

The benefits of cloud computing vs on-premise – a strategic comparison

When considering digital transformation, choosing between cloud computing and on-premise is a critical decision.

The fundamental difference between cloud vs on-premise software is where it resides.

To make informed decisions, business leaders need to understand the differences between cloud and on-premise and where they fit into their corporate IT strategy.

As well as accessibility, there are other things that need to be considered, including software ownership, cost of ownership, software updates and additional services, such as support and implementation.

Your decision ultimately depends on your organisations specific needs, data sensitivity, compliance needs, scalability requirements, and budget considerations.



On-premise computing

Referred to as on-premises, on-premise or on-prem this traditional approach consists of the IT infrastructure and software located within an organisation's physical premises and hosted on-site. The software is hosted on physical hardware usually in the organisation's own data centre.

This model demands significant upfront investment in hardware and software. It also means you're responsible for ongoing maintenance, security, and upgrades of your IT infrastructure.

On-premise does provide IT staff with greater control over server hardware, data configuration, security, and management, which can be appealing to businesses with stringent data security, compliance, and customisation requirements.



Cloud computing

Cloud computing is the delivery of computing services including servers, storage, databases, networking, software, analytics, and intelligence over the internet. The data is stored on the cloud (public, private, or hybrid), and the vendor handles the security and uptime. You can access your applications anytime and anywhere via a web browser from any device. You typically pay only for the cloud services you use.

Cloud-based solutions are appealing to businesses wanting to reduce operating costs, run their infrastructure more efficiently, and scale as their needs change.



A hybrid cloud environment, blending on-premise and cloud elements, is increasingly becoming a viable strategy. This model leverages the cloud for scalability and innovation, while maintaining sensitive operations and data on-premise for security and compliance.

If control and compliance are top priorities, an on-premise approach may be better for your organisations. However, if you prioritise agility, scalability, and cost-efficiency, then cloud is the way forward. In many cases, a hybrid approach that leverage the strengths of both may be the best solution.



Key factors to consider

Here we explore the pros and cons of cloud vs on-premise deployment



Cost considerations

On-premise solutions demand a significant capital expenditure for initial setup. You will need to buy related hardware, servers and software and to have experienced IT staff to manage the system. While operating expenses can be predictable, your capacity limits are set and cannot be easily adjusted to meet changes in demand.

Cloud computing requires no upfront costs, instead operates on a pay-as-you-go model which makes it an operating expense (OpEx) allowing expenses to scale with your needs. While the monthly cost adds up over time, maintenance and support services that cover software licences, upgrades, support and daily back-ups are included removing the need for annual contracts. Carefully manage any variable costs to avoid unexpected expenditures.

A move to the cloud, also means you no longer have to pay to power on-premise servers or to maintain their environment. This can significantly reduce the amount you pay on your energy bills.

Many clients have transitioned from on-premise to cloud-based solutions and have found that the move not only reduced their upfront investment but also enhanced their ability to allocate and manage resources. This led to more controlled and predictable operating expenses.



Security and compliance

On-premise environments give you complete control over security measures and data compliance protocols and internal teams can access important information and data without the risk of third-party access. However when breaches occur, it can often take a long time for the company to discover, handle and recover from them.

Data centres employ security measures beyond the affordability of most businesses, therefore your data is often safer in the cloud than on a server in your office. Cloud computing uses a shared responsibility model and you must clearly understand the roles and responsibilities of the provider and the client and security maintenance is key. Evaluate your industry's compliance requirements and risk tolerance.



Scalability

Scalability and flexibility are critical in adapting to changing business needs. On-premise infrastructures are limited by physical capacity, so on-premise expansion will require significant infrastructure and staff investments.

Cloud provides greater flexibility. Cloud services, including private clouds, provide on-demand scalability as you only pay for what you use and can easily scale to meet demand, for example adding and scaling back licences or quickly expanding into new regions without having to make huge investments. Many companies migrate to a cloud model when they need the flexibility to swiftly deploy, utilise, and transition between services and providers.



Performance and reliability

The performance and reliability of the IT infrastructure can significantly impact your operational efficiency and customer satisfaction.

On-premise solutions depend on the capacity and upkeep of physical infrastructure, requiring substantial investment to ensure redundancy and disaster recovery.

Cloud computing often provides greater performance and reliability accomplished through advanced technologies and multiple data centres that offer backup and failover capabilities. With managed services many routine tasks like updates, backups, and security are managed by the cloud provider, freeing your team for strategic initiatives.





Accessibility

With cloud, access your data from anywhere with an internet connection. On-premises solutions limit access to your internal network, which might hinder remote work or collaboration. A steady internet connection is a deal breaker in some industries and use cases.



Data sovereignty and latency

On-premise computing keeps data within the premises, directly addressing sovereignty and regulatory compliance concerns. It can also offer lower latency for on-site applications and data access.

Some organisations may be lawfully required to keep data within specific geographic locations, which may not be possible with cloud computing as the cloud model, stores and processes data in multiple locations.

While cloud computing can introduce latency based on the geographic distance from cloud servers, ongoing advancements in networking technology are continually mitigating this issue with technologies like edge caching and CDN, cloud vendors can match the latency to that with on-premise installation.



Deployability

On-premise implementation takes longer due to complete on-site installation, and configuration and integration can take weeks or months to complete. Cloud solutions can be rapidly enabled for companies, with pre-integrated features, leading to shorter implementation times



Agility and innovation

Cloud computing allows organisations to rapidly adopt and leverage new technologies and services. Cloud providers often release new features and services faster than on-premise. It enables quicker deployment of applications, faster experimentation, and easier integration with new tools and services, promoting innovation and agility.

You can also collaborate more effectively with your teams, partners and customers using cloud-based platforms and applications.



Data management and analytics

ERP systems can provide robust reporting and analytics tools that convert raw data into actionable insights, enabling informed decision-making at all levels.

On-premise ERP offers you full control over your data but may not be able to provide the same level of analytics as cloud solutions connecting siloed data.

Modern cloud ERP solutions utilise a number of cutting-edge and emerging technologies, such as advanced data analytics capabilities, to help derive real-time insights.

Yet implementing a solution with advanced analytics capabilities doesn't guarantee intelligent, reliable insights. One of the most common challenges especially of disparate and legacy systems is data migration. The data migration process is critical to ensuring that your data is accurate and complete, vital as the business will rely on historical data.

Companies can underestimate the complexity of this crucial yet demanding and time-consuming task that requires much planning, meticulous preparation, and a team effort.

By unifying data sources, enhancing accuracy, and providing actionable insights, ERP empowers decision-makers to navigate complexity, drive efficiency, and chart a course for sustainable success.

We can help you understand the capabilities of the latest technologies and assess your needs to make the right choice for your organisation.

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