Data center infrastructure: In-house hosting versus outsourcing

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When it comes to IT infrastructure, an in-house data center is among the big ticket CAPEX items for most Indian CIOs. This is why many businesses prefer to have a better OPEX-CAPEX equation by taking the data center outsourcing route. Today, Indian organizations are definitely looking at IT infrastructure outsourcing as an alternative, with co-located hosting prices dropping on a consistent basis.

This trend is substantiated by analyst firm Gartner Inc., which observes that despite the economic slowdown infrastructure outsourcing (including IT) will witness bullish growth in FY '09-'10. As we shall soon examine, the call between in-house data center infrastructure and opting for co-located data center services involves more than just accounting jugglery.

Data center outsourcing and India.org

In India, organizations are skeptical when it comes to putting their entire IT infrastructure under another entity's control. Business critical applications continue to be hosted and managed internally in most large and medium Indian businesses, more so in the case of financial services companies such as banking and insurance firms that store highly sensitive personal data. However, the trend of outsourcing non-critical applications to third-party service providers is on the rise.

A good case in point is Chikkamagaluru, Karnataka-based Café Coffee Day (CCD), which uses a mix of in-house and outsourced hosting. CCD has its own data center in Bengaluru that hosts its business-critical applications such as SAP. However, CCD's point-of-sale software has been outsourced for the past six years to Chennai-based TAS Automation. CCD's e-mail and corporate website are hosted with a data center service provider in Mumbai.

Outsourced data center infrastructure services are adopted largely by organizations that have realized that IT is an enabler and not its core function. If this describes your company, does it make sense to outsource?

"When it comes to in-house infrastructure, there are challenges like regulatory compliance requirements, data center design and levels of built-in redundancy," said S Jayabalan, the chief technology officer of Netmagic Solutions, a managed service hosting provider that has physical data centers in Mumbai and Bangalore and a virtual data center in the US. "Also, how does one foresee the business requirements five years down the line? One does not think of these factors upfront. That is where the third-party players come into picture, as the data center is their core focus."

Requirement analysis

The data center function to be outsourced (entire vs. partial) is a strategic step that has to take into account many factors. According to Venkatesh Babu, the CIO of CCD, an organization should evaluate its data before considering outsourcing. "Confidentiality of the data plays a major role when taking this decision," said Babu. Since CCD's confidential data resides in SAP, it is hosts and manages its ERP system in house.

When an organization decides to opt for a mix of in-house and outsourced data center infrastructure, benchmarking is a good start. This will help it identify loopholes to be remedied by involving third-party experts.

"Smart companies have to realize the levels up to which they want to build and buy. Things which are strategic in nature on which organizations have good control should be done in house. Outsourcing should be considered for things that they do not specialize in," said Jayabalan.

Data center infrastructure provider selection

Evaluating a vendor can be a troublesome task. "One should look at the service provider's capability, infrastructure, facility and security mechanisms in place," Babu said. "Look at the vendor's credibility in the market. Always look at all the references. Above all, the cost factor should be kept in mind."

Site visits are critical to understand the service provider's capabilities. Comprehensive reference checks with the service provider's existing clients come next on the evaluation checklist.

Security, transparency and trust issues come into the picture when an organization puts its data in the hands of a third party. The service aspect is yet another key issue. This is where service level agreements (SLA) play an important role in bridging this trust. The SLA should have sufficient safeguards in place to

Build your in-house data center

Pros
* Data is in your hands with a lot of transparency.

protect your organization's interests. However, the validity of an SLA in the Indian context is still disputable.

SLA hotchpotch

Considering the snail-paced Indian legal system, the viability of SLAs (especially in case of a breach of contract) is disputable. Notwithstanding that, SLAs are put in place to ensure the binding of two organizations.

The commercial arrangement in cases attributed to SLA breaches is the service-debit or service-credit model. "It is understood in the industry that there will be certain lapses. In the case of any sort of breach, then it could be translated to monetary terms. Accordingly, the credit or debit is calculated," said Gowree Gokhale, the head of IP/IT practice at international law firm Nishith Desai Associates.

From the CIO's perspective, a customer-driven SLA is always a challenge, especially when it comes to negotiating with bigwigs.

"SLAs can be negotiated with medium-sized vendors. However, one gets no choice with the top vendors," Babu said. "If one has good relations with the vendor, then SLAs should not be a problem since one can try to resolve [a problem] through non-legal ways. A lot is dependent on trust here."

This lack of legal recourse in the case of unprofessional service providers has been a major cause behind the mistrust prevalent among Indian CIOs on the outsourcing front. More so the case, since it leaves a CIO with no option but to terminate the contract in the case of a company consistently defaulting on its service level.

Despite the uncertainty prevalent on the infrastructure provider's service-level fronts, CAPEX savings have been a big draw for all the Indian organizations opting for data center outsourcing. Adding to this is the reduction in management complexity and skilled manpower costs.

Organizations relying on outsourcing, can build trust with regular communication. "There should be periodic well-defined parameters for different levels of interaction," according to Jayabalan. "Weekly interaction could be at the operational level, whereas fortnightly it could be a slightly higher level of discussion. The monthly interaction could look at business-level discussions."

As a trend, data center infrastructure outsourcing is growing in India since available expertise and resources for in-house data centers cannot always be found. However, outsourcing is definitely not set to wipe out the in-house model.

* Trust factor is high as the team and its performance is known.
* A specialized team caters only to a single organization -- yours.

Cons
* Huge cost incurred to hire and manage the IT team. In certain situations, to make a profit or justify the cost, these IT teams in turn become IT service providers.

Outsourced data center infrastructure

Pros
* Constant upgrades to the latest technology releases.
* Service provider is exposed to more problems and thus develops a strong knowledge base.
* Resiliency is built up as it is a carrier-neutral set-up.

Cons
* Probable data privacy concerns if not hosted with an established player and backed by clearly defined SLAs.