

Should we opt for Cloud or Colocation?

Making the right decision



Key Highlights

- > *For any business enterprise choosing the right server infrastructure is critical to business success. Yet with the increase in the trends towards adoption of cloud computing by organizations, the IT infrastructure landscape is undergoing a major transformation.*
- > *Having said this, the two key approaches for organizations that want to move away from on-premise data centers include either the more traditional colocation or the increasingly popular virtualized cloud route.*
- > *Both of these approaches can provide suitable solutions depending on an enterprise's specific requirements and can help achieve the objectives as well as derive business value.*

For any business enterprise choosing the right server infrastructure is critical to business success. Yet with the increase in the trends towards adoption of cloud computing by organizations, the IT infrastructure landscape is undergoing a major transformation. This trend calls for an open debate on the best direction that an organization can take with respect to its IT infrastructure in 2016 and beyond.

Having said this, the two key approaches for organizations that want to move away from on-premise data centers include either the more traditional colocation or the increasingly popular virtualized cloud route.

Both of these approaches can provide suitable solutions depending on an enterprise's specific requirements and can help achieve the objectives as well as derive business value.

The underlying challenge

Doing more with less is the new mantra, as enterprises look up to their internal IT setups for improvements in customer experience, dealing with disruptions and growing revenues. Server infrastructure forms the core of any business technology agenda for delivering key services.

Much of this transformation of the IT department and subsequently the enterprise is being driven by the adoption of cloud as a flexible, agile and scalable solution to enable business growth. The burden of aging on-site IT equipment, including hardware and data center facilities are the key drivers for the shift from building an on-premise data center to hosting it off-site.

However, for enterprises that have already invested a significant amount of resources and capital in their in-house IT infrastructure, moving to the cloud may require a significant leap.

The burden of aging IT infrastructure can often be one of the key drivers for an outsourced alternative.

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The agility, scalability and flexibility of a Cloud based infrastructure

69% of organizations have at least one application or a portion of their infrastructure in the cloud and 18% plan to use cloud applications in the coming 12 months, according to a recent IDG Enterprise report. In short this means that cloud has become an integral part of the IT infrastructure for most business enterprises.

ADVANTAGES

Scalability and agility

Cloud computing is on demand, enabling your business to have more space, power and bandwidth in an instant. It means your IT infrastructure can adapt fast and efficiently to the changing needs of your business. It encourages business innovation and is essential in an era of real-time big data and advanced analytics.

Cost-effective

Cloud is virtual so your service provider provides the infrastructure, software and platform, giving you reduced CAPEX and more control of your costs.

Highly flexible

With no capital outlay for cloud services, there's no need to commit to a long-term contract. Pay for what you need and switch provider easily.

Hassle free

Your provider handles upgrades, maintenance and repairs, leaving you and your IT Team free to focus on core business.

Compliance

Cloud providers can ensure security procedures to demonstrate compliance. If you're subject to regulations such as PCI DSS, SOX or HIPAA, make sure your cloud provider has the relevant accreditations.

Availability and support

A robust server infrastructure with minimal downtime is key to the running of business critical applications. Cloud offers good availability but check that this is detailed in your service level agreement. Also, find out what customer support is offered when problems do arise.

DISADVANTAGES

Management and migration

Cloud is still a relatively new concept so your team may not have the skills in-house to deploy key services onto a virtual environment.

Lack of control

Cloud is like buying a share of a server and although offloading management can be a good thing, IT managers lose control of this essential part of their infrastructure. Therefore, it's important to choose a cloud provider with excellent reviews and a strong track record.

Lock in and data ownership

As you don't own the hardware, make sure there are procedures in place allowing you to retrieve your data when you need to and ensure there are no prohibitive costs in the process.

Costs and tipping point

Although the shared services provided by cloud benefit from economies of scale, you can actually outgrow the cost benefits and it may become more economically viable to use colocation.



Used cases for Cloud

Cloud computing allows a business enterprise to become more competitive through cost reduction, greater flexibility, elasticity and optimal resource utilization. Below are a few situations where cloud computing enables organizations to achieve their business goals.

Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS)

Infrastructure as a Service or IaaS that essentially means using an existing infrastructure on a pay-per-use basis seems to be an obvious choice for companies saving on the cost of investing to acquire, manage and maintain an IT infrastructure.

Organizations may use Platform as a Service (PaaS) to increase the speed of development on a ready-to-use platform to deploy applications for similar reasons as IaaS.

Private Cloud and Hybrid Cloud

Among the many incentives for using the cloud, there are two situations where organizations are looking into ways to assess some of the applications they intend to deploy into their environment through the use of a cloud (specifically a public cloud). While in the case of test and development it may be limited in time, adopting a hybrid cloud approach allows for testing application workloads, therefore providing the comfort of an environment without the initial investment that might have been rendered useless should the workload testing fail.

Another use of hybrid cloud is also the ability to expand during periods of limited peak usage, which is often preferable to hosting a large infrastructure that might seldom be of use. An organization would seek to have the additional capacity and availability of an environment when needed on a pay-as-you-go basis.

Test and Development

Probably the best scenario for the use of a cloud is a test and development environment. Setting up an environment can be an expensive proposition both from a capital and resource perspective. With cloud computing, there are now readily available environments tailored for your needs at your fingertips. This often combines, but is not limited to, automated provisioning of physical and virtualized resources.

Big Data Analytics

Cloud computing can help an organization to tap into vast quantities of both structured and unstructured data for extracting business value.

This means that retailers and suppliers can extract information derived from consumers' buying patterns for targeted advertising and marketing campaigns to a particular segment of the population. By the use of social networking platforms companies can now derive meaningful information on the basis analytics on user behavioral patterns.

File Storage

The cloud can help in storage of files and accessing, storage and retrieval them from any web-enabled interface. Organizations pay for the amount of storage they actually consume and do so without the worries of overseeing the daily maintenance of the storage infrastructure.

Data can be either stored on or off premises depending on the regulatory compliance requirements.

Disaster Recovery

Cloud based DR provides for faster recovery at a much lower cost than a traditional DR site with fixed assets, rigid procedures and a much higher cost.

Backup

Backing up data has always been a complex and time-consuming process. Cloud-based backup enables an organization to back up data by sending a copy of the data over a proprietary or public network to an off-site server. Capital expenditures for additional hardware are not required and backups can be run automatically without manual intervention.



The security of Colocation

In colocation, space and bandwidth are rented which essentially means that businesses are able to use and maintain their own equipment such as servers, but share the cost of power, cooling, physical security and data center floor space with other tenants.

Although this is a more traditional approach to server infrastructure, a number of other factors continue to make colocation a viable option, particularly for larger businesses with in-house IT staff.

ADVANTAGES

Ownership and control

The biggest advantage of colocation is that the enterprise retains full control of the equipment, especially where an organization has to satisfy regulatory or data protection requirements. Colocation enables IT managers to control technology lifecycles and retrieve data as and when required.

Security and compliance

Colocation provides a dedicated environment for your server infrastructure, overcoming the security pitfalls of a shared environment. That makes it a good choice if your business is in an industry with tight data-protection regulations.

Provider expertise

Colocation enables your organization to gain from the expertise of skilled individuals who specialize in providing the service. Third party data centers are manned 24/7 by engineers who can also provide remote support for more complex work.

Resilience

Service level agreements are often more stringent for data centers and providers with multiple facilities can replicate the same information across more than one of their sites. They offer robust back-up services, added resilience and peace of mind.

DISADVANTAGES

Cost of equipment

Colocation involves a large amount of capital outlay to purchase your own servers, storage, switches, and software, housing it in a secure and resilient facility and maintaining and updating the hardware whenever required. Although expensive, it does allow you to control the hardware you use, so that it's optimized specifically for your applications.

Maintenance and monitoring

Although expertise is on hand, it doesn't come as standard with colocation, meaning businesses either have to personally monitor their own hardware or pay extra to get their provider to do it.

Agility and growth

Data centers need to plan in advance for expansion and additional capacity. If your organization is looking at growth and expansion, you have to ensure that your provider is informed of the expectations and can provision resources in advance.

Convenience and location

Cloud can be managed remotely and your in-house IT department can maintain the in-house infrastructure. However, this is not so easy with when you collocate to an external data center, so when you go for colocation ensure that the facility located conveniently in the event that your team need on site access.



Used Cases

Colocate for Greater Scalability

Forrester calls scalability one of the top benefits of colocation. “Additional capacity can be brought on quickly, cheaply, and only as needed.” TechRepublic echoes the same: “The common IT case for data center co-location is that you can scale out your data center quickly, and at 20% of the cost that it would take to construct your own data facility. ... This is an attractive proposition for IT departments that must be frugal at the same time that they must be able to rapidly scale IT up or down, depending on the needs of the business.”

Colocate for Lower Total Cost of Ownership (TCO)

Organizations can typically collocate their data center for a much lower total cost than they could build and maintain a private data center. In August 2013, Forrester released the results of research into the total cost of ownership associated with building a traditional raised-floor data center, a modular data center, and data center colocation. The research group found that a modular data center has the lowest aggregate total cost. But data center colocation has significantly lower costs than a traditional build (37-52% lower net present value cost).

Colocate for Greater Agility

As Forrester points out, the colocation model turns the capital expenditures associated with building a data center to operating expenditures associated with “renting” data center space. Meaning the organization has greater flexibility and agility. They can more quickly scale IT capacity where they need it, and reduce or eliminate IT capacity where there’s no longer a business case for it.

Cloud vs Colocation

Factors such as an organization’s strategic business aims, vertical market, budget, intended use and service levels influence the decision to opt for a Colocation or Cloud.

	Cloud	Colocation
Hardware provided	Yes	No
Suitable for highly regulated needs	Yes	Yes
Scalability	Yes	No
Capex required	No	Yes
Convenience	High	Low
Resilience	High	High
Managed by supplier	Yes	No
Flexibility/Agility	High	Medium
Cost	Medium	High
Maintenance/Monitoring	Yes	Yes
Control	Medium	High
Time to go Live	Less	High
Lock-in Period	None	Yes
Data Ownership	Yes	Yes



Though both approaches to organizing your IT infrastructure can offer an ideal alternative to an in-house data center, the ideal route depends on both your organization's current and future business strategy and requirements. One important thing to note here is that a public cloud does not support hosting legacy and RISC based applications, so for certain legacy and RISC based applications colocation may be the only option.

Another critical factor is choosing the right provider; your service provider must have the expertise to analyze your organization's infrastructure requirements and should be have the capability to assist with migration and optimization.

If you opt for cloud, ensure that your business is 'cloud ready' and you have a roadmap in place to make sure your solution is optimized. For organizations that are still unsure of which route to take, a hybrid solution that includes multiple IT deployment models, may offer the best results.

Both colocation and cloud services offer you viable alternatives to traditional in-house data center solutions. Deciding whether to co-locate, move to the cloud or leverage both, should be based on your specific IT and business requirements.



About Netmagic (An NTT Communications Company)

Netmagic, an NTT Communications company, is India's leading Managed Hosting and Cloud service provider, with 9 carrier-neutral, state-of-the-art data centers and serving more than 2000 enterprises globally. Headquartered in Mumbai, Netmagic also delivers Remote Infrastructure Management (RIM) services to various Enterprise customers globally including NTT Communication's customers across Americas, Europe and Asia-Pacific region. The Company was the first in India to launch services – Cloud Computing, Managed Security, Disaster Recovery-as-a-Service (DRaaS) and Software-Defined Storage. Netmagic has been recognized with 6 awards at the CIO Choice Award 2016 and also bagged the Frost & Sullivan India ICT Award 2016.

To learn more, visit us at: www.netmagicsolutions.com

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NTT Communications provides consultancy, architecture, security and cloud services to optimize the information and communications technology (ICT) environments of enterprises. These offerings are backed by the company's worldwide infrastructure, including the leading global tier-1 IP network, the Arcstar Universal One™ VPN network reaching 196 countries/regions, and 140 secure data centers worldwide.

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