

DATA CENTERS

A holistic view of the data center and the opportunities to enhance its infrastructure to meet current and future demands

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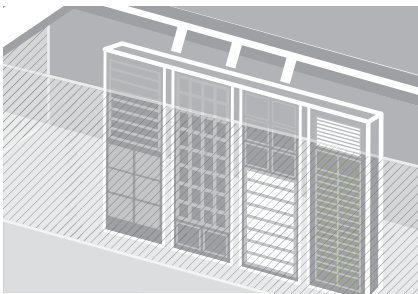
Chapter 2

Multi tenant data centers

Multi tenant data centers

Freeing enterprises to focus on their core business

With more than 130 million square feet of white space, multi tenant data centers (MTDCs) are one of the fastest-growing segments in the data center industry. Expanding at a rate of 16 percent annually, MTDCs enable enterprises and service providers to outsource their data center facilities. By leasing third-party data center whitespace, enterprises can remain focused on their core business while enjoying optimal data center availability, reliability and cost control.

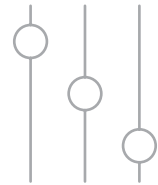


As a leading provider of multi tenant data center infrastructure solutions, CommScope has developed considerable expertise in this space, helping both operators and tenants maximize the value of these flexible, cost-effective facilities.

KEY ADVANTAGES

Flexibility

Multi tenant data center infrastructure makes advanced technology such as cloud computing and virtualized data centers available to small- and mid-sized businesses while also allowing easy expandability as the business grows.



Reliability

Multi tenant data centers provide their own technicians to maintain the infrastructure and ensure that hosted functions operate at peak efficiency at all times. Multi tenant data center operators provide service level agreements (SLAs) to tenant clients to ensure commitment to uptime and operational parameters. Multi tenant data center operators typically offer 2N, N+1, N and hybrid mesh solutions for power redundancy with multiple POPs (point of presence)/ POEs (point of entrance), as well as multiple metro/WAN connectivity providers to provide redundancies that increase reliability. This enables clients to balance their redundancy/reliability needs against their cost options. Some clients may require lower levels of reliability for certain applications, such as deploying a lab environment; Multi tenant data centers can match the reliability requirements to specific user requirements.



Reduced Latency

By providing direct connectivity to service providers, content providers, cloud providers, high-frequency traders, financial transaction and peering partners also co-located at the multi tenant data center, latency can be significantly reduced.



KEY ADVANTAGES

Savings

By outsourcing data center services instead of building, hosting, maintaining and upgrading them themselves, multi tenant data center tenants can realize significant OpEx and CapEx savings. Most companies are not in the business of building and operating data centers. The expertise and efficiencies gained by multiple builds and design iterations have enabled Multi tenant data center operators to optimize their designs and operational efficiencies. Multi tenant data center operators can not only build a data center more cost-efficiently but are also able to operate it more cost-effectively, as well. Building a traditional data center is a significant capital expense for enterprises; Multi tenant data center operators offer conversion from CapEx to OpEx by leasing the data center to the client, and also offer savings from tenant improvement or asset amortization. Enabling direct connection between enterprises, vendors, content providers and cloud providers in the same facility eliminates the need for metro/WAN connections that have backhaul and bandwidth charges. Multi tenant data centers offer clients the ability to scale as they grow, and to deploy assets on a just in time basis. Most leases run from three to 15 years, which gives the customer the ability to dynamically manage their business versus trying to over-plan and build a traditional data center that is an up to 30-year depreciating asset.



Security

A multi tenant data center offers multiple levels of security against external threats plus faster, more thorough recovery from disaster situations. The initial layer of security is at the entry points of the facility or campus, which are usually surrounded by high steel fences, gates and bollards, and equipped with a badge or biometric readers and security personnel. The facilities themselves are designed to restrict accessibility while maintaining a discrete appearance. Inside, there are security guards, restricted access and man traps that are designed to slow and restrict entry. Only authorized personnel are allowed entry to designated areas via badge or biometric access. In addition, the entire campus is under continuous monitoring via security cameras, and may often be subject to random security patrols.



Factors to consider when choosing a multi tenant data center

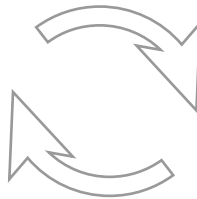
The best multi tenant data center providers help clients through all stages of the project, from need assessment through migration through operation. They have the core competencies to understand, meet and exceed clients requirements.

High-quality, robust mechanical, electrical, and data transport infrastructure that performs optimally and deploys quickly, allowing for fast, simple changes.

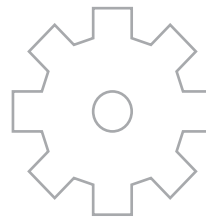


Physical layer management that supports the tenant's differentiated services and allows visibility into the enterprise.

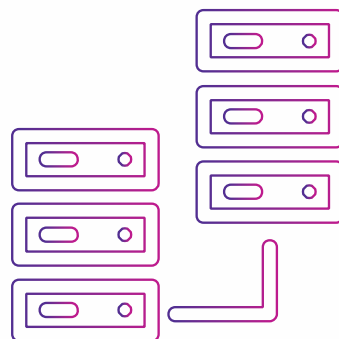
Scalability to readily expand capacity and functionality under the same roof to meet increasing data center demand as the tenant's business grows. This includes space, power and bandwidth scalability, and also the ability to scale down should there be a shift in public cloud utilization.



Direct access to cloud and content providers. Today's and tomorrow's data centers are and will continue to be connected with content and cloud providers in an effort to support internal and external customers. The ability to have direct access to these providers improves latency and cost objectives.



Effective in-building wireless (IBW) service for tenants working onsite, since data centers are often constructed with reinforced materials that make IBW coverage difficult. Providing mobile service to all mobile operators ensures that tenants have access, ensuring their productivity and efficiency while they are onsite.



When designing the cabling infrastructure for deployment in an MTDC, it is critical that the infrastructure be able to scale up and down, and adapt to technology changes.

It must be able to integrate peer, cloud and hybrid strategies, and must also ensure that adequate space is allocated for horizontal and vertical cable management so that moves, adds and changes can be carried out easily. There is often the temptation to fully load server and switch cabinets without consideration of cable management. While this may reduce the amount of leased rack space, it also greatly increases the risk of downtime due to manual error.

Proper cabling design, along with the use of an automated infrastructure management (AIM) system, can reduce this risk.



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