7 QUESTIONS YOU NEED TO ASK BEFORE CHOOSING A COLOCATION FACILITY FOR YOUR BUSINESS

First Communications®

Executive Brief

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Choosing a provider seems like a simple endeavor, but there are many differences between providers and colocation facilities that need to be identified during the selection process. Businesses of different types and sizes also have vastly different needs. A hospital needing colocation space has vastly different network connectivity and regulatory requirements goals than a retailer, a government office, or a regional bank. Beside the data center facility and connectivity offered, the level of services offered by various providers can vary greatly.

We published this executive brief to help decision makers make sure they have considered all the critical factors when selecting a colocation provider and facility. Reviewing these factors along with a reviewing your companies requirements and objectives should result in a better fit and overall experience once you have completed your selection process and have migrated to the new colocation space. Here are the 7 questions you need to ask before choosing a colocation facility for your business:

1) **Range of Services Offered**
   The services offered by your colocation provider must be adequate to meet your present and future requirements. These services can be categorized as follows:

   a. **Colocation**
      This is where most users of data center services start, because of a need for a secure environment with adequate infrastructure to house servers.

   b. **Managed**
      Managed services like managed storage, security, or disaster recovery and business continuity require specialized skills that most company do no possess in house.

   c. **Virtualization**
      The ability to scale quickly, and having the rights products and services available to meet changing requirements

   d. **Cloud**
      Most companies are either considering or already have moved some IT Infrastructure to the cloud. You want to make sure that your organizations cloud strategy and the colocation provider is a good fit.

   e. **Migration**
      If your needs change, it will benefit your organization to have the flexibility to move to a different level of services (for example, Colocation to Managed) without financial penalty.

2) Physical Location

Convenient access to business and employees is the normally the first consideration when embarking on a search for colocation space, but there are other factors to consider which are described below:

a. Proximity

For pure convenience, being in close proximity to company's offices and IT resources is important. Proximity of a colocation facility to your office also helps increase performance of your IT infrastructure, particularly with applications where large volumes of data are being transmitted or when latency may become an issue.

b. Business Continuity

It may be important to add another remotely located colocation space in order to provide a greater degree of resiliency to your IT infrastructure, since power disruptions and severe weather events do occur. Backing up data remotely and having a failover option in the event of disruptions are essential elements of good business continuity planning.

c. Footprint

If your company has a large geographic footprint, does your colocation provider have additional locations available (regionally, nationally, or worldwide?)

d. Capacity

Does the facility (or facilities) have additional physical capacity available if you need more colocation space? Is the provider planning to add space ahead of the demand, or are they reactive in nature? If the provider is reactive, they may not have adequate financial resources needed to meet your company's needs in the long run.

e. Regulatory or Compliance Requirements

Certain industries must follow strict requirements to use geographically diverse data centers which provide real time backups.

3) Network Connectivity

Even with stellar location and physical infrastructure, a data center loses its real value without reliable and adequately sized network connectivity. These factors should be considered when evaluating network connectivity:

a. Reliability

Is the primary network connectivity available at the colocation facility of sufficient quality to entrust your mission critical applications?

b. Integrated Network Services

It may be highly beneficial to use a colocation provider that operates an advanced MPLS network, allowing seamless secure network integration between numerous physical locations using different legacy protocols. MPLS also facilitates better control over network traffic because of its built-in QoS (Quality of Service) capabilities. This greatly improves performance of video, voice, and other priority network applications.

c. Tier 1 Internet Access

If the colocation facility is operated by network services provider, the user of the colocation space and network connectivity will benefit from having single point of contact for escalations and experience faster problem resolution than when having to deal with multiple vendors.

d. Carrier Diversity

For high availability applications that have high uptime requirements, it is essential to select a colocation facility that has redundant network connectivity and advanced

capabilities that can be accessed in the event of primary network problems or surges in network usage. The ability to provide dynamic routing allows users to move the flow of traffic across different carriers and routes to improve uptime and performance. Dual paths provide redundancy in the event of circuit failure, and Burstable bandwidth allows users to immediately scale the connectivity used to meet surges in usage.

 e. **Flexibility**
  Some carrier owned colocation facilities do not allow diverse network connections from competing carriers. Customers often have varying needs which can change over time, so having a colocation provider that allows multiple carriers can prevent being locked in with limited options.

4) **Infrastructure**

 a. **Redundant & Reliable Power Supply**
  Power is the most critical of infrastructure elements, so engineered redundant power systems that provide concurrently maintainable power is high on the list of must haves when searching for colocation space. N+1 systems and a 100% SLA for power provide assurance that power to your servers will not be interrupted in the event of routine maintenance or unexpected loss of electrical service from the power grid. A facility should be able to provide you with specifications on backup power, including UPS units available as well as backup generators and expected run time of those generators in the event of a power outage. Tier 4 data centers have redundant access to diverse power grids, and in the event of a major outage these data centers take priority when power is restored. In addition to a reliable power supply, you want to make sure that the colocation provider will have access to adequate power supply to keep up with increased future demand within the facility.

 b. **Cooling Technology**
  High performance and high density server environments, along with virtualization have increased the power consumption and heat generated in modern data centers dramatically. It is critical that the facility has invested in a well-engineered cooling system, along with hot air containment design to maintain both temperature and humidity within a prescribed range. The benefit of a well-designed cooling system is higher server reliability and longer equipment life.

5) **Security**
When a decision is being made to collocate critical applications in a third party data center, IT Professionals routinely place the physical and network security features of the data centers under a microscope. These are the security features that they typically evaluate:

 a. **Access Control & Physical Security**
  The data center you choose should have highly restricted access, make use of the latest access control technology to achieve the goal of keeping unauthorized parties from entering the facility. Biometric scanners, card readers, and video monitors are the most commonly used technologies. These systems allow access for authorized parties, and deny access to part of all of the facility for those without the proper credentials. The systems also monitor the precise whereabouts of visitors while in the facility, and provide precise records of the credentials visitors used to gain access in the event there are problems

 b. **Data Center Security Staffing**
  Data Centers can provide a higher degree of security by staffing them 24x7 with trained security personnel. This also provides a higher degree of security for authorized visitors to the data center, as well as keeping unauthorized parties out of your server cage.

c. **Geographic Location**
Data Centers generally are not built in inherently risky locations, such as inland flood plains or coastal areas that could be in the flood zone of a hurricane. When they are, they need to be built in a way that provides additional protection to compensate for the additional risk factor. There are a number of data centers built in seismic zones, such as California, but those typically are built with seismic-compliant construction techniques to compensate for the location.

d. **Network Security & Layered Security Services**
Additional services that may be performed for a fee by some colocation providers include:
   o   Protection from Denial of Service Attacks (DDoS)
   o   Network Monitoring and Threat Protection
   o   Network Security Testing, Evaluation, and Remediation Services

6) **Compliance**
Colocation providers should be familiar with regulatory requirements of your industry, and the facility should be compliant with the standard(s) that apply to your business. The most common regulatory requirements are:

a. SSAE16 Certification (formerly SAS70) This is a regulation created by the American Institute of Certified Public Accountants (AICPA) SSAE16 requires that the service provider (Colocation Provider) provide a written statement that the description of their service and all the operational aspects of the facility that could affect the customer are accurately represented. This Certification should be sought by all those looking for colocation services, regardless of industry.

b. Sarbanes Oxley (SOX Compliance) – required for publicly traded companies

c. HIPAA Compliance – required for healthcare providers

d. FISMA Compliance – required for financial services companies

e. PCI Compliance – required for ecommerce companies or those that handle or store credit card information

7) **Support Resources**
When comparing different data center facilities, make sure that you perform and "apples to apples" comparison of what support resources are available, which of those are included in base contract, and which are premium services where an addition fee may be charged by the provider. These services can be extremely valuable and allow valuable in house IT resources to be deployed on other initiatives

a. **Remote Hands**
This resource provides 24/7 on-site support that can respond quickly when issues arise and your staff is not present. The availability of this convenient service can also prevent small problems from becoming much larger problems.

b. **Migration & Installation**
Standing up servers is time consuming and not always the best use of IT resource's valuable time, and it can be a good investment to outsource this function to a provider if they offer this service.

c. **Structured Cabling**
Choosing a facility that has structured cabling system in place will mean better performance, as well as easier installations, testing, and future changes.

   d. Ticketing System

It is important to choose a provider that that has an orderly ticketing process in place for communicating with provider regarding routine issues and problems, and tracking the resolution of those issues.

   e. Amenities

It is likely that your IT staff will be spending a significant amount of time at the colocation facility, so their comfort and access to conveniences is important. Does the facility have meeting rooms, workspaces, lounge area, vending machines, wireless access, and phones? The presence of these elements at a colocation facility can help make your employees much more productive.

Summary

Now more than ever, maintaining 100% uptime is of critical importance to enterprises. As demonstrated in this Executive Brief, colocation providers vary widely in the breadth of and quality of service. The cost of a disruption in service is high, and colocation is a long term endeavor in most cases, making the potential cost of a poor decision considerable.

First Communications can help your business if you are in need of technology solutions. We can help with your voice & data networking needs, including colocation space to keep your network and data assets safe, secure, and up and running.   We also possess considerable expertise in designing and managing network infrastructure, which makes for a more seamless experience than collocating with a provider that does not possess these capabilities.

First Communications is a leading technology solutions provider offering data networking, voice, and managed services throughout the Midwest. Founded in 1998, First Communications network has grown to include more than 600 on-net wire centers and supports over 35,000 customers. Headquartered in Akron, Ohio and a 24x7x365 Network Management Center in Chicago, First Communications is dedicated to pairing effective customer communications with next generation technology.

We create solutions to align with your business objectives, while our built-in scalability accommodates for the future. Combined with a strong focus on the customer experience and operational expertise, First Communications bridges technology with Five-Star customer service.

To find out more about how First Communications can help your business, visit www.firstcomm.com or call **1-800-860-1261**