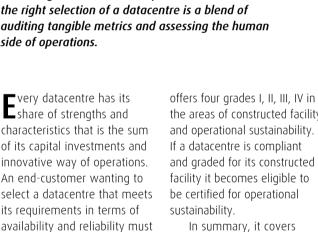# How to select your strategic datacentre partner

Sachin Bhardwaj, eHosting DataFort, Director, Marketing & Business Development discusses how the right selection of a datacentre is a blend of auditing tangible metrics and assessing the human side of operations.

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Every datacentre has its share of strengths and characteristics that is the sum of its capital investments and innovative way of operations. An end-customer wanting to select a datacentre that meets its requirements in terms of availability and reliability must be ready to go down both the paths of assessments.

What should you look for in your datacentre partner? Below are some important categories for assessment:

Certifications

Third party certifications can help end customers gain confidence in the publicly available credentials of a datacentre. As an example, The Global Data Center Authority, Uptime Institute's Tier Standard offers four grades I, II, III, IV in the areas of constructed facility and operational sustainability. If a datacentre is compliant and graded for its constructed facility it becomes eligible to be certified for operational sustainability.

In summary, it covers staffing levels, skills, training, qualifications, effectiveness of maintenance and datacentre operations, policies that affect planning and coordination of activities, building characteristics, site location, organisational controls and security. Certifications are also independently provided by Payment Card Industry and HIPPA amongst others.

Location

The location of the datacentre is one of the most important single factors that can influence its selection. Is the datacentre located in a region of extreme weather change susceptible to large scale changes of wind, rain, and snow? These can frequently limit movement and activity. Or is the datacentre located in a region of geologic activity with frequent tectonic movements that can stress the building structures?

Is there a significant power feeder connection or utility substation nearby that ensures that uninterrupted power is available for the datacentre? What is its distance to the nearest highway, urban city, airport, nuclear plant, important infrastructure, that needs to be balanced in terms of remoteness, accessibility and proximity as required?

Design

An important attribute inside a datacentre is not just how much existing equipment is stacked and how it is stacked, but also how new equipment will be stacked and configured. What are the options available to bring in new equipment in terms of individual cabinets, cages with racks, data modules and private rooms? And once decided how the equipment will be stacked and configured, what is the availability of power and cooling per square area of space leased.

Does the datacentre

follow raised floors and cooling below with equipment racks directly secured to the concrete floor slabs? This is usually an important consideration for heavy and sensitive equipment. Other parameters to validate during selection are cooling efficiency, power density per rack, modular approach to build up, and just in time space expansion. Lastly, what is the availability of temporary office space when employees from end-customer organisations are expected to function on-site.

Connectivity

The best advantages for an end-customer are when the datacentre offers the choice of network connectivity from multiple service providers and from multiple landing points. This allows the end-customer to become less susceptible to latency issues that may arise from time to time with specific providers and through specific routes.

The ideal situation arises when the datacentre provides direct connectivity to service providers they are contracted with. As well as the option of bringing in other service providers on demand without any specific preferences or bias towards any of them. This is sometimes referred to as carrier neutrality.

Operations

Auditing the physical attributes of a datacentre is usually one side of the selection process. The other side is the human audit. How well does a datacentre go to reduce human errors? Are the processes and procedures of operation documented? How well are the staff trained on these processes and procedures? Are the processes flexible enough and is change management built into the datacentre operations? How does the datacentre manage service level agreements, maintenance schedules, and planned downtime?

Datacentres compliant with Tier III and Tier IV levels have redundant and fault tolerant capacities inbuilt and hence should rarely have any downtime. But datacentres compliant with Tier I and Tier II levels will need to go through planned downtime and will need to actively manage their service level agreements accordingly. A datacentre is also a business and the stability of the business model, shareholders, and profitability is an important part of the consideration.

Other factors

Physical security is an integral part of the operations with varying degrees of importance for every datacentre. This usually includes surveillance, biometrics and two factor authentication. Similarly, commissioning and maintenance of critical equipment is an important operational procedure. This covers end of life replacement, selection of new equipment, and incorporation of redundant equipment.

Critical equipment is usually UPS devices, generators, switchgear, chillers, utility connections, control monitoring systems. Another key aspect is the presence of Data Center Infrastructure Management that can alert when there is a reduction in planned availability and reliability in real time. Finally, most datacentres tend to offer their own share of hosted IT solutions and going forward this may increasingly become the final point of differentiation.