APEX

ORACLE

Oracle APEX 21.1

New Features

Name
Presenter's Title
Organization, Division or Business Unit
Month 00, 2021

- Maps Region
- New Application Data Loading
- Faceted Search Enhancements
- UI and Theme Roller Updates
- Improvements to REST Data Sources
- Native Markdown Support
- New Data Picker Item Type
- Security Improvements
- Developer Experience
- Reporting Improvements
- Additional Features
- JavaScript Library Upgrades

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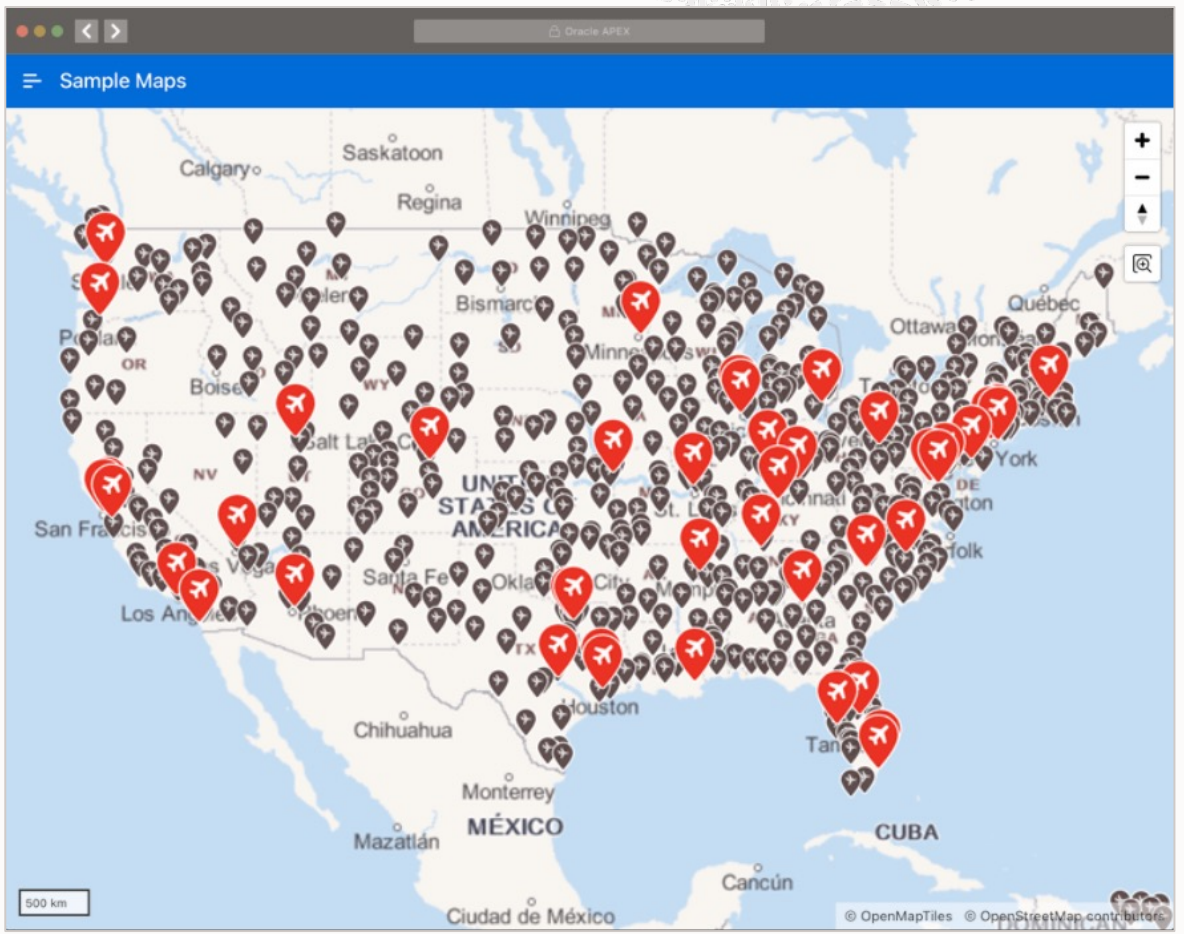
Native Map Region Type

You can now visualize location data on a map with the new native Map Component in APEX 21.1.

- Point, Line, Polygon, Heat Map and "3D Polygon" (Extruded Polygon) layer types.
- Background maps from the Oracle Elocation Service. Ready to use, no API Key required.
- Fully Interactive: Drag and Zoom, show details about objects on the map.
- Oracle Spatial (SDO_GEOMETRY), GeoJSON and simple numeric columns.



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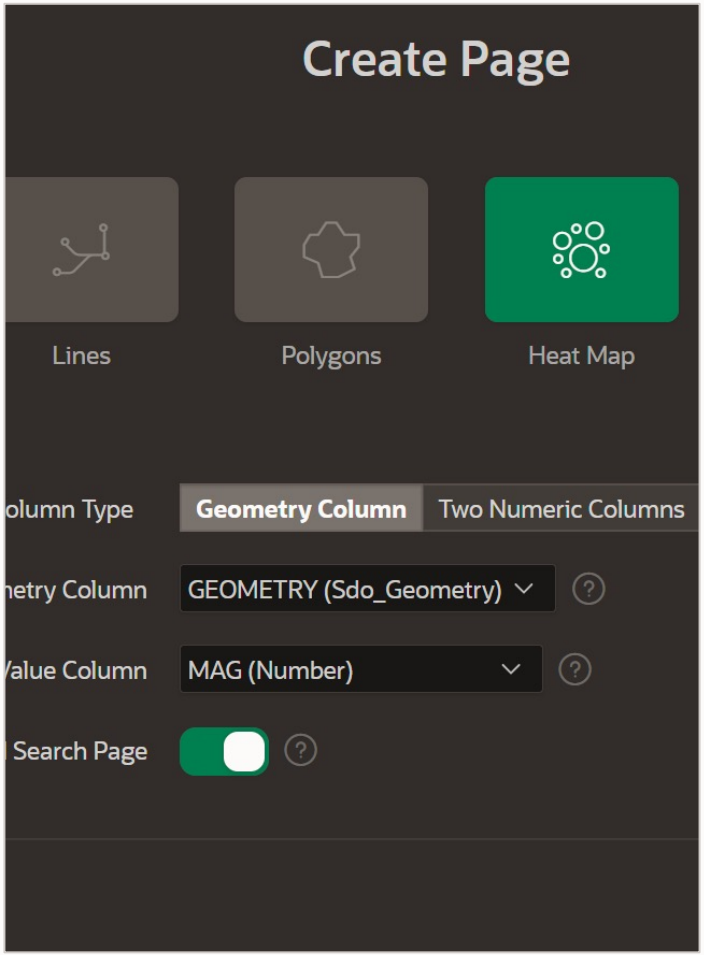
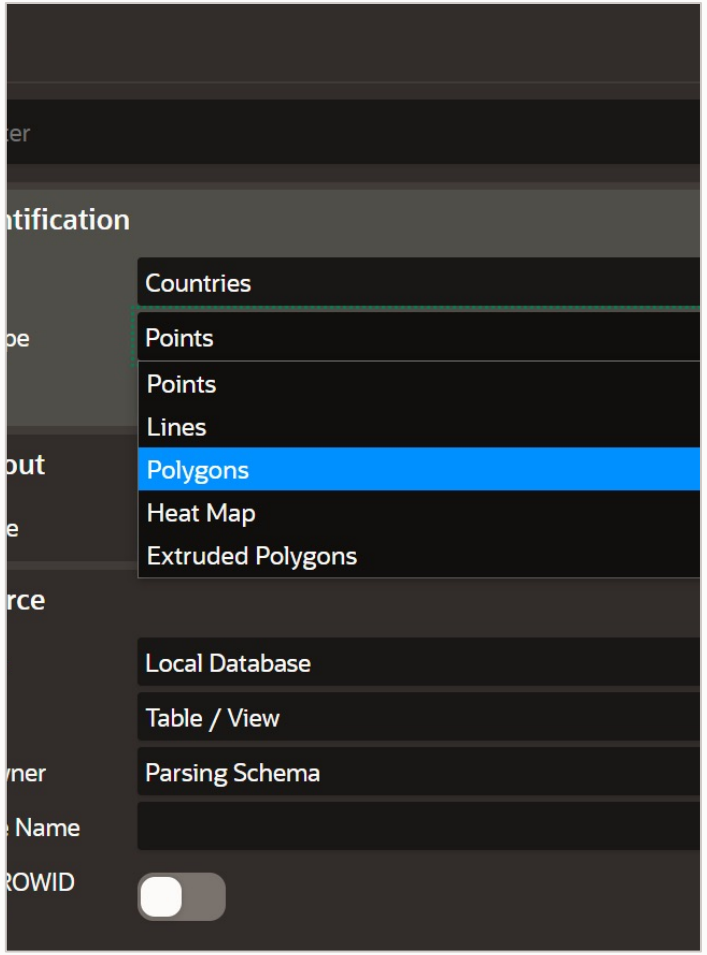
Native Map Region Type





- Leverages Oracle Spatial (Indexes, Coordinate Transformations), if available.
- Visualize data from local SQL queries, REST Enabled SQL or from REST Data Sources.
- Rich set of built-in marker icons and SVG shapes.
- Built-in color schemes for thematic visualizations.
- *Faceted Search* integration.
- Dynamic Action support and JavaScript API.

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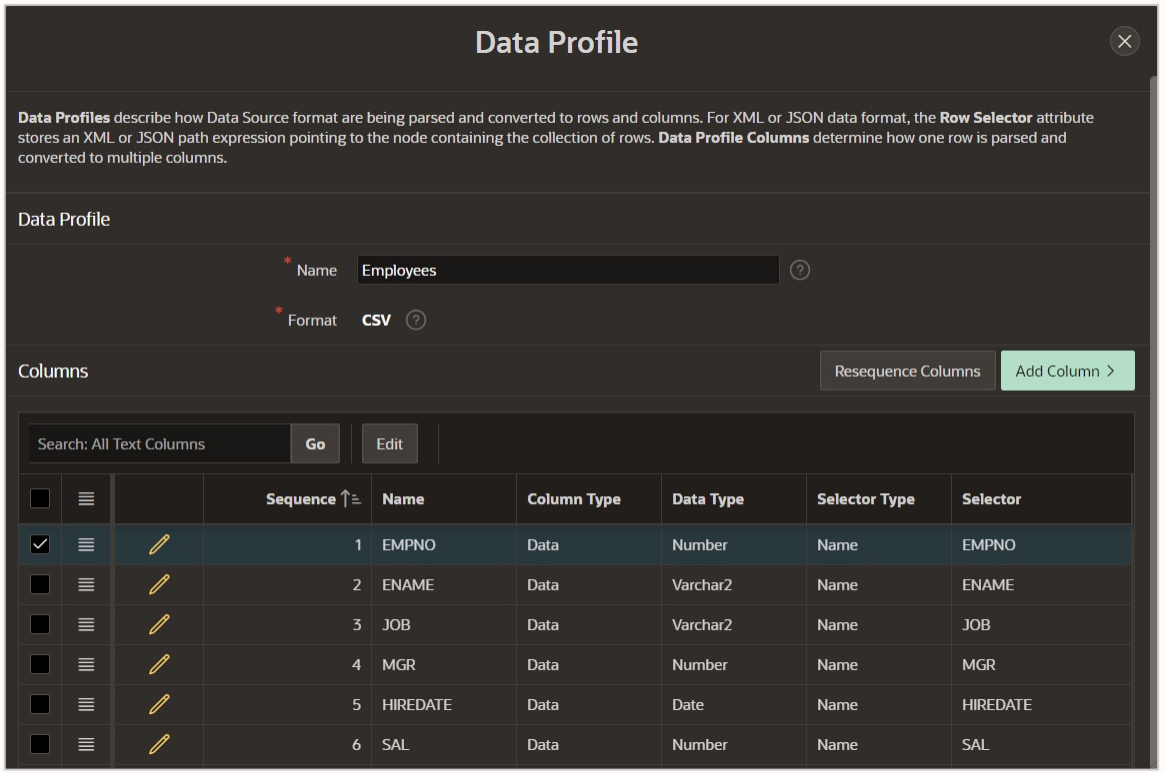
New Application Data Loading

New Application Data Loading functionality, which supports CSV, XLSX, XML and JSON formats.

- *Column Mapping* at design time; no burden for end users any more.
- Flexible column mappings based on simple names or regular expressions.
- Data Conversion with Transformation Rules or Lookup Queries.
- Super-Easy flow for end users: Just upload the file, verify the preview and load data.



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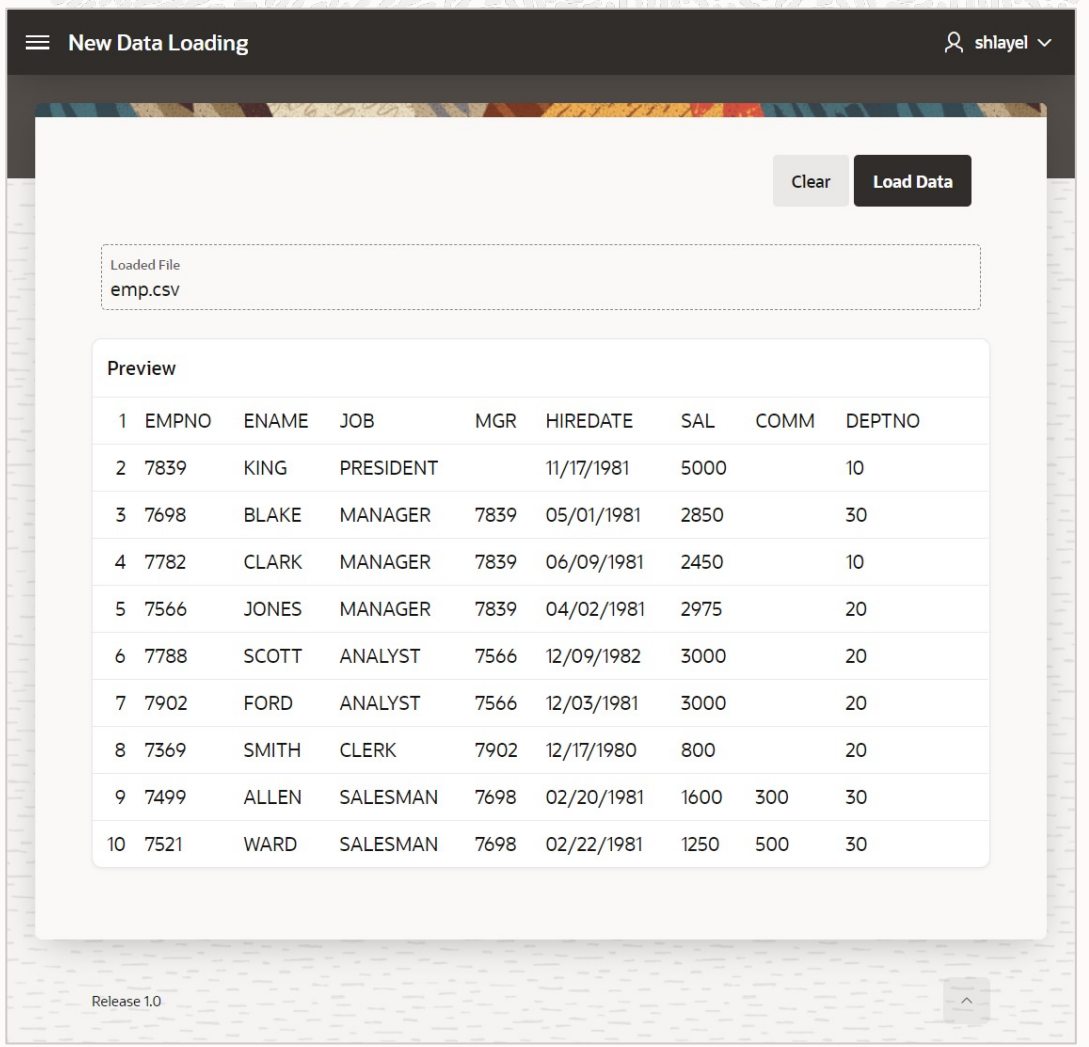
New Application Data Loading

- CSV, XLSX, XML, and JSON data formats can be loaded to Tables or Collections.
- Configure data loading to Append, Merge or Replace data, with or without Error Handling.
- Simple new Process Type **Data Loading**: Customize Data Loading pages as you wish.
- PL/SQL API **APEX_DATA_LOADING** available for custom processing.



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Faceted Search Enhancements

Optional Facets with end user customization

- Facet and Facet Groups now have two new Page Designer attributes under 'Advanced' called 'Display Toggling' and 'Initially Displayed'.
- If ‘Display Toggling’ = On, End-Users can Show or Hide that facet from a new "More Facets" popup.
- Use case: Hide some advanced and rarely used Facets out-of-the-box, but make them available on-demand.
- Your faceted search now supports Calendar and Map regions.

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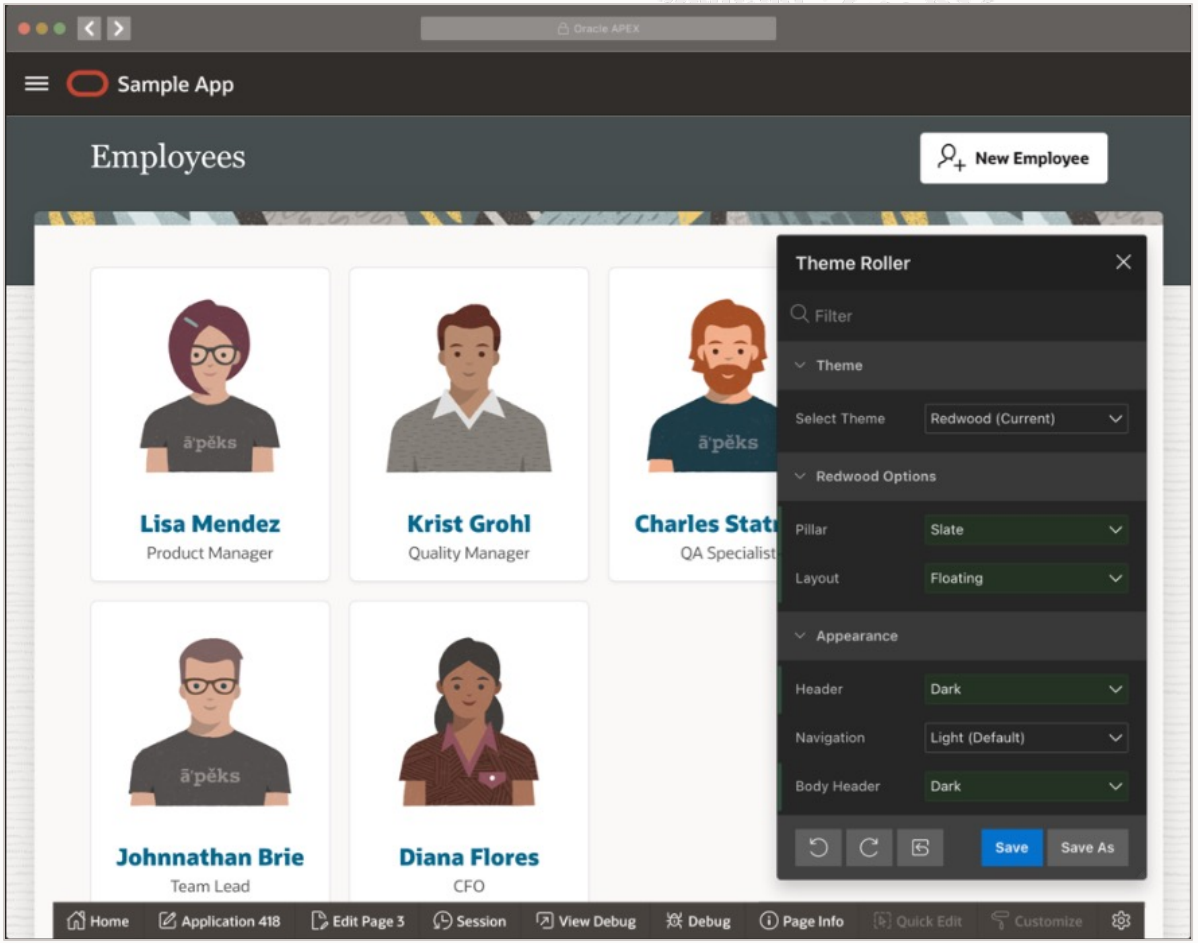
UI and Theme Roller Updates

- Enhanced "Redwood Light" Theme Style which is more inline with the Redwood Design System.
- New "Row CSS Classes" Page Designer attribute added to Region, Page Item, and Item Buttons.
- New "Theme Style Page CSS Classes" attribute added to Theme Styles (see Shared Components -> Theme -> Theme Styles).



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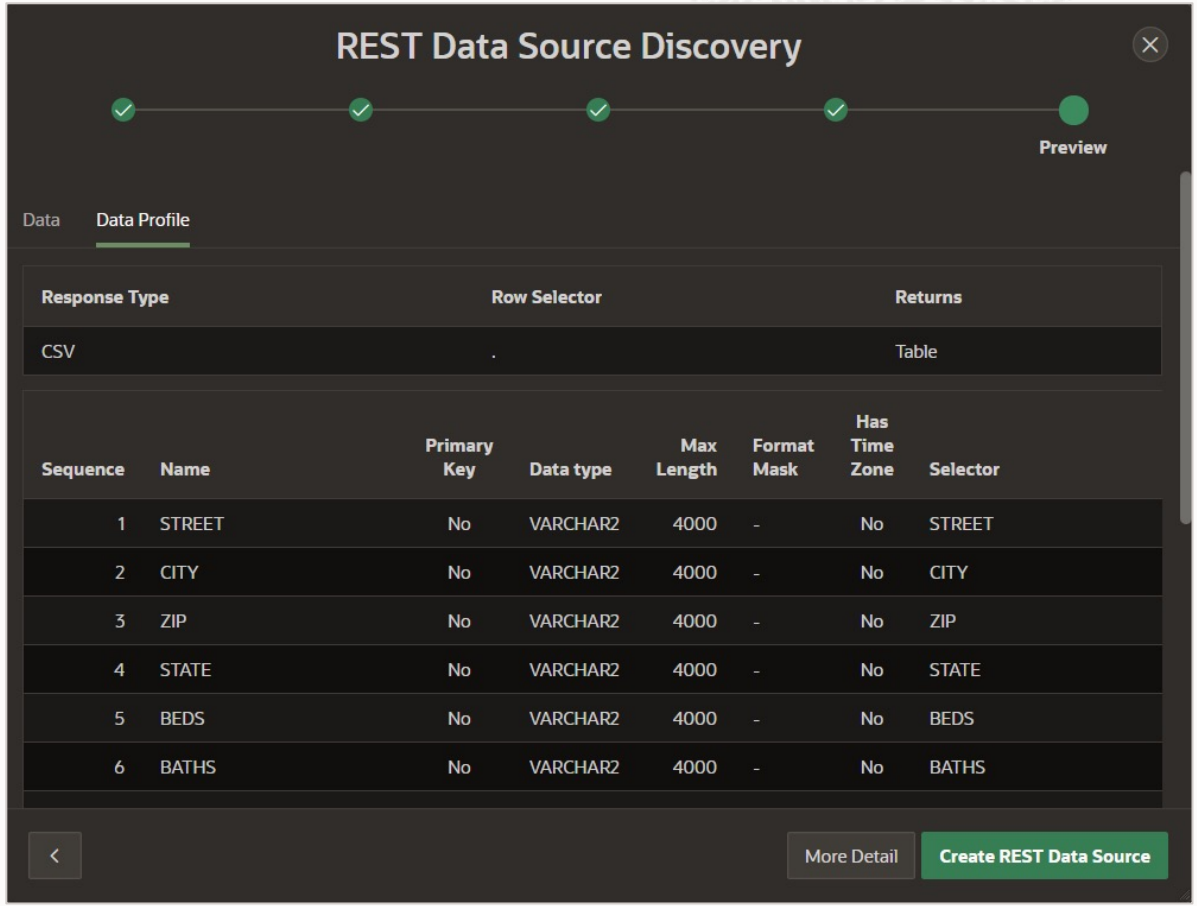
Improvements to REST Data Sources

- Support for CSV data:
  Use *Synchronization* to schedule frequent loading of CSV data from the web to a local table.
- Data conversions using Transformation Rules and Lookup Queries.
- New Overview report on defined REST Data *Synchronizations* in Shared Components, REST Data Sources.



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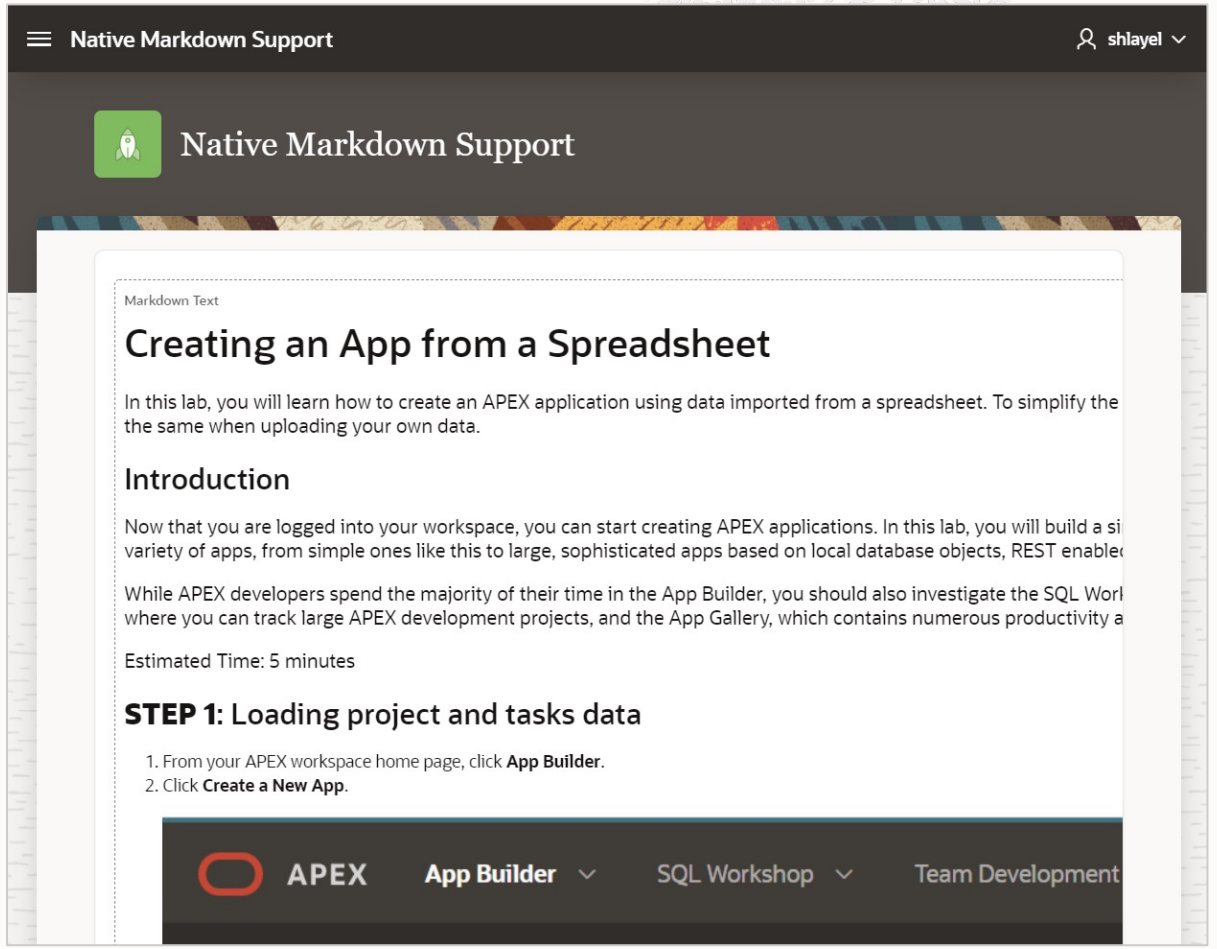
Native Markdown Support

- New public PL/SQL API, **APEX_MARKDOWN**, to convert Markdown into HTML.
- Enhanced ‘Display Only’ item type which supports Markdown. Added new ‘Format’ attribute and removed ‘Escape Special Characters’ flag.
- Renamed ‘Markdown’ Classic Report Column Type to ‘Rich Text’.
- New ‘Rich Text’ Interactive Report column type.
- Markdown support added to HTML format of Data Export.
- Changed default of Rich Text Editor, Rich Text to use Markdown as secure out-of-the-box default



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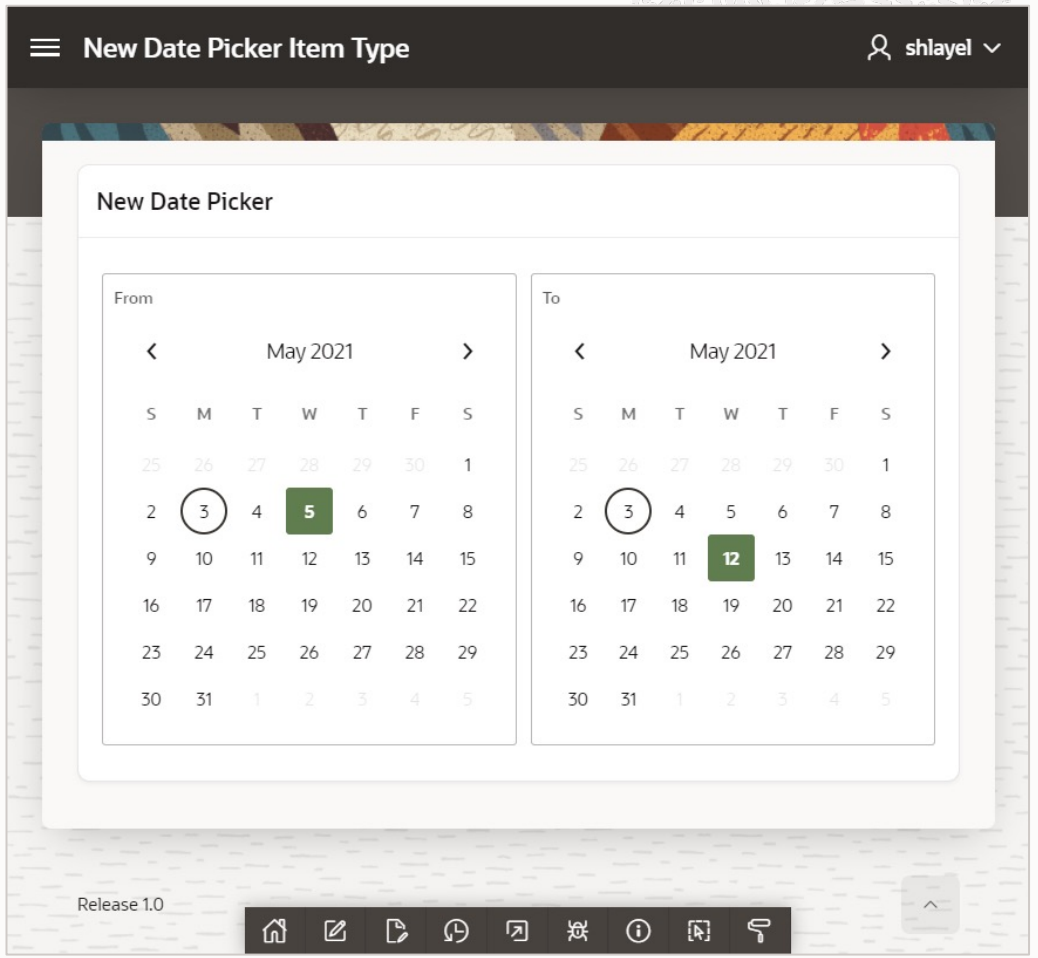
New Date Picker Item Type

New Date Picker item type. This new modern, accessible item type is based on the Oracle JET Input Date Time, featuring.

- Supports different display modes: JET-based Popup and Inline, and also Native HTML (no-JET, and better mobile UX)
- All display modes support both Date, and Date and Time (time enabled through new dedicated attribute 'Show Time')



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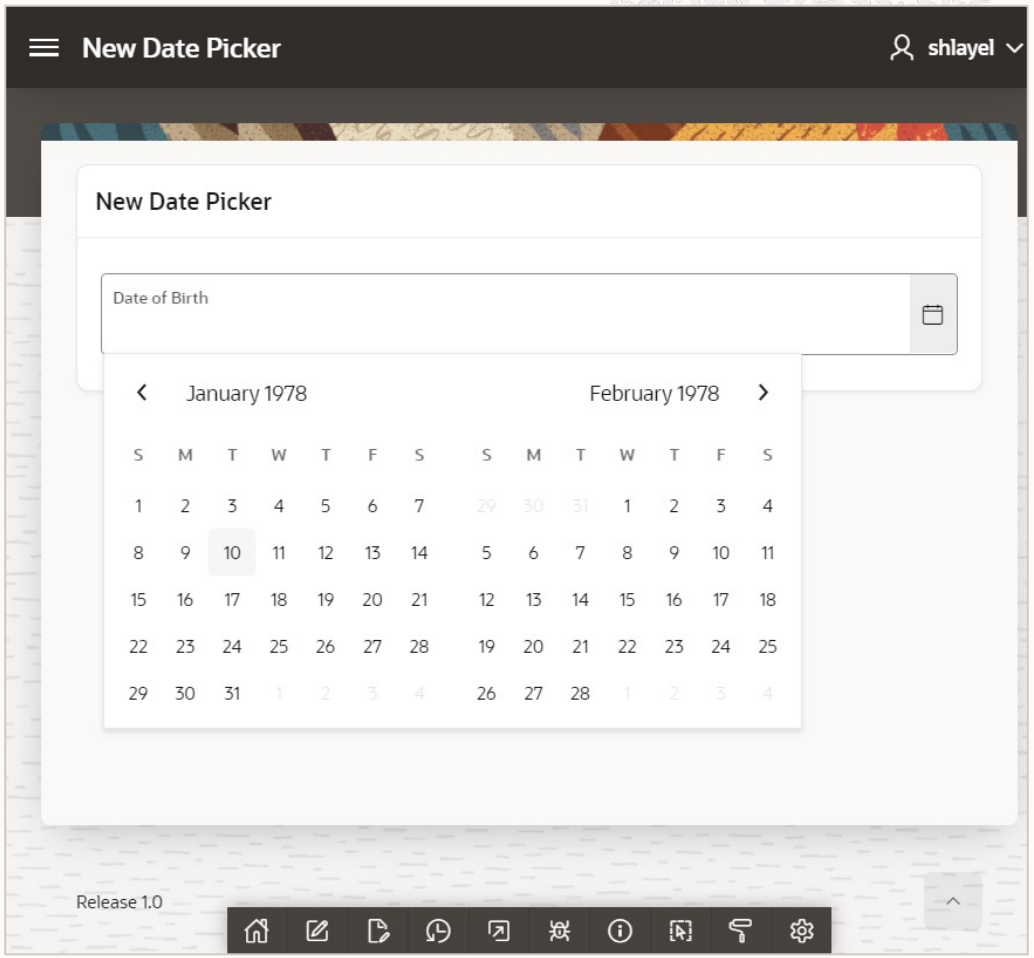
New Date Picker Item Type

- Includes ability to define dynamic Minimum / Maximum dates (for defining date ranges between items, eg 'From' and 'To')
- Other new features include: Improved UX (especially around year and month selection), additional appearance options for example 'Show Week' and 'Days Outside Month', and a few other new attributes (check out the samples below)



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Security Improvements

Escape Special Characters in Application Items

There is now an attribute for Application Items that allows you to escape special characters. This setting is applied when accessing application items via substitution syntax.

Referrer-Policy HTTP Header

APEX now sends a default Referrer-Policy HTTP header so session IDs are no longer sent with the Referrer header on external links.

Markdown Format Default for Rich Text Editor

The Rich Text Editor now defaults to output in Markdown format to provide the best out-of-the-box security.

Maximum Session Idle Timeout

The maximum session idle timeout has been increased from 12 hours to 24 hours.

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Developer Experience

Import Application Exports as ZIP

You can now import zip files of application exports, including zips of applications split using the APEXExport utility.

SQL Workshop Enhancements

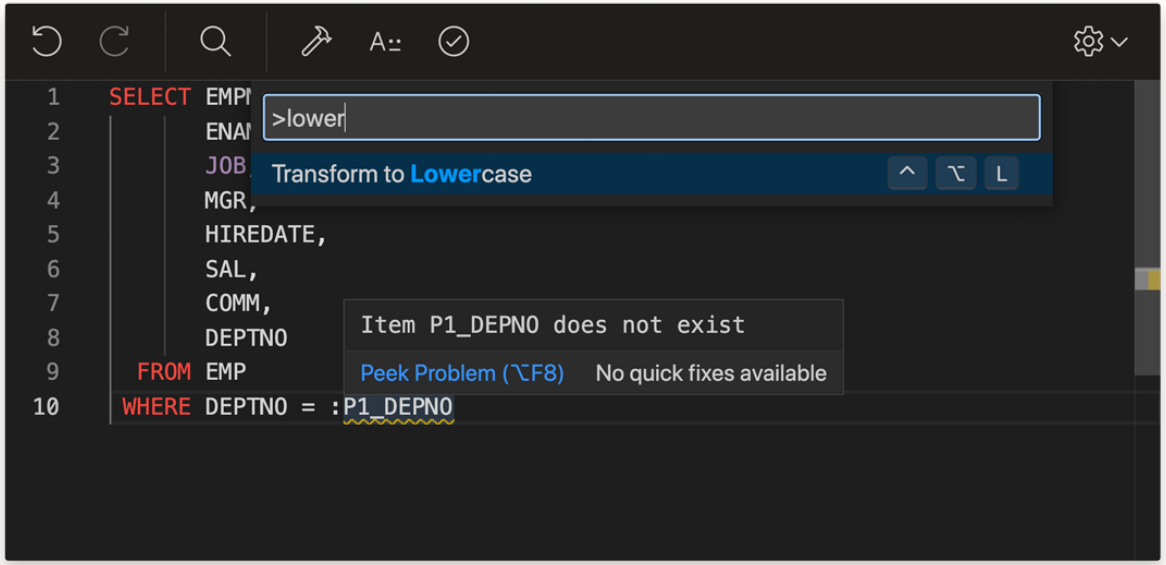
SQL Workshop now includes a new Create Spatial Index wizard.

Application and Page Checksums

You can now find application and page checksums for easy comparisons across different environments.

Code Editor Improvements

There are numerous improvements to the code editor within the App Builder, including toggling between upper and lower case using Ctrl-Alt-C, marking of non-existent page items, and several additional editor options for Minimap, Show Suggestions, Show Line Numbers, Show Whitespace, Accessibility Mode, and more.



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Reporting Improvements

Lazy Loading

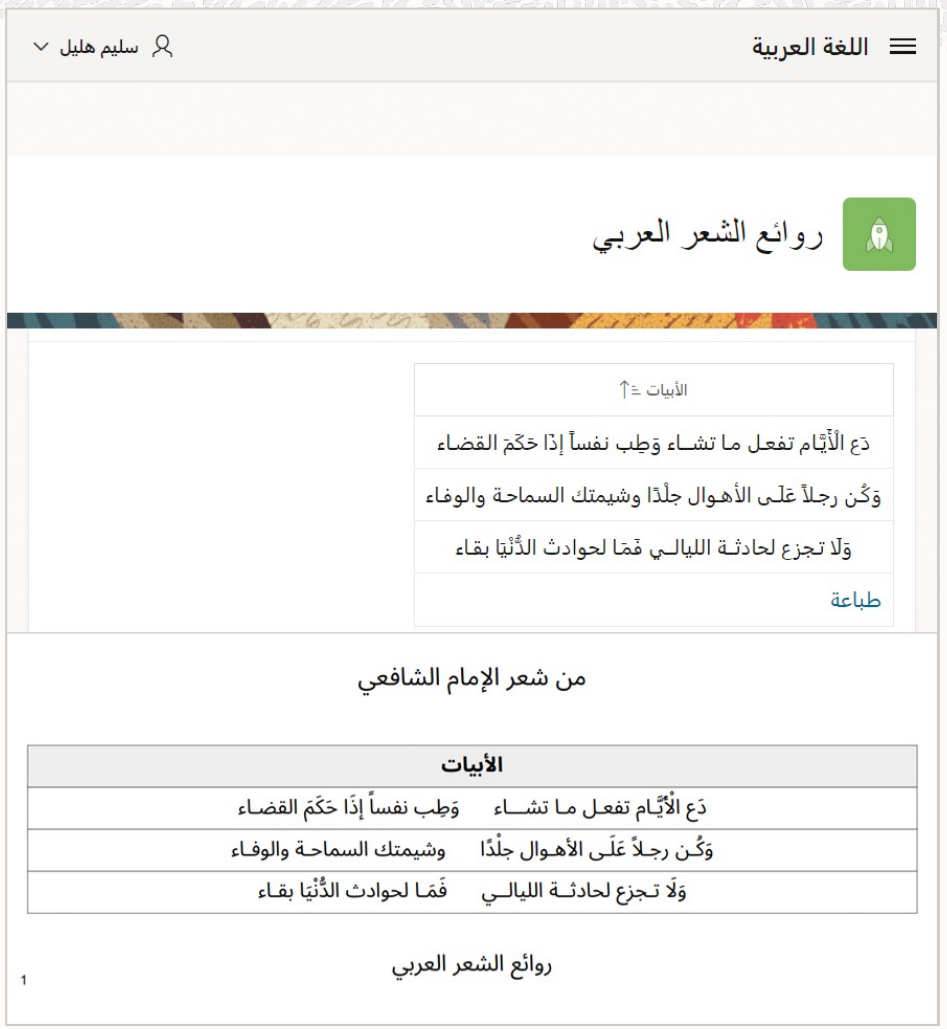
Classic and Interactive Reports now support Lazy Loading, where report data is not loaded until the page has been rendered, or the current tab has been activated improving initial page load speed, primarily for pages containing reports with long-running queries.

Report Printing in Arabic and Hebrew

Report printing supports complex text layout languages, such as Arabic and Hebrew, when exporting to PDF.

Variable Height Rows in Interactive Grids

Interactive Grids now support variable height rows by setting the 'Appearance: Fixed Row Height' property to Off.



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Additional Features

Dynamic Action Enhancements

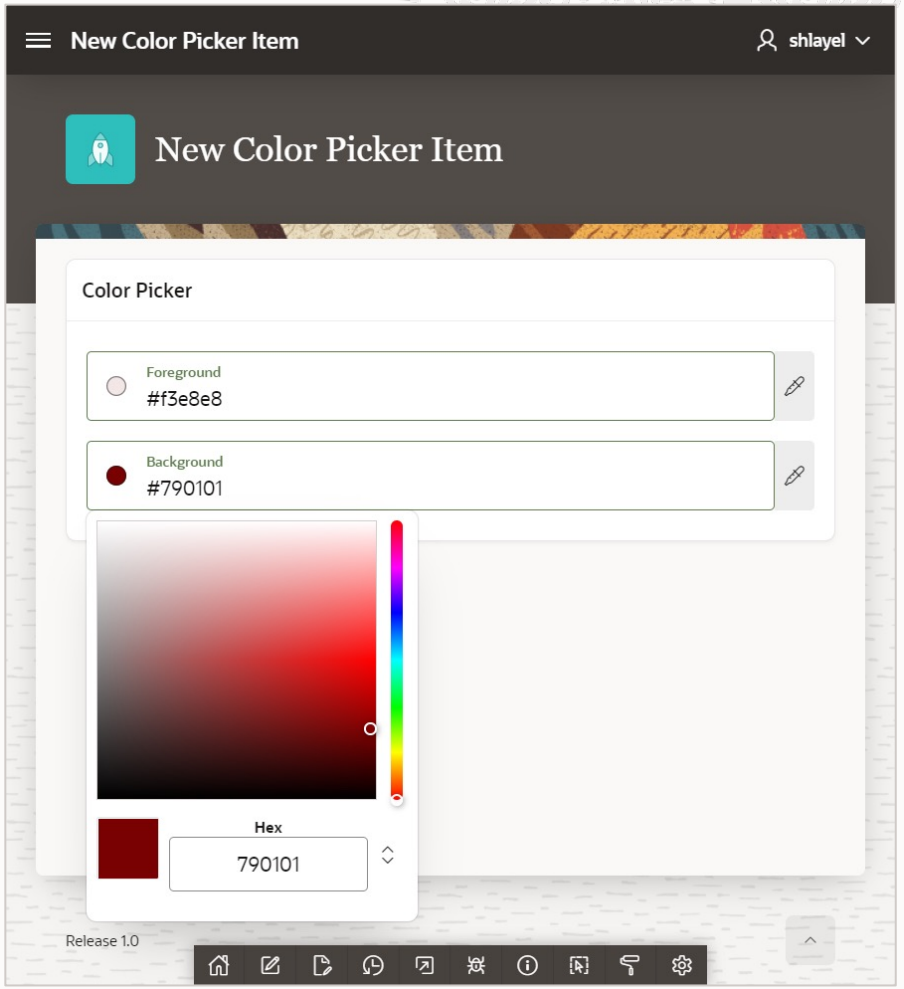
You can now define Client-Side Conditions, Server-Side Conditions, Authorizations, and Build Options for Actions of Dynamic Actions.

Improved Number Field Page Item Type

The Number Field page item type now does automatic formatting according to its format mask and client side validation.

Updated Color Picker Page Item Type

The Color Picker page item type has been updated with different display modes, color presets, contrast checking, and multiple value return formats. (HEX, RGB/RGBA, HSL/HSLA, or any CSS color value).



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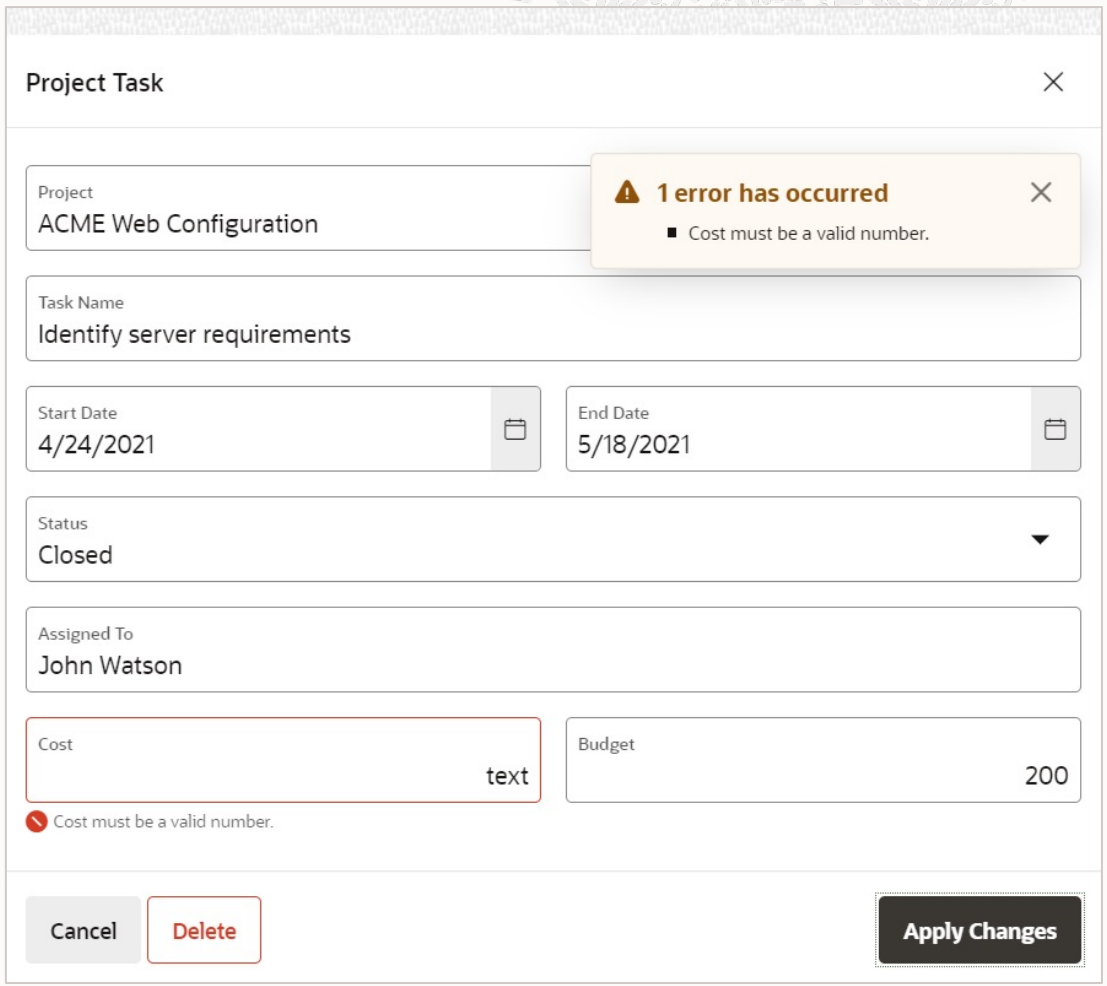
Additional Features

Client-side Validation Improvements

The client-side validation messaging is more consistent with server validation messaging, and no longer displays the error pop-up.

APEX API Enhancements

There's now GeoJSON and SDO_GEOMETRY support in the APEX_JSON and APEX_EXEC packages.



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JavaScript Library Upgrades

- Oracle JET 10.0.0
- FullCalendar 5.5.1
- CKEditor5 27.1.0
- Monaco Editor 0.22.3

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Desupported Features

- Websheets are no longer supported
- Migration Workbench
- REST Administration Interface
- AnyChart, AnyMap, and AnyGantt charts
- Productivity and Sample Applications
- WWV_FLOW_EPG_INCLUDE_LOCAL for Web Entry Points
- Download Interactive Report as RTF

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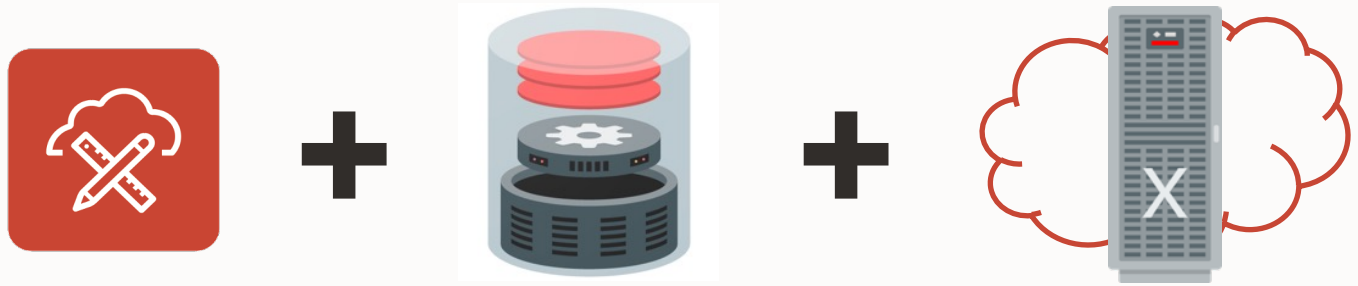

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