



# An introduction to Oracle REST Data Services for autonomous databases

Timo Herwix, Senior Consultant  
DOAG Conference 2022

# Facts and figures.

Your partner for digital transformation.  
Individual IT solutions from one single source.



## Headquarters

Ratingen

### Branches

Frankfurt am Main,  
Köln, München, Hamburg

> 125 Customers



> 300 Employees

Certified partner  
leading technology  
manufacturer



approx. 44 Mio. €  
Turnover in 2021



Foundation 1994



Cross-sector



Manufacturer-neutral



Training company,  
Partner in dual studies



Owner-managed

# About me

## Timo Herwix

Senior APEX Consultant at MT AG since 2019

Previously worked as a Data Warehouse Developer

Oracle APEX since 2016

Oracle Databases since 2008

Blog author, conference speaker

Born in 1983, two children and living in Kevelaer

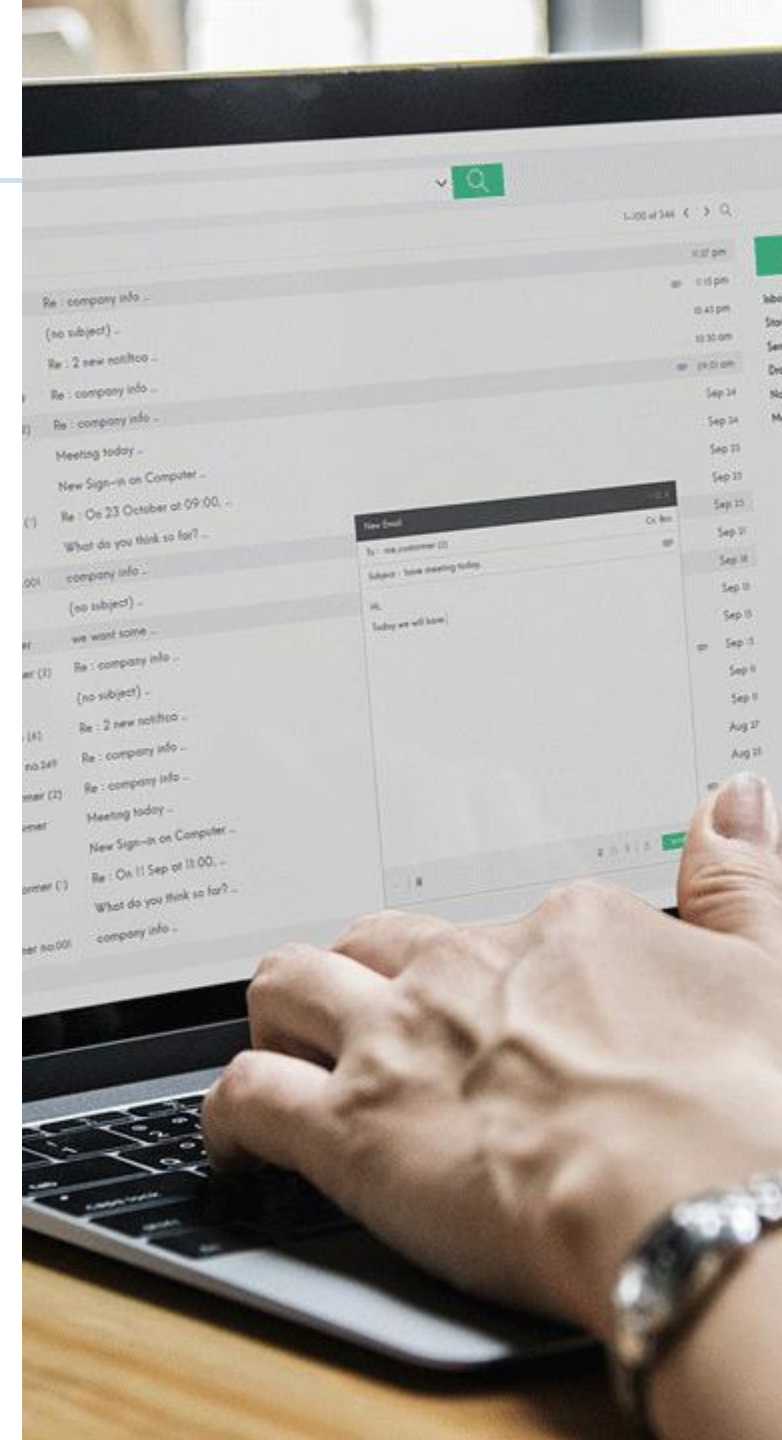


# Agenda

1 What you should know

2 Ready to take off

3 Summary

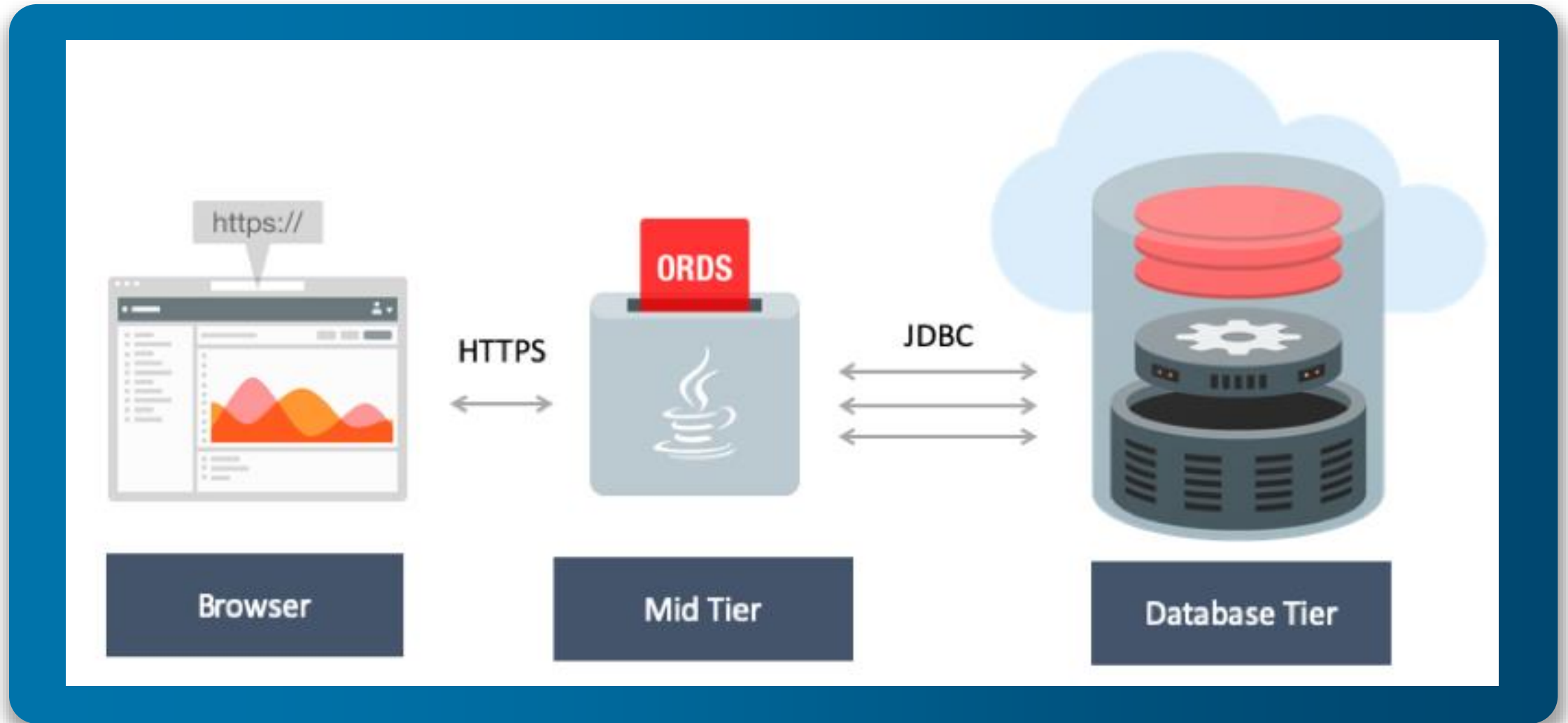


## What is ORDS?



# Oracle Rest Data Services

# An introduction to Oracle REST Data Services for autonomous databases



# What is REST?





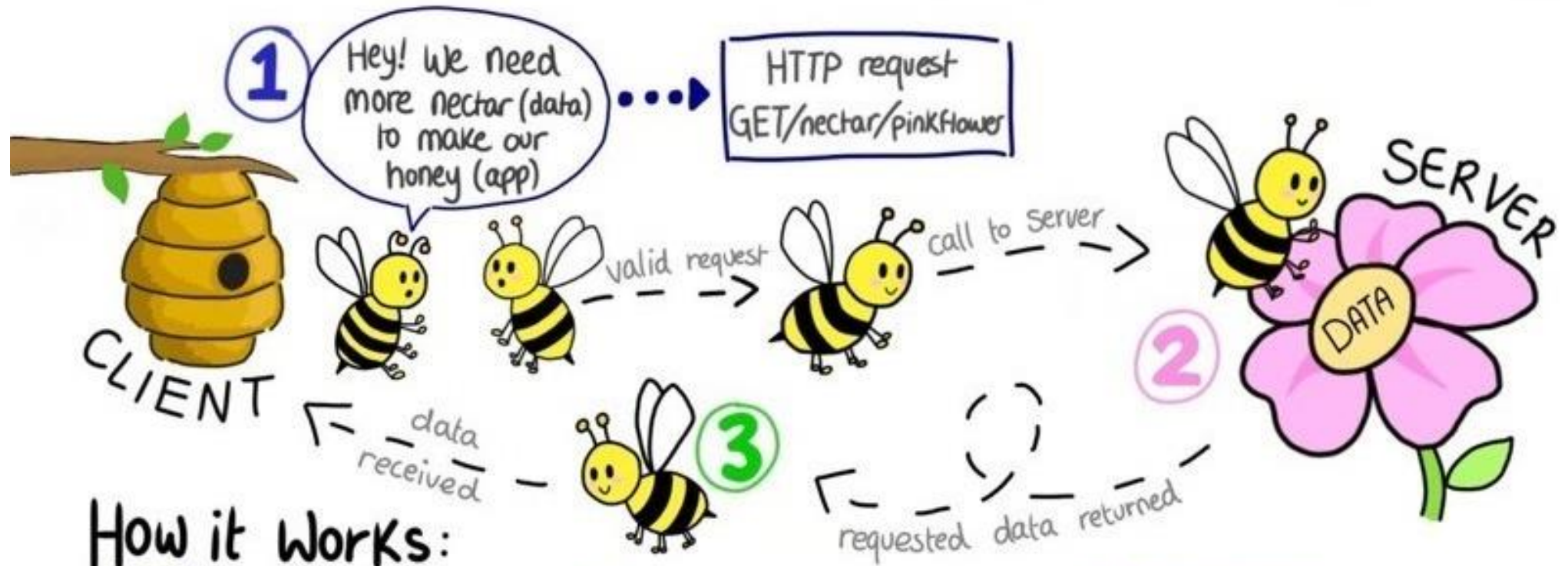
## REpresentational State Transfer (REST)

It's an architecture used to design client-server applications. With a Rest API, you're getting a representation of the requested data stored in a database. A REST API is also stateless, which means that the server doesn't store any data between requests from clients.

To access and manipulate resources, a REST API uses **Get, Post, Put and Delete**.



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## How it works:

### 1 Request

API call is initiated by the Client application via a HTTP request

### 2 Receive

Our worker bee acts as an API, going to a flower (server) to collect nectar (data)

### 3 Response

The API transfers the requested data back to the requesting application, usually in JSON format

# An introduction to Oracle REST Data Services for autonomous databases

Build your REST APIs with:

PL/SQL API

SQL Developer

APEX

Database Actions



# What is an Autonomous Database?



## Oracle Autonomous Database

Everything is automated – nothing to learn – nothing to do – easiest to use and lowest cost



**Self-Provisioning**



**Self-Securing**



**Self-Managing**



**Self-Repairing**



**Self-Scaling**



**Self-Optimizing**

And what are Database Actions?



## Oracle Database Actions

The favorite Database Management Tool in the Browser with nothing to install or maintain

The screenshot displays the Oracle Database Actions web interface. The main window shows a query result table with columns: employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, department\_name, and salary. The table contains 5 rows of data. The interface also shows a sidebar with a tree view of database objects (ADMIN, Tables, COUNTRIES, DEPARTMENTS, EMPLOYEES, JOBS, JOB\_HISTORY, LOCATIONS) and a top navigation bar with 'ORACLE Database Actions | SQL'.

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	department_name	salary
100	Steven	KOZMIN	SKOZMIN	515.121.4567	1987-06-08	AD_PRES	Department	24000
101	Alexis	DEKORV	AKORV	515.121.4567	1987-06-08	AD_ASST	Department	9000
102	Lex	DEKORV	AKORV	515.121.4567	1987-06-08	AD_ASST	Department	9000
103	Alexander	BURNS	ABURNS	515.121.4567	1987-06-08	AD_ASST	Department	9000
104	Bruce	CLAKE	BCLAKE	515.121.4567	1987-06-08	AD_ASST	Department	9000
105	David	FERRELL	DFERREL	515.121.4567	1987-06-08	AD_ASST	Department	9000



# An introduction to Oracle REST Data Services for autonomous databases

## Overview

- No additional cost feature of the Oracle Database (free)
- Quarterly releases
- One install can service multiple databases
- Database account authentication
- Your database roles determine access to features
- No desktop configuration, Oracle clients, TNS management required

## Features

- SQL worksheet
- Import and export data
- Build powerful, secure REST APIs
- Create rich relational diagrams and data dictionary reports
- Create users, monitor your instance and drill down into sessions, Top SQL, Wait Events and more
- Real Time SQL Monitoring and Performance Hub
- Complete JSON Document Collection management (SODA)

## Availability

- Database Actions is deployed automatically with Oracle Autonomous Database Cloud Services
- Also available from any customer managed ORDS installation and their Oracle Databases
- Supported on Database versions, multi-tenant or classic architecture
- Can be deployed for one or multiple Oracle Databases



# An introduction to Oracle REST Data Services for autonomous databases

5

Reasons to use  
Database Actions

It's in active development with frequent updates

End-to-end security

cURL is as easy as a click

Built-in OpenAPI 3 Support

Nothing else to install ...

Ready to take off

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## Getting started.

Enable a user for REST access



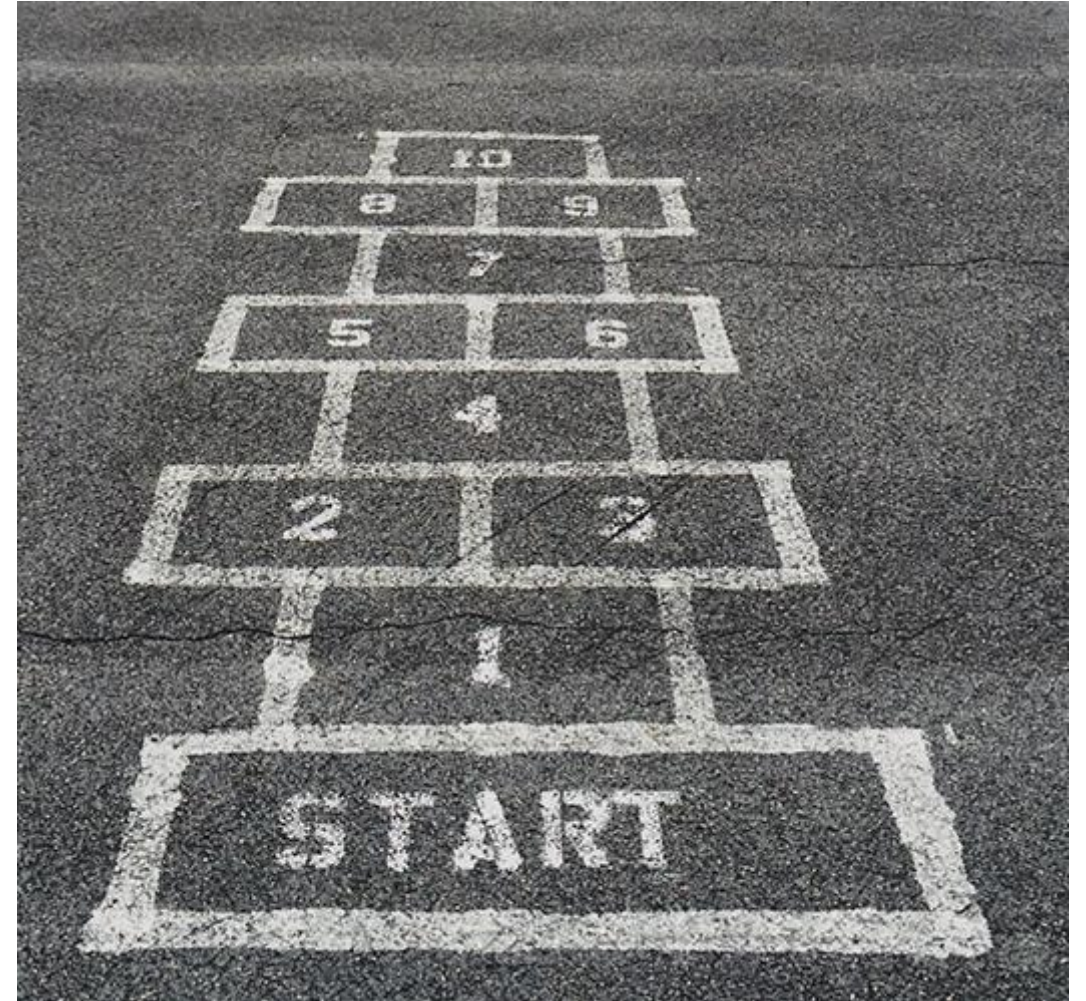
## Let the games begin!

Publish a RESTful service for a database table



## What about security?

Secure the REST service

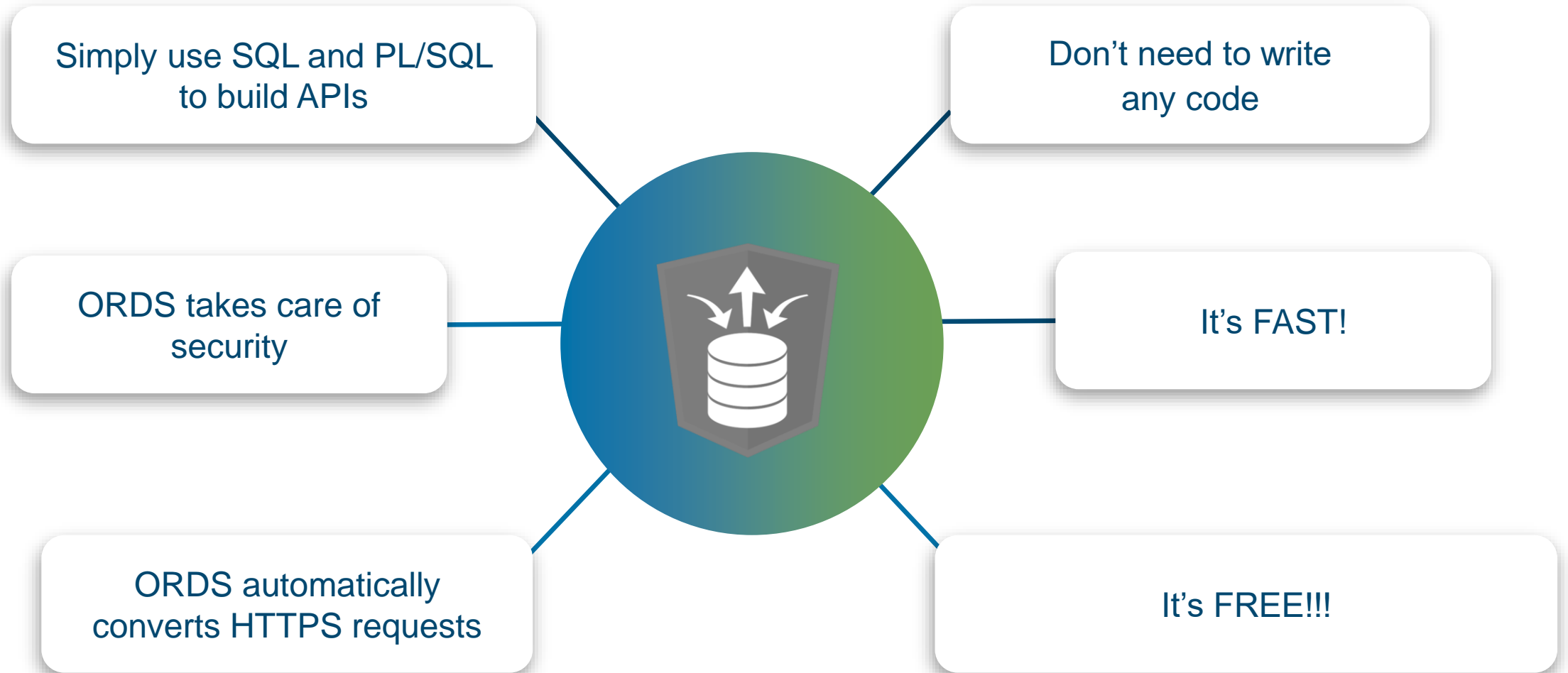


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## Summary

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# Vorträge Mittwoch, 21.09.2022

Titel	Uhrzeit	Raum	Referent:in
You've got Mail!	15.00–15.45 Uhr	Istanbul	 Timo Herwix
Mobile frei definierbare & skalierbare DevOp's Umgebung (Docker, Oracle, APEX)	15.00–15.45 Uhr	Kopenhagen	 Guido Sokolis
Web-Server und Apache Tomcat verstehen	16.00–16.45 Uhr	Kopenhagen	 Robin Schulz
Der „Hype“ Podcast: Von der Idee zur Umsetzung #DevsOnTape	16.00–16.45 Uhr	Budapest	  Kai Donato und Carolin Hagemann
Ein Einstieg in Oracle REST Data Services für autonome Datenbanken	17.00–17.45 Uhr	Kopenhagen	 Timo Herwix

# Vorträge Donnerstag, 22.09.2022

Titel	Uhrzeit	Raum	Referent:in
Playwright enters the stage - End-to-end Oberflächentests für Oracle APEX Apps	08.00–08.45 Uhr	Prag	 Fabian Neureiter
Immersive Analytics: Datenvisualisierung mit VR	09.00–09.45 Uhr	Oslo	 Philipp Hartenfeller
Die Dynamic Actions Schulbank	09.00–09.45 Uhr	Stockholm	 Robin Schulz
APEX Visualizer 22.1	11.00–11.45 Uhr	Sydney	 Oliver Lemm
APEX API 6.5	12.00–12.45 Uhr	Sydney	 Markus Klumpp



Thank you for your attention!

Any questions?



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