Attendees taking a break to meet the adorable puppies at the Nutanix Dog Park inside the exhibition hall.

Cloud Infrastructure and Autonomous Database

Oracle Code 4 Kids was a one day, hands-on coding session for children aged 10 to 16.

Age of the autonomous cloud

The new generation of cloud infrastructure will eliminate human error, writes Balqis Lim

Ellison said an autonomous system eliminates human labour, which in turn eliminates error and delivers unprecedented cost savings.

AS cloud becomes mainstream, large businesses and enterprises are moving their systems to this new platform. US software giant Oracle's Autonomous Database adoption rate has been spiking, with 500 new customers this past quarter, and over 1,000 new customers in this quarter. Its Executive Chairman and Chief Technology Officer, Larry Ellison, said it is no longer the early days of cloud as Oracle has many large conservative organisations that are in the process of moving to the cloud.

"This is a period of sudden acceleration as we see customers wanting to modernise their systems, and their business practices,

and are moving from older systems to modern cloud systems. We think it's a gigantic opportunity for us."

Ellison was speaking at the Oracle OpenWorld 2019 conference in San Francisco, US recently. The event, which ran for four days from Sept 16, focused on customer successes and showcased the latest in autonomous computing, artificial intelligence and machine learning, as well as business-critical applications and security through executive keynotes, demos, learning sessions and more.

Last year, Oracle introduced the world's first autonomous database, a self-provisioning, self-configuring database engine. This year, the company is offering a

number of other autonomous services that it is adding to its cloud in its goal towards delivering the world's first complete and truly autonomous cloud.

ELIMINATING HUMAN ERROR

Ellison said the company plans to eliminate humans from the database system management through its Oracle Generation 2 Autonomous Cloud Infrastructure. He said having an autonomous system eliminates human labour, which in turn eliminates pilot error and delivers unprecedented cost savings.

"In the Oracle Autonomous Cloud, when you use the Oracle Autonomous Database, the system configures itself and it's not possible for customers to make configuration errors because there is no pilot that will make the error. The

database system automatically provisions itself, encrypts itself; even the security is backed up automatically.

"In this new generation of cloud, the autonomous database is responsible for preventing user errors and data theft. You not only pay less as there are no human beings involved — which brings down cost savings — but there are also no mistakes caused by humans."

Ellison said Oracle has also upped its ante in the cloud with the world's first autonomous operating system, Oracle Autonomous Linux.

"Like the database, it provisions itself, it scales itself, it tunes itself... it patches itself while it is running," Ellison said.

When the Spectre and Meltdown bugs showed up last year, Oracle had to patch its entire cloud, the processors, and the

system. Oracle was able to roll out 150 million patches to the 1.5 million processor cores in its data centres in four hours, with no downtime, he said.

Keeping systems patched and secure is one of the biggest ongoing challenges faced by IT experts today. Tasks can be tedious and error-prone, and extremely difficult to manage in large-scale cloud environments. With Oracle Autonomous Linux, customers can rely on autonomous capabilities to help ensure their systems are secure and readily available to help prevent cyber attacks.

DIGITAL ASSISTANTS

Built on Oracle's next-generation infrastructure, Oracle Digital Assistant applies AI with deep semantic parsing for natural language processing (NLP), natural language understanding (NLU), and custom machine learning (ML) algorithms.

The NLP engines that power today's traditional messaging-based channels lack the ability to handle highly expressive

Attendees were treated to a screening of Mission: Impossible: Fallout at Oracle Park.

sentences. Voice interactions, however, enable expressive conversations which require NLP engines to manage more complex constructs.

However, Oracle Digital Assistant is able to understand a user's natural conversation, derive intent, produce compositional logical forms, and identify and learn user behaviour patterns in order to proactively take action on behalf of the user.

The intelligent enterprise voice assistant makes voice and user interactions more expressive by processing complex queries and deriving intelligence from all available enterprise applications, such as ERP, CRM

and HR systems to respond in the context of the request made.

Oracle Digital Assistant can also be deployed to popular conversational interfaces, such as Microsoft Teams, Slack, Facebook Messenger, WeChat and across voice interfaces such as Siri and Alexa.

With these plug-and-play skills, line-of-business users only have to interface with one digital assistant that can source the right information from employee directories, expense management systems or an assortment of other enterprise applications, including Oracle Cloud Application offerings.

SIGNIFICANT PARTNERSHIP

Oracle also announced its partnership with VMware, a cloud computing software provider, to help customers leverage the companies' enterprise software and cloud solutions to make the move to the cloud. Under this new partnership, customers will be able to support their hybrid cloud strategies by running VMware Cloud Foundation on Oracle Cloud Infrastructure.

As a part of this partnership, Oracle will also provide technical support for Oracle software running in VMware environments both in customer on-premises data centres and Oracle-certified cloud environments. With Microsoft, Oracle is expanding its partnership with the integration between Oracle Digital Assistant and Microsoft Teams. Enterprise customers can now access Oracle Cloud Applications through an AI-powered voice experience in Teams.

Once Oracle Digital Assistant is enabled from the Teams App Store, users can query Oracle Cloud Applications through conversation. Skills from Oracle Digital Assistant are auto-provisioned and auto-configured, tapping into the richness of the Teams' experience. Both moves are significant to make it easier for Oracle cloud customers to use its products with applications and services from other vendors as they move their workload to the cloud.

Cherian Varghese

CUSTOMER SPOTLIGHT

ShopBack, a loyalty and discovery platform with over 11 million members across eight countries in the Asia-Pacific region, including Malaysia, has selected Oracle CX Unity to unify its customer data and deliver personalised service to its customers.

"Managing data across various countries, languages and applications has always been the focus for us. In order to create a personalised customer experience, we needed to aggregate our data to create one system of record," said Scott Tan, head of Customer Relationship Management at ShopBack.

"Oracle CX Unity will not only allow us to weave our customer data together to create a single source of truth, but will also provide the insights needed to deliver

Scott Tan

richer interactions with our customers."

Meanwhile, Universiti Putra Malaysia, which has been using Oracle's on-premises database since 2002, is upgrading its system to Oracle's Cloud Infrastructure. UPM InfoComm Development Centre Director, Associate Prof Madya Dr Fatimah Sidi said the move is aimed at reducing human operation jobs so IT administrators can focus on other important tasks.

"We use Oracle platform to store student and financial information for use in the human resource department. Moving to the cloud and using autonomous database will allow the university to use the data to generate meaningful insights. We plan to integrate information on students which comprise their academic and social behaviour.

"Moreover, the data insights will benefit the university in terms of students' registration. Once we have the numbers, we can forecast next year's registration. It is also helpful as we know what courses received more applications, and we can use the insights to make future decisions," she said.

Meanwhile, Oracle Regional Managing Director for Asean and South Asian Growing Economies, Cherian Varghese, noted that the company is doing extremely well in the Asean region, making it a key priority.

For Malaysia, Oracle is currently working with Mimos to explore how the government can utilise Blockchain to streamline various processes with the aim of making it easier to do business in Malaysia.

Mimos had initially experimented with Open Source Hyperledger and had completed a proof of concept (POC) with respect to traceability of palm oil. Wanting to broaden its experimentation, the company approached Oracle for use of the latter's cloud-based Oracle Blockchain Platform.

The resulting blockchain prototypes in development — in addition to product traceability which explores how blockchain can help curb potential food-related crises such as outbreaks and contamination by increasing the visibility and traceability of products in the supply chain — include cashless wallets, power distribution, and transaction origination.