

Oracle's autonomous cloud portfolio drives greater developer productivity and operational efficiency

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Ovum view

Summary

Oracle recently announced a range of self-driving, self-securing, and self-repairing cloud platform autonomous services under the umbrella of its broader PaaS portfolio. Oracle's autonomous cloud proposition offers the combined benefits of developer productivity, faster time-to-value, and cost savings to its growing cloud services customer base. While Oracle has dedicated substantial investment and resources in developing one of the most extensive PaaS portfolios available in the market, it is the underlying autonomous capabilities that are a key differentiator, making the overall value proposition of Oracle PaaS portfolio more attractive to enterprise users.

There is more to Oracle autonomous cloud portfolio than just operational efficiency

The new set of autonomous capabilities is aimed at six key use cases: application development, service and data integration, data management, analytics, mobile and bots, and security and management. Interestingly, this announcement comes within five months of Oracle announcing the availability of its autonomous database cloud.

The self-driving aspect of Oracle autonomous cloud refers to the elimination of human labor involved in operational tasks such as provisioning, security, monitoring, backup, troubleshooting, and recovery. It enables automated upgrades and patching in running state, as well as supporting instant growth and shrinkage in compute or storage capacity, without downtime.

Another foundational autonomous capability, self-repairing for higher availability (HA), with the provision for automated protection from planned and unplanned downtime, offers up to 99.995% availability, which means less than 2.5 minutes of downtime per month (planned maintenance included).

The third foundational autonomous capability (self-securing) offers protection from external attacks and malicious internal users, as well as enabling automated data encryption and security updates in running state for protection against cyberattacks. These three foundational autonomous capabilities are supported across a range of Oracle PaaS products and deliver substantial improvements in terms of operational efficiency. According to Oracle estimates, Oracle autonomous PaaS products can deliver up to an 80% reduction in administration costs under complete automation of operations and tuning. Moreover, users can reduce runtime costs by up to 70%, with the provision for paying only for the resources they need.

While, at the top level, the concept of a fully packaged and managed PaaS should ideally include the provisions for the automation of tuning, patching, upgrade, and maintenance tasks, it is the capabilities driving developer productivity and faster time to value that deliver greater value to users. In this context, Oracle has an early-mover advantage and offers a clear differentiation in comparison to its nearest PaaS competitors. This is in line with Oracle's strategy to embed artificial intelligence (AI) and machine learning (ML) capabilities as a feature to improve the ease-of-use and time-to-value aspects of its software products, and not just focus on directly monetizing a dedicated, extensive AI platform.

A good case in point is service and data integration, where Oracle Integration Cloud Service (OICS) provides a graphical data mapper that integrates with Oracle Recommends, offering intelligent recommendations on mappings based on a semantic inference engine. With autonomous capabilities, Oracle Integration Cloud users are able to exploit self-defining integrations to automate business processes involving on-premises and SaaS applications. Every enterprise has a need to automate standard (or structured) business processes (an order-to-cash process, for example), and Oracle is simplifying integration flow development via the automation of the steps/tasks involved in connecting endpoint A with endpoint B (A↔B). Using this capability, one of Oracle's customers (General Electric) moved more than 100 integrations from Oracle SOA Suite (on-premises deployment) to Oracle's iPaaS, and realized cost savings of over \$1m, with about two-thirds (67%) of savings accounted for by developer productivity gains. It is just one of the several use cases where the developer productivity gains from Oracle autonomous PaaS would be far greater than the operational cost savings.

On the data management side, Oracle offers the ability to rapidly provision a data warehouse, and automated elastic scaling, with customers paying only for the capacity they use. In the context of security and management, Oracle offers ML-driven analytics on user and entity behavior to automatically isolate and eliminate suspicious users. Then there is the provision for preventive controls to intercept data leaks across structured and unstructured data stores. Oracle mitigates the need to set and manage performance and security monitoring metadata (for example, thresholds) via AI/ML capabilities applied to a unified data repository comprising log, performance, user experience (UX), and configuration data.

On the application development side, several capabilities to improve developer productivity have been introduced, including automated artifact discovery, dependency management, and policy-based dependency updates for better code quality. Oracle has introduced self-learning chatbots to automate repetitive end-user actions based on observations obtained from interaction patterns and preferences, freeing up resources for higher priority tasks. These capabilities align well with the requirements of enterprises that are hard-pressed to meet new business requirements under significant time constraints while focusing on doing more with less.

Expect continuous improvement and greater productivity gains from Oracle's autonomous cloud portfolio

This announcement marks the first step from Oracle in terms of extending autonomous capabilities beyond Oracle autonomous database cloud, and over the next few months, Oracle will roll out new autonomous capabilities to its PaaS customers. While this is an early stage in terms of the adoption of these autonomous capabilities, the level of insight and automation enabled via applied AI/ML will gradually increase with an increase in the volume of different, relevant data sets available for analysis.

For example, in the case of integration, Oracle will be able to offer accurate suggestions to enable a greater degree of automation of the steps/tasks involved in developing an integration flow between an on-premises and a SaaS application. This is along the same lines as identifying unique or distinguishable patterns based on AI/ML applied to observe all steps/tasks that need to be executed to automate a standard process involving integration between on-premises and SaaS applications. In the case of an enterprise facing the challenge of developing dozens of integrations every month, even 30% to 40% automation of the process involved in developing integration flows will lead to substantial time and cost savings. The other aspect is that these autonomous capabilities will reduce the need for highly skilled developers/IT practitioners. Moreover, other Oracle PaaS products will also benefit from

this continuous improvement process aimed at delivering greater developer productivity and operational efficiency.

Appendix

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Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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