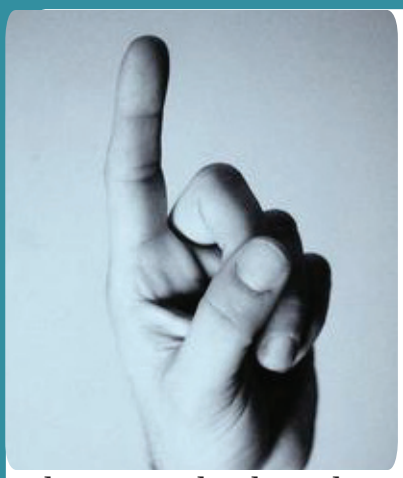

Colocation Centers: Best Practices in Locating a Data Center

By Michael Hoch

In the last six months, the demand for diverse, redundant colocation centers has accelerated, almost to the fevered pitch of the late 1990s. Currently, active facilities are nearing operational limits; derelict facilities are being reopened and revamped, and new sites are being built out as quickly as leases can be secured. Absorption is up; rates for services are on the rise, and demand has come back to the market. With highly complex offerings clouding a company's ability to easily compare pros and cons, how does one sift through all the variables to determine the most concise and salient solution?

The process begins, of course, with a crisp, clear set of requirements. While this may sound simple enough, it is essential for a company to know exactly what it's looking for before evaluating colocation facilities and potential vendors.

The Three Rules of Colocation

When companies begin the search for a new vendor, the first consideration is the same as with any other business: location, location, location. In defining an optimal location, two key factors must be taken into account: physical location and network distance. The physical location of a facility is generally noted as a critical requirement. Evaluating how the facility will be used can help companies reach resolution in this area. For example, some companies may need the facility to be within a certain physical distance of their offices or require close proximity to allow convenient and timely access for IT staff.

Depending on the physical location, network distance can be a greater or lesser variable. If company personnel MUST be able to drive to the data center within 30 minutes, network distance will be a non-issue. However, if there is no physical requirement, companies can then evaluate options based on network distance. In the past, Time Division Multiplexing (TDM) requirements were the main network constraint in terms of location. Carriers and customers tried to colocate as close as possible to the nearest Tandem switch located at the local Bell operating company. Usage on local loops was charged by the measured mile, providing the most cost-effective configuration. With today's IP networks, colocation centers should be evaluated based on their distance to a nexus of fiber and/or any of the many private or public peering points now in existence.

Once the general geographic location has been identified, five criteria should be investigated, each of which will affect the operational cost of delivering services at that facility. These include power, fiber, labor pool, taxation issues and natural disasters. The following provide insights and strategic questions that will help companies collect the right information to make smarter colocation decisions:

1. Power: As the most significant cost factor after physical space (and sometimes more so than physical space), power capabilities of the facilities should be closely evaluated. Companies can ask several key questions to ascertain the critical information. Is the utility power diverse: Are there multiple feeds, and/or do multiple substations feed the facility?

Is the power source stable and not dependent on the growing cost of fossil fuels? Can the amount of time required to meet the necessary ROI models of these large enterprise users be relied on now and for the next few years?

2. Fiber: All businesses need Internet connectivity. Companies should ensure they are choosing a vendor with reliable providers and not just take the vendor's word for it. Which fiber providers feed the facility? If measurable, how many milliseconds of delay exist on the individual lines from each carrier to the local Nap/MAE or peering point? Can the end user leverage the fiber? Is there opportunity to purchase the fiber, or at a minimum, come to terms with providers to own IRUs and run a network?

3. Labor Pool: A number of facilities are being built in various locations, such as eastern Washington, that have an abundance of inexpensive power delivered from large generators, such as hydroelectric dams in those regions, yet there is a dearth of qualified talent to run these facilities. Young, progressive, growing companies may have issues recruiting the qualified talent needed at each of these "super-centers." Wenatchee, Washington, home of the Red Delicious, has never been known for its progressive lifestyle or its diverse culture. Evaluating the labor pool is critical, particularly if you are considering colocation facilities a significant distance from your IT services.

4. Taxation Issues: State and local taxation issues have become a major component in the decision-making process as e-commerce develops, originates and/or terminates in these facilities. Taxation issues extend beyond domestic borders as well, and should also be considered for international engagements. Companies that generate billions of dollars of commerce need to choose locations that are not tax prohibitive. The difference between two percent and four percent per year can mean millions of dollars to the bottom line: the TCO of that facility.

5. Natural Disasters: In a multi-site situation, geographic diversity is sometimes necessary for complex users with high peering needs—and an absolute requirement for redundancy and disaster recovery. Florida, one of the four corners of the US, has been hit hard and frequently in the last few years with hurricanes and flooding. As such, it has lost some of its shine as a secondary or tertiary location. (Power cost increases in Florida have also hurt it as an option, with prices rising almost 100 percent in the last year.) It is important for companies to evaluate their data centers and place them in the best locations to avoid known natural disasters.

The Decision to Buy or Lease

Another option to consider: As one is vetting the available locations in any given geographic area, the opportunity may exist to either buy or lease the facility in question. There are a number of reasons that a company might be better suited for one scenario versus the other. In attempting to determine which is best for a particular situation, a company should look at (a) the size of the facility that is necessary, (b) the three, five and ten-year needs of the company, (c) the fit of data center operations as a core competency of the company, and (d) the potential asset or liability as it would appear on the balance sheet. Companies must execute a thorough evaluation process, which might include the following questions: Is OPEX or CAPEX more effective as a tool for the company? If the facility is leased, does it lessen the need for operation personnel, and, if so, how does this affect the actual cost of services delivered?

Making Sense of It

With today's increasing bandwidth needs, the dynamic growth of server farms and the pressure those devices now put on data centers, companies cannot afford to misstep when it comes to selecting a colocation facility. Unsuccessful engagements, unfulfilled service levels and constraining provisions can all lead to lost revenue opportunities. Yet, the due diligence process has become more complex, as have the service requirements and vendor offerings. By taking a pragmatic approach and evaluating criteria in a systematic way, companies can more easily narrow their search, compare options and identify the optimal solution for their needs today and in the next several years. This process begins with defining critical requirements, articulating location parameters, and making the lease versus buy decision.

Look for part II of this colocation series in next month's issue of "The Communiqué."

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