

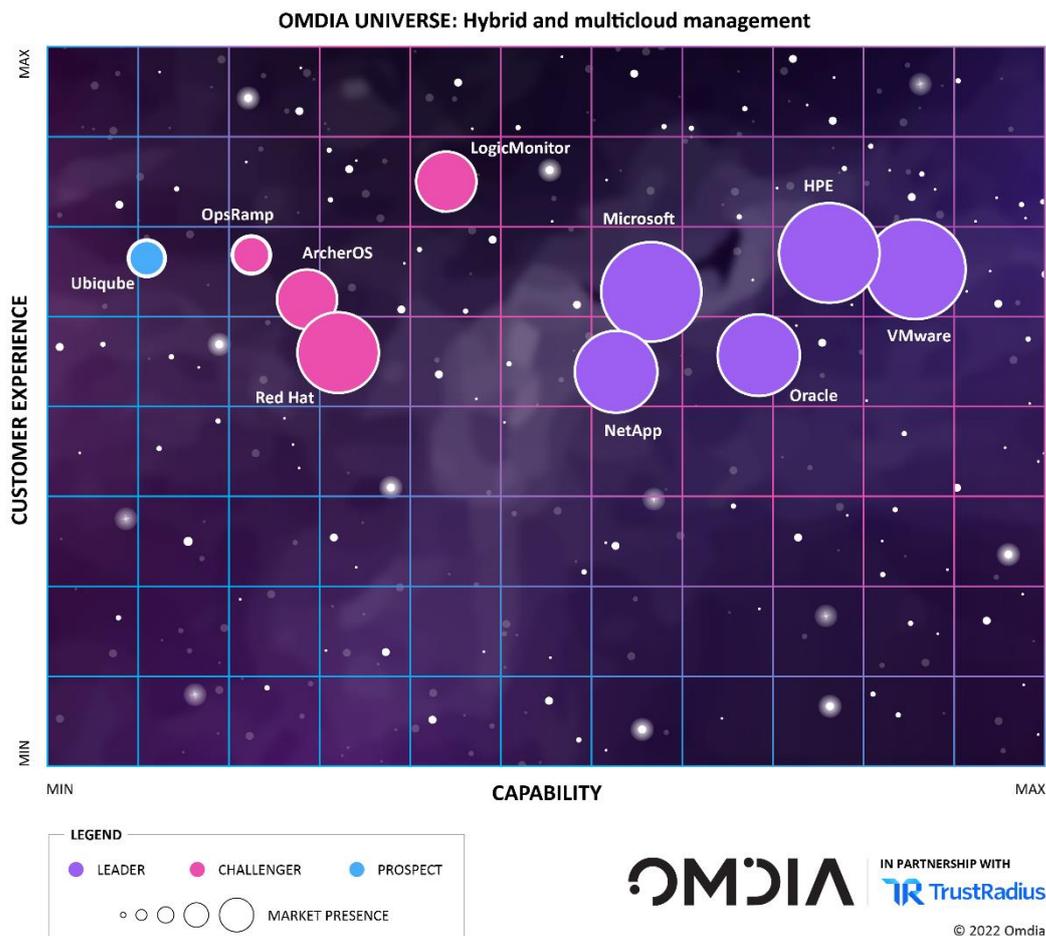
Omdia Universe: Hybrid and Multicloud Management Solution, 2022–23

Summary

Catalyst

IT’s role and purpose in organizations are undergoing significant change, driven by sthe need for businesses to become more agile. This report provides a side-by-side comparison and evaluation of leading hybrid and multicloud management solutions, with the findings delivered as the Omdia Universe (see **Figure 1**). It considers the significance of management in a hybrid and multicloud world to support the business requirement for agility.

Figure 1: The Omdia Universe for hybrid and multicloud management



Source: Omdia

Omdia view

The adoption of any new technology is disruptive, and fully embracing it for operational management takes time. Typically, with new technologies, the wider ecosystem of vendors offering a comprehensive set of solutions and tools tends to lag the technology adoption itself. However, this lag means organizations gain experience with the technology and identify changes to processes or new processes needed to operate the technology. This lag also allows organizations to acquire the skills and adopt and modify processes to ensure they are prepared for any transition to new ways of working that the technology will introduce.

The shift to cloud is challenging CIOs as the roles and responsibilities of IT operations move from being custodians of infrastructure and IT resources towards sharing this responsibility with application developers and cloud service providers (CSPs). The DevOps movement was seen as the approach for IT departments to transition to this new shared responsibility model of operational management. However, the way organizations adopted DevOps did little to break down the silos that IT departments have constructed. In fact, DevOps was implemented as a bridging toolset to connect developers and operational teams, and few organizations made the structural changes necessary to become truly a DevOps culture.

Omdia believes that in 2022, more CIOs will recognize the need for structural changes to the IT department, particularly as the need to manage hybrid and multicloud environments grows. We expect these changes to be based on the ethos of DevOps, CloudOps, FinOps, and site reliability engineering (SRE) principles.

Key messages

- VMware maintains its leadership position, but the gap between the vendor and the rest of the market is narrowing as competitors evolve their solutions.
- HPE is second overall and delivered the most consistent performance, with the lowest variation of 23% between the maximum and minimum subcategory scores.
- Oracle is third overall, just ahead of Microsoft and NetApp (which is appearing for the first time in this report).
- The challengers were closely grouped, with LogicMonitor marginally ahead of Red Hat, ArcherOS, and OpsRamp (with the latter two appearing in this report for the first time).
- There was only one prospect, Ubiqube. Its performance was more variable than the others but had some significant strong points to offset the lack of capability in some areas.

Analyzing the hybrid and multicloud management universe

How to use this report

Omdia is a proud advocate of the business benefits derived through technology, and hybrid and multicloud management is at the forefront of realizing benefits to marketers across the globe. The Omdia Universe report is not intended to advocate an individual vendor but rather to guide and inform the selection process to ensure all relevant options are considered and evaluated efficiently. By using in-depth reviews on TrustRadius to derive insights about the customer experience, together with the analyst's knowledge of the market, the report findings gravitate toward the customer's perspective and likely requirements, characteristically those of a medium-large multinational enterprise (5,000-plus employees). Typically, deployments are considered across the financial services; technology, media, and telecoms (TMT); and government sectors on a global basis.

Market definition

In this report, Omdia developed a series of features and functionality to reveal differentiation between the leading solutions in the marketplace. The criteria for hybrid and multicloud management are as follows:

- **Observability and monitoring:** This criterion evaluates a solution's ability to monitor resource usage and its impact on performance. In the 2020–21 report, monitoring is extended beyond performance monitoring to include mobile, services, and container technologies.
- **Hybrid cloud management (on-premises cloud):** This includes the ability to manage all aspects of the infrastructure delivery chain from server, network, storage, and endpoint to I/O.
- **Public cloud management:** This considers how well the solution integrates with other cloud solutions, allowing visibility into resource usage and control and management of those environments.
- **Financial management and service modeling:** One of the biggest challenges for any CIO is being able to predict resource needs by type and delivery method. This section looks at how well the solutions allow for modeling and support "what-if" analysis. An increasingly important, if

underrepresented, capability is managing the cost and financial aspects of delivering services to line-of-business customers.

- **Operational management (scale, delivery, provisioning):** This examines the ability to manage at scale across different geographies and technologies.
- **Security management (DevSecOps):** The rise of DevSecOps has changed how the IT operations function thinks about the management of applications. This criterion focuses on how well the solutions support security and lifecycle management and align with any DevSecOps approach.
- **Data management:** The ability to secure and protect data should be implicit in any solution. Although these solutions are primarily seen as backup and recovery solutions, they must be able to perform basic data protection and support security integrations.
- **Patch management and automation:** The need to automate as many operational activities as possible aligns with the CIO's need to reduce costs. This criterion examines how the solutions enable different levels of automation.
- **Reporting and integration:** This capability allows the production of more than the standard weekly resource usage report. This criterion evaluates the solution's ease of integration with other data sources and how user friendly its reporting capabilities are.
- **Marketplace and application management:** This evaluates the ability to operate and manage the applications and services that customers can select and deploy to the cloud from a marketplace.
- **Environmental sustainability management:** This is a new topic in this year's report but one that is gaining significant interest. The need to at least monitor, if not manage, these aspects is now an important part of the future management strategy.

Market dynamics

Changes from the previous report

VMware and Oracle retained their leadership positions from the previous report, and Microsoft moved from a challenger to a leader classification. DXC and Micro Focus changed their strategy and did not participate in this report. Red Hat retained its challenger position, and with the IBM acquisition of Red Hat, IBM decided not to participate in this report. Broadcom acquired CA Technologies, which was not included due to a change in focus. Cisco and Platform9 were unable to meet the project timescales. NetApp, which acquired Cloudcheckr, developed the capability and entered the report for the first time. Other new entrants in this report include ArcherOS, HPE, LogicMonitor, OpsRamp, and Ubique. ArcherOS became the first China-based vendor to appear in this report; it mainly serves the local Chinese and South-Eastern Asian markets but has a small number of customers globally.

Key market trends

The growth of hybrid cloud is seen as pivotal to the wider adoption of cloud computing because it enables organizations to begin their journey to cloud computing in a way that matches their strategy. However, various cloud providers have taken different approaches to support the enterprise demand for hybrid cloud solutions:

- Amazon Web Services (AWS), Microsoft, and Oracle have developed proprietary edge and hybrid cloud appliances.
- Google and IBM have software solutions based on a platform-agnostic, container-based environment.

The two approaches to enabling distributed cloud workloads are not exclusive. Cloud providers' proprietary cloud platforms also support open-source container-based application deployment and management. However, the management solutions from the CSPs now offer the ability to manage these assets in any environment (as long as it is based on standard Kubernetes), from public cloud to bare metal on-premises. With the hardware/appliance approach, cloud providers are working with hardware OEMs to deliver edge and hybrid cloud infrastructure solutions for their clouds.

The management challenges that IT departments face are amplified as organizations adopt different public clouds and different hybrid cloud approaches. The complication is that organizations are selecting cloud environments based on factors such as cost, resiliency, regulatory compliance, service disruption, and security to match the persona of the workloads/applications.

However, organizations require the ability to manage across these different environments, so independent software vendors (ISVs) such as VMware, HPE, NetApp, and LogicMonitor are challenging the cloud providers. These ISVs have developed cloud-neutral management solutions, while the CSPs have extended proprietary solutions to compete. The market is at a crossroads, with both groups delivering hybrid and multicloud management capabilities to differing degrees of breadth and depth.

Table 1: Vendor rankings in the hybrid and multicloud management Universe

Vendor	Product(s) evaluated
Leaders	
HPE	GreenLake
Microsoft	Azure Arc
NetApp	NetApp BlueXP
Oracle	Oracle Cloud Observability and Management Platform
VMware	VMware Aria
Challengers	
ArcherOS Software	ArcherCM (Archer CloudManager), ArcherOS, Archer SDN, Archer Orchestrator
LogicMonitor	LM Envision
OpsRamp	OpsRamp Platform
Red Hat	Red Hat OpenShift, Red Hat Advanced Cluster Management for Kubernetes, Red Hat Advanced Cluster Security for Kubernetes
Prospects	
Ubiquite	MSactivator, Cloudclapp

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Source: Omdia

Market leaders

The leaders all have a total capability score greater than 55%; they account for over 90% of the highest and second-highest subcategory scores, with at least two entries on this list each. The customer scores were fairly consistent irrespective of the classification of the vendor. The other key characteristic was that all the leaders scored a weighted total solution score of over 60%. VMware was the clear leader, scoring 2 percentage points more than HPE, which was second overall for total

capability score. Oracle was third, a further 2 percentage points behind HPE and Microsoft. NetApp completes the leader classification just behind Oracle.

Market challengers

The market challengers recorded total capability scores of between 46% and 51% and total weighted average solution scores of between 56% and 59%. The other key characteristic of the challengers is that they all recorded at least four scores below the cohort average. LogicMonitor was the leading challenger, with Red Hat, OpsRamp, and ArcherOS narrowly behind it.

Market prospects

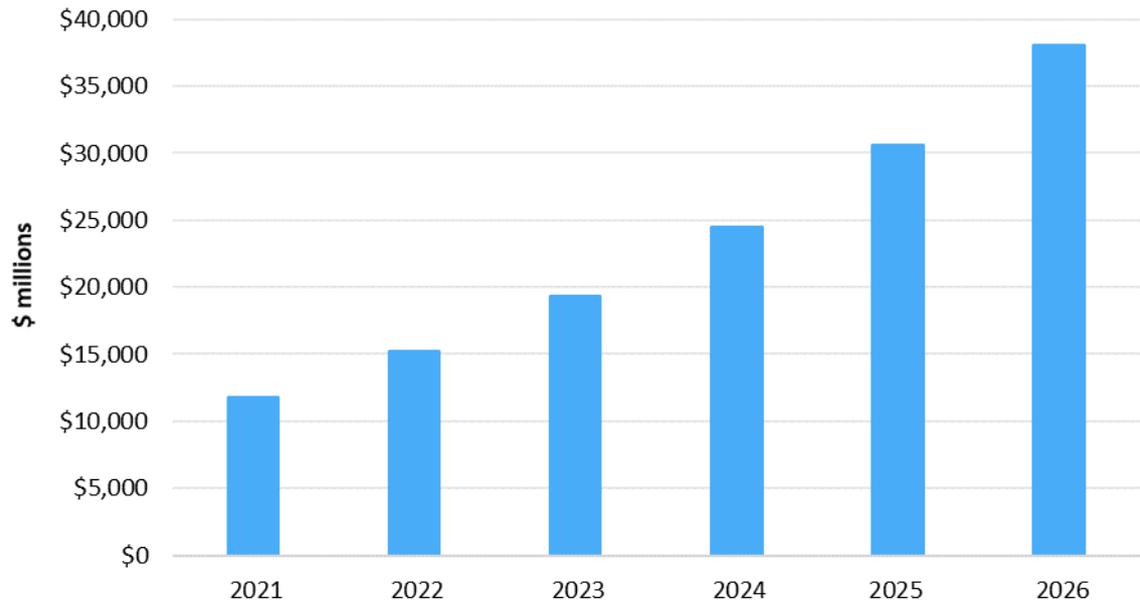
The market prospect, Ubiquibe, recorded total capability scores of 43%. The key difference between the challengers and prospects is that prospects are relatively new entrants to the market and are rapidly developing their solutions. Omdia considers the prospects to be the ones to watch for the future as their solutions are based on modern cloud-native architectures.

Market outlook

The hybrid and multicloud management market will grow at a CAGR of over 26% between 2021 and 2026, according to Omdia's *Software Market Forecast: Infrastructure, 2021–26*. Omdia forecasts the market will be worth more than \$38 billion by 2026 (see **Figure 2**), with US the largest market, accounting for \$17.6 billion in 2026. To put this in context, we forecast the infrastructure management market to be worth just over \$3.6 billion by 2026, with US again the largest market, accounting for almost \$1.5 billion.

Analysis of IT department infrastructure spending provides further evidence of the move to cloud. In 2019, the average percentage of the IT budget spent on server and storage was 4.65%, compared to 7.85% spent on cloud (infrastructure as a service [IaaS], platform as a service [PaaS], and software as a service [SaaS]). In 2021, the spending was 4.49% on servers and storage and 9.04% on cloud; we forecast this gap to widen as IT budgets in enterprise organizations reduce spending on physical infrastructure, a trend accelerated by the COVID-19 pandemic.

Figure 2: Omdia market forecast for hybrid and multicloud management (\$ millions)



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Source: Omdia

Vendor analysis

Oracle (Omdia recommendation: Leader)

Oracle should appear on your shortlist because its second generation of observability and monitoring and management capabilities is designed for a multicloud world.

Products: Oracle Cloud Observability and Management Platform

Oracle is classified as a leader in the Omdia Universe with a total capability score of 58%, making it third in terms of overall classification; it was less than 4 percentage points behind the overall leader. Oracle also recorded two leading subcategory scores and three second-highest subcategory scores. It had only two scores below the average out of the 11 subcategories. The customer reviews for Oracle are for the latest Gen 2 capabilities released in 2022, and these results show an improvement in customer feedback compared to the previous version. The new Gen 2 release of Oracle's hybrid and multicloud management solution is built on a cloud-native platform that brings together all telemetry, traces, metrics, and logs for analysis and visualization. It is based on open standards supporting third-party technology collection, so it can operate across environments.

Figure 9: Omdia Universe ratings: Oracle



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Source: Omdia

Strengths

Oracle’s strongest subcategory was public cloud management, where it recorded a second-highest score of 71%. Omdia notes that the Gen 2 Oracle Observability and Management’s ability to natively manage between on-premises, public cloud, and private cloud with the same data look and feel is important and helps reduce any issues with skills and lack of familiarity on the part of IT admins. The ability of Oracle Observability and Management to offer managed cloud services for Oracle Cloud, multicloud, and hybrid on-premises management is another significant capability, as CIOs looking to adopt managed services can select some or all of their environments. It supports the management of the entire Oracle estate and is natively integrated into OCI for an improved user experience. It

also integrates with Oracle Enterprise Manager, providing new capabilities to customers, such as machine learning, analytics, and log telemetry.

Oracle's second-strongest subcategory was security management, where it once again recorded the second-highest score with 70%. Omdia was impressed by the comprehensive capabilities across a range of different security requirements that Oracle provided. For example, intrusion detection is provided using a variety of approaches in order to maintain a defense-in-depth approach. In the cloud, web application firewalls are used to protect application traffic from malicious actors. At the host layer, baseline monitoring includes the use of both Advanced Intrusion Detection Environment (AIDE) and file integrity monitoring (FIM) to detect malicious activity. At the network layer, it can perform network blocks and blacklist known bad domains and geographic regions when necessary. The capabilities also extended to protection against distributed denial of service attacks (DDoS) at the network layer. The internet edge is scanned daily to identify any misconfigured systems that should not have internet access. Oracle also employs technologies such as CloudGuard to detect misconfigurations and alert the security operations center (SOC) when one is found.

One of the key differences about OCI is that the security team also monitors the end-user population, gaining insight into the places where most reconnaissance, initial delivery of malicious code, and exploitation occur. This allows Oracle to build an end-to-end picture across the entire kill chain when a malicious actor attempts to access OCI properties.

Oracle's third-strongest subcategory—patch management and automation, where it scored 58%—was also one of its two subcategory leading scores. Omdia found the breadth of capability across many different technologies and environments to be noteworthy. In Oracle Cloud, autonomous services such as Autonomous Database and Autonomous Linux are patched automatically with no customer involvement. The OS Management service in OCI provides patch management for Oracle Linux and Windows systems through an agent. For customer-managed environments in Oracle Cloud, third-party clouds, or on-premises, patch level identification and management can be performed with the Oracle Observability and Management solution. In PaaS or hybrid environments, database patch levels are identified by the Database Kernel and exposed to Oracle Enterprise Manager while Linux patch levels are identified by Linux Ksplice and similar Linux Kernel technologies and then exposed to Enterprise Manager. Enterprise Manager further provides patching automation for Exadata.

Limitations

Oracle's weakest subcategory was data management, where it recorded 34%; this was one of its two below-average subcategory scores. Oracle's score was affected by the lack of support for MTTf, allocation of the cost of any downtime, and the fact that it does not offer user choice in terms of RTO/RPO. These limitations are not significant as Oracle, like most vendors in this report, integrates with third-party data protection providers for these capabilities. Oracle supports Commvault Metallic and zConvertor, to name just two such third-party solutions.

Methodology

Omdia Universe

The process of writing a Universe is time consuming:

- Omdia analysts perform an in-depth review of the market using Omdia’s market forecasting data and Omdia’s ICT Enterprise Insights survey data.
- Omdia creates a matrix of capabilities, attributes, and features that it considers to be important now and in the next 12–18 months for the market.
- Vendors are interviewed and provide in-depth briefings on their current solutions and future plans.
- Analysts supplement these briefings with other information obtained from industry events and user conferences.
- Analysts derive insights on the customer experience with each solution via reviews and ratings on TrustRadius.
- The Universe is peer reviewed by other Omdia analysts before being proofread by a team of dedicated editors.

Omdia ratings

- **Market Leader.** This category represents the leading solutions that Omdia believes are worthy of a place on most technology selection shortlists. The vendor has established a commanding market position with a product that is widely accepted as best of breed.
- **Market Challenger.** The vendors in this category have a good market positioning and are selling and marketing the product well. The products offer competitive functionality and good price-performance proposition and should be considered as part of the technology selection.
- **Market Prospect.** The solutions in this category provide the core functionality needed but either lack some advanced features or suffer from a low customer satisfaction rating.

The scoring for the Universe is performed by a number of independent analysts against a common maturity model, and the average score for each subcategory and dimension is calculated. The overall position is based on the weighted average score, where each subcategory in a dimension is allocated

a significance weighting based on the analyst's assessment of its relative significance in the selection criteria.

Inclusion criteria

There are many vendors in the IT management market offering solutions to customers of all sizes. However, inclusion in this Universe is based on the vendor's ability to offer solutions specifically for the hybrid and multicloud management aspects of data center management. All the vendors have verified the accuracy of the data. As is typical with these projects, some vendors are unable to meet the strict deadlines for the return of submissions so decline to participate.

The criteria for inclusion of a vendor in the Universe for Hybrid and Multicloud Management, 2022–23 are as follows:

- The vendor must be a global vendor with customers in all of three regions: Asia Pacific; Europe, the Middle East, and Africa; and North America.
- A solutions vendor must offer cloud management capabilities that enable the management of platforms/infrastructure other than its own technology.
- A software vendor's solution must be capable of managing more than server virtualization. It must cover at least three of the four main areas (compute, storage, network, and applications).
- The vendor must have at least 250 customers, and they must be a mix of midsize enterprises (1,000–4,999 employees) and large enterprises (5,000-plus employees).

Exclusion criteria

The hybrid and multicloud management market is considered a new and evolving management market, and Omdia accepts that some vendors have entered this market from different backgrounds such as infrastructure management, services management, or cloud. Vendors and products are excluded from the analysis according to the following criteria:

- The vendor's solution is only applicable to 5 of 11 different classifications in the capability dimension.
- More than 50% of the vendor's solution is made up of partner solutions or third-party solutions.
- The vendor has no direct contact with the end customer, and everything is done through channel partners.

Appendix

Further reading

[Software Market Forecast: Infrastructure, 2021–26](#) (September 2022)

[Reviews of Cloud Management Suites on TrustRadius](#)

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