PUBLIC CLOUD USES AND LIMITATIONS

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The cloud is an attractive option for applications like database instances. However, there are also many reasons to keep systems on-premises for the time being. Migrating to the cloud is not always a straightforward process. So, it can be time-consuming. As a result, many organizations end up with a hybrid environment. With hybrid clouds, some systems are in the cloud, while others remain on-premises. The biggest problem with this architecture is managing it. Many tools can only focus on the cloud or on-premises infrastructure. Tools that work in the hybrid cloud can thus save users time and money.

TRENDS

Cloud usage was booming at the start of 2020. Adoption of the cloud further increased because of the COVID-19 pandemic that made remote work more desirable. Greater requirements for data governance and regulatory compliance also drove hybrid deployments in 2021 and are becoming the norm. Cloud migrations are now common. Many enterprises are still reluctant to move their core databases because of the significant challenges in this process. The data and operations tools available for hybrid clouds have improved over the past year. This decreases the expertise needed to manage such an environment. This trend should continue in 2022, making hybrid clouds the default operating environment for enterprises.

BENEFITS

Many organizations start their journey to the cloud with the lift and shift approach. This moves workloads with little or no change to their underlying code. This method is the fastest path to the cloud. It involves virtualizing on-premises infrastructure instead of designing an architecture for the cloud. This tendency is changing as more enterprises seek the advantages of cloud-ready applications, such as elasticity and scalability.

LIMITATIONS

More workloads are moving to the cloud. But not all of them are suitable for this environment despite the rapid evolution of the cloud. Many organizations have messy infrastructures with thousands of applications. This results in some running in the cloud and others running in their own data centers. While more of these applications will move to the cloud, others may never do so. Common reasons to keep applications on-premises include latency and compliance requirements. Sometimes, a public cloud is more expensive for enterprises to operate than their own infrastructure.

LATENCY

Some workflows have a high volume of messages they must transmit with minimum delay, such as those in financial transactions and manufacturing. All networks have some latency that becomes worse with distance. Applications that need to process data in real time are therefore poor candidates for migration to the cloud.

REGULATORY COMPLIANCE

Laws on data privacy and protection, like the European General Data Protection Regulation (GDPR), are becoming common. These regulations place limitations on the processing and storage of data, including its physical location. Some regulations require certifications that are not available for public clouds. As a result, processes that use this data may not run on the cloud. A hybrid cloud can use on-premises infrastructure to leverage cloud-first principles while still maintaining regulatory compliance.

COST

A 2020 Forrester study reports that labor costs may account for most of the cost of migrating to the cloud. Writing applications from scratch to run on the cloud is easy. It is a different matter for legacy applications that have been running on a data center for years. Migrating these applications to the cloud requires substantial modification before they can realize the benefits of the cloud.
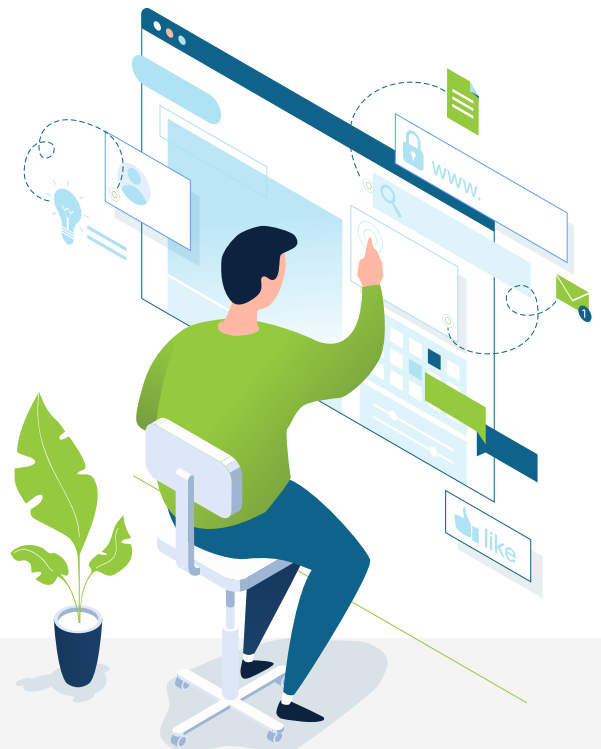
SUMMARY

The latest cloud solutions are taking aim at other approaches, such as physical servers and hyper-converged infrastructure. It will take years for the cloud to affect the established market for on-premises infrastructure, which is dominated by companies such as Cisco, Dell, and HPE.

Solid integration with virtualized infrastructure is the most likely means by which this process will occur. This approach could comprise an on-premises as-a-service solution engineered with a software-defined data center application running on a dedicated bare-bones server. A cloud solution could then provision database instances on this server. This provides an integrated hybrid cloud with a unified control plane. This environment would then have access to a cloud platform and its cloud-native services.

HOW IDERA CAN HELP

If you are not managing your databases in the cloud, then it is just a matter of time before lightning strikes. Proper database management across the environment involves multiple aspects and tasks, and produces critical benefits:

- Manage the inventory, security, configuration, disaster recovery, performance, migration, data, and data models of your databases.

- Handle databases on physical machines, virtual machines, and cloud-hosted virtual machines, as well as managed cloud databases.

- Save on software purchases, reduce the learning curve, reduce deployment time, and maximize the return on investment.

- Optimize your databases across your entire environment to ensure that you achieve goals and control costs.

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