

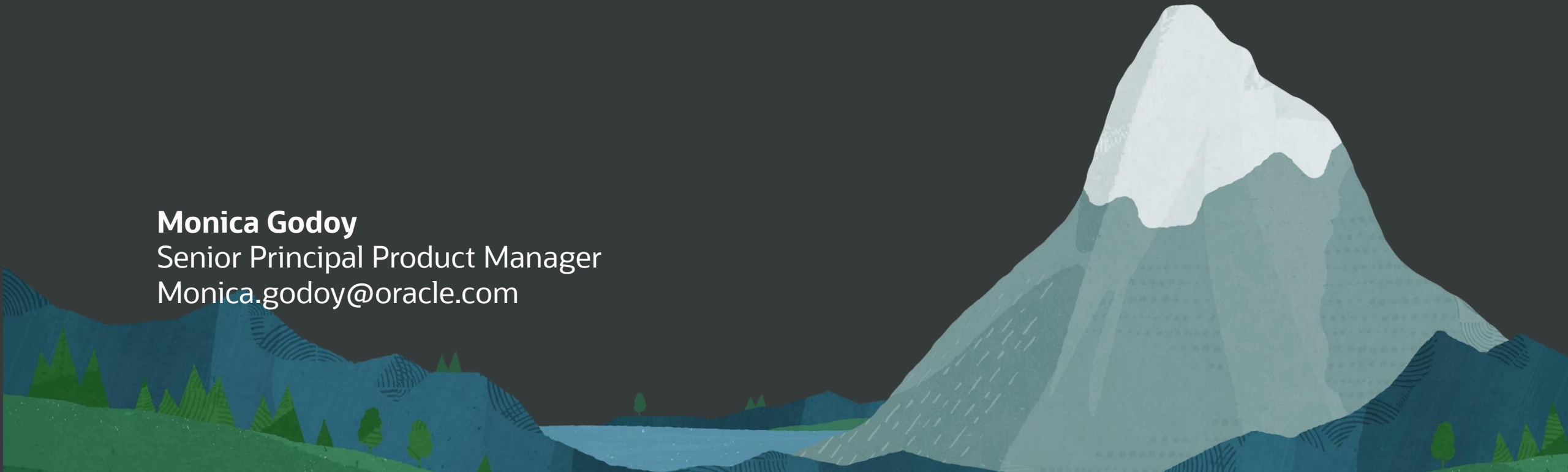


Análisis de Datos, IA, y Low Code

Monica Godoy

Senior Principal Product Manager

Monica.godoy@oracle.com



What is Oracle APEX?

Oracle's Strategic AI Platform

APEX is the **world's most popular** enterprise **AI** application platform.

It enables you to build scalable and secure enterprise apps with world-class features.

Oracle APEX delivers the most productive way to develop and deploy **Mobile, Web, and Desktop** apps everywhere - cloud and on-premises.



ā'pěks
(#orclapex)

21 Million +

apps created till date

7,000+

APEX apps created daily

850,000+

APEX developers worldwide

100,000+

customers across 150 countries

The Oracle APEX Advantage



Quickly create apps that meet business objectives

Focus on the intent of the app – not how to code it, and spend less time on maintenance going forward



Add AI to your apps

Add AI capabilities to apps even if you're not an AI expert – giving users flexible options for using apps, and shortening their learning curve



Build enterprise-ready applications

Get the security, scalability, performance and reliability of Oracle Database.

APEX is included with Oracle Database at no extra cost

Oracle APEX

Comprehensive AI Platform



- **Build** powerful cloud and mobile apps using a web browser
- **Generate** Applications using AI
- **Import/export** data
- Publish **REST APIs**
- **Integrate** local and remote data
- **Automate & Integrate** processes and apps

Development / Deployment Options



Local

- Install on stand-alone laptops using Oracle Express Edition (XE) or the full database version
- Simply upgrade APEX to the required version
- Can work completely disconnected



On-Premise

- Typically run by the IT Department
- IT generally both production operations service, and a service provider
- Departments responsible for application development



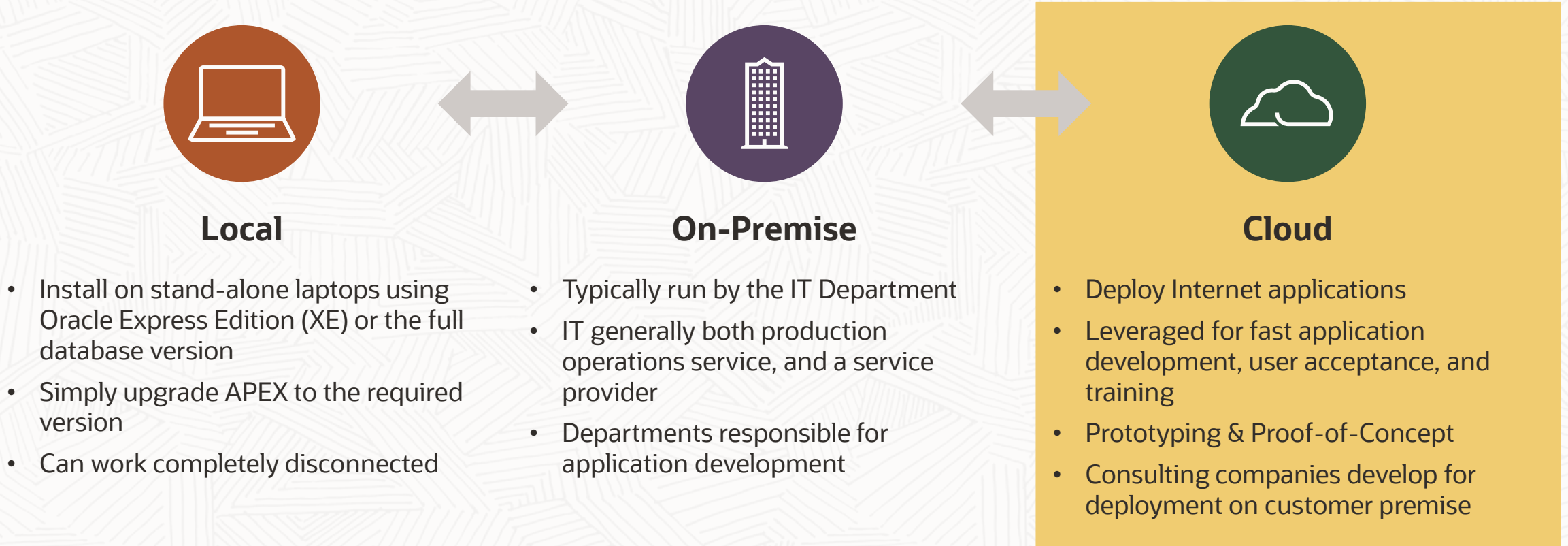
Cloud

- Deploy Internet applications
- Leveraged for fast application development, user acceptance, and training
- Prototyping & Proof-of-Concept
- Consulting companies develop for deployment on customer premise

Browser based application development framework enables efficient development & deployment

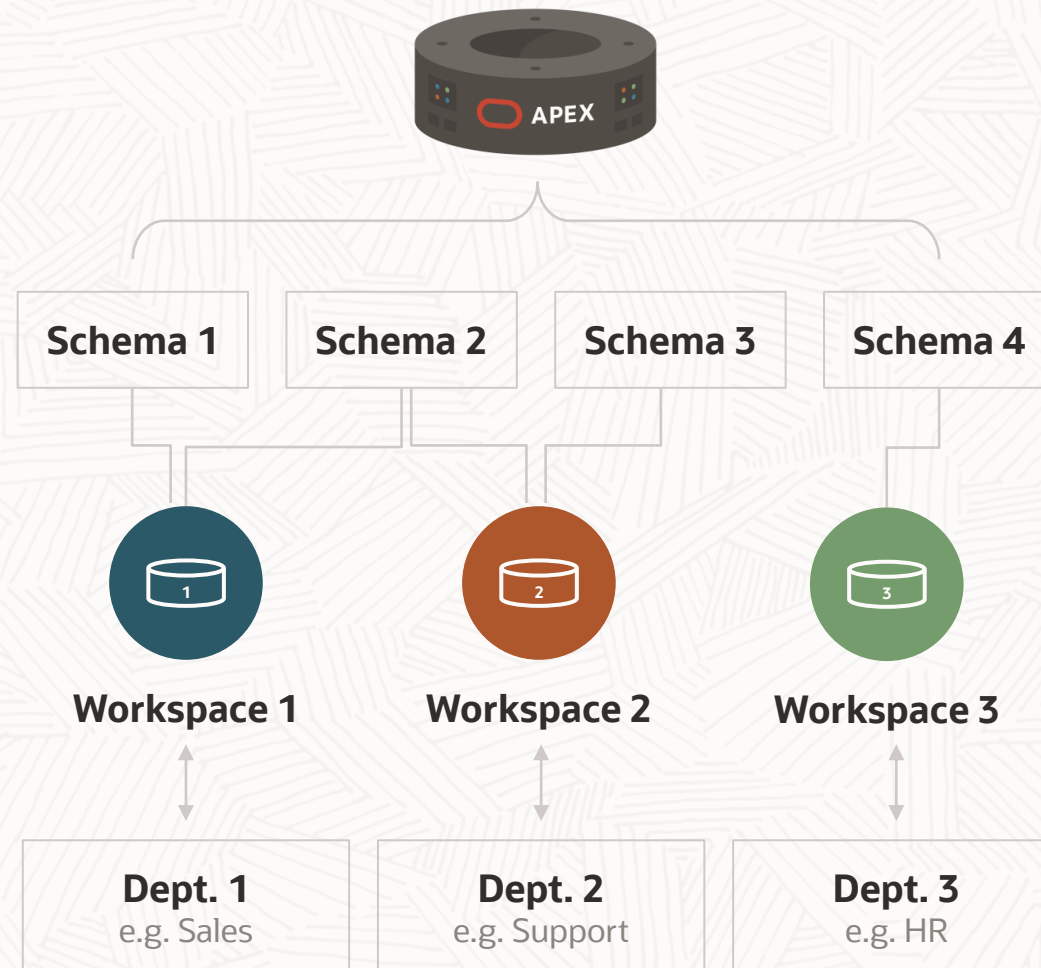
Shoot someone a URL – Check this out – Application Development

Development / Deployment Options



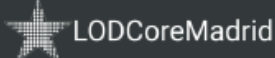
Browser based application development framework enables efficient development & deployment
Shoot someone a URL – Check this out – Application Development

Oracle Database with APEX



Inscripción
bit.ly/inscribete_datathon

Oracle Cloud Free Tier
oracle.com/free



Inscríbete al Datathon y consigue tu OCI gratis

— *

Escucha a los expertos de Oracle para ayudarte con el reto

- ✓ Intro a la tecnología y a la nube de Oracle
- ✓ Bases de datos convergentes
- ✓ Herramientas de Low Code
- ✓ Asistentes de IA generativa





bit.ly/inscribete_datathon

Pasos

Inscripción
bit.ly/inscribete_datathon



Crear ADB
apex.oracle.com/go/nyc-genai



Crear Espacio de Trabajo de
APEX

- Get Started

Introduction

Option 1: apex.oracle.com

Option 2: Autonomous Database in
Oracle Cloud

Option 3: APEX Service

Oracle APEX

DEMO ✓

DEMO ✓

..... ✓

☐ Remember Workspace and Username ?

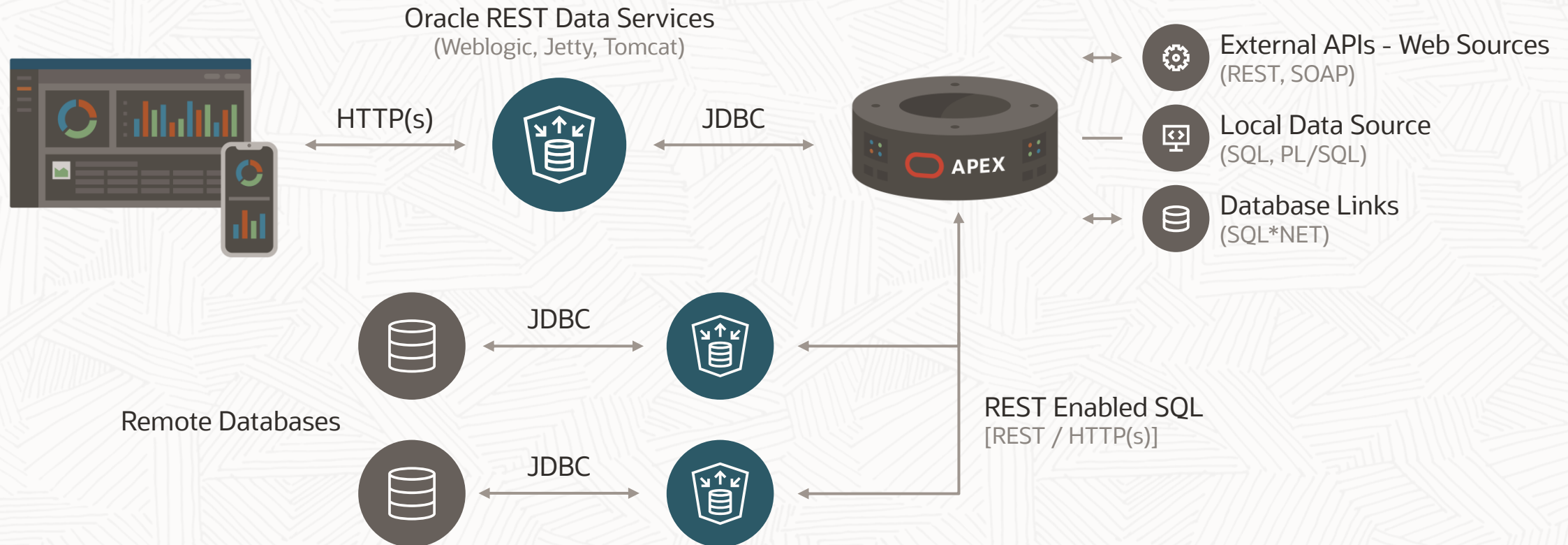
Sign In

Administration Services Get Started

Deutsch · English · Español · Français · Italiano · Português (Brasil) · 中文 (简体) · 中文 (繁體) · 日本語 · 한국어



APEX Data Sources



AI-Assisted Development

Generative AI Service

Workspace Utilities \ Generative AI Services \ Create/Edit

Generative AI Service OpenAI Search

Cancel Delete Apply Changes

Show All Identification Settings Advanced

Identification

AI Provider: Open AI

Name: Open AI

Static ID: open_ai

Settings

Used by App Builder: ☒

Base URL: https://api.openai.com/v1

Credentials

Credential: credentials_for_openai_search

Test Connection

Advanced

AI Model: gpt-4o

HTTP Headers

Comments

Generative AI Service

The Name and Static ID must be unique within the workspace. The developer can select from a list of supported AI Services and specify if the AI Service should be used by App Builder. Only one AI Service can be configured for App Builder. Advanced properties including additional HTTP headers and JSON attributes can be configured.

Additional Attributes

roopesh roopesh en Copyright © 1999, 2024, Oracle and/or its affiliates. Oracle APEX 24.2.0

- An abstraction to popular commercial **Generative AI products** like OCI Generative AI, Open AI, and Cohere
- Authenticates using **Web Credentials** in Oracle APEX
- Users can **Validate Information** before setting up a connection
- Used by **App Builder, AI Assistant & APEX_AI PL/SQL API**
- Can be enabled/disabled on APEX at **Instance** and **Workspace** levels

Create a Data Model from a Prompt

APEX Assistant

Create a data model with the prefix PM to manage projects, milestones, tasks, task to-dos, task links, and comments, including multiple rows of data for each table.

Certainly! Here's an optimized data model for managing projects, milestones, tasks, task to-dos, task links, and comments, along with constraints, sequences, and trigger definitions. The multiple rows of data inserts will be added to provide sample data for each table.

```
sql
-- create projects table
create table pm_projects (
  id                number                generated by default on null as identity
                                constraint pm_projects_pk primary key,
  name              varchar2(255) not null,
  description        varchar2(4000),
  created_on         date                not null,
  created_by         varchar2(255) not null,
  updated_on         date                not null,
  updated_by         varchar2(255) not null,
  row_version        integer             not null )
/
```

I have created the tables with appropriate relationships, constraints, and triggers for the data model. Each table also has multiple rows of sample data inserted.

1. Do you need any additional attributes for any specific entity?
2. Any specific integrity constraints or business rules you want to implement in this data model?

Create SQL Script

Type your message here

SQL Format **Oracle SQL** Quick SQL

- Create your **Own Schemas** from a Prompt
- Generate scripts either in **Oracle SQL** or **Quick SQL** format
- Build a **Data Model** and generate **Sample Data**

Create App from a Prompt

APEX Assistant

 Let's create an app together. Describe the app you want to create, including the data or tables it will use.

Build an app on project tasks, project status, project milestones, project task todos, and projects, that includes pages for a smart filters, classic report, chart, and interactive report. RT

 Sure, I can create an application called **Project Management Suite** with the following pages:

- Smart Filters on Projects (Smart Filters on `EBA_PROJECTS`)
- Smart Filters on Project Milestones (Smart Filters on `EBA_PROJECT_MILESTONES`)
- Project Milestones Report (Classic Report on `EBA_PROJECT_MILESTONES`)
- Projects Status Chart (Chart on `EBA_PROJECTS`)
- Interactive Projects Report (Interactive Report on `EBA_PROJECTS`)

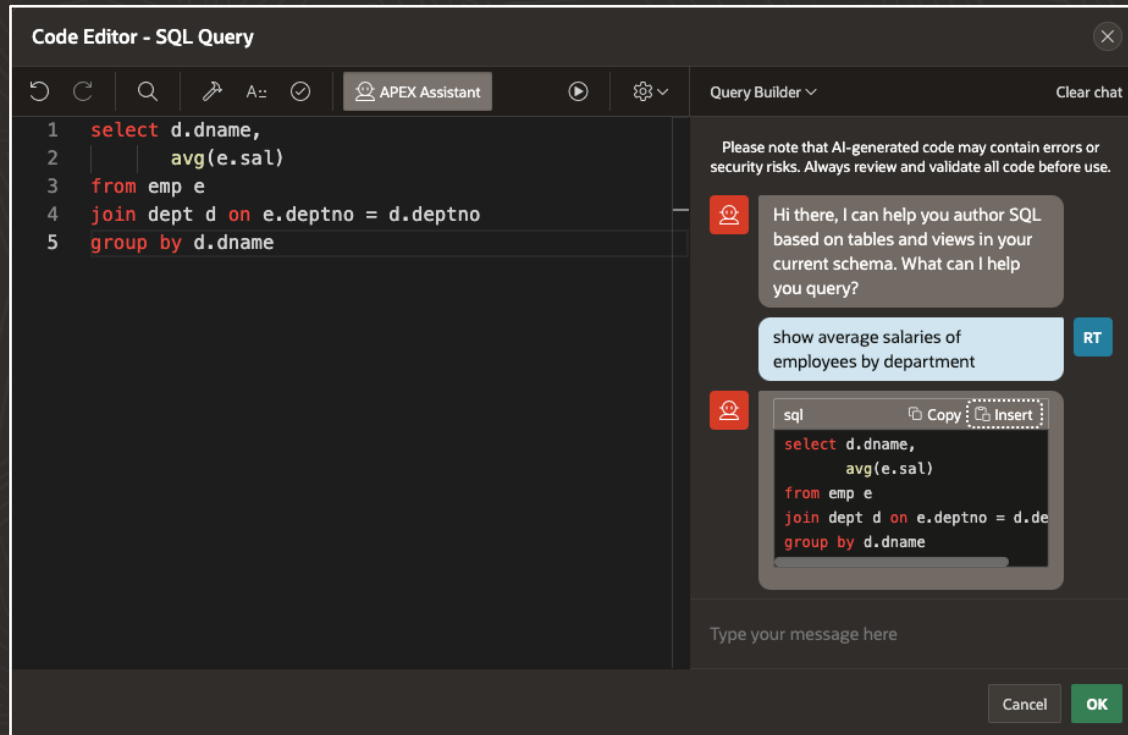
With the following features enabled: **Install Progressive Web App, Push Notifications.**
Would you like to create the application now? Or, if you have any changes, just let me know below!

Create Application

Type your message here

- Generate **Application Blueprint** based on a Prompt
- Leverages **APEX Dictionary Cache** to identify relevant tables.
- Further, **enhance the generated blueprint** with additional instructions

APEX Assistant in Code Editors



- APEX Assistant in Code Editors leverage **Generative AI Services**
- Leverages **APEX Dictionary Cache** to identify relevant tables
- **Generate SQL Queries** for form and report regions using the Query Builder mode
- **Generate PL/SQL, JavaScript, HTML, and CSS** Code using the General Assistance mode
- **Improve & Explain** Quick Actions help improve and understand the selected code

What are AI Configurations?

The screenshot shows the 'Generative AI Configuration' page in APEX. The breadcrumb trail is 'Application 124 \ Shared Components \ Generative AI Configurations \ Create / Edit'. The page has tabs for 'Show All', 'Identification', 'Subscription', 'Generative AI', 'RAG Sources', 'Advanced', and 'Comments'. The 'Identification' tab is active, showing fields for 'Name' (Summarize Project Details) and 'Static ID' (summarize_project_details). The 'Subscription' section shows a 'Subscribe From' dropdown. A message states: 'This is the "master" copy of this Generative AI Configuration. No Generative AI Configuration subscribed to this configuration.' The 'Generative AI' section shows a 'Service' dropdown set to 'Application Default'. The 'System Prompt' section shows a text area with the prompt: '1 Analyze the provided information and generate a concise summary in a single paragraph.' The page has 'Cancel', 'Delete', and 'Apply Changes' buttons.

Application 124 \ Shared Components \ Generative AI Configurations \ Create / Edit

Generative AI Configuration

Cancel Delete Apply Changes

Show All Identification Subscription Generative AI RAG Sources Advanced Comments

Identification

Name Summarize Project Details

Static ID summarize_project_details

Subscription

Subscribe From

This is the "master" copy of this Generative AI Configuration.
No Generative AI Configuration subscribed to this configuration.

Generative AI

Service Application Default

System Prompt

1 Analyze the provided information and generate a concise summary in a single paragraph.

- **AI Configurations** centralize key Generative AI settings.
- Customizable **System Prompt**, **Welcome Message**, and **RAG Sources**.
- Use it in both the **Show AI Assistant** and **Generate Text with AI** Dynamic Actions
- Accessible via the **APEX_AI PL/SQL API** for seamless integration.

RAG Sources - Overview

RAG Source [Cancel] [Delete] [Apply Changes]

Show All Identification Description Source Advanced Server-Side Condition Security Configuration Comments

Identification

Name: Project Details RAG Source

Description

Description:

Source

Type: SQL Query

SQL Query

```

1 SELECT
2   'Project Name : '
3   || PROJECT_NAME
4   || CHR(10)
5   || CHR(13)
6   || 'Milestone Title : '
7   || MILESTONE_TITLE
8   || CHR(10)
9   || CHR(13)
10  || 'Task Name : '
11  || TASK_NAME
12  || CHR(10)
13  || CHR(13)
14  || 'Task Status : '
15  || TASK_STATUS

```

Advanced

Maximum Tokens:

- Use **RAG Sources** to enrich AI conversations with application-specific data.
- Can include **SQL Queries**, **Function Bodies Returning CLOB**, or **Static Text**.
- Use **Authorization Schemes** or **Server-side Conditions** to control which RAG data is included.
- Use **APEX\$AI_ALL_USER_PROMPTS** and **APEX\$AI_LAST_USER_PROMPT** bind variables for custom RAG logic
- Utilize the **AI Configuration** in **Show AI Assistant** and **Generate Text with AI** Dynamic Actions

Interfaz Chat



cual es el mejor municipio para ir a vivir cerca a Madrid?

MO



Determinar el "mejor" municipio para vivir cerca de Madrid es subjetivo y depende de factores como presupuesto, preferencias (tranquilidad vs. urbanidad), familia, trabajo o transporte. Me limitaré a proporcionar información precisa basada en datos sobre municipios de la Comunidad de Madrid, enfocándome en proximidad a la capital (menos de 30-40 km), y destacando servicios como sanidad, educación, deportes, farmacias y gasolineras. Usaré criterios objetivos como densidad de instalaciones para sugerir opciones populares.

Municipios recomendados cercanos a Madrid:

1. **Algete** (a unos 30 km al norte, bien comunicado por A-1 y transporte público):
 - **Sanidad:** Centro de Salud Algete, hospital cercano en San Sebastián de los Reyes. 4 farmacias.
 - **Educación:** Varios colegios (e.g., Padre Jerónimo, Virgen de Valderrabe) e institutos (e.g., Al-Satt).
 - **Deportes:** Ciudad Deportiva Duque de Algete, Pádel Sport Home

Recursos

REST Endpoints:

apex.oracle.com/go/uc3m

Catálogo de Servicios REST:

apex.oracle.com/go/json

Lab: Innovative Q&A Interface Powered by Generative AI

apex.oracle.com/go/nyc-genai

Summary

Oracle APEX

Summary

- Oracle APEX is a strategic platform for the generative development of enterprise apps.
- Everyone can collaborate to quickly describe, iterate, and deliver sophisticated, data-centric enterprise solutions with AI assistance.
- Using both natural language and declarative builders, you capture the intent of your business solutions and the data they require, staying focused on the **WHAT** instead of the **HOW**.

Learn More...

Primary site

apex.oracle.com

APEX Shortcuts

apex.oracle.com/shortcuts

APEX on Autonomous
Tutorials

apex.oracle.com/autonomous

Oracle APEX Education

apex.oracle.com/education

Oracle APEX + AI

apex.oracle.com/go/ai

Gracias!

Monica Godoy

Senior Principal Product Manager

Monica.godoy@oracle.com



ORACLE

Learn more at apex.oracle.com



Our mission is to help people see
data in new ways, discover insights,
unlock endless possibilities.

