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ONE COMPLETE MARKETING PROGRAM

Managing the HYBRID and MULTICLOUD FUTURE

database
TRENDS AND APPLICATIONS

Best Practices Series

The GRAVITATIONAL PULL of the CLOUD

Best Practices Series

Is the movement of data to the cloud as inevitable as the force of gravity? It appears that way. With data—especially unstructured data—overwhelming the capacity of many on-premise systems, cloud is becoming its natural landing place. And as turbulence—brought on by the headwinds of digital disruption and a global pandemic—continues to stir the business atmosphere, cloud is increasingly seen as the safest and most secure place to maintain data.

Moreover, cloud adoption is accelerating for additional reasons, ranging from the desire to reduce infrastructure costs to the need for greater systems agility. The heterogeneous nature of data requires the selection of technologies that are best-suited to enable its many use cases, and this is spurring hybrid cloud strategies in which data and systems are located both in the cloud and on-premise, as well as multi-cloud approaches in which data and systems are managed by more than one cloud provider. As a result, cloud computing in its many forms continues to proliferate across organizations.

THE RISE OF MULTI- AND HYBRID CLOUD

A recent survey of database managers found that they are moving to multi-cloud scenarios or to the hybrid cloud in a big way. While most enterprises still maintain their databases within on-premise systems, many have also moved functionality to the cloud or third-party providers as well, the survey showed ("Thriving in a Multi-Database World: PASS 2020 Survey on Data Diversity," Unisphere Research, a division of Information Today, Inc.).

There are also strong indications that hybrid cloud implementations within these environments are gaining ground, according to the Unisphere survey. Roughly eight in 10 systems are on-premise, while 41% are now in the cloud. About 25% of respondents are running their data environments in both cloud and on-premise environments.

WHAT END USERS NEED

Ultimately, of course, end users only seek faster, easier, more wide-ranging data access, and they have no preference as to whether back-end data stores and applications are in the cloud or on-site data centers. Speed and flexibility are critical for improving decision making and optimizing operations. At the same time, data environments continue to grow in size and complexity—traversing relational and non-relational stores, transactional and analytical systems, and multiple locations. The challenges of managing, governing, securing, and integrating data are growing.

The decision about whether to move data to the cloud or keep it on-premise depends on many factors. For example, how well is the flow of data to the cloud governed? Are there parts of the enterprise where the flow is unchecked and not subject to enterprise guidelines? In some cases, such as when subscribing to an infrastructure-as-a-service platform, the organization has some control over the management of its databases. In others, in which SaaS applications are employed, back-end database choices and management may be controlled by the cloud vendor.

And then there are internal organizational dynamics that shape cloud consumption and will likely lead to multi-cloud scenarios. In many cases, end users or their departments may move to the cloud under the radar of IT departments. This is especially the case in some areas of enterprises—such as marketing, customer service, and HR—which are being aggressively targeted by application vendors.

ADVANTAGES AND RISKS

There are even situations in which cloud adoption may not be the best option at a given time. In these scenarios, a hybrid approach in which data is moved gradually into cloud settings may be adopted.

In arriving at the decision on where to store, process, and manage data, managers need to look at their environments holistically to assess the risks of either approach. Companies have data governance rules, and there may be industry practices or government mandates that affect where and how data is stored. Datasets with low risks associated with them may be better candidates for the cloud. Financial data, conversely, carries higher risk if compromised and therefore may be destined to remain with on-premise storage.

DELIVERING THE SERVICE

Every organization has differing needs and, therefore, differing requirements for cloud arrangements. Some parts of the business may have real-time requirements, which stem from stepping up the pace of transactions or building AI into processes. Cloud vendors offer the capabilities and processing power, but network latency could be an issue that necessitates on-premise delivery. Business residency also is a critical factor.

Some may seek to turn over as much data management as possible to providers, while others need to maintain on-site capabilities and systems, supplemented by cloud providers. The key is to build and sustain cloud architectures that deliver services to the business as rapidly and as powerfully as possible. ■

—Joe McKendrick

Streamline Hybrid and Multi-cloud

Strategies with the Intelligent Data Hub

INTRODUCTION

Cloud computing technologies came to the forefront over the past decade as they offer many advantages for businesses. Some of the biggest benefits include the ability to design a tailor-made strategy where users can scale services according to their needs, to customize applications, and to access from anywhere with an internet connection. Cloud services also offer ideal support for working in a collaborative mode, improving the digital workers' efficiency. Needless to say, organizations that have placed cloud services' adoption at the core of their innovation strategy were the most resilient in these times of crisis and uncertainties.

However, even though the benefits of cloud computing are widely recognized in the industry, it also brings new issues for IT departments. With the variety of cloud-based solutions, information systems face significant challenges related to the coexistence of cloud-based technologies and services in the same environment, commonly referred to as multi-cloud.

THE INTELLIGENT DATA HUB VISION

Natively available on most popular cloud marketplaces, such as Microsoft Azure, Amazon Web Services (AWS), and soon on Google Cloud Platform (GCP), alongside on-premises, single-tenant SaaS, and private cloud options, Semarchy xDM empowers organizations to create an Intelligent Data Hub, which is the go-to place for the core data within an enterprise. It centralizes the enterprise's data that is critical across applications, and it enables seamless data sharing between diverse endpoints, while being the main source of trusted data for the data governance initiative.

The comprehensive data management solution that xDM delivers on-premises and in the cloud includes data quality, cleansing, de-duplication, and curation capabilities. Along with consolidating trusted golden records, xDM helps organizations enforce data governance requirements and track changes over time (data lineage).

The Intelligent Data Hub not only provides master data to all enterprise applications and processes but it connects business applications to analytics structures such as data warehouses and data lakes. This way, operational analytics, predictive analytics, and traditional analytics share the same master data, reference data, business glossary, and data catalogs to transform customer interactions and product definitions into measurable business value.

HYBRID AND MULTI-CLOUD READY!

Semarchy xDM can be deployed on any cloud platform using the same code base and license which makes it a very cloud-friendly platform, giving users the flexibility to work with multiple cloud providers, avoiding being stuck with a private cloud lock-in or a closed ecosystem.

The xDM cloud architecture uses the same concepts and code base as the on-premises product. Application servers are clustered with high availability and the database stores rely on the cloud vendor's optimized solutions (for example, Amazon RDS for Aurora, PostgreSQL, Microsoft SQL Server or Oracle). Users can easily connect any kind of middleware or application with our REST and SQL APIs within a hybrid or multi-cloud environment.

The platform is designed, tested, and certified for clustering, load balancing, enterprise security, fault-tolerance, and high-availability configurations, both on-premises and in the cloud.

Semarchy xDM deployments are horizontally scalable by increasing the number of application server nodes in the cluster.

The database layer is scalable by increasing the number of CPUs and RAM (on-premises) or by extending the type of hardware cluster when running in the cloud.

Dedicated Amazon Web Services (EC2/RDS) and Azure marketplace setup are available with a BYOL (Bring Your Own License) model. Semarchy xDM is the most popular MDM and RDM solution on the AWS Marketplace.

Clients such as Bose, BP, Broadridge, Chipotle, Elsevier, FORTUM, Maxar, Merieux, NSC, Oxford University Press, Sanofi, Thames Valley Housing, VIP, Volvo, or WestJet run xDM on the cloud.

100% of our cloud-based subscription clients renew their solutions via flexible annual or three-year agreements.

Finally, Semarchy xDM is also available as a service (SaaS) through a selection of partners.

30-DAY TRIAL

Ready to streamline your hybrid and multi-cloud environment with the Intelligent Data Hub™?

https://www.semarchy.com/download/

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For more information: https://www.semarchy.com/ ■