

Is on-premise or public cloud the right platform for your business?

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Abstract

*Determining the benefits of **Public Cloud** offerings is something that decision-makers must do more often when researching new options for enterprise solutions. Along with vendor reputation and user community, accessibility, performance, and security are essential considerations. The competition to increase market share and win over customers.*

Providers to provide attractive starting pricing to recruit Cloud renters. Conducting due diligence to reduce risks or surprises is crucial to keep long-term TCO and business objectives in mind. Understanding the business, technological, and contractual drivers can help your firm make decisions about the future of cloud computing. The options and business indicators must always be thoroughly analyzed before a decision to adopt the public cloud.

*Following thorough needs analysis and comprehension of the variables, it is easier to choose and manage a result that is both trustworthy and economical. This article describes the necessity to comprehend the ramifications of choosing a **public cloud vs. an on-premise data center** in the future.*

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I. Introduction

The estimated cost structure indicated that a sizable multi-year investment in Cloud services would be necessary to evaluate the optimum solution application and platform at a medium-sized firm. Cloud computing is distinguished from On-Premises data centers by utilizing computing services from outside the firewall.

The total cost of the Cloud subscription in the example below is expected to be more than \$2 million over ten years. Organizations of all sizes should be aware of the risks involved before making such significant Cloud commitments.

There are business and cost drivers at play. It is important to comprehend the available options and comparable cost structures before signing any contracts. The research that follows is motivated by actual occurrences. The information is representative and illustrative as a case study for educational purposes. The pool of possible suppliers was reduced as a result of extensive research, analysis, and formal RFP (Request for Proposal) initiatives. Ten finalists were reduced to two. The next step was to assess each supplier's proposal in turn to learn more. Is the Cloud preferable to an on-premises strategy, for instance? If not, why not? What, when, how, and who is the supplier? Is the Cloud more economical?

It depends, as will be shown below. The comparative Total Cost of Ownership is determined by a variety of factors (TCO). Therefore, comparing the model to decide between cloud computing and on-premises computing helps evaluate operations and breaks down availability and flexibility.

What is an On-premises data centre?

Private data centres that businesses house in their facilities and care for themselves are referred to as "on-prem." Private clouds that utilize virtualized computational resources much like public clouds can be operated using on-premises equipment (however, private clouds can also be run on leased third-party hardware).

What is a Public Cloud?

An IT architecture known as the public cloud makes computing resources, such as computation and storage, develop-and-deploy environments, and applications, on-demand access to businesses and consumers via the open internet.

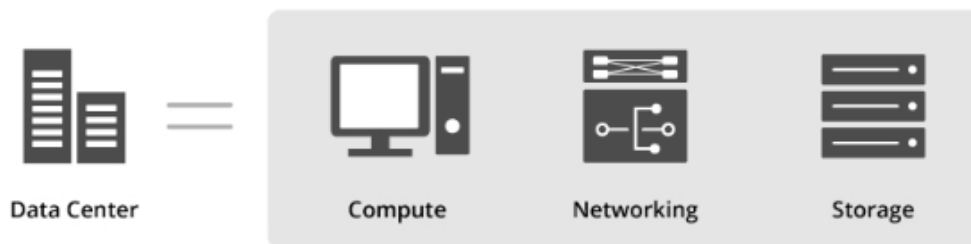
What is a Data Centre, and Why is it Important?

A data centre is frequently described as a physical or cloud facility that stores programs and data that are essential to business operations. Storage, computing, and networking are the three groupings of components that make up data centres.

The compute component, which is frequently offered by top-tier servers, reflects the processing speed and memory required to operate apps. The media that is utilized to store corporate data is the core of storage. They include several backups on tapes, hard drives, and solid-state devices.

On the other side, networking is the connecting of switches, routers, controllers, and other components of the data centre.

Reliability, security, and efficiency have risen to the top priorities as more firms store some of their data in the cloud. Multiple on-premises and cloud-based sites are expected to communicate with the modern data centre. This architecture enables workloads and applications in a multi-cloud environment as well as across physical data centres.



On-premise data centre vs public cloud

It's crucial to comprehend the parallels, distinctions, and advantages and disadvantages of cloud and on-premises data centres before making a decision. Since every firm is different, what works well for one organization might not be great for yours. Here is a quick summary of the things to think about before deciding.

Similarities

Although on-premise and cloud data centres function somewhat differently, both of these approaches use agile and contemporary IT architecture to lower maintenance requirements and expenses. Some of the key parallels are as follows:

1. **Adaptable workload management**

On-premise data centres can employ cloud computing to simplify workloads in a manner comparable to cloud deployments. For instance, they can temporarily test and run additional workloads in the cloud depending on the needs.

2. **Access to contemporary technology**

To maintain security and effectiveness, both cloud and on-premise infrastructure rely on a combination of contemporary technology. These technologies, which work together to enable the efficient operation of the data centres, comprise a management platform, an operating system, and application programming interfaces (APIs).

3. **Advanced automation**

Both on-premises and cloud environments have implemented IT infrastructure automation. This facilitates workload deployments, cuts costs, and frees up manual and repetitive labour.

Differences

Businesses that choose cloud data infrastructure experience notable variations from those that host and manage their data on-site. The following parameters are some of the main differences:

1. **Cost**

Cloud deployments are very inexpensive compared to on-premise data centres because of user-focused subscription services like pay-as-you-go models.

2. **Data protection**

Because on-premise data centres provide you with total control over your data, you can quickly put advanced security measures in place. Depending on the cloud service type you've selected, you could not retain direct control over your data while using cloud installations. If you choose a shared responsibility model, be sure you are aware of your obligations and what is needed to protect your data.

3. **Utilisation of resources**

In contrast to cloud data centres, where most resources are deployed on external servers, on-premise deployment places the majority of your resources at your company's physical location.

4. Scalability and operational flexibility -

Compared to cloud data centres, on-premise deployments are less flexible and scalable.

5. Compliance problems

The majority of on-premise deployments follow the data compliance guidelines. However, because one loses direct control over their data, cloud data centres by default break data compliance rules.

Case Study and Research Findings

Vendors are already offering their solutions at reasonable prices to secure the largest possible market share in the revolution for Cloud software as a service. Innovators, acquisition targets, and established large vendors are all engaged in a competitive race to survive and prosper in the face of upheaval, change, and market turbulence.

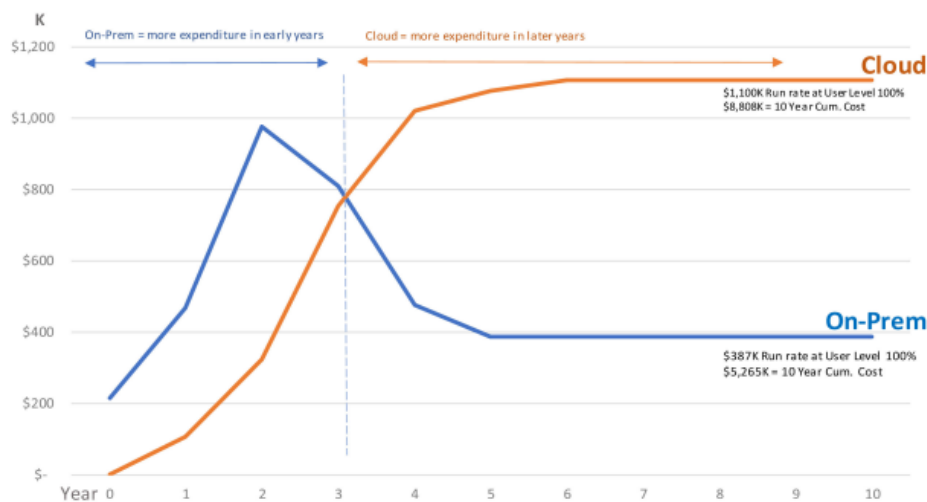
The scenario in this study implies that competing providers answered inquiries, carried out proof-of-concept tests, and created "conference room" prototypes. The CIO made a figurative statement as Top-to-Top negotiation talks approached closer: "Let's give both vendors a sharp knife, lock them in a nasty fight, and see who emerges with the best bid."

In our case, the manufacturers' solutions promised to provide crucial functionality and strong system administration capabilities. The first vendor provided the service with both on-premises and in the cloud. Vendor 2 only provided the Cloud subscription model.

The options are reduced by research and trial and error. This case study highlights the key takeaways and danger zones. In this instance, "kicking the tires" revealed three possibilities for items 1a, 1b, and 2 listed above. And if it means that an On-Premise offering must compete with the Cloud approach from the same company, that's okay, too.

Care was taken to investigate a vendor's maturing go-to-market positioning, Cloud strategy, and future because one vendor's older application had On-Premises roots.

The graph below compares the annual run rates of On-Premise licence costs versus Cloud subscription costs. Years 4 through Year 10 are the final years where on-premise licence maintenance expenditures are highest. As expected, the initial years of using the cloud may be less expensive due to fewer upfront capitalisable costs. But over a longer period, On-Premise may end up being less expensive. It's important to precisely evaluate the internal expenses that self-reliance would bring about for On-Premise while comparing various options.



Cloud versus On-Premise—10-year comparison of costs.

Business Objectives

The key differential came down to which solution met the needs of the business:

- Domain capabilities
- Reliability in performance, availability, and security
- Simple navigation (users and system administrators)
- Implementation assistance
- Customer service after deployment and training
- Reputation and references
- Stability and depth of the organization
- The total cost of ownership over the long run

With three possibilities for moving forward, it was important to decide which one was the best because each one had met the necessary criteria. A closer look at the elements that affect long-term expenses and success was deemed worthwhile for the last item on the list above.

The Cloud makes it possible to utilise and deploy critical company applications in a new way. However, the ostensibly simple structure introduces a plethora of new complexity.



Illustration—The basics of Cloud.

II. Conclusion

The importance of cost management and governance while choosing between public cloud and on-premises data centres has been highlighted by this study. Comparisons and calculations were offered to contrast the more traditional self-reliant approach with the expanding Cloud options.

The approach evaluated the total cost of ownership over the long term. Knowing the similarities, and differences, between public cloud and on-premise data centres should make it easier for you to select the best option for your business.

The ideal option frequently comes down to your business demands, pricing, and desire. You might want to think about a hybrid cloud solution if you work in a highly regulated sector like finance. However, because of the lower IT costs and greater scalability, cloud implementation will be advantageous for small businesses.

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