

Keeping Location in Mind When Considering a Datacenter Investment

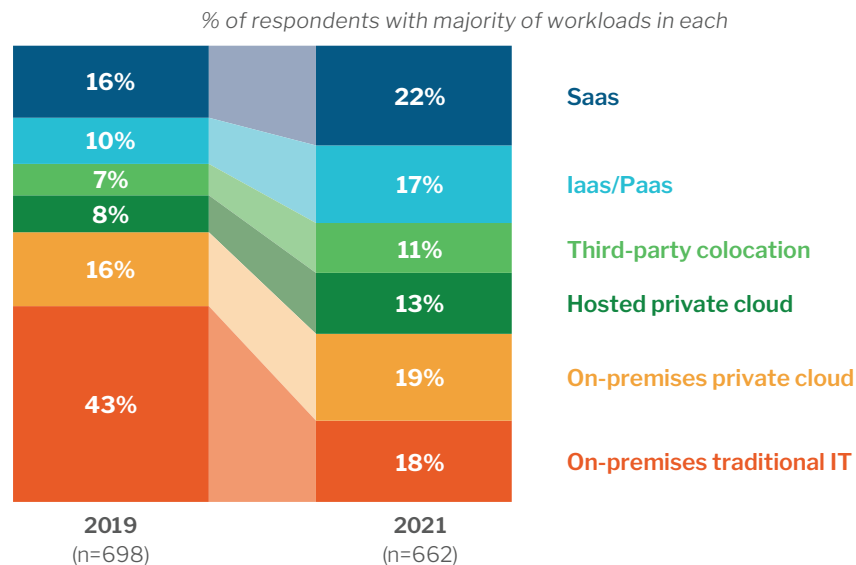
The 451 Take

Enterprises continue to adjust the location of their primary workloads. In our surveys, we are seeing a shift to cloud (IaaS/PaaS) but also to software as a service, third-party colocation and private cloud.

Primary Workload Deployment Venue, 2019 and 2021

Source: 451 Research's Voice of the Enterprise: Digital Pulse, Vendor Evaluations 2019

Q. Thinking about all of your organization's workloads/applications, where are the majority of these currently deployed? Where will the majority of these be deployed two years from now?



In addition, for many companies, third-party colocation (or leased datacenter space) is used for disaster recovery (DR) – for example to back up a datacenter in or near the company's headquarters, or as a place to store a second copy of data used by applications run in a cloud environment. In our most recent VotE: Datacenter survey, 30% of respondents said they rent some colocation space, and of those, just over half (53%) said they use it for disaster recovery.

As primary workloads shift off-premises and the use of cloud and SaaS grows, requirements for colocation may change as well. Companies will still need reliable facilities at reasonable cost. However, network capacity and latency are likely to become more important. Applications increasingly combine data stored in one place (e.g., on customer-owned equipment) with processing or output used in another (e.g., in cloud or SaaS). For example, applications that use large amounts of data (such as AI) may need that data to be stored close by, yet it may be expensive or impractical to store it in a public cloud. Colocation that is within a certain latency could offer a cost-effective solution. Many firms also would like to enable active/active replication to reduce the risk of data loss during an outage, but this requires a second site with latency of less than 10ms from the first.

IT service providers and systems integrators have a similar need to build or lease datacenter space that is relatively close to end users for latency reasons yet is reliable and reasonably priced.

Business Impact

LATENCY AND CONNECTIVITY. As organizations evolve and digitize, they will need to evaluate where to run applications, store primary data and back up that data. For security and cost reasons, firms may want to consider leasing or buying datacenter space to store data used by applications in the cloud. In addition to potentially saving money and providing more control over the data's location, this may allow the data to be used more easily by multiple applications (e.g., in multiple clouds) and improve application portability (from one cloud to another). When evaluating datacenter space for this use, latency and cloud connectivity will be key criteria.

GEOGRAPHIC DIVERSITY. There are still plenty of enterprises that have backup sites quite close to their primary sites. This can be helpful when IT staff want to access the backup site relatively quickly/easily, for example if the backup site also houses some primary workloads. However, it can increase the risk of an outage following a disaster that affects a wider geographic area, for example Hurricanes Dorian or Sandy on the East coast, the wildfires in Australia and Northern California, or an earthquake. Companies should consider leasing datacenter space that offers greater geographic diversity. There is a growing amount of high-quality, reasonably priced space that is within latency requirements yet completely isolated from local electrical grid failures and at a lower geographic risk profile for disaster.

PROXIMITY TO STAFF. IT service providers and systems integrators cannot afford downtime. A backup/DR strategy is essential, ideally one that enables rapid replication at a reasonable cost. One often overlooked consideration is proximity to staff. Can your critical IT staff commute to the failover site easily? Is it within driving distance, or is a flight required? Many natural disasters also impact air travel, so that may be a critical consideration. Service providers will increasingly look at datacenter location and network latency characteristics, as well as cost and quality, when determining where to deploy.

Looking Ahead

Enterprises are slowly getting out of the datacenter business, but not all workloads are suitable for the cloud. There will be several years ahead where firms are evaluating where to store data, particularly data that would be expensive or unwieldy to store in public cloud or that needs to be accessed by multiple clouds. Governance is also a key issue: Not all public cloud providers are appropriate for storing sensitive/controlled data. Security, cost and latency are likely to be key criteria in these evaluations. For backup/disaster recovery, companies will also increasingly try to guard against disasters impacting a wider region, particularly as there are a growing number of high-quality leased datacenter options that are accessible yet geographically diverse and relatively inexpensive. As referenced above, not all workloads (and budgets) support public cloud. Leasing colo is a good private cloud solution for those cases where public is simply not appropriate. Increasingly, enterprises are looking to exit their high overhead facilities, but they still have a need for datacenter infrastructure.



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