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The Future of Enterprise Data and Analytics Is Hybrid

The 451 Take

Cloud computing has had an enormous impact on the data processing landscape in the last decade. While the vast majority of data platforms have traditionally been deployed on physical server infrastructure in on-premises datacenters, data platform deployments have gradually shifted away from traditional on-premises architecture as enterprises look to take advantage of cloud to lower infrastructure complexity and enhance business agility.

Not all data processing and analytic workloads are moving to the cloud, however. Data from 451 Research's Voice of the Enterprise: Data & Analytics, Data Platforms survey indicates that rather than moving wholesale to the cloud, data processing workloads are increasingly spread across multiple locations. Two years from now, we expect to see on-premises non-cloud infrastructure used by 37% of respondents; on-premises private cloud by 39%; hosted private cloud by 38%; IaaS/public cloud by 38%; PaaS by 27%; and SaaS by 36%.

There are multiple reasons for maintaining data processing workloads on-premises, including data and system security, data locality/sovereignty, performance, compliance, and the desire to leverage existing investments in on-premises infrastructure. Key benefits of a hybrid IT strategy include the ability to migrate workloads as needed to different environments in order to optimize cost, boost speed and performance, and improve security.

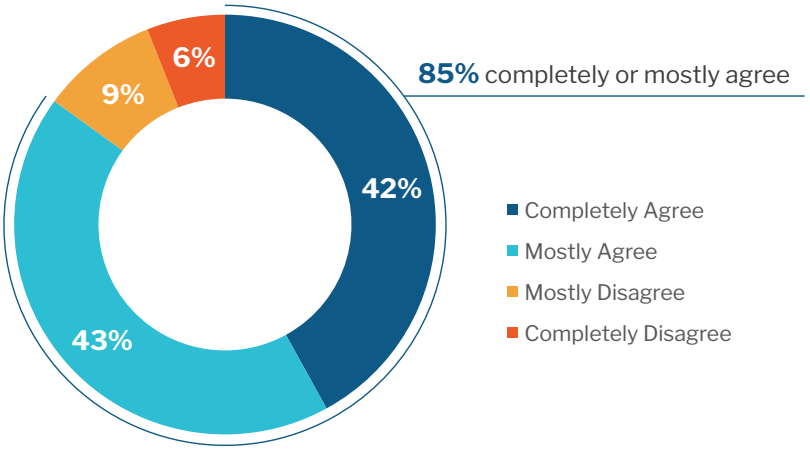
For most organizations, the future is hybrid. Additionally, while many enterprises initially stumbled into the adoption of hybrid IT thanks to M&A and shadow IT projects driving the use of multiple cloud providers in addition to existing on-premises datacenter investments, hybrid IT is increasingly a deliberate strategic choice.

More than a third of enterprises today are already deliberately executing a hybrid IT strategy, according to 451 Research's Voice of the Enterprise: Cloud, Hosting & Managed Services, Vendor Evaluations survey, while a further 42% are developing or considering a strategic approach to hybrid IT. As such there is increasing demand from enterprises for data platforms that are able to support a hybrid IT strategy: 85% of respondents to the Voice of the Enterprise: Data & Analytics, Data Platforms survey agreed that the ability to run the same database in multiple cloud/datacenter environments is an important consideration when selecting a new data platform.

Importance of Support for Multiple Cloud/Datacenter Environments

Source: 451 Research's Voice of the Enterprise: Data & Analytics, Data Platforms 1H20

Q. To what extent do you agree or disagree with the following statement? -The ability to run the same database in multiple cloud/datacenter environments is an important consideration for my organization when selecting a new data platform. Base: All respondents (n=428)



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Business Impact

HYBRID IS A STRATEGIC CHOICE – An increasing proportion of enterprises are adopting hybrid architecture as a strategic approach to optimize the use of multiple providers – enabling the potential for migration between on-premises and public cloud environments, as well as interoperability between applications running in separate environments via consistent standards and interfaces.

HYBRID IS A PRACTICAL DECISION – Hybrid data processing recognizes the need for some workloads to remain on-premises for data security, sovereignty and performance reasons, while enterprises are also looking to maximize the value from existing investments. More than a third (35%) of respondents to the Voice of the Enterprise: Data & Analytics, Data Platforms 1H20 survey stated that existing data platforms will remain on premises, while a third said new data platform workloads are being deployed on-premises.

HYBRID SUPPORT IS INCREASINGLY SIGNIFICANT – While traditional factors such as reliability, security, performance, cost and scalability remain the most important selection criteria for data processing products, enterprises are increasingly factoring support for hybrid architecture into their data processing product and vendor selection criteria.

CONSISTENT EXPERIENCE IS KEY – In order to maximize the potential benefits of a hybrid IT strategy, enterprises require data processing platforms that provide a consistent experience that facilitates the interoperability between those environments and enables enterprises to make decisions related to workload placement based on cost, performance, security and regulatory requirements.

A SINGLE VIEW OF DATA – In addition to a consistent experience for managing data in multiple locations, enterprises are increasingly looking for products that provide an inventory of, and access to, data wherever it resides, enabling the management of data across multiple environments and accelerated business decision-making.

Looking Ahead

As a greater volume of data is generated and stored in the cloud, the importance of hybrid data processing will only increase. There are economic and performance advantages to moving some data workloads to public cloud. However, it is clear that a significant proportion of workloads will remain on-premises, also for economic and performance reasons, as well as security and regulatory compliance.

Retaining workloads on-premises does not necessarily mean retaining the use of traditional physical server infrastructure. The use of cloud-native architecture helps to support the potential portability advantages of a hybrid IT strategy, while also respecting the data location and security requirements that will keep some workloads – both existing and new – on-premises.

Data from 451 Research indicates that a quarter of enterprises are re-architecting existing on-premises workloads to take advantage of on-premises cloud-native infrastructure, while 20% of enterprise are developing new workloads with cloud-native infrastructure and deploying them on-premises. Whether involving traditional server or cloud-native infrastructure – or a combination of the two – hybrid IT strategies require data processing platforms that are designed to not only support deployment on both private and public cloud, but also provide consistent experience and functionality that enables the management of data across multiple locations.