**Businesses are Partnering with Third-Party Datacenters- An Explanation**

DeepaNatarajan

Department of Management Information Systems, Bellevue University

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Professor James Krohn

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Data storage demands are increasing at a higher pace. The spread of the internet, globalization, and digitalization has increased the demand for more storage options. Increasing amount of data are being collected by individuals, businesses, and by the research institutes. This has led businesses to move toward in-house to third-part datacenters and cloud computing.

Datacenters are physical facilities that support the Infrastructure needed for the smooth operation of any organization and its IT department. Third-party Data centers are an attractive option for enterprises rather than in-house servers and storage. Reason - the amplitude of advanced networking computing and the storage devices with tight security, makes it a wise choice for partnering for the enterprises. These facilities house a huge volume of data and several critical applications that help the smooth operation of the shared application services and the data stored in them. (Cisco,2021). The most critical components are the routers, servers, switches, firewalls, application delivery controllers. These centers have backup components and infrastructures for power supply, data communication, air conditioning, fire suppression systems, UPS, backup components, and tight security controls.

**In-house to Third-Party Data Centers**

As an outdated trend, the in-house IT structure had the mainframes and servers, which eventually couldn’t keep up with the needs for anytime, anywhere supporting applications and their data. It led to the virtualization technology which paved way for the idea of moving the IT workloads to a different physical location. Though it had advantages like reducing maintenance cost, power supply, they were not capable enough to support all applications and ever-increasing amount of data being collected by the businesses. The modern trend is that everything - the applications and their data - is in the cloud, anyone can access anything from anywhere anytime. For this to happen, the applications and data should communicate and process information at high speed, between different data centers or in the cloud which is inhouse, public, or private cloud anytime; cloud is a datacenter. (Cisco,2021). The reality of Third-party data centers or cloud computing has evolved. They offer-Network and Storage infrastructure along with the computing systems to process the applications. For the ultimate user experience, businesses need more of everything - storage, speed, security, reliability – which has powered the growth of cloud data centers or third-party data centers.

**Characteristics and Service Models of Datacenters/cloud computing:**

As stated by Peter & Timothy in 2011, the third-party data centers or the cloud computing model has five characteristics. They are - on-demand access, resource pooling, flexibility to configure and re-configure, measured services to monitor, chargeback and network connectivity through broadband access, (as cited in Ahuja,2016).

National Institute of Standards defines three service models, for data centers that support cloud computing, (as cited in Ahuja, 2011).

* SaaS: Software as a Service. Hosting applications like email, CRM, Human Capital Management (HCM), Enterprise Resource Planning (ERP).
* PaaS: Platform as a Service. Providing application deployment and development platform, as a service like Database, analytics.
* IaaS: Infrastructure as a Service. Providing consolidated and virtual servers, storage, and operating system environment.

**Need for the Third-Party Data Centers**

Ahuja (2016) in his article claims further that more organizations are moving towards the third-party data centers, which has many benefits like hosting the applications from the cloud data centers, thereby allowing the internal IT department to focus on the core business. Managing and maintaining an internal data center can be highly inefficient in terms of cost and resource utilization. When the data and applications are outsourced, it offers higher efficiency to manage the site under single management. Enterprises can spend less time on maintenance, networking, upgrading, and configuration activities. The data centers can provide on-demand service utilization and storage, thereby reducing the cost. This dynamic load support with quality and secured service makes third-party data centers a successful model. Data centers host the cloud architecture, which may be a private or third-party data center. The growing number of cloud service providers and cloud computing are streamlining their data facilities across global locations for the benefit of the business and its customers.

**Benefits of Third-Party Data Centers**

**Data storage Management**

Many companies are attracting their customers to use cloud services for storing their contents. The third-party data centers around the globe have come up with more physical storage options and innovative management plans, which help enterprises to utilize the benefits irrespective of their sizes. The management plans include the utilization of the optimum storage space, with the help of techniques or software to provide capacity, data recovery, availability of data for better performance and speed. Businesses irrespective of their size can rent the servers based on the load and if the load varies frequently, renting the servers on an hourly basis are available through these data centers. The best example is Netflix which has a self-service portal to add and drop servers instantly throughout the day based on the demand. (Panko & Panko, 2018).

**Reduced Point of contact**

Inhouse datacenters demand hefty administrative and maintenance tasks, which utilize the cost, resource, time in a considerable quantity and deviating from the core business process. This is because having an in-house datacenter means dealing with multiple manufactures, vendors, and contracts. According to SIA, (2021), up to 71% of the organization prefer having a single point of contact instead of dealing with multiple vendors for data maintenance. Having a Third-party data center also means that no need to deal with multiple types of equipment and its Original Equipment Manufacturers. The third-party maintenance plan makes sure that the equipment is used optimally irrespective of the manufactures. These centers reduce the confusion by having a single point of contact, getting satisfaction in the service, and safety standards for the investment made.

**Cost Effectiveness**

Using a vendor for the data services reduces the heavy investments in the equipment and other resources. (Sify,2021). Businesses don’t have to worry about establishing a physical infrastructure for data storage and maintenance. If the business expands, simply we can buy more storage, or if the requirement is reduced the implementation is reduced accordingly. These third-party data centers offer cost-effective and efficient options to their clients by offering the varying level of capacity based on the needs.

**Security**

Data security is the ultimate priority for any enterprise. These centers offer constant monitoring, expertise support, upgraded technologies to trace any potential data breach along with the physical facility monitoring, which otherwise is not an easy task to keep up with for any individual business group. Backup support of the data storage and quick easy recovery process within a very short, given timeframe is the most needed services that are supported for the client's success. With regular monitoring and updated technologies, third-party data centers have become the hazel-free choice for most companies.

**Conclusion**

The world is shifting to 5G technology, which means more use of data, devices, and more business. The business has to keep up with the people’s demand, we demand more speed, more free data storage, we want anytime, anywhere access to anything. In this highly challenging market, latency is unacceptable, the data breach is uncompromisable, and keeping up with the pace of the technology is increasingly demanding. Inhouse data centers are costly in terms of time, skills, and technology. For the Enterprises to have world-class security, improved choices, serverless services combined with powerful innovation the cost-effective solution is to partner with Third-party Datacenters.

**Reference**

Ahuja, A. (2016). Organizational Effectiveness of Data Centers - A Foundation for Effective Cloud Architectures. *International Journal of Management Science & Technology Information,* 22, 1–15.

Cisco. (n.d.). What is a Data Center? Retrieved March 20,2021, from <https://www.cisco.com/c/en/us/solutions/data-center-virtualization/what-is-a-data-center.html>

Panko, R. and Panko, L. (11th Ed.). (2018). *Business Data Networks and Security.* Pearson Publications.

Service Industry Association. SIA. (n.d.). *The Case for Data Center Third-Party Maintenance.* Retrieved March 20,2021, from <https://www.servicenetwork.org/blog/the-case-for-data-center-third-party-maintenance/>

Sify. (n.d.). *Why Data centers are Necessary for Enterprise Businesses* Retrieved March 22,2021, from <https://www.sifytechnologies.com/blog/why-data-centres-are-necessary-for-enterprise-businesses/>