



Omdia Universe: Selecting a Hybrid and Multicloud Management Solution, 2020–21

Publication Date: 23 Sep 2020 | Product code: INT003-000460

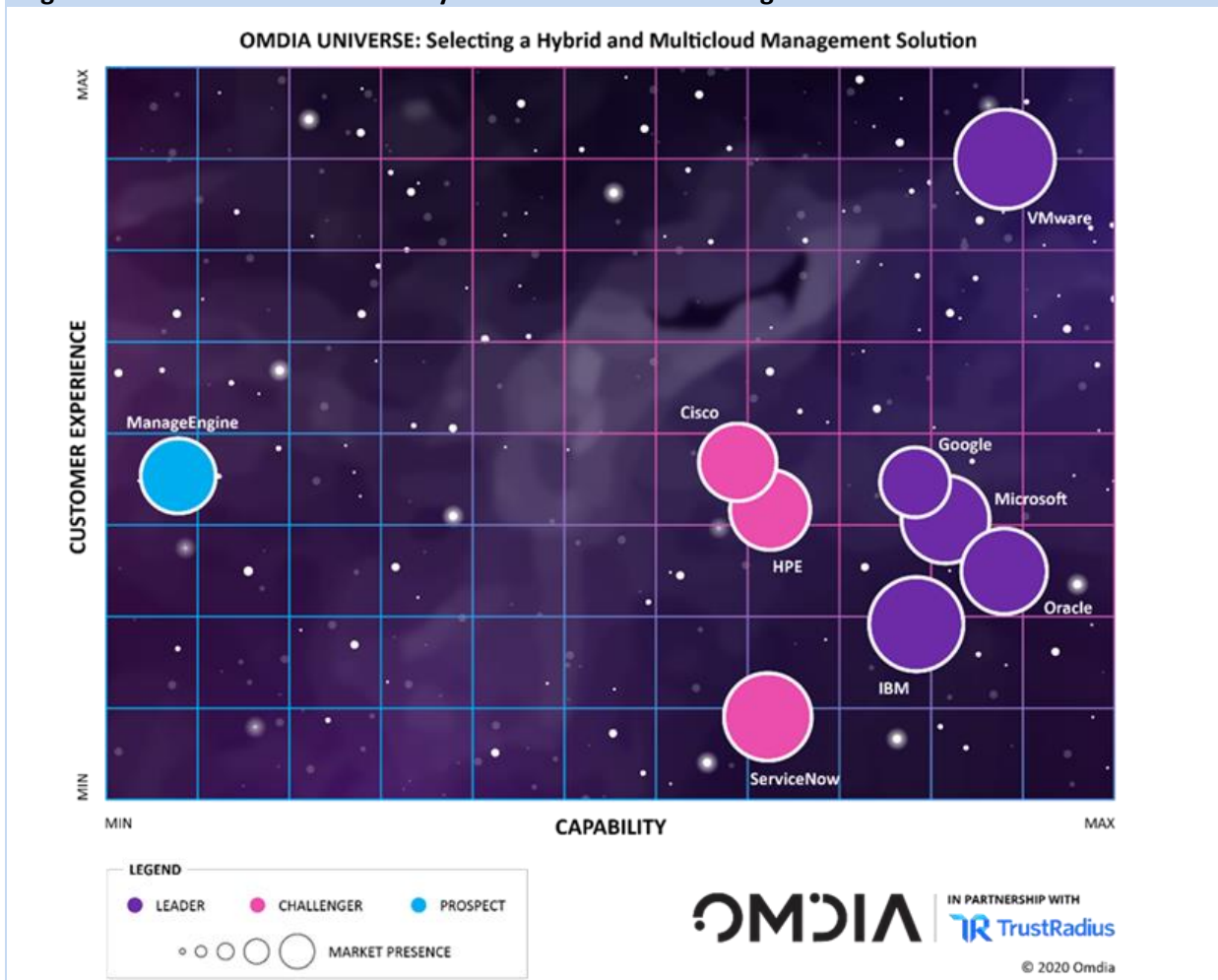
Roy Illsley

Summary

Catalyst

The role and purpose of IT in organizations is undergoing significant change, driven by the 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 challenges of managing cloud resources and services has become a much greater part of the IT department’s role and responsibility over the past 10 years. The use of cloud computing is continuing to grow as organizations look for more agile approaches to IT delivery of applications, workloads, and services. Initially, many organizations adopted cloud for business productivity and

customer-facing applications, but increasingly, the types of applications and workloads moving to a cloud environment are changing to include core systems such as ERP, CRM, and so on. While it is true that the cloud is not the ideal environment for every workload/application, it is now becoming the accepted norm that a cloud-first strategy is more common.

As the type of workload/applications moving to the cloud is changing so is the expectation of what the cloud provider must deliver to meet business needs. This increased demand for resiliency, protection, and service continuity has seen the growth of hybrid cloud environments. The hybrid cloud is not a singularity; it is a construct that enables bridges between clouds to be built so as to support workloads/applications that require on-premises deployment. The cloud providers are extending the operational and functional benefits of their cloud platforms to customer premises. The goal is to make it easier for enterprises to take advantage of cloud services. The motivation is to drive more traffic and revenue to the cloud and to capture those customers that have previously been reluctant to move core applications to the cloud because of regulation and compliance requirements.

Key messages

- For the second successive report, VMware is the clear leader in the Omdia Universe, scoring an overall average of 80.80% across all three dimensions.
- Microsoft, IBM, Google, and Oracle are also classified as leaders, all scoring an average of over 70%. The other distinction was that the leaders were responsible for 95% of the 16 subcategory-leading scores.
- The challengers' performance ranged from an average score of 67% to just below 70%, but the key differentiator was that no challenger recorded more than one subcategory-leading score.
- The prospects all showed significant promise as solutions that are being developed. Prospects are characterized as having some gaps in their capabilities that are still a work in progress.

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 in an efficient manner. 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, TMT (technology, media, and telecoms), and government sectors, on a global basis.

Market definition

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

- **Monitoring:** this looks at a solution's ability to monitor resource usage and its impact on performance. In the 2020–21 report, monitoring is extended beyond just performance monitoring to include mobile, services, and containers technologies.
- **Private cloud management (server, network, storage, I/O):** this includes the ability to manage all aspects of the infrastructure delivery chain from server, network, storage, endpoint, to I/O.
- **Public cloud management:** this considers how well the solution integrates with other cloud solutions, allowing not only visibility into resource usage, but control and management of those environments.
- **Service modeling and financial management:** one of the biggest challenges for any CIO is being able to predict future 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 that of 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 section focuses on how well the solutions support the concept of security and lifecycle management and align with any DevSecOps approach.
- **Backup and resiliency:** 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.
- **Lifecycle management and automation:** the need to automate as many operational activities as possible aligns with the CIO's need to reduce costs. This section looks at how the solutions enable different levels of automation.
- **Reporting and integration:** this capability is the need to produce more than the standard weekly resource usage report. This section evaluates the solution's ease of integration with other data sources and how user friendly its reporting capabilities are.
- **Marketplace 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.

Market dynamics

Changes from previous report

One of the most obvious changes in the market since the previous report (*Omdia Decision Matrix: Selecting a Hybrid and Multicloud Management Solution, 2018–19*) is the number of vendors taking part has reduced from eleven to nine. This reduction in the market is due to a number of factors:

- 1. Mergers and acquisitions in the market have reduced the number of vendors. This trend has been driven by the increased breadth of requirements, forcing specialist vendors to be acquired and incorporated into fewer bigger vendor offerings. For example, Red Hat's capabilities are now incorporated into IBM's offering, Micro Focus is now part of HPE's submission, CloudHealth was acquired by VMware, and CliQr is now fully integrated into Cisco.
- 2. The multicloud inclusion criteria of this report eliminated a number of those vendors with only proprietary management solutions for either single on-premises private cloud or a single public cloud.

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, different 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. The proprietary cloud platform of the cloud providers also supports open source container-based application deployment and management. However, the management is much more rudimentary than with the software-based platforms developed with the open source community. The hardware/appliance approach is witnessing cloud providers working with hardware OEMs to deliver edge and hybrid cloud infrastructure solutions for their own clouds.

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

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

Vendor	Product(s) evaluated
Leaders	
Google	Google Cloud Operations, Cloud Deployment Manager, Cloud Console, Cloud Shell, Cloud Console Mobile App, Cloud APIs, Anthos
IBM	IBM Cloud Pak for Multicloud Management
Microsoft	Azure Automation, Azure Advisor, Azure Backup and Azure Site Recovery, Azure Lighthouse, Azure Migrate, Azure Monitor, Azure Portal, Azure Resource Manager, Azure Arc, Azure Stack, Azure Cost Management
Oracle	Oracle Enterprise Manager, Oracle Cloud (services covering management, observability, security, database, application development, and marketplace)
VMware	vRealize Suite, Tanzu Observability by Wavefront, CloudHealth, Skyline
Challengers	
Cisco	Cisco CloudCenter
HPE	GreenLake
ServiceNow	ITOM Operator Enterprise
Prospects	
ManageEngine	Cloud Spend, Site 24x7

Source: Omdia

Market leaders

The market leaders all scored an average across all three dimensions of greater than 70%, and they accounted for 95% of the subcategory-category leading scores. The leaders also demonstrated a breadth of capability with only 20% of the recorded below-subcategory-category average scores. The other criterion for being a leader was being within 11% of the overall leader's score.

Market challengers

The challengers all scored between 67.53% and 69.31% and were characterized as solid performers with the gap between their performance and that of the leaders (except VMware) being a matter of fine margins. Omdia considers that the market is in transit and is shifting its emphasis from a

technical management capability to a services-centric approach. The challengers to different degrees all demonstrated a strong performance in the service management aspects.

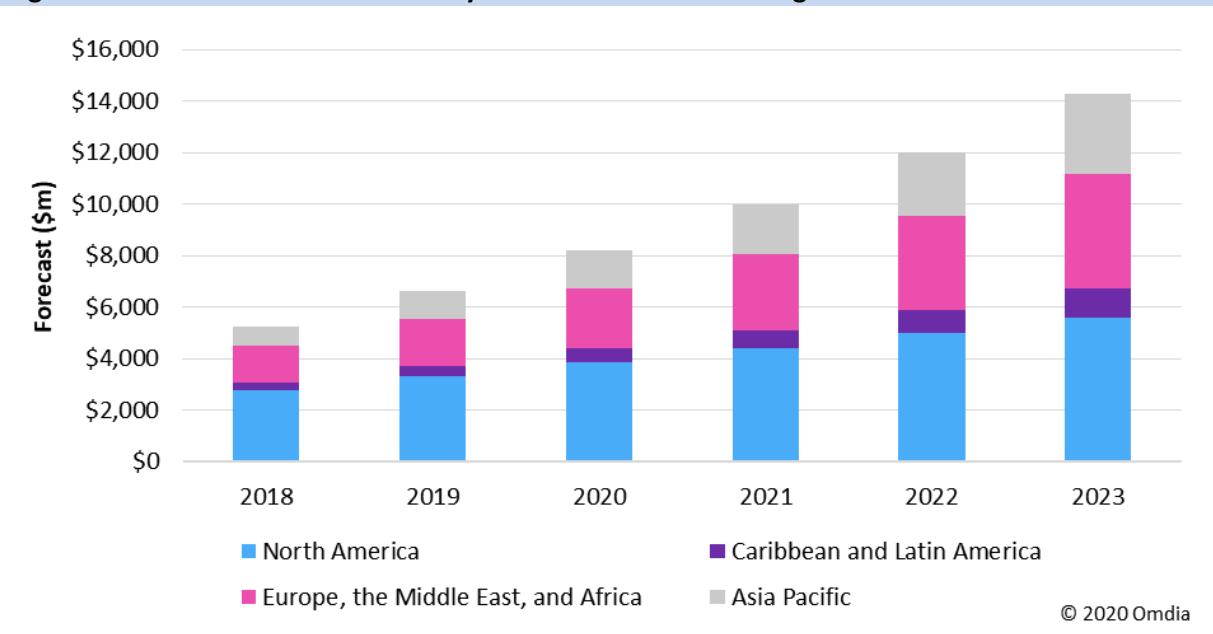
Market prospects

The market prospects all scored below 60% on average and were characterized as being solutions in development. The prospects provided strong capabilities in a few subcategories, which were matched by weaknesses in other subcategories. However, Omdia believes that the prospects all have development plans for evolution of the solutions.

Market outlook

The market in hybrid and multicloud management is growing at a CAGR of over 22% between 2018 and 2023, according to Omdia’s *Software Market Forecasts: Infrastructure, 2018–23*. Omdia forecasts the market will be worth more than \$14 billion by 2023, with North America the largest market, accounting for \$5.6 billion (see **Figure 2**). To put this in context, the infrastructure management market is forecast to be worth just over \$2 billion by 2023, with North America again the largest market, accounting for almost \$700 million. Further evidence of the move to cloud is provided by an analysis of the infrastructure spending by IT departments. 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]). The forecast is for 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



Source: Omdia

Vendor analysis

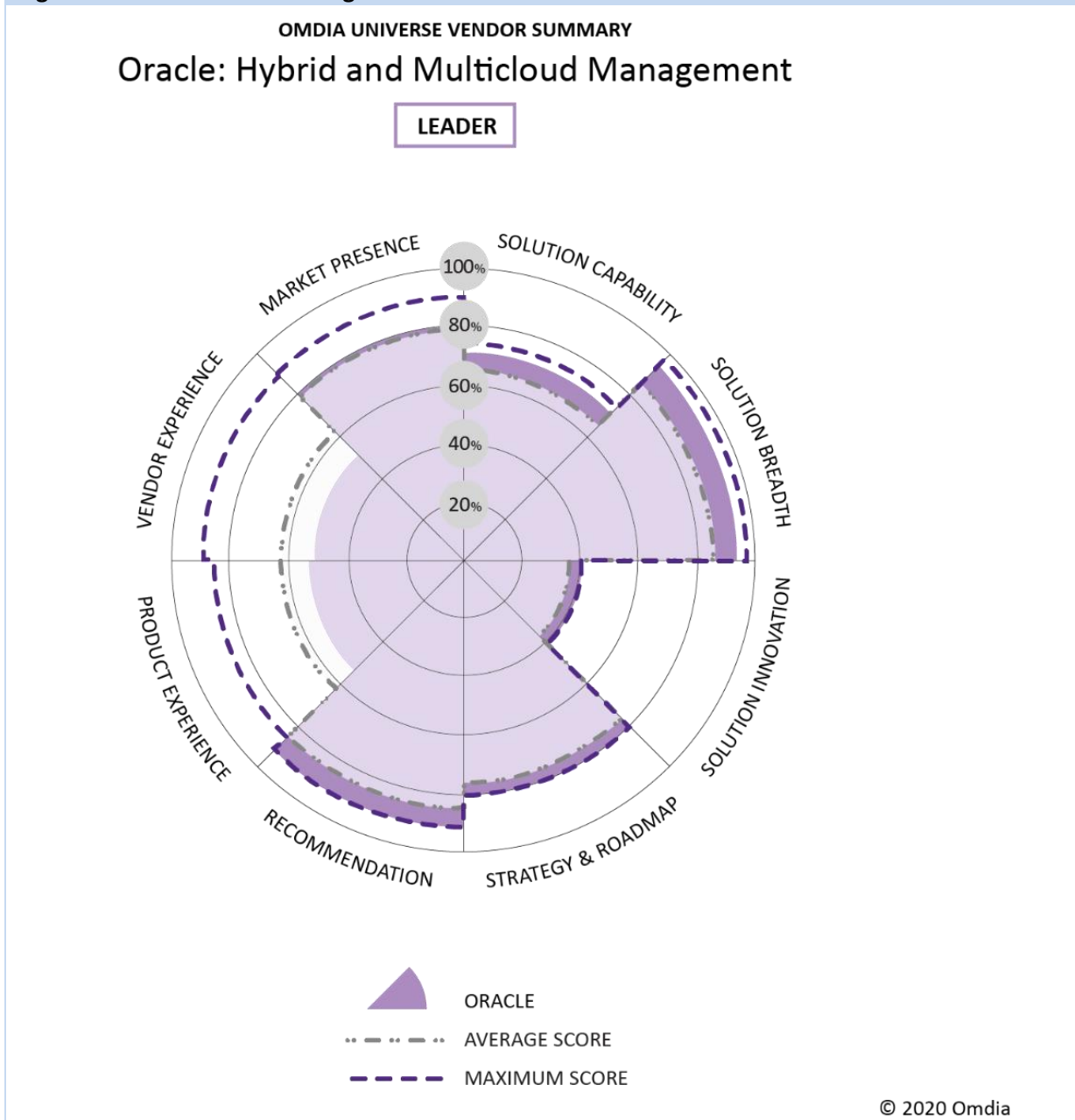
Oracle (Omdia recommendation: Leader)

Products: Oracle Enterprise Manager, Oracle Cloud (services covering management, observability, security, database, application development, and marketplace)

Oracle should appear on your short list because of its strong automation capabilities

Figure 9 shows the high-level performance of Oracle, which is classified as a leader in the hybrid and multicloud universe with an average score of 72.51%. Oracle was joint leader in the capability dimension with an average score of 73%, which demonstrates the consistency of Oracle's performance. Oracle's strongest capabilities were in the lifecycle and automation (87%), marketplace and applications (81%), and security management (80%) subcategories. Its weakest capability was service modeling and financial management (54%).

Figure 9: Omdia Universe ratings: Oracle



Source: Omdia

Automation is a key strength of Oracle and runs through a number of the subcategories. Oracle Cloud provides two defined autonomous services: Autonomous Database and Autonomous Linux. The Oracle Autonomous Database Cloud (OADC) is a new concept that Oracle introduced in 2018/19. The OADC is built using AI and ML and is designed to improve availability while reducing the cost of managing these complex assets. Initially, the OADC provided a solution for data warehouse deployments; it was then expanded to cover OLTP, NoSQL, and Graph use cases. The core premise of OADC is to transform the way databases are managed when they move to cloud to improve some challenging operational activities such as tuning databases to ensure optimum performance,

patching and updating databases to ensure security and compliance, and autoscaling databases to meet business demand.

Omdia considers the integration of any management solution to the service desk to be a critical capability. While it is not a capability that many see as initially significant, its importance becomes obvious as organizations begin to consider the day two activities. At this stage, service desk integration is a business imperative if service quality is to be maintained and measured. Service desk integrations provided by Oracle include sharing data with Jira, Slack, ServiceNow, Grafana, BMC Remedy Service Desk, CA Service Desk, HP Operations Manager, HP Service Manager, IBM Tivoli Netcool/OMNibus, and Microsoft Systems Center Operations Manager.

Oracle's strength in marketplace and applications was due to a combination of capabilities. Oracle delivers a number of different solutions that can be used to deliver the marketplace capabilities required. The weakness of Oracle's approach was that it is predominantly an Oracle marketplace solution, but the addition of the Oracle Cloud Registry is beginning to change that approach. Oracle Cloud Console has a capability that enables customers and partners to create, edit, and configure listings in the Oracle Cloud Marketplace. Omdia notes that the generation of listings requires Oracle approval before they are publicly accessible. Omdia liked the capabilities provided by Oracle Cloud Registry, which provides access to a Docker Registry for public and/or private use. Oracle also provides Oracle Linux Container Registry, which is accessed from inside Oracle Linux, placing the control in the hands of developers. The overall marketplace capability that Oracle Enterprise Manager provides is access to a private cloud marketplace via a self-service portal.

In terms of making the marketplace simple and easy to use and manage, the use of automation is key. Oracle Cloud performs automation based on Terraform and Resource Manager Stacks, which can be integrated with other DevOps toolsets such as Hudson, Jenkins, Puppet, and Chef. One of the options available with Oracle is customer-managed environments. In these environments automation can be delivered in two ways:

- Oracle Enterprise Manager Patch Plans offer a quick, easy, and reliable patching mechanism that is facilitated using patch plans in Cloud Control.
- Ksplice updates the Linux OS kernel and key user space libraries while the OS is running, without a reboot or any interruption.

Both of the options can be invoked by external DevOps tool sets using different interface approaches such as, for example, APIs or command-line interfaces (CLIs).

Oracle's third-biggest strength was its security management capabilities. The key to Oracle's strength is the approach it takes to security. Oracle engineers security into its platform and provides security in depth. It is how these security capabilities are surfaced that enables Oracle to score above the cohort average. Omdia liked the fact that Oracle provides a wide array of security-specific offerings with each of its technology solutions. For example, database security is provided via the various security options such as transparent data encryption, audit vault, database firewall, and data masking. Oracle Enterprise Manager provides configuration and compliance management, which can be used as part of a comprehensive security posture activity. Identity and access management is provided by Oracle IdM on-premises and Oracle Identity Cloud Services in Oracle Cloud. Oracle also provides additional comprehensive capabilities in Oracle Cloud for intrusion detection, distributed

denial of service (DDoS) mitigation, identity and access management, threat detection, key management, and so on.

Oracle's weakest capability was service modeling and financial management. Oracle's solution is aimed at the IT operations team, and the financial information provided is limited to the information needed by this team. One key weakness is Oracle Enterprise Manager's chargeback function, which can contain general ledger information, but this is manually entered by administrators. The ability to show comparative cloud cost is also missing from Oracle's solution. However, Omdia accepts that a cloud provider showing cross-cloud cost management data might not be a trusted source of information: customers are seeking an independent perspective on cloud costs.

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 short lists. 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 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, 2020–21 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 just 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 five of ten different classifications in the capability dimension: monitoring, private cloud management (server, network, storage, I/O), public cloud management, service modeling and financial management, operational management (scale, delivery, provisioning), security management (DevSecOps), backup and resiliency, lifecycle management and automation, reporting and integration, and marketplace management.
- More than 50% of the vendor's solution is made up from partner solutions or third-party solutions.
- The vendor has no direct contact with the end customer; everything is done through channel partners.

Appendix

Further reading

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

Omdia Market Radar: Hyper-converged Infrastructure 2019/20, INT003-000253 (December 2018)

Omdia's Cloud Economics Self-Assessment Model, IT0022-000938 (May 2017)

Software Market Forecasts: Infrastructure, 2018–23, PT0192-000001 (September 2019)

Understanding the complexities of cloud economics, IT0022-000937 (May 2017)

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Omdia Consulting

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