

The increasing importance of multicloud strategies for enterprises

Why multicloud provides a “best of all worlds” approach to cloud architectures

Publication Date: 14 Dec 2022

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Summary

Catalyst

Organizations do not want to replace existing on-premises data centers and move to a single cloud that may not serve the complexities of workloads. Organizations have made these choices already as they typically operate mission critical workloads like ERP and customer facing applications as two distinct choices, the software and business logic, and the underlying database. Currently, organizations moving mission critical workloads to the cloud are forced to accept the compromise of running these operations in a single cloud. However, Omdia considers organizations need to create a coherent cloud strategy and make smart cloud choices to fulfill evolving business needs. Such as using multiple clouds and selecting the best cloud for the desired workload thereby delivering the most effective approach for the business. In a recent public endorsement (December 2022) of adopting a multicloud strategic approach the U.S. Pentagon announced a \$9B cloud contract. The contract was awarded to Amazon, Microsoft, Oracle, and Google, which is a clear statement of intent to enable the Pentagon to select the most appropriate cloud service for the specific use case.

Omdia view

Some customers select a single dominant public cloud provider and extend that to an on-premises deployment (hybrid cloud). This approach provides them with a flexible solution that meets the needs of balancing off-premises and on-premises resources yet combining them to become one effective shared pool of resources. However, this approach still suffers from the same limitations of choice that organizations experienced in the pre-cloud era; namely, they were locked into a single vendor's solution set. By contrast, the multicloud evolution is analogous to the 'open source' or 'open standards' approach; effectively providing freedom for customers to select the best environment for a particular workload. Enterprises see different clouds as having different strengths and weaknesses and want to develop applications that can operate on any cloud but can also exploit any advantage one cloud has over another. Omdia's 2022 cloud survey found 71% of respondents rated improved performance, a result consistent with our previous two surveys of enterprises using cloud services. Clearly, enterprises expect cloud service providers (CSPs) to provide better performance than in-house infrastructure. Another key finding in this year's survey was respondents perceive the cloud as more secure than their on-premises IT, with 70% of respondents saying it was a strong driver for cloud adoption. Last year, security ranked fairly low following a number of highly publicized security breaches. Clearly, CSPs did a good job over the course of 2021 in improving customer confidence in their security measures. Finally, reducing IT costs came in third in Omdia's drivers list, with 65% of respondents putting it as a strong driver, a result aligned with what we saw last year. Enterprises believe most of the cost savings CSPs achieve through scale will be passed back to them. The nirvana of cloud is true multicloud where there is no lock-in to any one vendor, or CSP, and we appear to be close to achieving it with the prevalence of multicloud deployments and multi-CSP partnerships

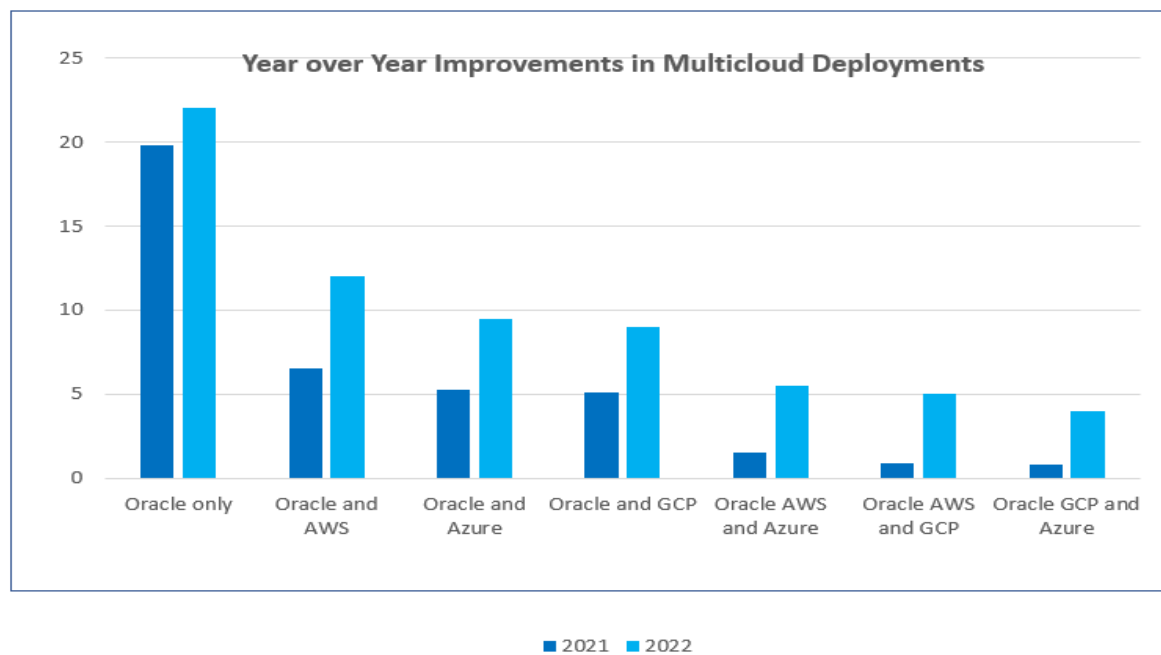
Key messages

- Multicloud has evolved accidentally and to deliver business value CIOs should make strategic choices based on the specific strengths of cloud provider offerings.
- Enabling the strategic multicloud approach requires cloud partnerships to evolve and cloud providers to consider the needs of its customers ahead of its own priorities.

The majority of mission critical workloads have not migrated to the cloud yet

The concept of multicloud has long held an appeal for organizations with the promise of free and frictionless movement of workloads between clouds. Organizations report on average they use between 2 and 3 different clouds as part of a multicloud strategy, but the relative proportion of workloads is still dominated by one cloud, with the second and third clouds only accounting for single digit percentage use. Applications like customer relationship management (CRM), email, and video collaboration, are the most cloudified, with respondents to Omdia's global IT Enterprise Insights survey and its annual cloud survey indicating they prefer to consume them as SaaS. Respondents also indicated that applications that require optimized equipment or a complex set of software libraries, such as AI, are well suited to the cloud. However, enterprises were understandably cautious with business- or mission-critical workloads like IT Management solutions and commercially licensed databases. These workloads run primarily in legacy environments on-premises today with IT Management solutions and databases being the top 2 on-premises environments, which were 144% and 132% above the average on-premises use of all workloads according to Omdia's IT Enterprise Insights survey 2022 (n=4966). **Figure 1** shows the strategic use of Oracle cloud Infrastructure (OCI), where on its own 22% of respondents to Omdia's IoT, Cloud, and 5G – IT Enterprise Insights 2022 survey said they use Oracle cloud strategically, but when we analyzed the strategic use of multicloud (Oracle and any one of the other cloud providers) the figure dropped to between 9% and 12%, and when we looked at Oracle plus two other leading cloud providers the figure dropped again to approximately 5%.

Figure 1: Strategic use of OCI



Source Omdia

The adoption of multicloud capabilities is dramatic in 2022, the chart above demonstrates that today, multicloud has shown signs of moving to be a strategic choice by CIOs. **Figure 1** shows the change in multicloud use. Oracle only cloud use increased by a couple of percentage points from 20% in 2021 to 22% of respondents in 2022. However, the use of Oracle and a second cloud provider shows high single digit percentage increase from 2021 to 2022. Omdia believes there are several factors driving this rise in multicloud use.

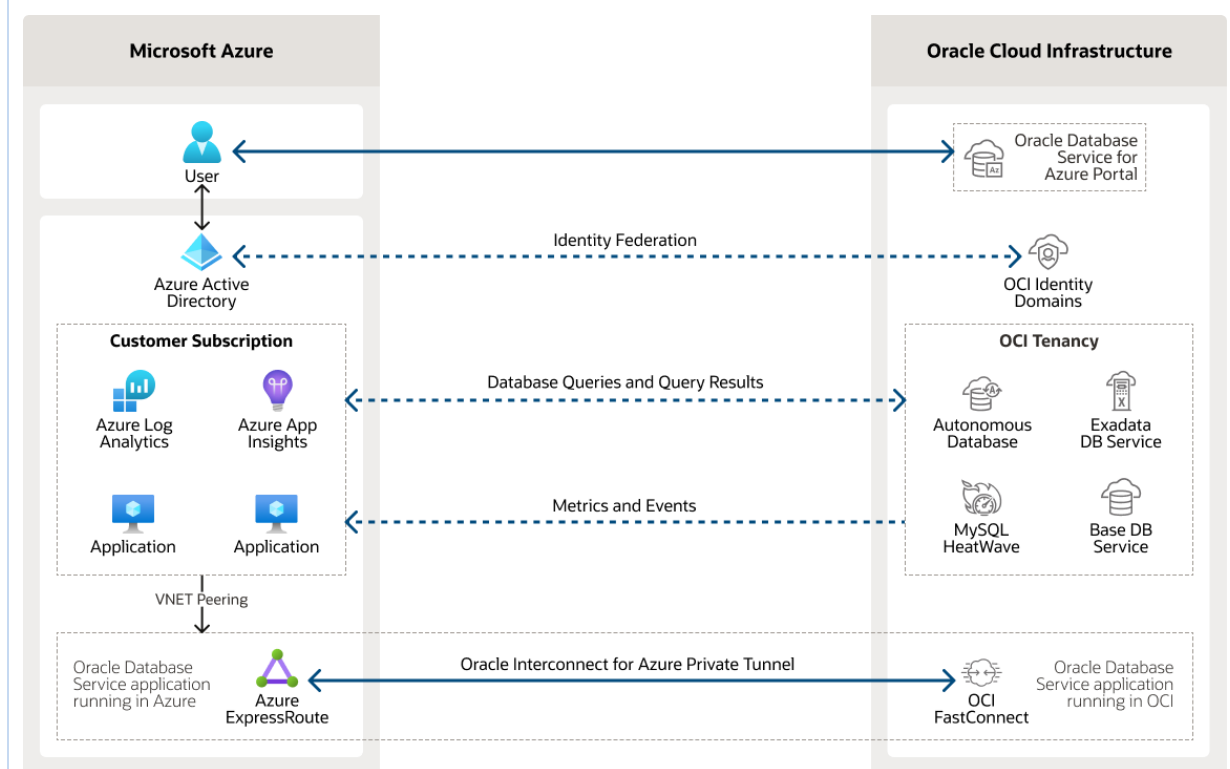
- Firstly, regulators are treating cloud providers as a single point of failure, and therefore expecting organizations to have At least two cloud providers, or some remediation in terms of a multicloud strategy.
- Secondly, the frustrating lack of standards to enable frictionless movement of workloads appears to be one reason organizations are adopting Kubernetes and the cloud-native ecosystem. This rise in adoption has seen the construction of applications that can be portable across clouds.
- Finally, some of the cloud vendors have recognized that the remaining obstacle to frictionless workloads portability remains the data associated with the workload. Cloud providers like Oracle and Microsoft has made some significant announcements relating to this that is covered in the section below.

Multicloud appeals to enterprises as it enables greater agility and improved efficiency

Omdia’s IT Enterprise Insights survey 2021/22 indicates that as cloud strategies mature, organizations are moving more of their mission critical core systems, including ERP, customer facing

applications and databases to the cloud. The ‘elephant in the room’ is that many customers use Oracle for its reliable database services and Microsoft or AWS for its business applications and analytics services. This implies customers often face a compromise by selecting one cloud provider to perform both activities when they move these core workloads to the cloud. Omdia considers two recent announcements in the space speak to the value customers can obtain from operating a true multicloud strategy.

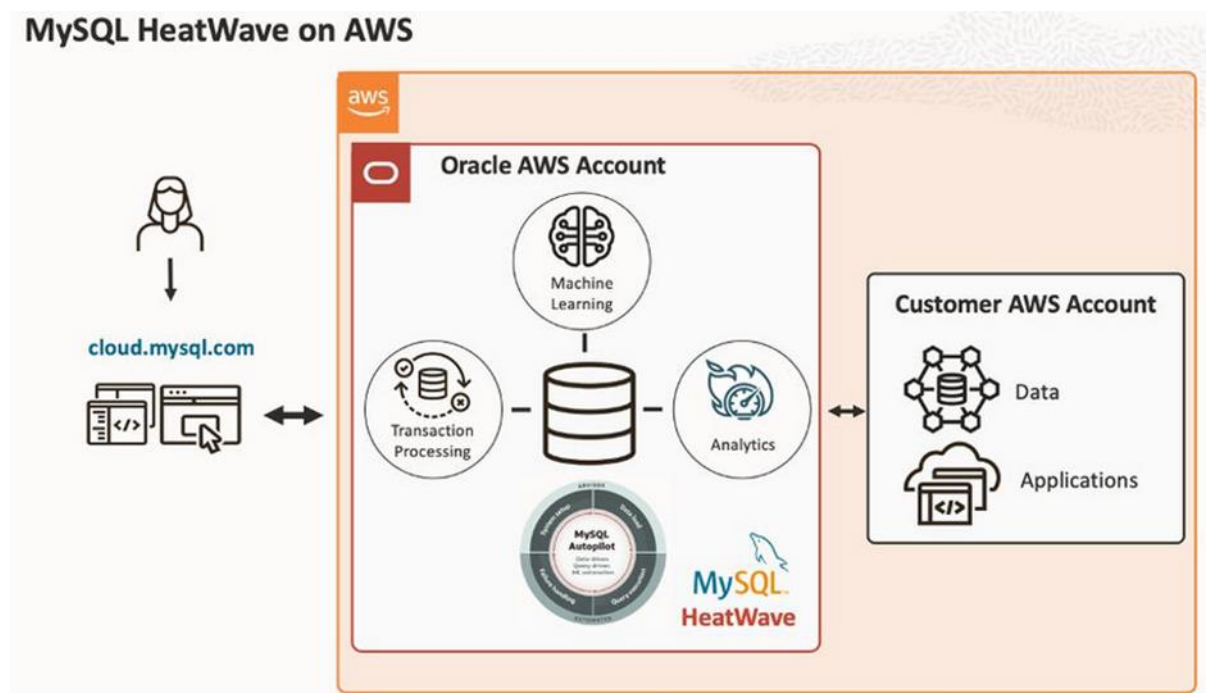
Figure 2: Multicloud strategy using Oracle Cloud and Microsoft Azure Interconnect



Source Oracle

The Oracle-Microsoft announcement, see **Figure 2**, is designed specifically to address the issue of applications and databases being hosted in different clouds. By providing a low latency (sub 2ms) Oracle Database service for Azure customers with Microsoft Power BI and Synapse or other application running on Azure, can access Oracle databases on Oracle Cloud Infrastructure (OCI). This means the customer can also benefit from the wider eco-system of services available on Azure such as Artificial Intelligence (AI), Internet of Things (IoT), and cloud-native development offerings such as Azure Kubernetes Services and Azure Functions to augment core applications while using OCI and the Oracle database services such as Autonomous database to deliver more efficiency. This is delivered so customers can create a seamless deployment for these scenarios using a direct private connection between OCI and Azure in 12 Azure and OCI regions.

Figure 3: MySQL HeatWave



Source Oracle

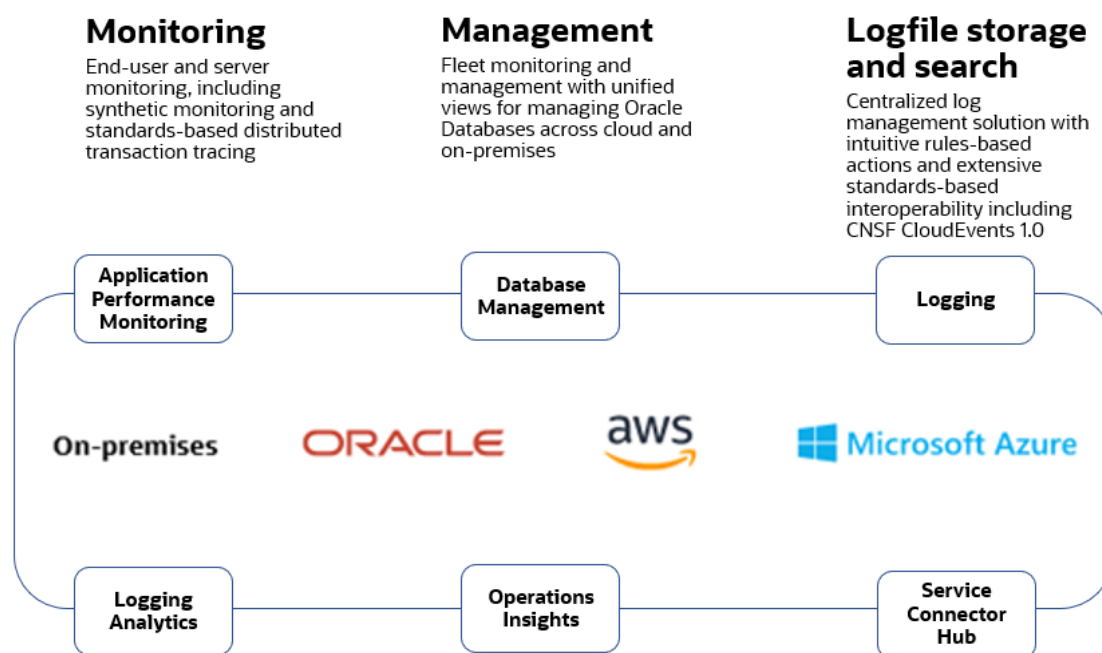
Oracle also announced on 12th September 2022 that MySQL HeatWave is available on Amazon Web Services (AWS). Customers can take advantage of the MySQL HeatWave service on AWS, see **Figure 3**, which combines OLTP, analytics, machine learning, and machine learning-based automation within a single MySQL database. This new partnership now enables AWS users to run transaction processing, analytics, and machine learning workloads in one service. Previously customers would need to perform extract, transform, and load (ETL) activities between the different databases such as Amazon Aurora for transaction processing, Amazon Redshift or Snowflake on AWS for analytics, and Amazon SageMaker for machine learning.

Oracle Cloud Observability and Management Platform

Observability continues to be a challenge in modern IT environments, as different clouds are used for different workloads, making monitoring and manageability very challenging. Further, traditional siloed tools make IT staff tasks more complex when troubleshooting problems or correlating log data, especially when applied across multicloud environments.

To help the industry with these challenges, Oracle offers a complete solution called Oracle Cloud Observability and Management Platform for deep visibility and machine learning driven insights across the entire stack deployed. The platform improves manageability in multicloud environments and reduces operational complexity and risk.

Oracle Cloud Observability and Management Platform



A mini case study demonstrates the potential of multicloud strategy.

Veritas Technologies is known for its data management and protection offerings, such as backup and recovery. However, supporting its customers to ensure their data is protected and the service is delivered effectively requires over 2 petabytes of data in its core analytics platform to be managed. The company supports more than 80,000 customers and it must operate across multiple clouds and cannot experience any delays with complex data transformation pipelines that feed the core analytics platform. This analytics platform provides Veritas management with insights that help them making key operational decisions.

The answer requires two clouds

Veritas Technologies needed to get insights from its platform in real-time so it could make more timely decisions. Because much of data used was structured data stored in Oracle databases Veritas took advantage of the Oracle Database Service for Microsoft Azure. Veritas could ingest large volumes of data into the Oracle Exadata Database Service on OCI and then connect to Microsoft Azure Data Factory where it ran the analysis using Azure Synapse. Veritas reported this approach delivered 20x performance improvement that allowed them to deliver real-time analysis directly from the data source

Closing Thoughts

The clear benefits of adopting a multicloud strategy are the ability to select the cloud providers to be used based on the strength of their services, and to use a mixture of these services to deliver the

price/performance business demand from IT. Omdia's research clearly indicates that organizations are adopting multicloud, which was driven by the application portability of cloud-native workloads developed on Kubernetes. However, as technologies such as Kubernetes have delivered the ability to move applications across clouds, the data, and in particular the cloud providers data egress charges, remained an issue that was making data portability the restraining force to adopting a multicloud strategy. However, Omdia has seen a number of CSPs fully embrace this new hybrid multicloud world by putting the needs of their customers ahead of their own priorities, and these CSPs are ones that will emerge as the trusted partners customers turn to.

[Learn more about Oracle Multicloud solution](#)

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