

REPORT REPRINT

Cloud or on-premises? Oracle says both, serves up hybrid strategy

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A few years into its cloud strategy, Oracle is seeing great gains. There's a certain optimism permeating throughout the company. However, getting to the cloud is not without its challenges, so Oracle has responded with a hybrid strategy to make it go smoothly. Will this be the catalyst?

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If 'cloud' was the watchword in 2014, this year's watchword at Oracle OpenWorld was 'hybrid' – in the form of managing on-premises and cloud environments. Perhaps a hybrid approach is inevitable, given that Oracle is in the midst of helping enterprises roll to the cloud. And while the company is gaining momentum, it is certainly expected to take some time, as evidenced by CEO Mark Hurd's prediction that 80% of production applications will reside in the cloud by 2025. It made sense then that Oracle took the opportunity to announce a number of products and updates.

THE 451 TAKE

Credit Oracle with reframing the question away from an either-or discussion about the cloud versus on-premises environments to one of offering both now in the form of hybrid – and providing the tooling to make that happen. For Oracle's large install base, particularly for Oracle Database customers, this is welcome news because moving to the cloud does require some heavy lifting and, of course, time. For potential greenfield customers, Oracle must show that it has the wherewithal to be the trusted cloud partner. Oracle's willingness to go deep within the stack from SaaS to PaaS and to IaaS certainly helps in that regard. But customers do have a choice for cloud providers, and with Oracle being relatively new to the cloud scene, there are still some hurdles ahead for the company.

CONTEXT

Oracle is all in on the cloud – and not just at the application (SaaS) layer. Oracle made it quite clear that its cloud strategy includes PaaS and IaaS offerings as well. Oracle notes that when it started in the cloud, it had 87 customers and now reports thousands of customers and millions of users, although exact numbers were not provided. A driving concept behind Oracle's strategy rests on the idea of a consistent experience between on-premises and the cloud – that is, all the features, performance, security, access and so forth postulated for Oracle's on-premises offerings would be consistently available in the cloud.

However, according to Oracle, it's not an either-or proposition – cloud versus on-premises – it may, in fact, be deliberate that enterprises want a hybrid environment. Further, it's important to point out that Oracle doesn't think on-premises is going away completely – it's the time and number of organizations that transition to the cloud that is up for debate.

DATABASE AND HYBRID MANAGEMENT

Oracle announced that Oracle Enterprise Manager enables organizations to manage assets on-premises and in the cloud, effectively giving users a single pane of glass in which to work. In addition, Oracle discussed the beta release of Oracle Database 12c Release 2 (12.2), which includes a number of enhancements.

Oracle released Oracle Database 12c in 2013, which included multi-tenancy along with the pluggable database (PDBs) architecture that served SaaS environments well and for driving database consolidation. That continues to be the case. For example, PDBs per container will be increased from 252 to 4,096. This increase plays well to an Internet of Things use case where thousands, if not millions of databases, may need to be consolidated.

In terms of administrative as well as test and development use cases, Oracle introduced the ability to hot clone, refresh, and relocate PDBs as part of 12.2, which can be done live on production systems with minimal disruption. In fact, Oracle's CTO, Larry Ellison, demonstrated the relocate feature during his Tuesday keynote, which went according to script and showed him moving a PDB from an on-premises datacenter to the Oracle public cloud.

Another notable update in 12.2 is the ability to share application objects across PDBs, a change from what was available in Oracle Database 12.1, where each PDB had to have its own metadata, code and so forth. This capability is accomplished by moving all of the shareable objects to an application root, where it can then be centrally managed. Tasks such as patching become much easier, for instance.

In June 2104, Oracle released Oracle Database In-memory, which the company concedes has been an extremely popular option alongside multi-tenancy. The in-memory option has been enhanced to run on Oracle Active Data Guard, which provides a standby database. This is good news for organizations worried about running analytics on the same database used for transaction processing.

EXADATA IN THE CLOUD

Oracle also highlighted the Oracle Database Exadata Cloud Service, which is based on the company's engineered system – Oracle Exadata Database Machine. Exadata has generally been promoted as the company's high-performing system running the Oracle Database on mission-critical data. So it makes sense then that Oracle is pitching the service as 'extreme performance in the cloud,' which some might argue are not necessarily traits traditionally associated with the cloud. Regardless, the Exadata cloud service starts and scales at the quarter rack size with 28 cores, 0.5TB memory, 19.2TB flash storage and with 42TB disk storage. The latest 12c Database (Release 1 until 12.2 is generally available) comes as part of the service, which includes the popular multi-tenant architecture, in-memory database and Oracle Read Application Clusters (RAC) capabilities.

While Exadata is known as a high-end performance system, Oracle notes that it can be used for a variety of workloads. Traditionally, Exadata has been a premium product, but as a cloud service, Exadata is available now to a wider audience, which is why Oracle is peddling it to not only large enterprises but also to midsized firms as well.

BIG DATA AND ANALYTICS

On the big-data and analytics front, Oracle released a platform for big data, consisting of both new and updated functionality to previously released service offerings. Oracle is clearly driving its big-data portfolio to the cloud, which is consistent with Oracle's overall messaging of providing consistent experiences between its on-premises and cloud offerings, including the ability to move workloads between the two environments.

The Oracle Big Data Cloud Service, while previously announced, consists of Oracle's Hadoop-as-a-service offering that runs on the Oracle Big Data Appliance in a virtualized environment. Included features consist of Cloudera Enterprise (Data Hub 5.4), Oracle NoSQL Database, Big Data Connectors, and Big Data Spatial and Graph. The cloud environment starts with 216 cores, 0.75TB memory, and 96TB disks and scales in the same increments.

In addition, Oracle announced a number of additional big-data services, including Oracle Big Data Discovery Cloud Service, which provides visual data exploration, transformation and analytics capabilities on a Hadoop cluster; Oracle Big Data Preparation Cloud Service, which enables the ability to prepare varied data types in order to carry out analytics; Oracle Golden Gate Cloud Service, which enables database replication for either on-premises or cloud environments; and Oracle NoSQL Database Cloud Service, which includes automated scaling, cluster templates, and automated patching, as well as upgrading and backup-and-restore capabilities.

A new data visualization cloud service was introduced, which shouldn't be confused with the Oracle Big Data Discovery Service, which is geared more toward Hadoop analytics. The new Oracle Data Visualization Cloud Service plays more in the traditional BI space and is targeted to the line-of-business individual. The offering is 'self-service' and enables easy blending of data from both on-premises as well as SaaS sources.

COMPETITION

Oracle continues to compete with a collection of established players – Microsoft, Amazon Web Services, IBM, Tera-data and SAP. However, as Oracle continues down the cloud path, the level at which it competes with these players could likely change, and we expect a new set of competitors to emerge as well. Noteworthy is the fact that most of these competitors were mentioned or inferred to at various times throughout the keynote addresses.

Amazon Web Services is competing more with Oracle as of late. Amazon Web Services, which includes the Amazon Relational Database, offers no less than six database choices: Oracle Database, PostgreSQL, Amazon Aurora, Microsoft SQL, MySQL and MariaDB. Further, Amazon Redshift is a data warehouse-centric offering but nonetheless has some crossover capability.

Microsoft is increasingly competing with Oracle, which is noteworthy because the company also provides on-premises offerings and is likewise pushing heavily into the cloud with services such as SQL Azure Data Warehouse and Azure Data Lake. There are also some products to help transition a cloud move, such as Data Management Gateway, Azure Data Factory and Microsoft Operations Management Suite.

IBM offers DB2 in the cloud on Bluemix, as well as the dashDB analytic database service, and the firm's recent acquisition of Gravitant reveals IBM's interest for cloud hybrid environments. Teradata also provides its database on the Teradata Cloud, but the company recently announced the availability of its database on Amazon Web Services as well. SAP likewise offers the SAP Hana Cloud Platform for its in-memory database offering.

Oracle's ongoing support of big data, which includes Hadoop as a service, as well as data preparation and visualization capabilities, opens a wide swath of competitors, large and small. A sampling includes Teradata, which offers a Hadoop appliance that is available in the Teradata Cloud, along with other big-data capabilities by way of Aster. IBM offers BigInsights on SoftLayer. Altiscale, a startup, provides Hadoop as a service. Amazon offers its Elastic MapReduce (EMR), as well as providing Cloudera, Hortonworks and MapR, all available on Amazon Web Services.

Tamr recently announced its data preparation tool for the cloud, and startups Platfora and Datameer provide visualization for Hadoop, as does the venerable SAS Institute, which recently released a new analytics visualization tool that can be integrated with Hadoop.

SWOT ANALYSIS

STRENGTHS

Oracle has a clear path to the cloud but has not forgotten its faithful and very large install base, for which the company provides the tooling in order to make that transition go smoothly - regardless of how long it takes.

WEAKNESSES

There are a lot of moving parts, which can be confusing for customers. What has been announced, what is generally available and which products work in which environments - cloud and/or on-premises?

OPPORTUNITIES

While Oracle has shown good traction getting customers to the cloud, there are still many opportunities for the taking. The ability to manage hybrid environments will be crucial in that effort.

THREATS

Beyond Oracle's install base, will greenfield customers turn to Oracle as their data platform for the future? Oracle's drive to not only offer SaaS but also PaaS and IaaS capabilities will most certainly prove important for new customers.