Big wheel keep on turning: Oracle Database rolls to the cloud (again)

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'Cloud' was the watchword at Oracle's recent OpenWorld customer event, and not for the first time, but this year the company's cloud database strategy appears to have taken a step forward. This was illustrated by the new Oracle Database Cloud Service, which builds on the multi-tenancy and pluggable database capabilities delivered with Oracle Database 12c.

The 451 Take

While emerging database providers have repeatedly predicted its demise over the past couple of decades, Oracle has kept chugging along, serving its enormous installed base and leaving would-be challengers in its wake. The delivery of the new Oracle Database Cloud indicates that the company intends to do it again by providing its customers with an easy route to adopting database as a service, Oracle-style. That style may not be to the taste of everyone in the industry, but the Oracle faithful continue to lap it up. There is no doubt that Oracle faces many challengers, perhaps more than it ever has before, and engaging with developers attracted by database alternatives is an important aspect that the company has yet to fully deliver on, but the company has some interesting plans that suggest its view of the future database landscape is by no means limited to the traditional on-premises relational database model.

Context

Oracle seems to have developed a rolling-news-style approach to announcements at its Oracle OpenWorld user conference – one year it announces all the things it intends to launch the following year, and the next year it announces the general availability of all the things it announced the
previous year, as well as announcing all the things it intends to launch the following year. And so on...

As such, it can get a little confusing trying to keep up with what has been announced, what is GA and what is only on the roadmap. The company’s predilection for switching product and service names along the way doesn’t help, so attendees at this year’s event could be forgiven for thinking that Oracle chairman and (recently appointed) chief technology officer Larry Ellison was announcing something that already existed when he highlighted the importance of the Oracle Database Cloud service as the basis of the Oracle Cloud.

**The new Oracle Database Cloud**

In fact, Oracle did announce an Oracle Database Cloud Service as part of its Oracle Cloud launch three years ago. Renamed the Oracle Database Schema service, it went into production in October 2012, and offers users access to 5GB, 20GB and 50GB chunks of a fully managed, shared Oracle Database 11g running on Oracle Exadata hosted in the Oracle Cloud. The Oracle Database Schema service is positioned for rapid Web application development and production deployment of Oracle Application Express applications.

The new Oracle Database Cloud is quite a different proposition, providing users with a complete database as a service consisting of access to a dedicated virtual machine running Oracle Database 11g or 12c with full SQL*Net access and full root and database administration access, in addition to management tooling, automated backup and point-in-time recovery, one-click patching and upgrades, and automatic data compression and encryption.

The new Oracle Database Cloud is also integrated with the Oracle Database Backup Service (launched in April), enabling users to back up to Oracle Cloud from both cloud and on-premises database deployments. Oracle Database Cloud also enables users to take advantage of the recently launched Oracle Database In-Memory option. In fact, the new Oracle Database Cloud could best be described as providing the same experience that DBAs have with on-premises Oracle Database delivered as a service, which is why we describe it as an Oracle cloud for Oracle customers.

For those taking advantage of Oracle Database 12c and its multi-tenancy and pluggable database architecture, the service further promises to enable users to quickly move existing on-premises workloads to Oracle Database Cloud. The phrase ‘at the push of a button’ was used several times to describe how this would work, which turned out to be appropriate since Ellison’s demo proved that it required pushing several buttons. Nevertheless, the process of taking advantage of remote
cloning to unplug an individual database from its on-premises container and plug it into a container running on the Oracle Database Cloud was impressive enough in its simplicity that we would expect it to encourage more Oracle customers to explore the potential benefits of the Oracle Cloud.

That said, we are at the early stages of cloud adoption for enterprise workloads. While Ellison says that he expects database to become Oracle's biggest cloud revenue generator, just as it is the company's biggest software revenue generator, the company also indicates that it expects customers to start with moving development and test and simple production applications (e.g., those requiring high availability but not disaster recovery) to Oracle Database Cloud. This is in keeping with our view of cloud database adoption more generally.

Other data and analytics service

Of course, the Oracle Database Cloud is not just a stand-alone service; it also serves as one of the fundamental building blocks of the company's larger Oracle Cloud, alongside the Oracle Java Cloud and capabilities for developing and delivering social, mobile, analytics, integration and identity functionality. The company claims 62 million users for the various services that run on Oracle Cloud, including the various SaaS applications, the PaaS itself and the underlying IaaS.

Oracle also announced a number of other new cloud services at Oracle OpenWorld 2014. From a data and analytics perspective, the new services of interest include Oracle Analytics Cloud, which includes the existing Oracle Business Intelligence Cloud and Oracle HCM Analytics services and will be expanded over time to include Oracle CRM Analytics and Oracle Big Data Discovery, as well as Oracle Big Data Cloud – essentially a managed Hadoop as a service.

Additionally, Oracle announced Oracle Data as a Service (DaaS) for Sales, delivered in partnership with Dun & Bradstreet, as part of the Oracle Data Cloud, which already includes DaaS for Marketing and will be expanded over time with DaaS for Social.

Other database announcements

As is to be expected from an Oracle customer event, there were plenty of other database-related announcements, although one of the most interesting, from our perspective, was made without much fanfare: Oracle has added support for storing JSON documents in Oracle Database 12c.

This is something we have anticipated, but while the announcement was understated, it may turn out to be significant in terms of JSON document database adoption. We believe so due to the role the company's ongoing strategy of adding support for new data types, such as objects and XML, to
the Oracle Database arguably played in restricting the market for specialist object and XML databases.

Oracle also mentioned, somewhat in passing, that it has kicked off a marketing campaign called ‘Yes SQL’ designed to counter NoSQL evangelism and educate new developers about the advantages of SQL and relational databases. This is likely important to the company in terms of continuing to engage with developers attracted by new database alternatives.

There also appeared to be a noticeable change in attitude from Oracle in terms of emerging nonrelational data platforms. While the company embraced NoSQL and Hadoop in 2011 by launching its own Oracle NoSQL key value store and the Hadoop-based Oracle Big Data Appliance, it is fair to say these were not given the same prominence as Oracle Database, Exadata Database Machine and Exalytics Business Intelligence Machine.

The recent launch of Oracle Big Data SQL, which enables users to query the Oracle Database, Hadoop on Oracle Big Data Appliance and Oracle NoSQL Database, had indicated that attitude was changing. We left Oracle OpenWorld 2014 with the impression that Oracle as a company has accepted that the data platform landscape of the future will be a multi-faceted one – indeed, we are aware of (but cannot disclose) some interesting plans that Oracle has to tackle head-on the opportunities and challenges this represents in the coming years.

**Competition**

Oracle’s primary competition comes from the other major database providers: IBM, Microsoft, Teradata and SAP. In terms of cloud databases, the primary competition is likely to come from Amazon Web Services with its Relational Database Service (which offers a variety of databases, including Oracle Database, as well as Microsoft SQL Server, Oracle MySQL and PostgreSQL), as well as Microsoft's Azure SQL Database (Azure also offers Oracle Database as a service) and IBM's Bluemix data and analytics services.

Oracle also competes with a variety of specialist database providers. From a NoSQL perspective, the challenge is coming from the likes of MongoDB, DataStax, Couchbase, Neo Technology and Basho, while emerging NewSQL providers such as NuoDB, MemSQL and VoltDB are also looking to eat away at Oracle's installed base. With regard to Hadoop, Cloudera is Oracle's partner for BDA, which means it is likely to compete with Hortonworks and its partners - especially Teradata, SAP and Microsoft – as well as MapR, Pivotal and IBM.
SWOT Analysis

**Strengths**
The size of Oracle's installed base is perhaps its biggest asset in terms of maintaining its dominance in the database market, although things like multi-tenancy and pluggable database capabilities show that it continues to innovate.

**Opportunities**
There does seem to have been a change of attitude from Oracle with regard to the role of nonrelational data platforms and cloud databases, which can only help the company moving forward.

**Weaknesses**
There continues to be grumbling from emerging players that Oracle still doesn't really 'get' the cloud. The truth, we suspect, is that the company just 'gets' the cloud on its own terms.

**Threats**
Will enterprises turn to Oracle for their next-generation data platforms? While there is a good chance that the installed base will, there is a danger that the company is missing out on early adopters by failing to engage with developers.