



Database Application Developer Newsletter

Technical news, how-to articles, best practices, and more.

March 2022 News Highlights

- Oracle Database World 2022 and Oracle CloudWorld 2022 announced
- In-database machine learning for MySQL HeatWave
- Oracle Machine Learning for Python (OML4Py) new capabilities
- Low-code development with Oracle APEX
- Oracle NoSQL Database - new on-demand mode available
- Latest best practices and how-to resources for Oracle Database
- New release announcements



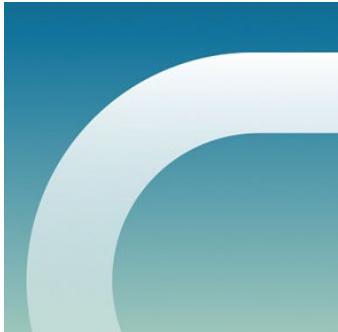
Don't miss Oracle Database World 2022

April 25–26, 2022, Americas, Europe, Middle East, Africa

Join Juan Loaiza and Andy Mendelsohn along with many top architects and experts in all areas of database to get updated on Oracle's latest innovations and learn how you can put them to work.

Sessions and hands-on labs will include topics such as Autonomous Database and Data Lake, Exadata Cloud@Customer, Kubernetes and microservices, Machine Learning, and more.

[Register for the event](#)



Save the date: Oracle CloudWorld

October 16–20, 2022, Las Vegas, NV

Mark your calendar and plan on joining us in Las Vegas, NV. You can explore the latest technical innovation as well as get product demos, advanced best practices, training, and insights from Oracle experts. [Subscribe](#) to get the latest news about event registration, keynote speakers, sessions, and more.

[Subscribe for updates](#)

Now Available: Oracle Machine Learning for Python (OML4Py) on Oracle Database 19c & OML4Py "Universal" Client

Oracle Machine Learning for Python (OML4Py) is the open source Python programming language and environment that you can operate database data at scale. OML4Py enables you to run Python commands and scripts for statistical analysis and machine learning on data stored in Oracle Database and Oracle Autonomous Database.



New capabilities

Now Python users can extend the power of Python when analyzing data using on-premises Oracle Database 19c instances on Linux. – Mark Hornick

- [Oracle Machine Learning for Python now available on Linux with Oracle Database 19c](#)

Users can now connect to Oracle Database 19c and 21c from separate Python engines using a single client package from Linux 7 or 8-based Python instances. – Mark Hornick

- [Announcing the OML4Py "Universal" Client – use OML4Py from third-party IDEs](#)
- [AskTom: OML feature highlight: OML4Py Universal Client](#)

Get started with OML4Py and Machine Learning

- Download [OML4Py](#)
- [LiveLab workshop: Introduction to Oracle Machine Learning for Python on Autonomous Database](#)
- [LiveLab workshop: Oracle Machine Learning Fundamentals on Autonomous Database](#)



Focused Topic: New on-demand Capacity in Oracle NoSQL Database Cloud Service

Oracle NoSQL Database Cloud Service is the world's easiest multi-model NoSQL database cloud service for document, columnar and key-value based workloads. It offers ACID transactions, serverless scaling, comprehensive security, and low pay-per-use pricing, including 100% compatibility with on-premises Oracle NoSQL Database.

Get to know NoSQL Database Cloud Service and on-demand capacity

An overview and short demo of the NoSQL Database Cloud Service, describing its ease of use, flexible data and transaction models, and ultra-low latency design – with Dave Rubin

- [Oracle NoSQL Database Cloud: The World's Most Flexible NoSQL Database](#) (33:29)

An overview webinar covering the NoSQL Database's flexible options – data model, pricing, deployment, API, and more – with Michael Brey, Tim Goh

- [World's Most Flexible NoSQL Database](#) (47:53) with Michael Brey, Tim Goh

Technical how-to article: On-demand capacity

Step-by-step guide on how to create an on-demand capacity table and modify an existing table to use on-demand capacity mode.

- [New Feature Announcement: On-Demand Capacity](#) – Michael Brey

Get started with NoSQL Database Cloud Service

A guide that walks you through the steps to write a simple Hello World application using the Oracle NoSQL Database Cloud Service.

- [Oracle NoSQL Database Cloud Service – 15 Minutes to Hello World](#) – Bob Rhubarb
- [Oracle NoSQL Database Cloud Service - 10 Minutes to Hello World using .NET framework](#) – Dario Vega

Try NoSQL Database Cloud Services for free

[Get Started with Oracle NoSQL Database Cloud Service](#) page



Technology announcements

[MySQL HeatWave—New Machine Learning Capabilities](#)

New in-database machine learning capabilities include everything you need to build, train, deploy, and explain machine learning models within MySQL Heatwave. It eliminates the need for a separate machine learning tool or service. Watch the [event replay](#) to find out more.

[Multiple VM Autonomous Database on Exadata Cloud@Customer debuts](#)

One of the most requested is now available: the ability to create Autonomous Database VM clusters and Exadata Database VM

clusters on a single Exadata Cloud@Customer infrastructure. - Ranganath Srirangapatna Ramachandra and Robert Greene

Oracle Zero Downtime Migration 21.3

New version of Oracle Zero Downtime Migration, which moves Oracle Database workloads to Oracle Cloud, supporting various Oracle Database versions as the source and most Oracle Cloud Database Services as targets. - Ricardo Alonso Gonzalez Acuna

March Quiz

Question

Which of these terms are part of loop syntax in PL/SQL?

Possible answers:

1. for	5. continue
2. exit when	6. raise
3. repeat until	7. forall
4. while	

Continue reading this newsletter to find the correct answers!

Focused Topic: Low-code development with Oracle APEX

Oracle Application Express (APEX) is a low-code development platform. Using APEX, you can quickly build scalable, secure enterprise apps without being a technology expert and deliver sophisticated solutions.

Get to know APEX

See APEX 21 in action with a live demo of the new maps region,

Faceted Search, new Smart Filters, Auto Scale and Progressive Web Apps (PWA) – with Sharron Kennedy and Shakeeb Rahman

- [Low-code development with Oracle APEX](#) (24:51)



Enhance your skillsets with LiveLabs

Learn how to take advantage of Oracle APEX components to create a Shopping Cart App that can be run on any device out of the box.

- [Build a Starter Online Shopping App with Oracle APEX!](#)

Quickly develop and deploy a compelling application that solves real problems and provides immediate value using Oracle APEX on Autonomous Database.

- [Advanced Low Code Development: Oracle APEX on Autonomous Database](#)

Technical how-to

Vanity URL blog series to learn how to extend your Vanity URL configuration so it can serve multiple domains from the same Autonomous Database - Todd Bottger

- [Oracle Autonomous Database Vanity URLs Part 4: Multiple Domain Names](#) | [Part 1](#) | [Part 2](#) | [Part 3](#)
- [AskTom: Vanity URL Extensions for APEX and ORDS on Oracle Autonomous Database](#) (59:38)

Cool use cases

- [Explore and Use Free Government Data with Low-Code Tools](#) - Marc Sewtz
- [AskTom: Accelerate the development of your loan application using Oracle APEX](#) (59:53) with Salim Hlayel

Meet the APEX expert – App Create Spotlight

Meet Shelley McNeill from the National Centers for Environmental Information (NCEI), who built the HOMR app used to track and manage station data for climate change – with Justine Kavanaugh-Brown

- [Shelley McNeill's HOMR acts as a workforce multiplier for datasets used to understand the trajectory of climate change](#)



Start building apps for free

- [APEX Getting Started](#) page



What's new in database application development

Oracle Database and Oracle Autonomous Database

- [Database Tools in Oracle Cloud Infrastructure \(OCI\)](#) - Brian Spendolini
- [LiveLab: Prevent and Detect Fraud Using Blockchain Tables on Oracle Autonomous Database](#)
- [Migrating from AWS RDS to Oracle Autonomous Database via Data Pump](#) - Satyabrata Mishra

Develop XR with Oracle Cloud, Database on HoloLens, [Ep 1: Spatial, AI/ML, Kubernetes, and OpenTelemetry](#) | [Ep 2: Property Graphs, Data Visualization, and Metaverse](#) - Paul Parkinson

SQL and PL/SQL

- SQL in 60 seconds with Chris Saxon - [Outer join filtering](#) (0:58) | [Partitioned outer join](#) (0:55)
- [AskTom: SQL hierarchies using CONNECT BY and recursive WITH](#) (1:00:00) with Chris Saxon
- [AskTom: Visualizing SQL Pattern Matching \(MATCH_RECOGNIZE\) - A Beginner's Guide](#) (1:03:03) with Chris Saxon and Christian Berg
- [Debugging PL/SQL with Visual Studio Code](#) - Christian Shay

Machine Learning, Graph, Spatial

- [Announcing new URLs for Oracle Machine Learning Notebooks and REST Services](#) - Sherry LaMonica
- [Oracle Machine Learning Notebooks for Autonomous Database](#) - Mark Hornick
- [Import Wide Datasets into Nested Columns Using OML4Py](#) - Jie Liu
- [Contact Tracing using Oracle Spatial](#) - Ryota Yamanaka
- [Build SPARQL Endpoint with Autonomous Database Part 1](#) | [Part 2](#) - Ryota Yamanaka

Scripting

[Does Python Django use bind variables with Oracle Database?](#) - Christopher Jones
[Easy wallet-less connections to Oracle Autonomous Databases in Python](#) - Sharad Chandran R
[Always Use Connection Pools — and How](#) - Christopher Jones
[Python cx_Oracle Notebooks: the Oracle Database series on best practices](#) - Christopher Jones

.NET

[Oracle Entity Framework \(EF\) Core 6 Demo](#) (5:38) with Alex Keh
[Using Oracle Database with ASP.NET Core Identity](#) – Alex Keh
[Sample code: Oracle Identity and Access Management Tokens with .NET and Oracle Autonomous Database](#) – Alex Keh
April 13, 2022: [AskTom: .NET and Visual Studio](#) with Alex Keh and Christian Shay

JSON and Autonomous JSON Database

[AskTom: Demos and QA: Oracle Database API for MongoDB](#) (55:01) with Beda Hammerschmidt and Roger Ford
April 12, 2022: [AskTom: JSON in Oracle Database](#) with Beda Hammerschmidt | April 12, 2022

DevOps

April 21, 2022: [Live Developer Lab: Unified Observability in Grafana with Converged Oracle Database](#) with Paul Parkinson | April 21, 2022

... And the correct answers to the March quiz are:

Choices 1, 2, 4, & 5. For further explanations, visit the [quiz page](#) (requires Oracle login). For more quizzes, visit the [Oracle Dev Gym](#).



Thought-provoking success stories

[Building on OCI: Build an app to pandemic scale](#)

A look into the underlying requirements and Oracle's approach in rapidly building pandemic-scale systems that enabled the most important data collection effort in modern history.

[Data Management for Financial Services](#)

Read Oracle customer success stories in Financial Services as well as discover how Oracle data management solutions can help financial services firms around the world to rapidly create financial applications, manage high-volume transactions, and analyze data in real-time for personalized banking, fraud detection, and process optimization.



Get your hands dirty... for free!

[Get Autonomous Database for Free:](#)

1. Oracle Cloud Free Tier plus 30-day free trial
2. \$300 in credits for Cloud services

Get hands-on experience on hundreds of Oracle solutions 24x7, for free on [Oracle LiveLabs](#).

Learn, Write, and share SQL at a free interactive [Oracle Live SQL](#) site, built with Oracle APEX running on Oracle Database.

Build your Oracle technology muscles at the [Oracle Dev Gym](#) by taking workouts, quizzes and even entire classes on SQL, PL/SQL, database design, logic and more.



Useful links to keep your skills sharp

Blogs: [Oracle Developers](#) | [Oracle Database Insider](#) | [Oracle Cloud Infrastructure](#) | [Oracle APEX](#)

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Websites: [Oracle Database](#) | [Oracle Autonomous Database](#) | [Oracle Developer Resource Center](#) | [Oracle Developer Tutorials](#)

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