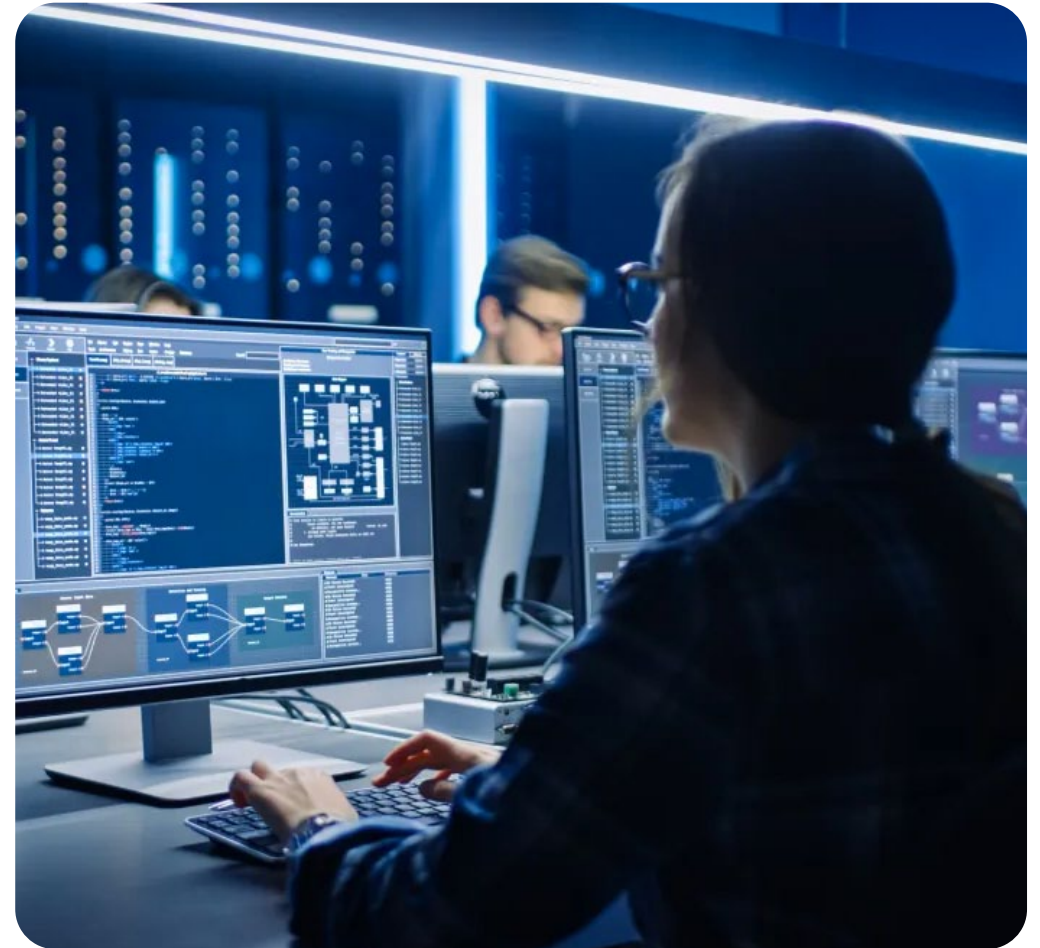


## THE FORTRESS OF UPTIME – MASSIVE NETWORKS DATA CENTER COLOCATION

### Conclusion

In a world where digital presence is paramount, Massive Networks' Data Center Colocation stands as a fortress of uptime and reliability. Our advanced power systems, state-of-the-art cooling infrastructure, expansive and flexible facilities, and unwavering commitment to reliability collectively create an environment where your business can thrive without interruption.

Choosing Massive Networks is choosing peace of mind, knowing that your critical operations are housed in a facility designed for resilience, efficiency, and scalability. Join us in the fortress of uptime, and let your business experience the true power of uninterrupted performance.





**WHAT NEXT:  
WHERE WE GO FROM HERE**



We have reached the conclusion of our comprehensive guide to colocation, and we are now uniquely positioned to take informed, strategic steps towards integrating colocation solutions into our enterprise's infrastructure.

## The Path Forward: Integrating Colocation into Your Enterprise

Understanding the anatomy of colocation, leveraging it for strategic advantage, and observing its real-world applications pave the way for a more nuanced approach to implementing these solutions. Whether you are a small business looking to scale up, a healthcare institution requiring compliant data management, a financial firm focusing on secure transactions, or a public sector entity balancing security with public accessibility, colocation offers a versatile and robust solution.

## Customizing Your Colocation Strategy Expert Collaboration

Every enterprise is unique, with specific needs, challenges, and aspirations. The key is not to adopt a one-size-fits-all approach but to tailor colocation solutions that align precisely with your enterprise's goals. This involves considering factors like scalability, security, compliance, and connectivity, all of which play a critical role in the efficiency and effectiveness of your IT infrastructure.

## Collaborating with Experts

Embarking on this journey need not be a solitary endeavor. Partnering with experts who can offer insights, advice, and customized solutions can significantly ease the transition and ensure that your colocation strategy is aligned with your business objectives. Expertise in navigating the complexities of colocation can transform it from a daunting challenge into a strategic asset.

## Ready to build a customized colocation solution for your enterprise?

Now that you have a deeper understanding of colocation it is time to move beyond theory and act.

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Our expert engineers will help you design your tailored solution today. Transform your IT infrastructure with colocation and unlock your enterprise's full potential.





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