



PUBLIC VS. PRIVATE CLOUD: HOW TO CHOOSE BASED ON YOUR WORKLOAD

While discussions around cloud implementations are now commonplace, deciding which cloud solution to use to optimise your business needs—especially given the ever-changing contours of technology—are not. In fact, the needs and goals of each organisation differ, making it near-impossible to adopt a one-size-fits-all cloud strategy, or even the same one for each workload within an organisation. As a result, understanding your workload attributes is critical in deciding which cloud hosting choice to make and, importantly, the cumulative impact of these attributes on your workload placement decisions.

Public vs. Private: The Business Case

Influencing these workload placement decisions include the following considerations:



Business – Including the top business problems your organisation is working to solve (e.g., time to market [TTM], agility, legal and regulatory.)



Ecosystem – Including software as a service (SaaS), cloud service provider (CSP) offerings, or the market accessibility of cloud expertise.



Technical – Including performance, security, integration, data volume, and workload elasticity.



Other – Including existing applications and their cloud-readiness, licensing, and organisational practices, such as disaster recovery.

Public vs. Private: The Workloads

Some applications are better suited for public clouds, while others are better for private clouds. In considering the performance, data volume, integration, and security needs, you can determine specific cloud workload placement.

Performance – The primary use cases which apply to workloads with very high-performance scores include the following:

- Performance and latency in relation to an end user’s location, such as engineering solutions that reside physically near engineering departments.
- Performance for resource-intensive transactions (compute, memory, and I/O) with guaranteed quality of service and response agreements.

Security – Some applications process and house data types such as intellectual property (IP), personally identifiable information (PII), and personal health information (PHI), that could cause harm to the organisation if affected by malicious or accidental actions. This rating also incorporates whether or not security solutions are broadly available for a particular workload.

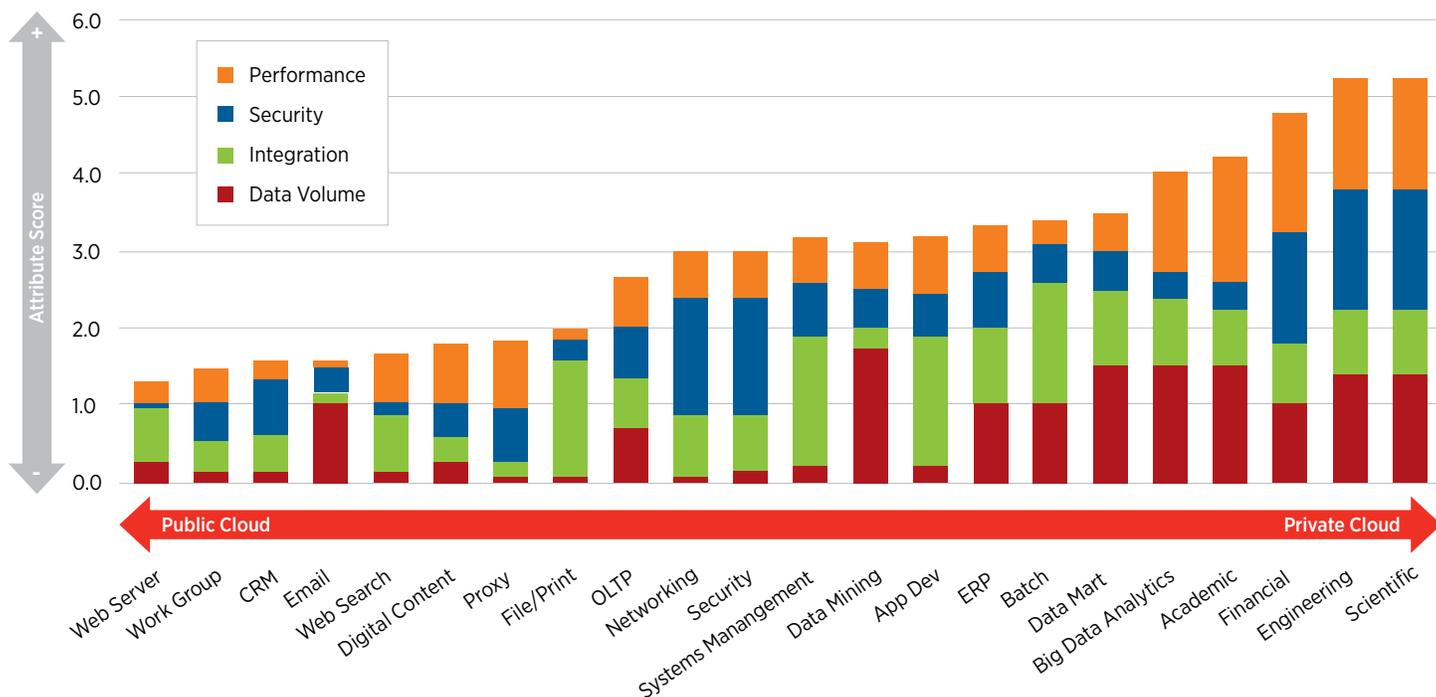
Integration – Connections to other databases, frameworks, applications, workflows, and endpoints present challenges to both traditional and cloud migrations. The complexity and quantity of integrations impact the workload placement because of the increased cost to integrate into multiple clouds.

Data volume – The two major factors are where the data is created and managed. Large datasets can be challenging to transfer across distances. For example, network log data (a large local dataset) for analytics would be cost prohibitive to transmit and store externally, and it would significantly extend the time to achieve insights.

▶ This model below helps explain why an application such as CRM and its business process workloads can be successfully implemented using SaaS in public clouds, whereas research and development workloads, such as engineering or industrial visualization, remain predominantly private.

Affinity Model for Public Versus Private Workload Placement

The technical workload characteristics determine whether an application is better suited to public or private clouds.



Public vs. Private: The Applications

As you evaluate the right cloud for your business, here are some further questions to consider around applications and workloads:

① How sensitive to latency is your application?

Some applications must respond within a defined time frame to meet end-user expectations. Private or hybrid clouds may be preferred where organisations control the location of their users and data centres, or the connections between them.

② Do your applications need to meet SLAs performance monitoring?

When your organisation requires a specific level of performance to consistently remain within thresholds, a private cloud or a managed services infrastructure can provide reliable, detailed, and visible performance monitoring and alerts.

③ How much elasticity do your applications require?

Cloud architectures enable elasticity to alleviate both capacity and short-term compute constraints. While public cloud provides mature elasticity, private cloud also offer solutions to dynamically scale architecture to ensure a good customer experience.

④ Do your business practices allow you to host critical applications only on private infrastructure?

Enterprises must determine if the target hosting platform supports all their data security requirements and enables them to mitigate risks. Be sure to understand your company's IP handling policies for sensitive information before migrating workloads to any new hosting environment.

⑤ To what extent do your applications depend upon other applications?

Few enterprise workloads are stand-alone, and many have multiple components, and often integrate with critical organisational applications. Some applications may not have open APIs, making it challenging or impractical to integrate with new systems. It may be cost-prohibitive to replace, migrate, or modify these applications without addressing the dependencies.



Sungard AS Cloud Solutions

Seamlessly connect your private infrastructure to your public or private cloud resources with a fully redundant network that gives you the privacy, reliability, and control you'd expect from a high-performance hybrid cloud architecture.

We offer a robust portfolio of connectivity, public and private cloud solutions designed to deliver superior performance, enhanced ease of use and elevated customer experience.

Private Cloud

The Sungard AS Private Cloud solution is built to scale with you at the pace you need to grow, with flexible minimum commitments that you control as well as on-demand scalability.

Hybrid Cloud

Sungard offers both co-location and private cloud, as well as offering SDN to connect to remote data centres and customer premises, making Sungard highly capable in the hybrid cloud space.



Public Cloud

Sungard AS provides you a common toolset to manage resources in either AWS or Azure in a simple, secure, integrated model enabling cross-platform deployments meeting compliance, scalability, and availability requirements.

UK Sovereign Cloud Services

Sungard AS UK Sovereign services are purposely built to support high-security public sector requirements. This helps you gain the agility and resilience whilst meeting security and compliance requirements for your most sensitive data.

- ▶ While there is, conclusively, no one-size-fit-all cloud solution for every business, by factoring in some or all of the above considerations before making a cloud hosting decision, it can ensure the best fit for your organisation's workloads both now and into the future.



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If you are calling from
North America contact us at:

+1 (866) 714-7209

If you are calling from
EMEA contact us at:

+44 0808 238 8080

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