

# Oracle APEX 26.1 – New Features

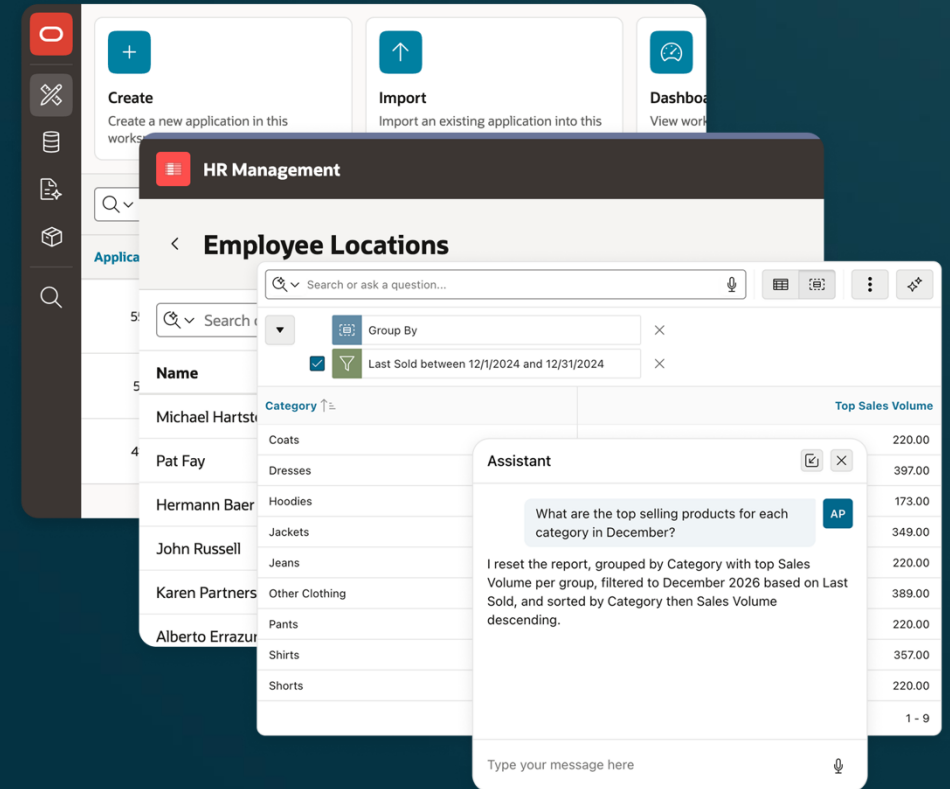
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# Safe Harbor

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

# Generate Intelligent Enterprise Apps You Can Trust with Oracle APEX

- Oracle APEX is trusted worldwide to deliver mission-critical, data-driven applications that are secure, scalable, and built on the Oracle Database.
- Its declarative low-code platform helps teams build enterprise applications faster, with a clear application model that is easier to understand, maintain, and ready for AI-assisted development.
- Oracle APEX is a **fully supported no-cost feature of the Oracle Database**, inheriting all of the enterprise-grade security and governance capabilities.
- Developers build and deploy applications knowing that data access, user management, and application behavior are managed within a consistent, enterprise-ready environment.



## Oracle APEX AI Application Generator 26.1

- One of the most significant APEX releases ever – **Enterprise Low-Code built for the AI era**
- APEX 26.1 brings AI into a **declarative platform designed for trust.**
- Instead of generating large volumes of arbitrary application code, AI in APEX generates application intent: structured, declarative metadata
- **If you generate it, you own it:** APEX gives teams a way to own AI-generated business applications by making the generated artifacts understandable, transparent, and governed from the start.
- Combines proven enterprise-grade capabilities with powerful AI capabilities at both design time and runtime.

# Oracle APEX 26.1: Three Major Innovations

Open Application  
Specification Language  
(APEXlang)

Most important APEX update since introduction. Engineered from ground up to fully exploit generative AI. An open application specification that any AI agent or LLM can generate to.

AI Interactive Reports  
Natural Language  
Reporting

Providing natural language capabilities to the popular APEX reporting component — turning conversational input into declarative trusted report settings.

AI Agents and AI Tools

Build intelligent agents that take safe, declarative action across your applications — an assistant that acts within governed boundaries.

## Oracle APEX 26.1 Availability

- Download from OTN today
- Try Oracle APEX 26.1 for free at [oraclearapex.com](https://oraclearapex.com)
- Rollout across OCI regions and all Oracle multi-cloud deployments beginning in the coming weeks.
- What's New in Oracle APEX 26.1  
[oracle.com/apex/whats-new](https://oracle.com/apex/whats-new)
- Full documentation, release notes, APEXlang resources, videos, and feature deep dives are available from [oracle.com/apex](https://oracle.com/apex)

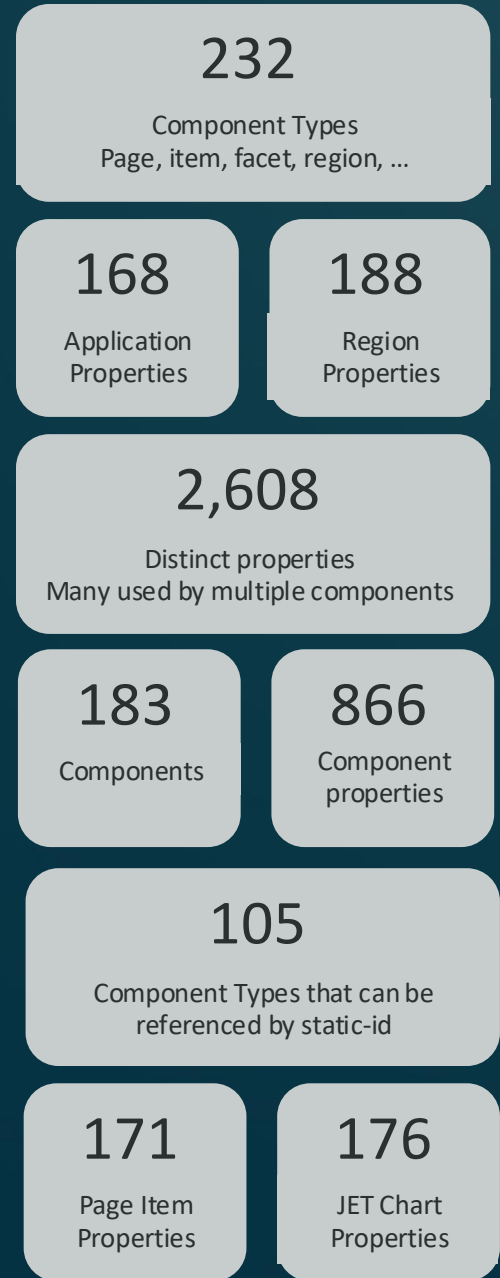
# Oracle Database and Oracle REST Data Services Requirements

- Oracle APEX release 26.1 requires an Oracle Database release 19c with Database Release Update 19.18 (January 2023) or newer.
- On Oracle AI Database 26ai, APEX requires at least Database Version 23.26.0 (October 2025).
- APEX runs on all database editions, including Enterprise Edition (EE), Standard Edition 2 (SE2), and Oracle AI Database 26ai Free.
- Oracle APEX 26.1 requires Oracle REST Data Services (ORDS) 26.1.1 or newer.

# Open Application Specification Language (APEXlang)

# Open Application Specification Language (APEXlang)

- APEXlang is an open, declarative, human-readable text representation of APEX application metadata.
- Applications export as structured .apx files that can be stored in source control, diffed, merged, scanned, and reviewed with standard developer tooling.
- SQLcl can generate, export, validate, and import APEXlang; Oracle SQL Developer for VS Code can edit it natively.
- Static IDs make application metadata stable enough for meaningful diffs and AI-assisted review.
- The result: APEX apps become easier to automate without giving up APEX governance.



# Open Application Specification Language (APEXlang)

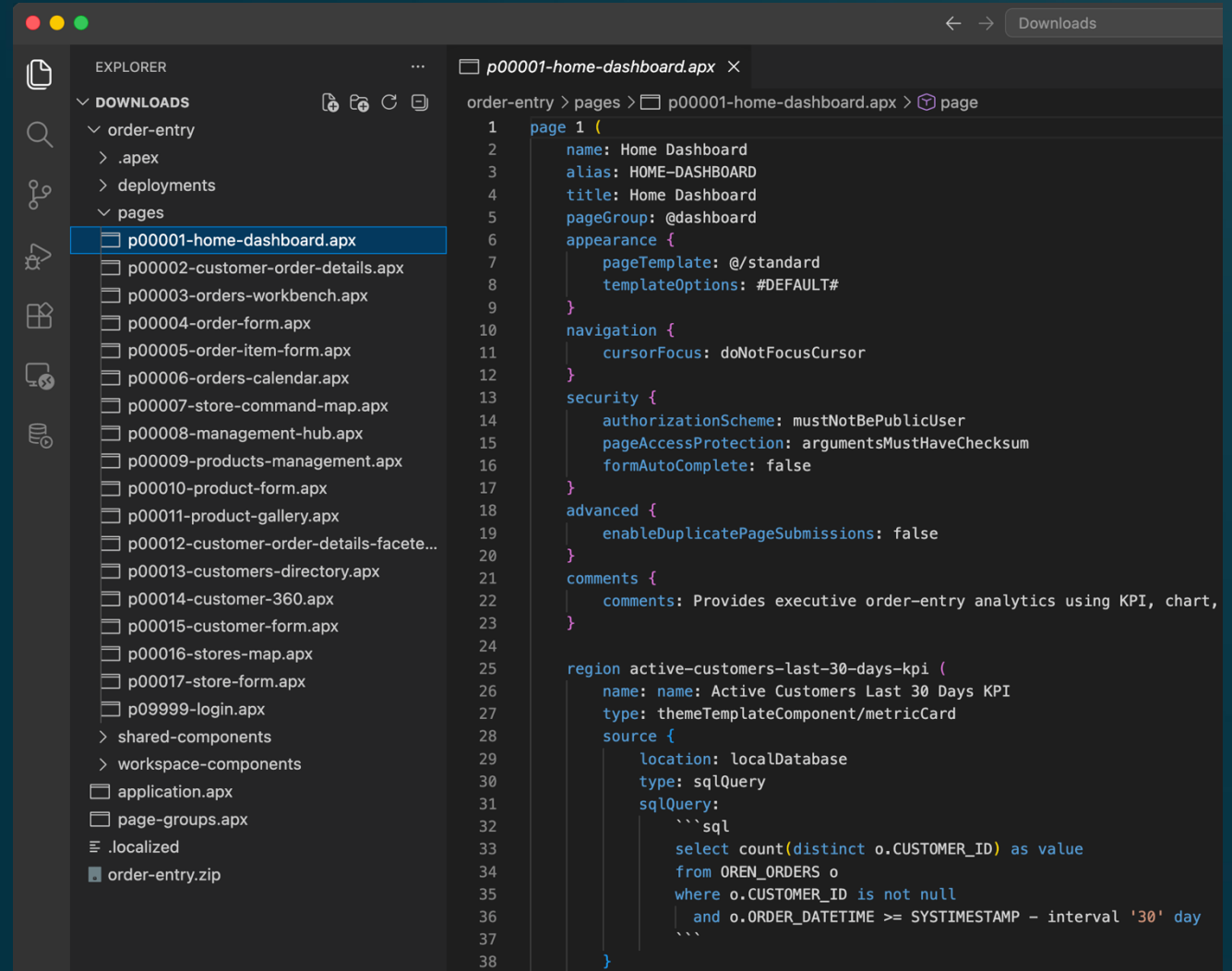
## Why it matters now:

- APEXlang gives AI agents — including OpenAI Codex, Anthropic Claude, and others — an Oracle-supported interface for generating and modifying APEX applications.
- Developers can work through the APEX Application Builder as they do today, or they can work entirely through AI agents and standard editors.
- Both paths produce the same governed artifact.

# Open Application Specification Language (APEXlang)

## Ecosystem integration:

- APEXlang is natively supported in Oracle SQL Developer for VS Code, inheriting industry-standard source control, editing, and AI tooling.
- Oracle SQLcl provides command-line and automation support for CI/CD pipelines and headless environments.



The screenshot shows a VS Code editor window with the Explorer sidebar on the left and a code editor on the right. The Explorer sidebar shows a file tree for 'order-entry' with a folder 'pages' containing several .apex files. The file 'p00001-home-dashboard.apex' is selected. The code editor shows the content of this file, which is an APEXlang page definition. The code is as follows:

```
1 page 1 (  
2   name: Home Dashboard  
3   alias: HOME-DASHBOARD  
4   title: Home Dashboard  
5   pageGroup: @dashboard  
6   appearance {  
7     pageTemplate: @/standard  
8     templateOptions: #DEFAULT#  
9   }  
10  navigation {  
11    cursorFocus: doNotFocusCursor  
12  }  
13  security {  
14    authorizationScheme: mustNotBePublicUser  
15    pageAccessProtection: argumentsMustHaveChecksum  
16    formAutoComplete: false  
17  }  
18  advanced {  
19    enableDuplicatePageSubmissions: false  
20  }  
21  comments {  
22    comments: Provides executive order-entry analytics using KPI, chart,  
23  }  
24  
25  region active-customers-last-30-days-kpi (  
26    name: name: Active Customers Last 30 Days KPI  
27    type: themeTemplateComponent/metricCard  
28    source {  
29      location: localDatabase  
30      type: sqlQuery  
31      sqlQuery:  
32        ```sql  
33        select count(distinct o.CUSTOMER_ID) as value  
34        from OREN_ORDERS o  
35        where o.CUSTOMER_ID is not null  
36        and o.ORDER_DATETIME >= SYSTIMESTAMP - interval '30' day  
37        ```  
38    }  
29  )  
30  )  
31  )  
32  )  
33  )  
34  )  
35  )  
36  )  
37  )  
38  )
```

# Open Application Specification Language (APEXlang)

## What makes it open:

- APEXlang is extensible, can be programmatically generated, is fully documented, has a public grammar, is human-readable and supported.
- It is not open-source but it is also not opaque and can be generated using any AI agent.
- When an AI assistant cannot read or write your application format, you are locked-out of the most significant productivity shift in a generation.

# Open Application Specification Language

APEXlang describes APEX application intent as readable, validatable source.



## Human readable

.apx files are plain text and structured for review.



## Source controlled

Package files work with Git, diffs, review, and merge.



## Validatable

Compiler feedback catches issues before import.



## AI ready

Documented syntax gives agents a clear generation target.



## Native assets

SQL, CSS, JS, and images remain first-class files.



## Portable

The same source can move across APEX environments.

**With APEXlang, the generation target is application intent, not low-level implementation code.**

## Learn More....

### Blog Series



[apex.oracle.com/go/apexlang-blog-series](https://apex.oracle.com/go/apexlang-blog-series)

### YouTube Playlist



[apex.oracle.com/go/apexlang-yt](https://apex.oracle.com/go/apexlang-yt)

# AI Agents and Tools

# AI **Configurations** Agents

**AI Agents** bring a new level of power and flexibility to APEX 26.1. Create an AI Agent and define one or more AI Tools to help users accomplish tasks—from retrieving data to running server-side or client-side code to automating actions.

## **Tool Execution Modes**

You control how each tool participates: augment the initial system prompt during a conversation, or have it called on demand by the AI Service as needed.

## **Managed Agent Loop**

The APEX engine handles the “agent loop” automatically, so you focus on just the parts specific to your application—no boilerplate orchestration required.

AI Agents add conversational AI to applications, helping users retrieve information, run actions, and complete tasks through natural-language interactions.

# AI Tools – Capabilities and Infrastructure

## Plugin Support and Reusable Tools

Intuitive plugin support and reusable tool definitions let you build once and deploy across applications—reducing duplication and accelerating delivery of intelligent features.

## Server and Browser Capabilities

AI Tools support both server-side and client-side (browser) execution, making it simple to deliver intelligent, interactive experiences wherever your users need them.

## Enhanced Infrastructure and Developer Resources

Improved infrastructure and expanded developer resources ensure you can innovate and extend AI capabilities with confidence across your APEX applications.

# AI Agents Tools

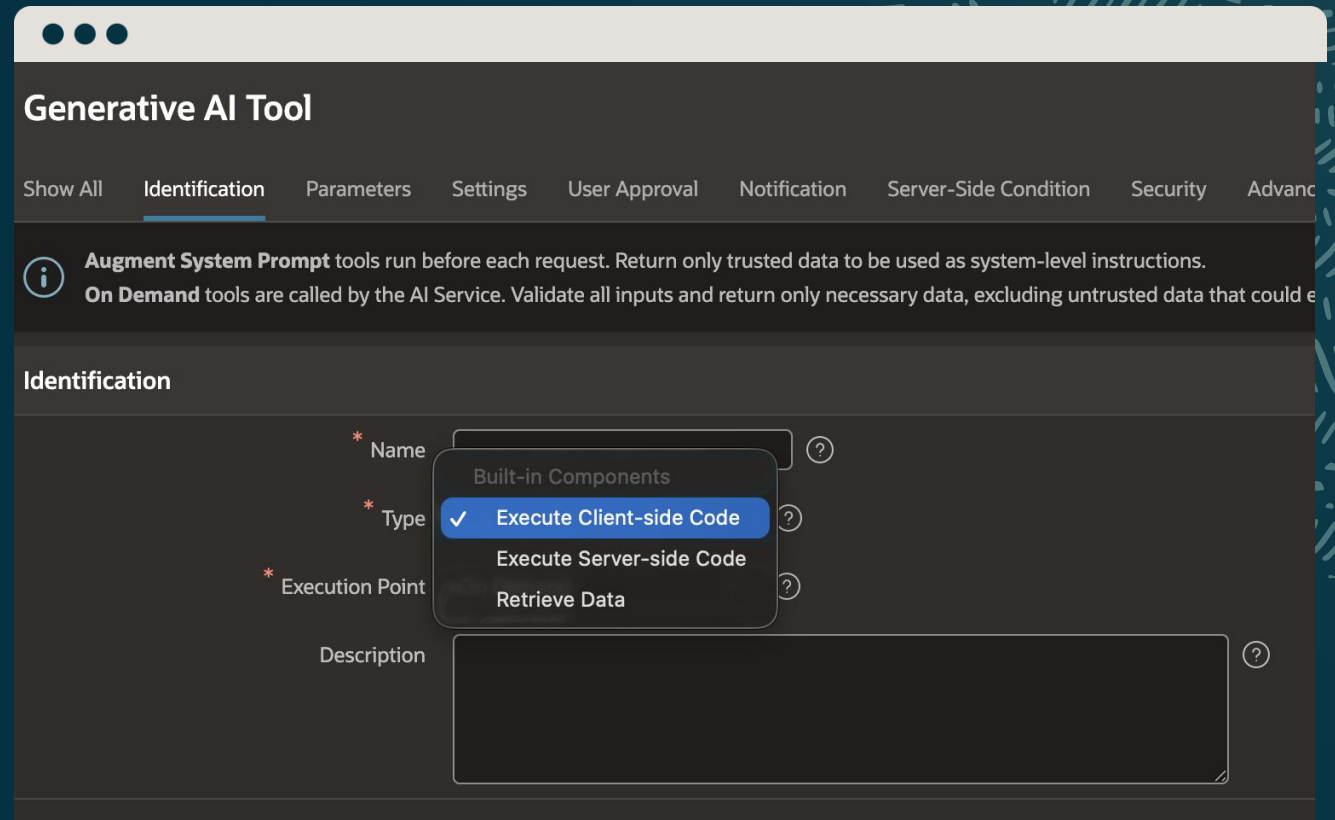
Expose additional capabilities that help the AI Service retrieve data or perform tasks.

Type:

- Retrieve Data
- Execute Server-side Code
- Execute Client-side Code

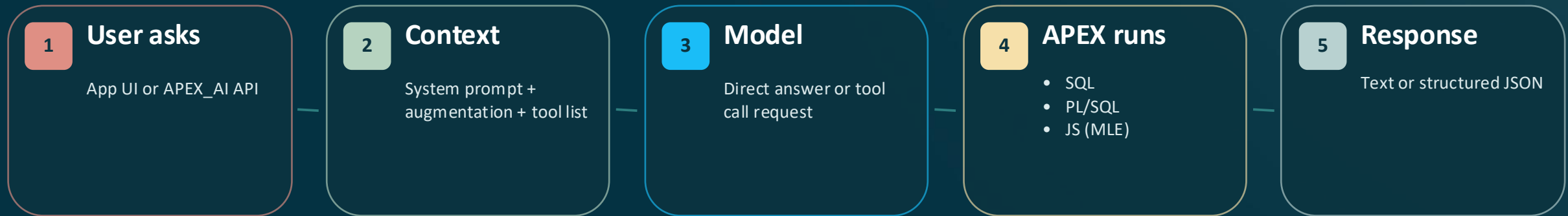
Execution Point

- On Demand
- Augment System Prompt



# The AI Agent Loop: From Prompt to Response

A five-step loop — user asks, APEX assembles context, model reasons, APEX executes tools, response returned.



Tools are developer-defined. The model never directly queries tables or runs arbitrary code.

# AI Tool Approvals: Human-in-the-Loop Guardrails

Sensitive On Demand tools can require explicit approval before execution.

- Agent calls tool
- APEX shows dialog
- User approves or denies execution
- Result returns to the AI model

The screenshot displays the 'Generative AI Tool' configuration interface. The 'User Approval' section is active, showing a toggle for 'Requires Confirmation' which is turned on. The 'Confirmation Title' is set to 'Confirm Purchase Order'. The 'Confirmation Message' field contains a list of instructions: '1 Raise PO for &QUANT to warehouse &WH\_ID'. A modal dialog is overlaid on the screen, titled 'Confirm Purchase Order', with the message: 'Raise PO for 50 units of item 44 from supplier 2 to warehouse 1, expected delivery by 2026-06-25'. The dialog has two buttons: 'Cancel' and 'Raise PO'.

# Natural Language Reporting with AI Interactive Reports

# Talk To Your Data. Trust The Results: AI Interactive Reports

Users explore data in plain language — APEX translates to native IR settings, never generates free-form SQL.

## Natural Language support for Interactive Reports

New capability in APEX 26.1 that enables users to apply formatting, filters, highlights, and visualizations without needing to navigate menus. It allows users to conversationally explore their data.

### Specific Benefits

- Allows users to ask natural language questions of the data
- The interpretation of the users' intent is indicated as "chips"
- Chips are editable and can be changed conversationally or via UI
- All data reported is always accurate

### Conversational features

- Apply filters
- Apply highlights
- Apply sorting
- Show/hide columns
- Apply control breaks
- Perform Group Bys
- Aggregate data
- Pivot
- Chart data (Bar / Pie / Line)
- Pagination
- Save Reports
- Reset report state

Configure Generative AI Service → set in App AI Attributes → Default Search Mode becomes "Search with AI"

# Oracle APEX AI Interactive Reports

**Employees Report**

show me employees in europe that work remotely, break by manager, order by career

City = \* Country in "IE, GB, FR, DE, ES, NL, AT" Manager

Manager: **Johnson, Erica**

Name	Title	Career Level	City	Country
Smith, Daniel	Senior Software Engineer	IC4	*	NL
Nguyen, Linh	Software Engineer	IC3	*	NL
Patel, Rohan	DevOps Engineer	IC3	*	NL
Kowalski, Marta	QA Automation Engineer	IC2	*	GB

Manager: **Martinez, Carlos**

Name	Title	Career Level	City	Country
Hernandez, Sofia	Senior Software Engineer	IC4	*	ES
Reyes, Alejandro	Software Engineer	IC3	*	ES
Gomez, Valeria	Content Strategist	IC2	*	ES

Users ask natural language questions that are **restricted to data in a pre-defined data view**

AI is used to convert the question into filters, aggregations, and other settings that are shown to users and can be **easily understood and edited**

## Learn More....

AI IR Blog



[apex.oracle.com/go/ai-ir-blog](https://apex.oracle.com/go/ai-ir-blog)

AI IR Hands-on Lab



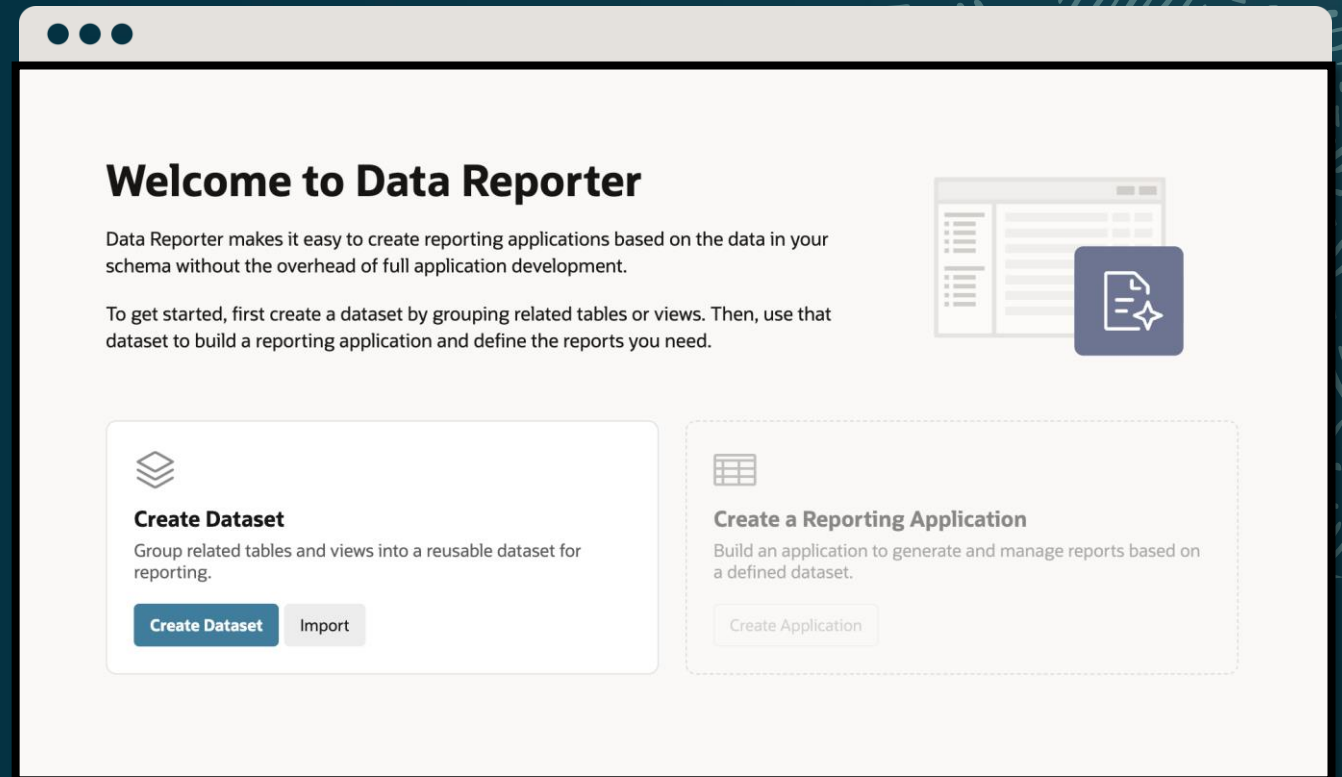
[apex.oracle.com/go/ai-ir-lab](https://apex.oracle.com/go/ai-ir-lab)

# Oracle APEX Data Reporter: Self-Service Reporting for Trusted Data

# Data Reporter

A dedicated APEX reporting module for business-led, governed self-service reporting

- A new reporting experience in APEX that lets business users create and manage reports without APEX application development expertise
- No SQL required for report creation
- Administrators define trusted datasets and control access, while Editors build and publish reports through a streamlined self-service interface.
- Private drafts before publishing
- Published reports can be shared by URL, making it easy to deliver trusted reporting across the organization.



# Data Reporter: Security & Scalability

How the feature stays safe as usage scales

## Datasets

Curated workspace-level collections of tables/views, bound the data available to report authors

## Roles

Editors create and manage reports

Viewers only see and interact with published reports

## Reporting Applications

Package one or more datasets with identity, authentication, AI settings, and end-users

## Lifecycle

Admins can synchronize changed objects, monitor activity, and move through export/import

# Other Platform Enhancements

# What's Inside

Seven areas of Platform Enhancements

## 01 Developer Experience

Builder UI, search, and richer diffs

---

## 03 Workflow

Parallel paths, APIs, and tenant context

---

## 05 Security

CSP, Fusion roles, and workspace SMTP

---

## 07 Components

Reports, buttons, actions, and data entry

---

## 02 Translations

Text Messages plus CSV and XLIFF files

---

## 04 Universal Theme

Iris style, components, and directives

---

## 06 Map Region

Vector tiles, background maps, and JS APIs

---

# Developer Experience



## Refined Builder Experience

A cleaner, more modern Builder UI featuring updates across Page Designer, shared components, navigation, dialogs, and other Builder pages — making everyday development smoother.



## Workspace Search

Quickly find workspaces from the sign-in and workspace selection screen, and sort by recent login to surface the workspaces you use most.

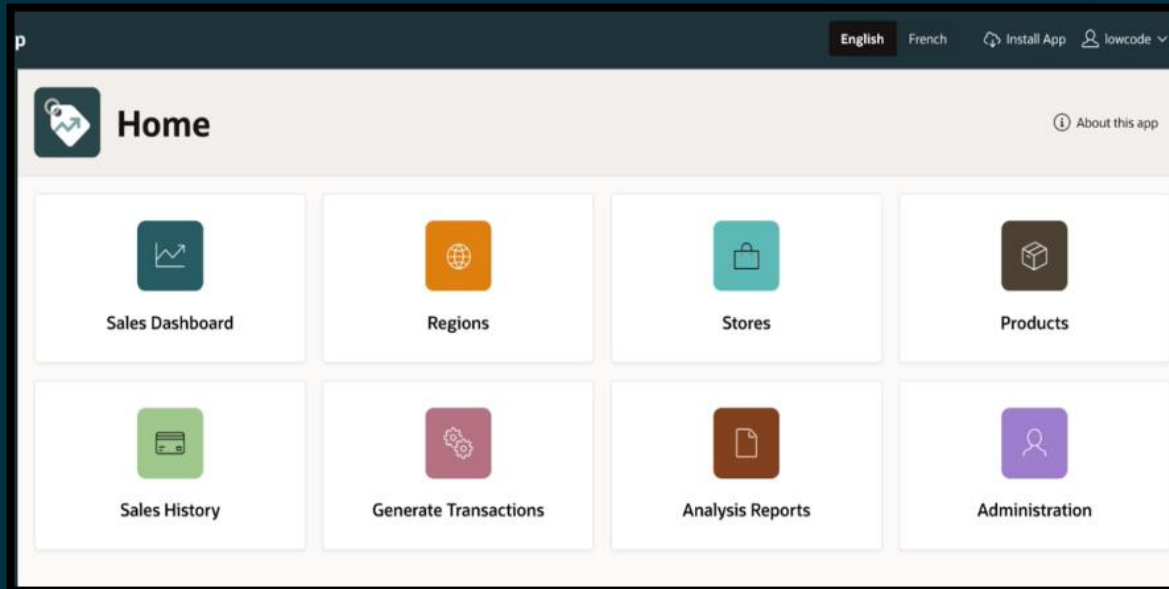


## Context-Rich Diff Views

Review changes with more context in Working Copy diff views — component names, types, and APEXlang syntax highlighting make edits easier to understand at a glance.

# Translations

Simplified Localization: Manage multiple languages in a Single Application



## Seed Translatable Text

Convert application text into reusable Text Messages so labels and other user-facing strings can be managed in one place and kept in sync as the application evolves.

## Standard Translation Formats

Export and import translated text messages using CSV, XLIFF, or ZIP files to support manual translation workflows and external localization services.

# Text Message Translations

Deploy a single application that serves multiple languages — no translated copies to maintain.



**Primary App (101)**  
Source application



**Text Message-Based**  
Use text messages for translation



**Add Languages**  
Add and manage target languages



**Text Messages**  
Extract translatable text from the app



**Export**  
zip, individual, XLIFF or CSV



**Translate & Import**  
Translate files and import back



**Single Application**  
One app, multiple languages

# Workflow Parallel Flows: Branch, Execute, Converge

APEX Workflow 26.1 adds parallel branch execution, AI integration, and automatic upgrade resume.

## Parallel Flow

Parallel Flow runs multiple branches at the same time and completes only when all branches finish - enabling more flexible, scalable workflow designs. If any branch fails, the whole flow fails.

## AI + Runtime

- "Generate Text with AI" Activity writes output into the Workflow state. Use this activity to perform ready-made AI actions like summarizing, translating, generating tags, or drafting emails.
- App exports can include runtime instances; APEXlang exports do not. Upgrade-suspended workflows resume automatically.

## Workflow APIs

Simplify workflow administration with APIs for deleting instances, resuming suspended workflows after upgrades, setting task due dates, refreshing admin roles, and exporting workflows.

The screenshot displays the APEX Workflow Designer interface. The main window shows a workflow definition for 'Employee Onboarding' with a 'Generate Email' activity highlighted. The right-hand panel shows the configuration for the 'Generate Text With AI' activity, including a system prompt and input/output values. An inset window shows a detailed view of the 'On boarding Tasks' parallel flow, which includes three tasks: 'Allocate Laptop', 'Provision Email', and 'HR Induction'.



# How Tenant Isolation Works in Workflows and Tasks

APEX captures the session Tenant ID at workflow/task creation, persists it, and filters all runtime views automatically



## Workflow Instance Tables

Workflow instance rows persist Tenant ID — Workflow Console filters by current tenant automatically.

## Unified Task List

End users see only tasks assigned within their tenant scope.

## Task Instance Tables

Task instance rows persist Tenant ID — Unified Task List filters by current tenant automatically.

## Custom Queries

Review custom reports or APIs querying workflow/task tables — add tenant filter if needed.

## Workflow Console

Administrators see only their tenant's workflow instances and history.

## Developer Validation

Create Tenant A and B sessions — verify zero cross-tenant visibility in Console and Task List.

# Universal Theme Enhancements



## Universal Theme + Iris Style

Introduces the new Iris style with an updated Oracle-branded look, accessibility improvements, and expanded icon support through Font APEX 2.5.



## Rich Template Components

Build richer, more flexible user interfaces with client-side partials, template directives, autocomplete support, and improved template component capabilities.



## More Powerful Template Directives

Extend template directive support across item, region, list, and page templates while improving the overall authoring experience for developers.

# Security and Compliance



## CSP Enhancements

Move closer to full Content Security Policy compliance by removing unsafe-hashes and replacing inline display behavior with safer class-based rendering.



## Fusion Extensions Security

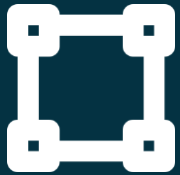
Align APEX extension security with Fusion roles and policies, controlling access to both Fusion data and custom APEX data in mashup applications.



## Workspace-level SMTP

Configure workspace-specific SMTP credentials via Web Credentials, while retaining instance-level email server config for declarative delivery.

# Map Region Enhancements



## Vector Tile Layer Support

Use vector tile layers to render large geospatial datasets more efficiently with smoother interaction and improved scalability across zoom levels.



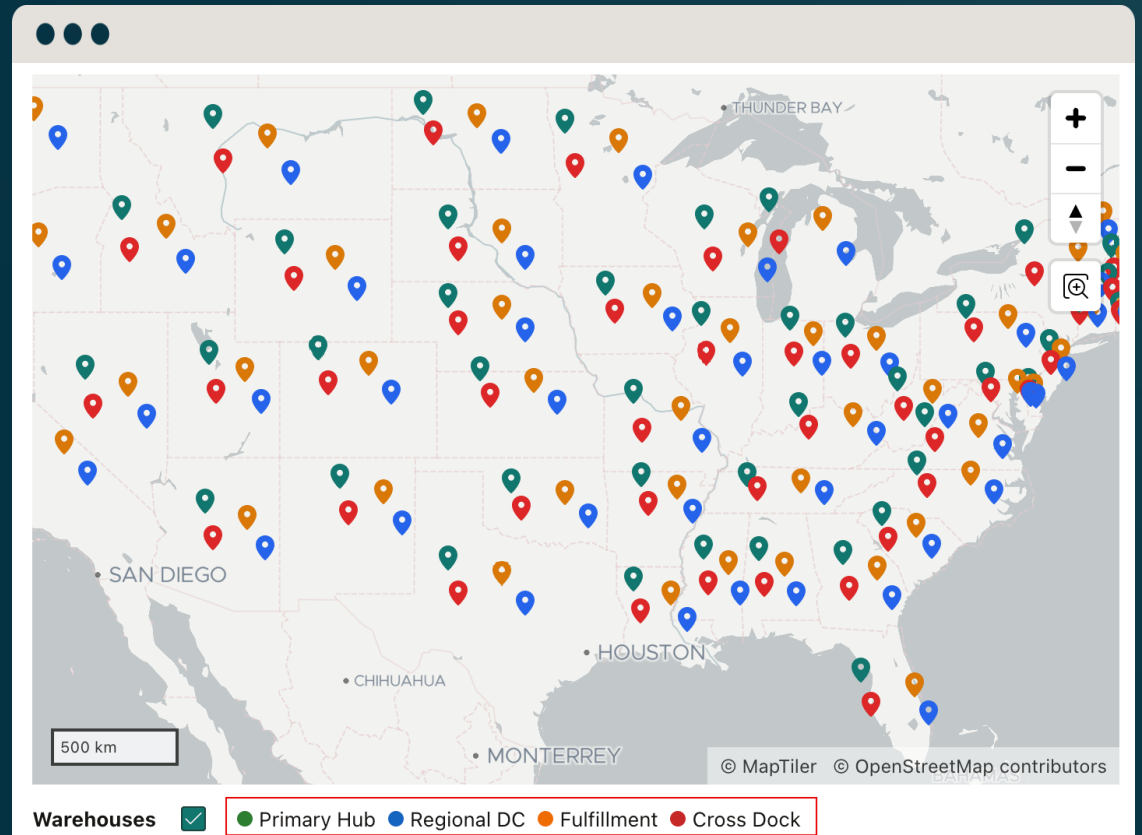
## Advanced Background Maps

Configure custom background maps using raster tiles, vector tiles, and OGC map services for more flexible and modern map presentation experiences.



## JavaScript Map Control

Use new JavaScript APIs to control map behavior, styling, and interaction more precisely in custom APEX applications.



# Component Updates



## More Powerful Interactive Reports

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Row selection capability and improved filtering support for template component columns, making reports more interactive than ever.



## Declarative Menu Buttons

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Add menus directly to buttons from Page Designer to create cleaner action menus and more flexible UIs without custom JavaScript.



## Enhanced Dynamic Actions

---

Declarative support for buttons and menus, plus new actions: Show Success, Show Error, and Wait Popup for richer interaction flows.



## Faster Data Entry Experiences

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Paste from clipboard into Interactive Grids and enable infinite scrolling for LOV and autocomplete fields to improve data entry workflows.

**20+** new types

### Trigger Actions

- Actions, Buttons, Cards, and Menus define DAs directly in Page Designer

**3** new Dynamic Actions

### Page Messages

- Show Success Message
- Show Error Message
- Clear Errors

**2** new DAs

### IR Dialogs

- **Invoke IR Dialog** is a declarative DA for opening Interactive Report dialogs such as Select Columns, Filter, Highlight, and Download without relying on the Actions menu or custom JavaScript.

**2** new DAs

### AI Inputs

- Open AI Assistant and Generate Text with AI expose Items to Submit
- Server-side Code shows item-level spinners.

## Dynamic Actions: Declarative Power, Less JavaScript

**Developer Check:** Retest Items to Submit/Return paths, validation messages, and long-running PL/SQL flows after enabling new DA types.

# Interactive Grid: Key Enhancements

## Customer Product Orders

<input type="checkbox"/>	☰	Order Datetime	Order Status	Customer Id	Email Address
<input checked="" type="checkbox"/>	☰	3/12/2025	CANCELLED	3	gary.jenkins@inter
<input type="checkbox"/>	☰	3/16/2025	COMPLETED		
<input type="checkbox"/>	☰	3/17/2025	COMPLETED		
<input type="checkbox"/>	☰	3/18/2025	COMPLETED		
<input type="checkbox"/>	☰	3/19/2025	COMPLETED		
<input type="checkbox"/>	☰	3/21/2025	COMPLETED		
<input type="checkbox"/>	☰	3/29/2025	COMPLETED		
<input type="checkbox"/>	☰	3/30/2025	COMPLETED		

Search: All Text Columns

Actions ▾ Edit Save Add Row

- Columns
- Filter
- Data >
- Format >
- Selection >
- Chart
- Report >
- Download

Cell Selection F8

- Copy ⌘ C
- Cut ⌘ X
- Paste ⌘ V
- Paste Insert ⇧ ⌘ V

Duplicate Rows

### Copy and Paste

Copy · Cut · Paste · Paste Insert - full clipboard support. Range movement works outside edit mode.

### View Selector

Switch between Grid, Icon, and Detail views. Combine with Faceted Search and Smart Filters.

### Column CSS & Formatting

Interactive Grid columns also support CSS classes - unify styling across IR and IG components.

# There's a Lot More in APEX 26.1

90+ features across AI, development, platform, UX, APIs, and security.

## AI & Intelligence

- APEXlang
- AI Agents & AI Tools
- AI Interactive Reports
- Data Reporter
- Major AI Provider Support
- APEX\_AI Attachments
- Interactive Report Row Selection

## Builder & Development

- Refreshed Builder UX
- Universal Theme 26.1
- Iris Theme Style
- Template Component Filtering
- Search & Smart Filters
- Faceted Search Exclude
- Workspace Search on Login
- Context-Rich Diff Views
- Upgrade App Wizard
- Builder Extension Backlinks

## Data & Integration

- Custom Link Attributes
- Built-in Sample Data Sets
- Message-Based Translations
- Seed Translatable Text
- Translation Import / Export
- Parallel Workflows
- Workflow API Enhancements
- Tenant-Aware Workflows
- Workflow Instance Titles
- Workflow Runtime Enhancements

## Dynamic Actions & UI

- Declarative Menu Buttons
- Trigger Actions
- Dynamic Action Button/Menu
- Show Success Dynamic Action
- Show Error Dynamic Action
- Wait Popup Option
- Paste from Clipboard to Grid
- Infinite Scroll for LOV

## REST & Security

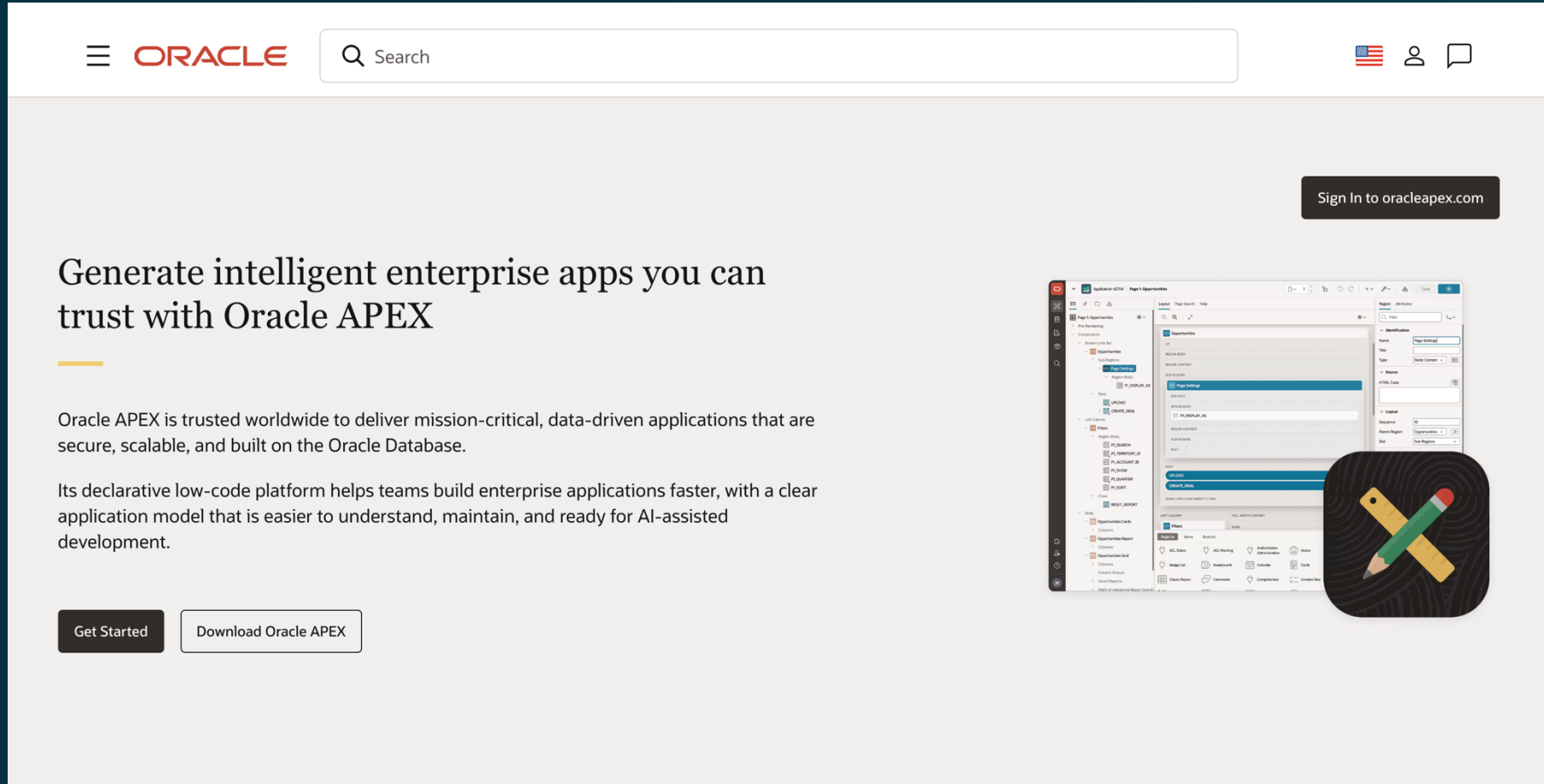
- REST Body Template Directives
- Dynamic OAuth Scopes
- Signed Assertions
- OAuth2 Password Credential
- OAuth2 Refresh Tokens
- Map Region Enhancements
- Vector Tile Layers
- Content Security Policy
- Fusion Extensions Security

## APIs & Platform

- JavaScript Map Control APIs
- Bounding Box Support
- Font APEX 2.5
- Template Component Enhancements
- Template Directive Enhancements
- Advanced Background Maps
- REST Data Source Enhancements
- OData CRUD Support
- Dynamic REST Source Params
- Instance Admin Enhancements

and more... see [oraclepex.com/26.1](https://oraclepex.com/26.1) for the complete list

# Everything about Oracle APEX



The screenshot shows the Oracle APEX website homepage. At the top left is the Oracle logo and a search bar. At the top right are icons for a flag, a user profile, and a chat bubble. A dark button labeled "Sign In to oracleapex.com" is positioned in the upper right area. The main heading reads "Generate intelligent enterprise apps you can trust with Oracle APEX". Below this, two paragraphs describe the platform's security and low-code capabilities. At the bottom left are two buttons: "Get Started" and "Download Oracle APEX". On the right side, there is a screenshot of the APEX development interface and a circular icon with two crossed pencils.

**ORACLE** Search

Sign In to oracleapex.com

## Generate intelligent enterprise apps you can trust with Oracle APEX


Oracle APEX is trusted worldwide to deliver mission-critical, data-driven applications that are secure, scalable, and built on the Oracle Database.

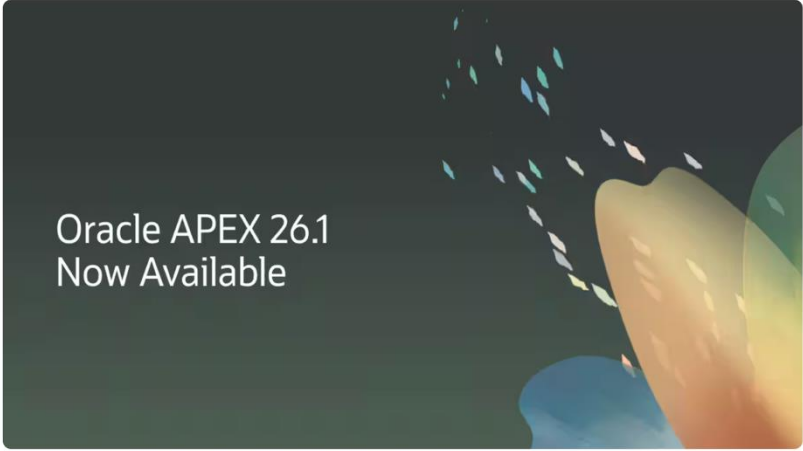
Its declarative low-code platform helps teams build enterprise applications faster, with a clear application model that is easier to understand, maintain, and ready for AI-assisted development.

Get Started Download Oracle APEX

<https://www.oracle.com/APEX/>


# Oracle APEX Blogs

Oracle APEX Follow: 



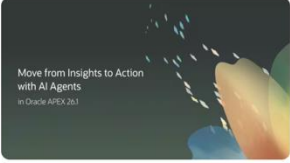
**Announcing Oracle APEX 26.1 General Availability**

Michael Hichwa  
4 minute read




**Introducing APEXlang: The Future of Generative Application ...**

Chaitanya Koratamaddi  
Ashwin Rao  
5 minute read



**Move from Insights to Action with AI Agents in Oracle APEX**

Chaitanya Koratamaddi  
Toufiq Mohammed  
10 minute read



**Talk to Your Data, Trust the result. Introducing APEX AI Interactive ...**

Chaitanya Koratamaddi  
Sahaana Manavalan  
7 minute read



<https://blogs.oracle.com/APEX/>

# Get Started / Q&A

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Download Oracle APEX 26.1

Try it free at [oracleapex.com](https://oracleapex.com)

Review release notes and docs at [oracle.com/apex](https://oracle.com/apex)

Explore APEXlang, AI Interactive Reports, AI Agents, and Data Reporter