ORACLE

Extending Oracle Fusion Cloud Applications Suite using Oracle APEX

Oracle APEX Technical Paper

February, 2025, Version [1.0]
Copyright © 2025, Oracle and/or its affiliates
Public

Purpose statement

This document provides an overview of Extending Oracle Fusion Cloud Applications Suite using Oracle APEX in release 24.2. It is intended solely to help you assess the business benefits and planning for the implementation of your Fusion extensions built with Oracle APEX in release 24.2.

Disclaimer

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential is subject to the terms and conditions of your Oracle software license and service agreement, which has been executed and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

This document is for informational purposes only and is intended solely to assist you in planning for the implementation and upgrade of the product features described. 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 in this document remains at the sole discretion of Oracle. Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

Copyright © 2025, Oracle and/or its affiliates / Public

ORACLE

Table of contents

Executive Overview **5**

Introduction **5**

What's New in APEX 24.2 5

Oracle APEX Concepts **6**

APEX Architecture 6

Oracle Fusion Application Cloud Suite Concepts **7**

Fusion REST Services 7

Fusion APEX Extension Application **8**

User Personas 8

Integration Design Patterns 9

Coordinate: Integrated APEX UI and Fusion UI 9

Handover: Copy Fusion Data 9

Collaborate: Exchange data with Fusion 10

Delegate: Trigger Fusion Processes 10

Deployment Topologies 10

Connecting Fusion Applications with Oracle APEX Application 11

Configuring Single Sign-On with APEX Starter App 12

Integrating APEX Security and Fusion Security 15

Managing Oauth Token Expiry 15

Integrating Fusion REST APIs 16

Security Role requirements for invoking Fusion REST APIs 16

Creating Fusion REST Data Sources. 16

"Oracle Cloud Applications (SaaS) REST Service" REST Data Source 17

"Oracle Cloud Applications (BOSS) REST Service" REST Data Source 19

Caveats 21

REST Source Operation Caching 21

Invalidating Cached Data 22

Exploring Service Metadata with Oracle Cloud Apps Data Source Explorer 23

Creating a UI Page with Fusion Data 24

Improving performance of a page with Fusion LOVs 29

Integration APEX Extension application UI and Fusion UI 29

Launching APEX application from Fusion 29

Conclusion **34**

Copyright © 2025, Oracle and/or its affiliates / Public

ORACLE

List of figures

Figure 1: APEX architecture 6
Figure 2: Fusion APEX extension application architecture 8
Figure 3: Deployment Topologies 11
Figure 4: APEX - Fusion security handshake for single sign-on 11

List of tables

Table 1: Replacement of special characters 25
Table 2: Sample LOV URLs 25

List of figures and tables

Figure 1: APEX architecture 6
Figure 2: Fusion APEX extension application architecture 8
Figure 3: Deployment Topologies 11
Figure 4: APEX - Fusion security handshake for single sign-on 11
Table 1: Replacement of special characters 25
Table 2: Sample LOV URLs 25

Copyright © 2025, Oracle and/or its affiliates / Public

Executive Overview

This paper outlines how to extend Oracle Fusion Cloud Applications Suite functionality utilizing Oracle APEX. We discuss different integration patterns, deployment topologies, architecture considerations and best practice security guidelines. We have also included examples to help you build your first Fusion Extension application with APEX with a sample end to end flow.

Introduction

Oracle Fusion Cloud Applications Suite delivers a wide range of functionality in the Enterprise Resource Planning (ERP), Supply Chain & Manufacturing (SCM), Human Capital Management (HCM), Sales, Service and Marketing domains that handle core areas of business processing. However, there are situations where you want to extend your information systems beyond the range of Oracle Fusion Cloud Applications Suite. Typical extension use cases include integrating on-premises customer applications with Oracle Fusion Cloud Applications, handling specific customer requirements and developing custom flows such as third party integrations for responding to changing business dynamics. The complexity of your Fusion Extension application depends on the business requirements of the enhancement developed.

Oracle APEX is a powerful low-code application development platform that provides a browser-based interface, declarative programming framework, and simple wizards to enable you to quickly build robust applications. The platform offers easy REST service integrations that enhance the power of the application extensions you build.

While Oracle manages the patching and upgrades of the Oracle Fusion Cloud Application Suite, you are in control of the Fusion extensions applications you build using this rapid application development platform. Your team can deliver ongoing updates to your extension applications on your own schedule. You can continue to take advantage of Oracle's SaaS offering while being in control of any custom functionality you introduce for your enterprise. You can also take advantage of PL/SQL expertise and apply those techniques to extending enterprise applications.

Get ready to build your first low-code APEX based Fusion Extension application!

What's New in APEX 24.2

APEX 24.2 adds the Fusion Integrated Starter App Wizard. This enables automatic connection between your Fusion instance and your APEX instance. All security configuration is now behind-the-scenes and configured by Oracle APEX. Your Fusion extension applications can take advantage of the security configuration in the Fusion Integrated Starter application. The Database Tools Fusion Integration option further simplifies connecting your Fusion instance to APEX. We outline details of how you can configure this connection in later sections of this document.

APEX 24.2 also adds support for the Oracle Cloud Applications (BOSS) REST Service. This new REST Data Source type lets you use Fusion Applications REST APIs whose URLs contain /api/boss. These

Copyright © 2025, Oracle and/or its affiliates / Public

newer APIs use a different technology underpinning than the ones with /xxxRestApi/resources/ in their URL. APEX Developers can now work with either kind of Fusion REST APIs with equal ease and productivity.

Oracle APEX Concepts

A few basic Oracle APEX concepts are key to understand before extending Oracle Fusion Cloud Applications. Oracle APEX runs inside the Oracle Database. You can create new schema objects using SQL Workshop functionality in Oracle APEX. Application developers can create pages, drop UI components onto the page, bind UI components to data using different data sources like local tables, REST APIs and more. Oracle APEX lets you quickly create pages to display and edit application data by providing different types of UI components like Interactive Report, Interactive Grid, Form, Cards, Chart, Classic Report, Faceted Search, Master Detail, etc. Navigation and Page flow functionality to traverse pages and relate pages to build a fully-fledged application is intuitive with Oracle APEX. Your APEX applications can leverage all built-in Oracle Database data types and utility packages to simplify delivering a wide range of functionality to end users.

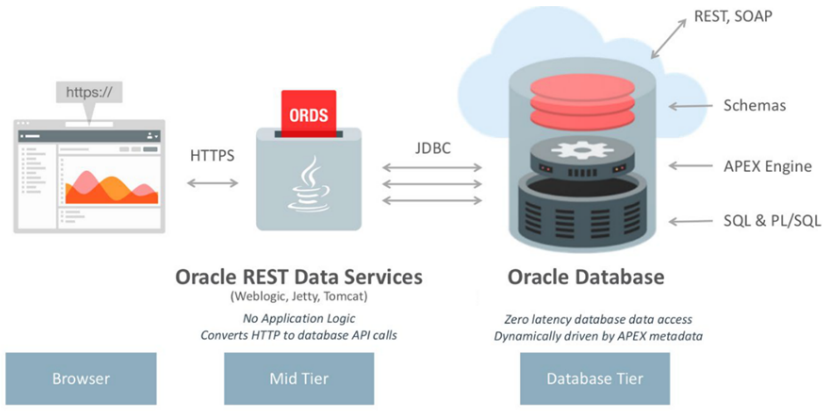
Oracle APEX also offers support for Generative AI. Developers less familiar with SQL can use the AI-powered APEX Assistant to help generate appropriate queries from natural language. For more information on APEX and Generative AI please view this link.

For additional details on features and functionality supported by Oracle APEX please refer Oracle APEX documentation.

APEX Architecture

Oracle APEX is part of the Oracle RAD stack. Core components include REST Data Services (ORDS), APEX and Database. You can use APEX and deploy your application on any Oracle Database in the cloud or on-premises. When using Oracle Autonomous Database Cloud Service, patches and updates for APEX are managed by Oracle and newer APEX releases will be available to you at a regular cadence.

Figure 1: APEX architecture



Copyright © 2025, Oracle and/or its affiliates / Public

Oracle APEX applications are model-driven. As developers use APEX Builder to define the pages and processes comprising their app, APEX saves metadata describing the options they have configured. The APEX engine interprets that metadata at runtime to render pages for end-users and to manage their updates. ORDS delegates incoming requests to the APEX engine and returns the response the engine generates back to the requester. That happens both when a developer is using the APEX Builder, as well as when an end-user is running the APEX application. The APEX Builder is built using APEX, so it is an APEX application whose "business data" is the application metadata for other applications that developers build. At design time, application metadata update requests are processed by the APEX engine and metadata is persisted. At runtime, application security is enforced at the database layer against database defined security credentials. Since APEX runs inside the database, applications can access local data with zero latency for both display and business logic processing in PL/SQL or server-side JavaScript. For additional information on Oracle APEX architecture please refer to this link.

Oracle Fusion Application Cloud Suite Concepts

You can view your deployed Fusion Application instances in Oracle Cloud Console. The Oracle Fusion Applications Cloud Suite is a Software as a Service (SaaS) offering from Oracle. This means Oracle manages application patches and updates. Customers can take advantage of new Fusion features deployed to the cloud at a regular cadence.

Extending Oracle Fusion Applications requires an understanding of Fusion security concepts. Oracle Fusion Applications supports Role-based access control (RBAC). Roles are assigned function security and data security privileges. Function security policies determine which roles have access to UI pages and components. Data security policies determine what data users can see. It is possible to define custom roles and privileges that extend the out of the box seeded security policies. Administrators can use the Fusion Security Console to modify role assignments to users and make other implementation specific updates to security policies.

Oracle Fusion Applications Cloud Suite is a SaaS offering from Oracle and its internal architecture and server topology is abstracted from customers. You can view environment information via Fusion Application environment management features supported by Oracle in cloud console.

For additional details on Oracle Fusion Applications Cloud Suite please refer to Oracle Fusion Applications Cloud Suite documentation.

Fusion REST Services

Oracle Fusion Applications Cloud Suite exposes REST APIs for different business objects supported by Fusion areas such as ERP, CRM and HCM.

These REST APIs let developers retrieve and manipulate Fusion business object data. They also encapsulate all appropriate business logic and validation rules. Application extensions use REST Data Sources corresponding to the Fusion REST APIs they need to work with. Developers can select these in bulk from the Fusion REST API Catalog or define them one by one. Once properly configured, APEX automatically provides the Fusion user security context required to invoke any Fusion REST API. This ensures functional and data security is appropriate for the end-user using the application extension.

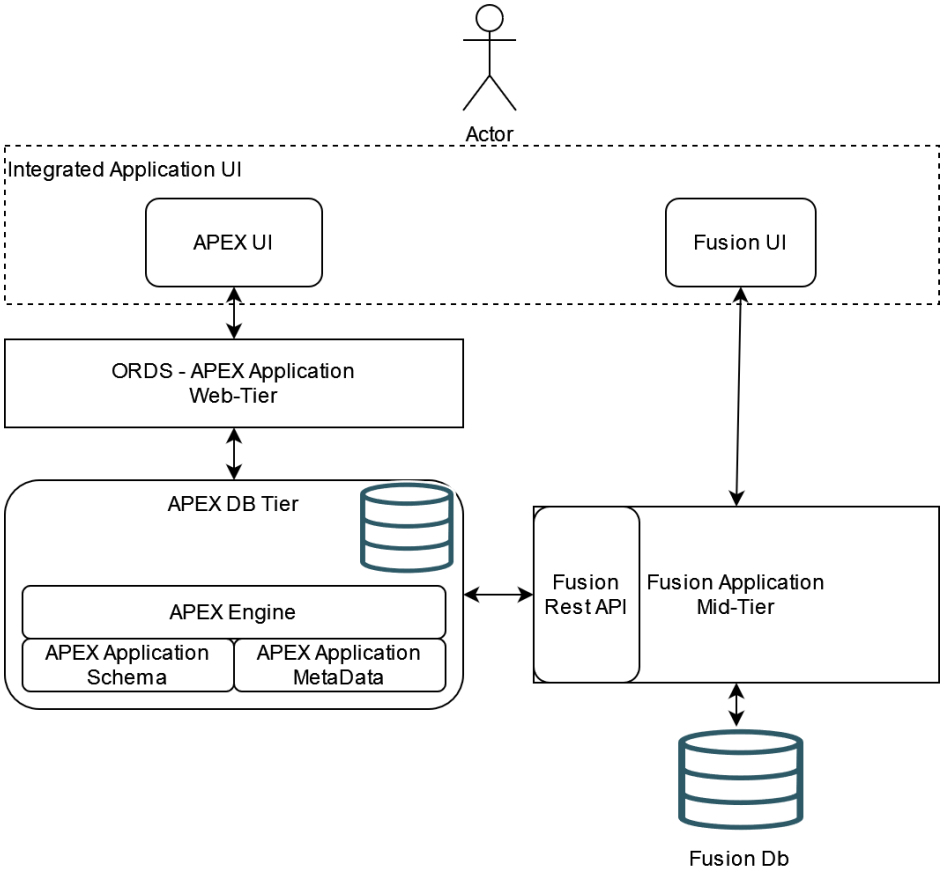
Copyright © 2025, Oracle and/or its affiliates / Public

Fusion REST APIs can be implemented using two different underlying technologies. For REST APIs with /xxxRestApi/resources/ in the URL, APEX developers use a REST data source of type "Oracle Cloud Application (SaaS) REST Service". For those with /api/boss in the URL, they use the "Oracle Cloud Application (BOSS) REST Service" instead.

Fusion APEX Extension Application

A Fusion APEX extension delivers an application UI that consists of APEX pages and flows. It is integrated with a single Fusion application instance. You can build your own application UI's and deploy them so that they are accessible from the same Fusion Apps dashboard, or as standalone interfaces to Fusion to simplify specific processes. You can use the Redwood Light style in Universal Theme to match the look and feel of your Fusion extension application with Oracle Fusion Cloud Applications The following diagram shows the different components of a Fusion APEX extension application.

Figure 2: Fusion APEX extension application architecture



User Personas

The following types of users typically cooperate to build a Fusion APEX extension application.

- The APEX System Administrator

Copyright © 2025, Oracle and/or its affiliates / Public

  - This user manages the APEX instance and its integrations with other systems.
- The APEX Application Developer
  - This user builds the application UI and functionality of the extension application.
- The Fusion System Administrator
  - This user manages roles and users in the Fusion instance.

Integration Design Patterns

Integration design patterns are template solutions for connecting different software systems or applications so that they work together. These patterns describe common scenarios and solutions for handling different custom tasks for integrating your applications with Fusion.

Choosing the right Integration pattern depends on the following factors:

- Amount of data exchanged with Fusion
- Real-time data synchronization needs
- Fusion user role and security privilege considerations
- Error handling and recovery scenarios.
- Fusion extensions in the Fusion instance such as Flexfields
- APEX deployment topology

Coordinate: Integrated APEX UI and Fusion UI

You will need this pattern when a business user works with multiple applications for your business scenario. This pattern can be implemented by creating a mashup for Fusion UI and APEX UI where single sign on between Fusion and APEX ensures seamless transition between UI flows initiated in APEX UI or Fusion UI.

We suggest the usage of following APEX Components for this pattern:

- Fusion Starter App for integrated single sign-on
- REST Data Source of type: Oracle Cloud Applications (SaaS) REST Service
- APEX UI Components such as Interactive Report and Interactive Grid

Handover: Copy Fusion Data

With the handover pattern you create a local copy of Fusion data for additional business processing. This pattern can be implemented by retrieving relevant Fusion data via API as one-time process execution in APEX to transfer Fusion data to APEX database. You are responsible for implementing security policies on the downloaded data as per your security requirements for the data. The Handover data pattern is a potential data pattern to be used when building custom AI training models for your business usecases.

We suggest the usage of following APEX Components for this pattern:

- Fusion Starter App for integrated single sign-on

Copyright © 2025, Oracle and/or its affiliates / Public

- REST Data Source of type: Oracle Cloud Applications (SaaS) REST Service
- APEX SQL Workshop and Object Browser for creating tables in APEX schema to hold data downloaded from Fusion into local tables.
- APEX REST Data Source synchronization for automatically creating the local table and handling data sync, optionally on a repeating schedule you can configure declaratively.

Collaborate: Exchange data with Fusion

Different apps share and change the same business data. This supports bi-directional data integration in real time. This pattern is implemented when you both read data from Fusion and update data into Fusion.

We suggest the usage of following APEX Components for this pattern:

- Fusion Starter App for integrated single sign-on
- REST Data Source of type: Oracle Cloud Applications (SaaS) REST Service
- Edit pages in APEX UI that manipulate Fusion data such as Forms and Interactive Grid
- View pages in APEX UI such as Interactive Reports and Interactive Grid

Delegate: Trigger Fusion Processes

Specialized app to be used for one business function or process. You can send all relevant data via API or as batch and receive regular status updates.

We suggest the usage of following APEX Components for this pattern:

- Fusion Starter App for integrated single sign-on
- Oracle Cloud Applications (SaaS) REST Service
- APEX Submit UI Components such as a Button (an example use case is where a button in APEX UI triggers an ESS job in Fusion by invoking the corresponding Fusion REST API)
- APEX Workflow

Depending on the complexity of the extension application developed it can be a combination of different design patterns and will use different APEX functions for successful end to end execution.

Deployment Topologies

A set of representative topologies for the extension application is shown in Figure 3: Deployment Topologies. You must identify your system configuration and topology and ensure that connectivity between the Fusion application REST endpoint and APEX database is setup correctly. You may need to work with your system administrator to ensure network connections are opened and firewall is configured as appropriate. To configure Fusion Starter App with success a route must exist from the Fusion tenancy to the sqlnet listener port on APEX database. Conversely for APEX to invoke Fusion REST APIs a route must exist between APEX database and Fusion external endpoint port in the Oracle Public Cloud hosted Fusion instance.

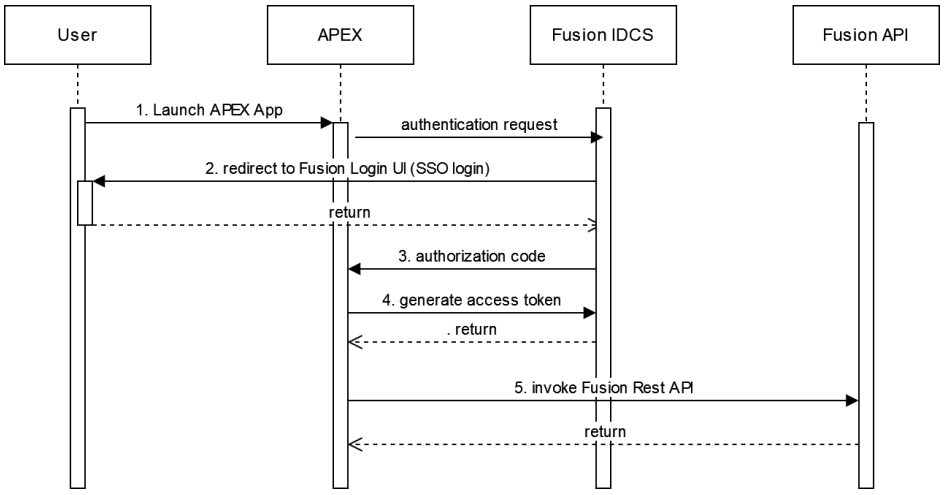
Copyright © 2025, Oracle and/or its affiliates / Public

Figure 3: Deployment Topologies

Connecting Fusion Applications with Oracle APEX Application

You must configure single sign-on between the APEX extension application and Fusion applications to establish connectivity. This ensures function security and data security rules configured in Fusion are automatically available in the APEX application. Authentication and authorization is implemented using the 3-legged Oauth flow. To configure this flow manually for existing APEX applications please refer to the related blog and APEX office hours recording.

Figure 4: APEX - Fusion security handshake for single sign-on



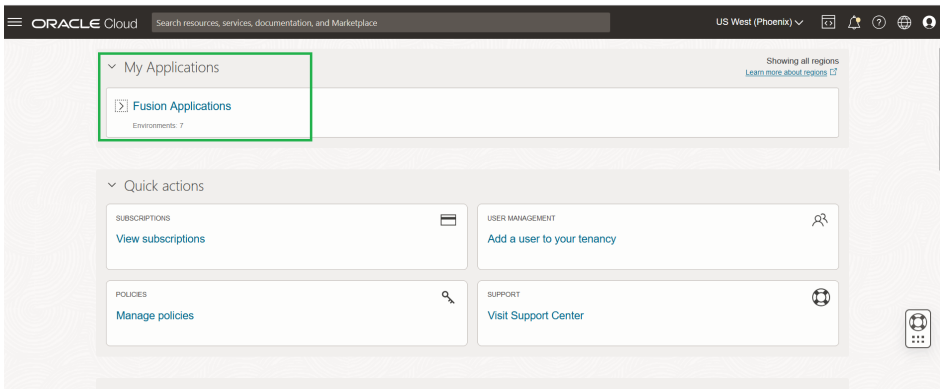
Copyright © 2025, Oracle and/or its affiliates / Public

Configuring Single Sign-On with APEX Starter App

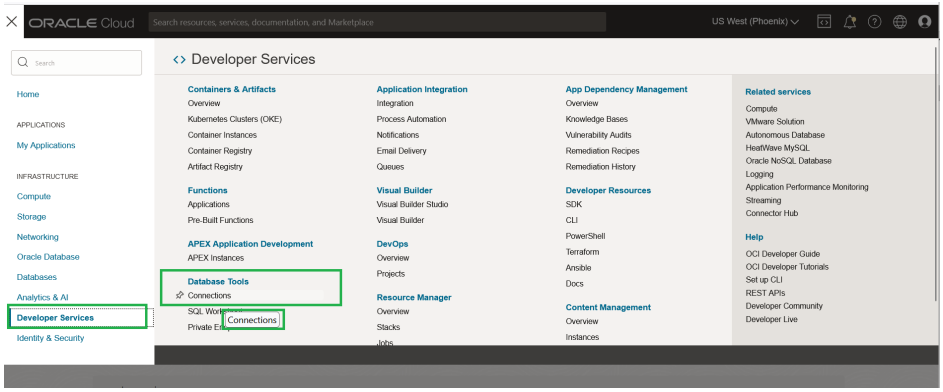
Oracle recommends you perform the configuration steps outlined in this section if you do not have an existing APEX extension application you need to connect to Fusion instance. This flow will create a APEX Starter App that is pre-configured with a Fusion application instance. By using the APEX Starter App, you avoid any manual configuration steps to orchestrate the 3-legged OAuth flow.

Steps to be performed by the APEX and Fusion System Administrator

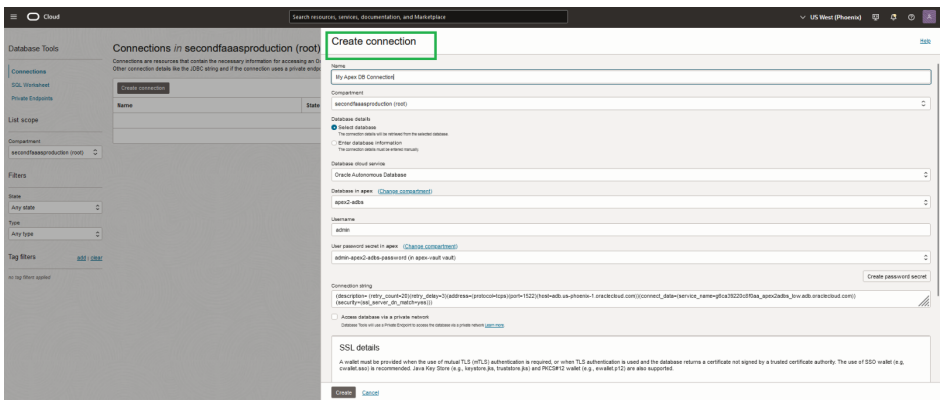
- Login to Cloud Console into the tenancy that hosts your Fusion Applications instance.



- Navigate to Developer Services → Database Tools → Connections

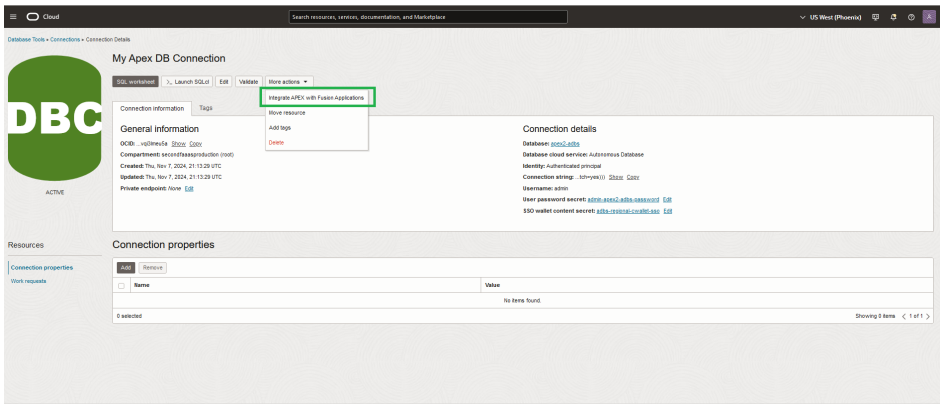


- Create a Database Connection to your APEX Database

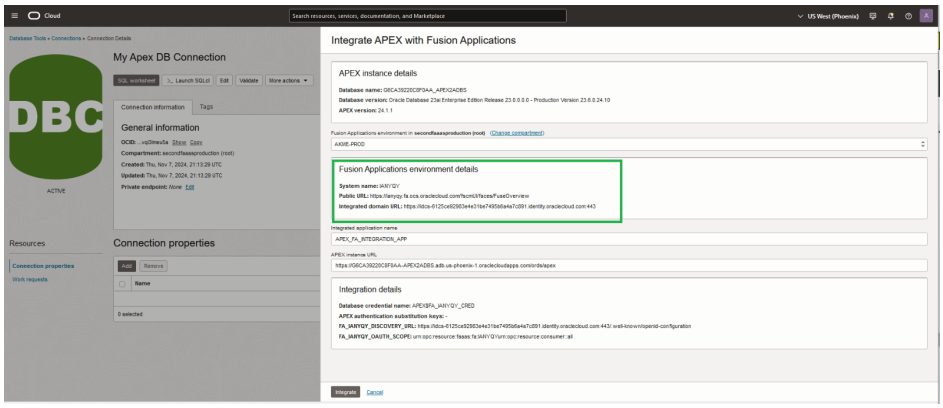


Copyright © 2025, Oracle and/or its affiliates / Public

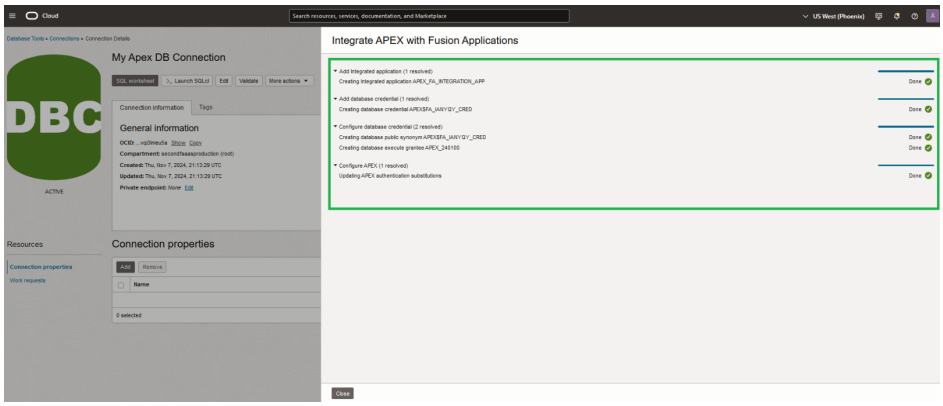
- Navigate to "Integrate APEX with Fusion Applications"



- Select your Fusion Applications instance and "Integrate"

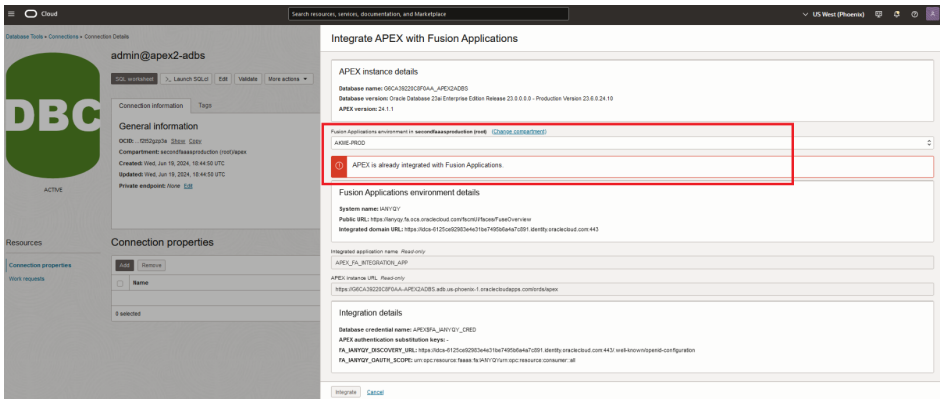


- Notice the steps performed to orchestrate the integration such as creating the confidential application in IDCS and related database credentials.



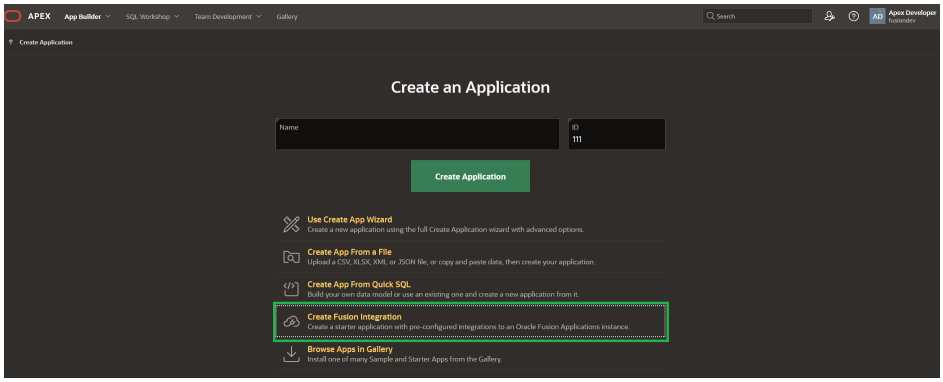
- Retry of integration with the Fusion instance will fail with the following error "APEX is already integrated with Fusion Applications"

Copyright © 2025, Oracle and/or its affiliates / Public

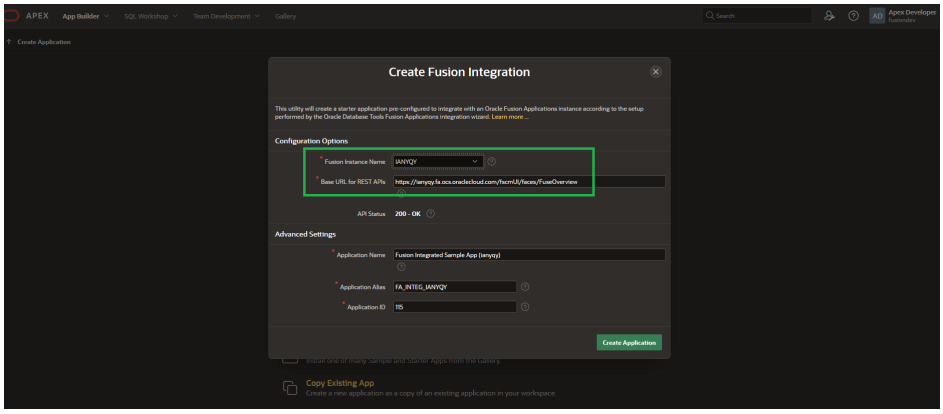


Steps to be performed by the APEX Application Developer

- Login to APEX Workspace and click on AppBuilder → Create → Create Fusion Integration

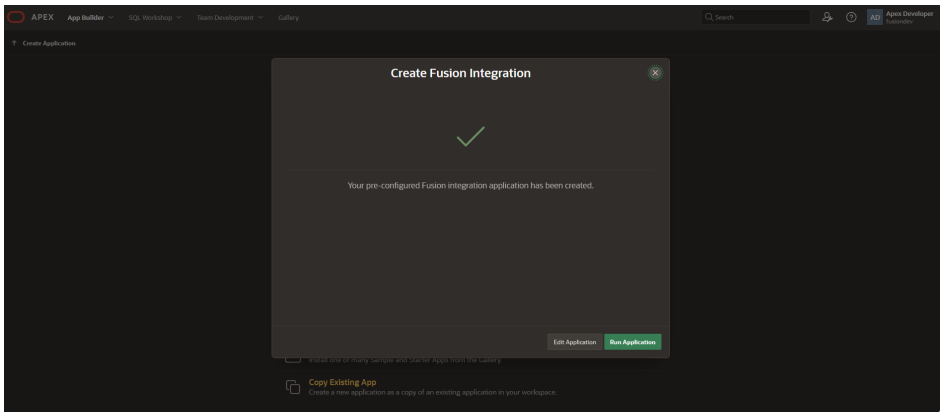


- Select the linked Fusion instance

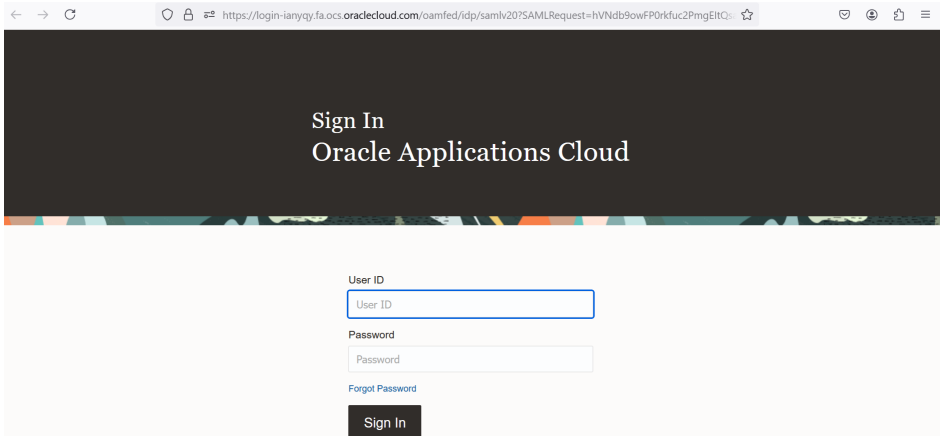


- Click on Create Integration

Copyright © 2025, Oracle and/or its affiliates / Public



- Click on Run Application and login to Fusion Applications via configured Single Sign-on.



Integrating APEX Security and Fusion Security

Fusion Users and roles are defined in the Fusion application instance. APEX users and roles are defined in Oracle Database. We discuss the strategies you can follow for managing user roles and security policies in the integrated Application.

Managing Oauth Token Expiry

By default, the access token which Fusion Starter application receives from Fusion IDCS will expire after a maximum of one hour, whereas the APEX session will have a longer lifetime, as will your underlying Fusion Applications login session. To help prevent users from having to needlessly re-authenticate, and to reduce the number of "session expired" errors that they encounter whilst navigating within an FA integrated APEX application, it is possible to automatically obtain new access tokens without the user's involvement. To configure refresh token and prevent Oauth Token expiry refer to this document.

Copyright © 2025, Oracle and/or its affiliates / Public

Manual page refresh of your APEX page within the expiry window can be used as a workaround to prevent token expiration as the page refresh gets a new token.

Integrating Fusion REST APIs

The majority of Fusion REST APIs are delivered as Application Development Framework - Business Components (ADF-BC) REST services. For more information on ADF-BC please view supporting documentation here. Newer Fusion REST APIs are delivered as Spectra REST Services. For more information on the internal Fusion Spectra initiative, please view this blog. If the URL pattern matches "/xxxRESTApi/resources/$restApiVersion/*" then the REST service is ADF-BC based. If the URL pattern matches "/api/boss" then it's Business Object for Spectra Services (BOSS) based. The Fusion REST API Explorer Utility App is specific to the "Oracle Cloud Applications (SaaS) REST Service" REST Data Source in APEX release 24.2.

Security Role requirements for invoking Fusion REST APIs

Before configuring your REST Data Source you must be logged in with a valid Fusion login session by running your Fusion Starter App. Your Fusion login session must be with the Fusion roles required to invoke the REST service to be configured. If your user does not have the required role you will be unable to configure the REST Data Source. If you are not using Fusion Starter App then these steps can be performed in any APEX application that is manually configured to connect to a Fusion instance and configured for Fusion single sign-on. You must use the web credentials created to map to the Fusion Oauth Client to configure your REST Data Source.

Common Fusion roles used for invoking REST services are as follows:

- Human Capital Management Integration Specialist (Job Role)
- Supply Chain Integration Specialist (Job Role)
- Integration Specialist (Job Role)
- Customer Relationship Management Integration Specialist (Job Role)

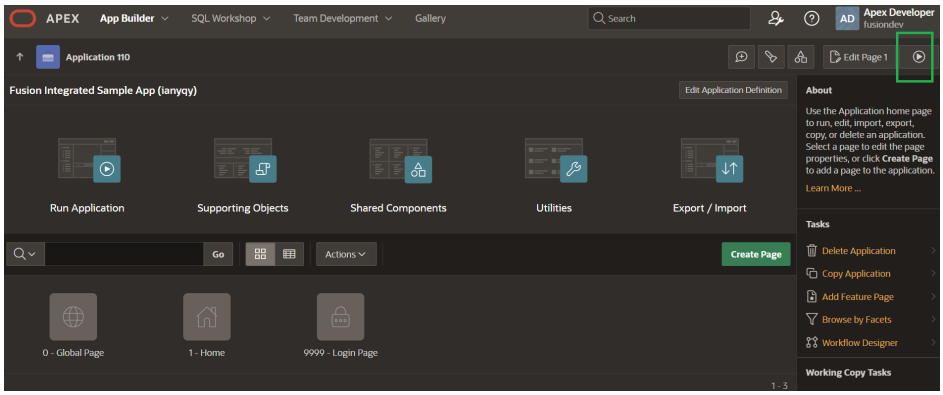
For a complete list of Fusion roles and privileges required to invoke Fusion REST APIs please refer to the Fusion documentation.

Creating Fusion REST Data Sources.

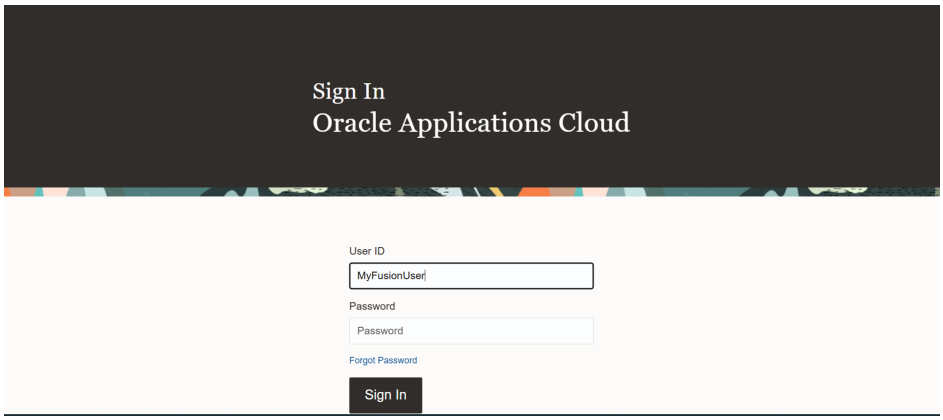
The following steps are common steps and must be followed prior to creating REST Data Sources of type "Oracle Cloud Applications (SaaS) REST Service" and "Oracle Cloud Applications (BOSS) REST Service" to acquire a security token that the APEX Builder can then also use.

- Navigate to AppBuilder → Run Fusion Starter App

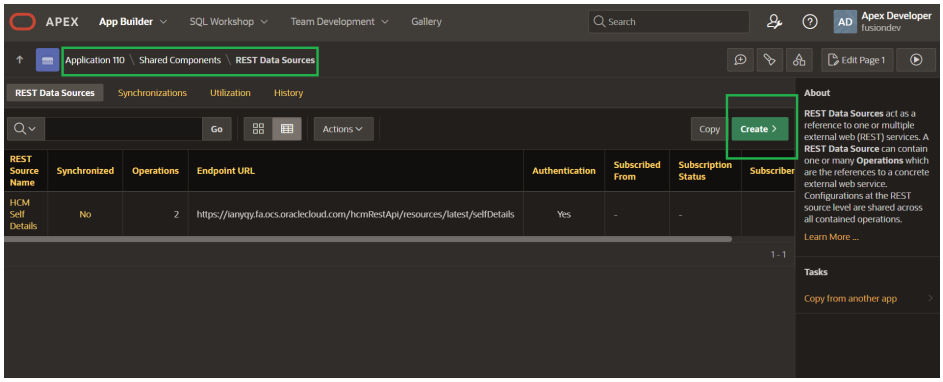
Copyright © 2025, Oracle and/or its affiliates / Public



- Login to Fusion via Single Signon



- Navigate to Application → Shared Components → REST Data Sources → Create REST Data Sources

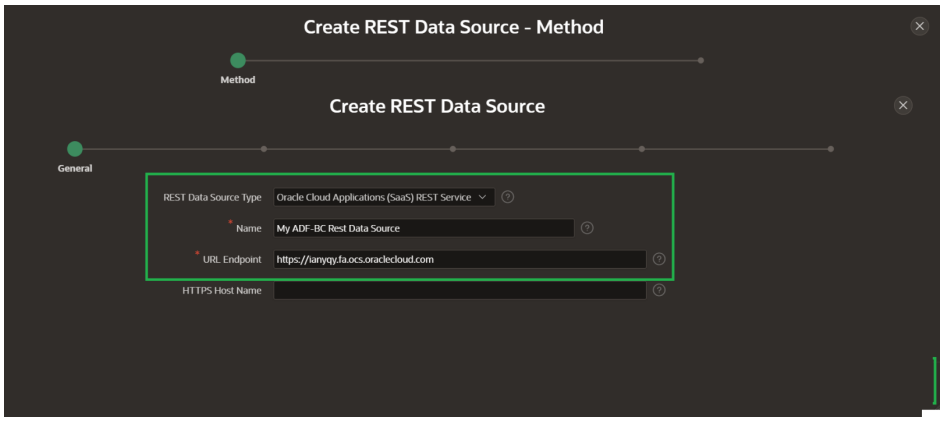


"Oracle Cloud Applications (SaaS) REST Service" REST Data Source

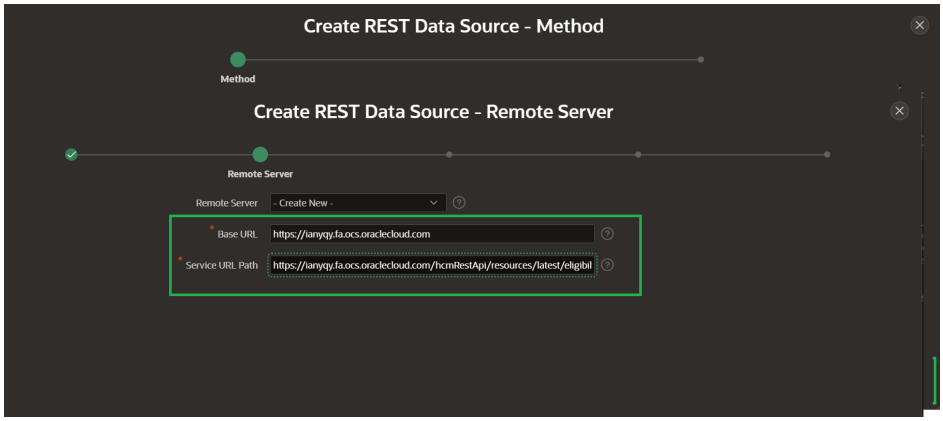
To configure your application to use ADF-BC REST services you must create a REST Data Source of type "Oracle Cloud Applications (SaaS) REST Service". These steps must be performed by the APEX Application developer to use Fusion ADF-BC REST Apis.

- Enter details of your Fusion REST API endpoint.

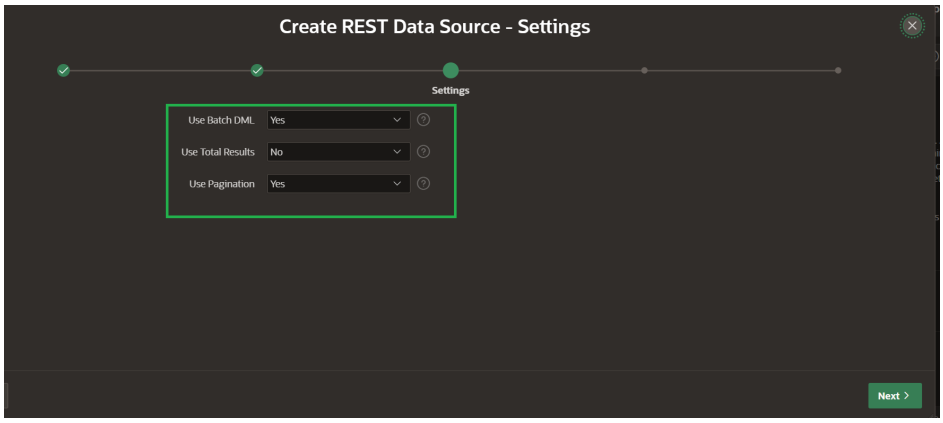
Copyright © 2025, Oracle and/or its affiliates / Public



- Select default rendered values for Base URL and Service URL Path

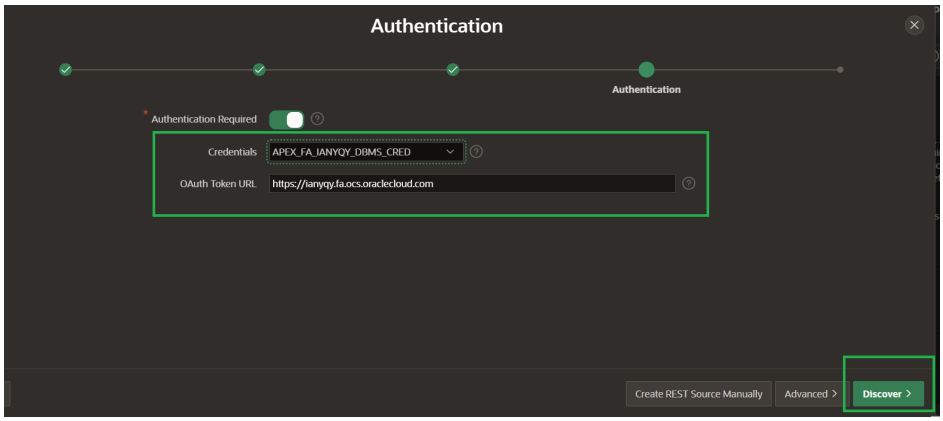


- Select desired values for Batch DML, Total Results and Pagination.

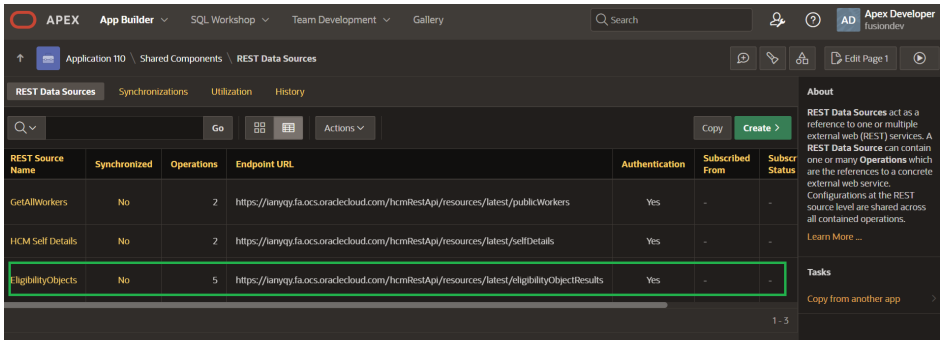


- Enter the credentials created for integration with Fusion instance in Fusion Starter App

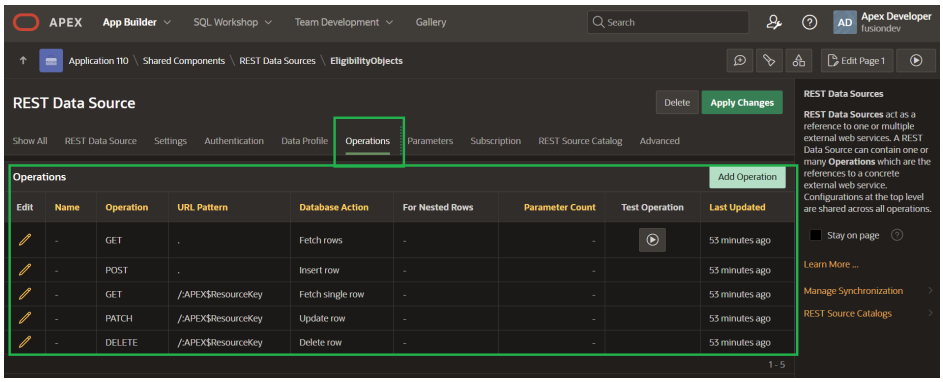
Copyright © 2025, Oracle and/or its affiliates / Public



- The REST Data Source is created with success.



- View details of available operations for your newly configured Fusion REST Data Source.

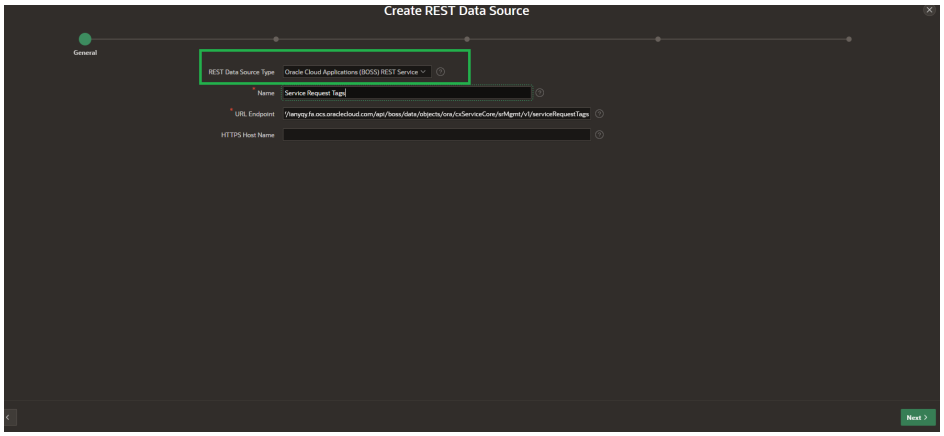


"Oracle Cloud Applications (BOSS) REST Service" REST Data Source

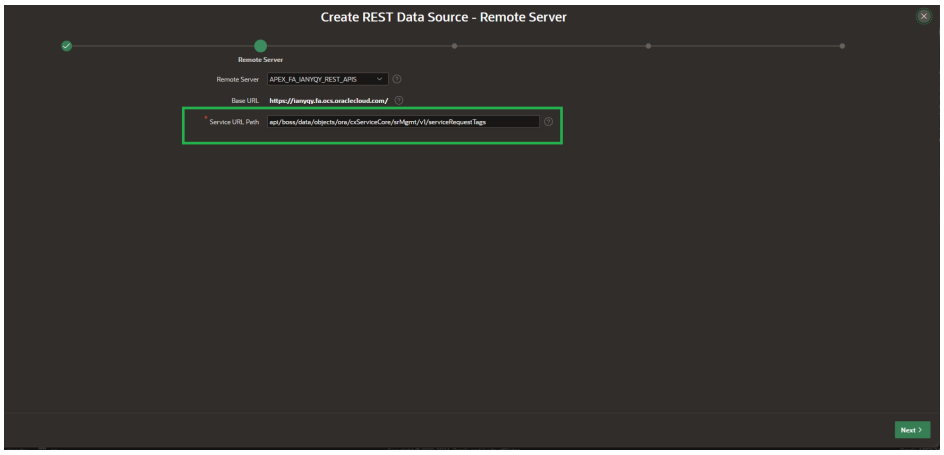
To configure your application to use BOSS REST services you must create a REST Data Source of type "Oracle Cloud Applications (BOSS) REST Service". These steps must be performed by the APEX Application developer to use Fusion BOSS REST APIs.

- Enter details of your Fusion REST API endpoint.

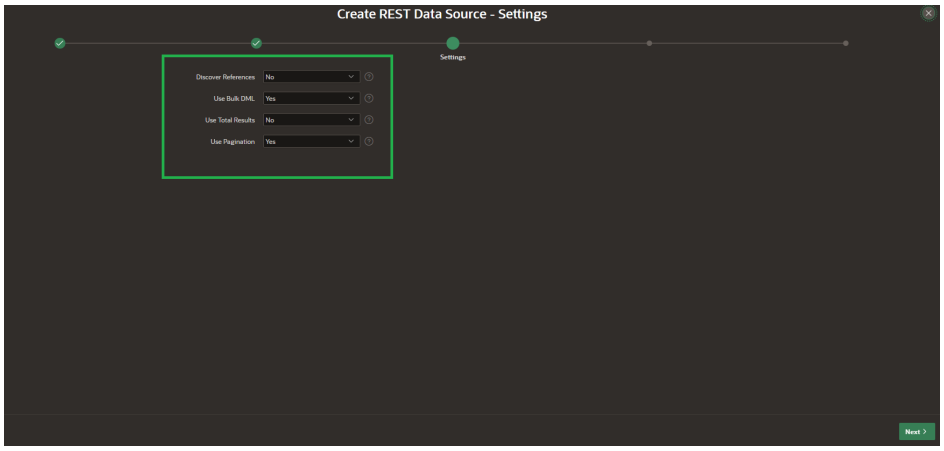
Copyright © 2025, Oracle and/or its affiliates / Public



- Select default rendered values for Base URL and Service URL Path

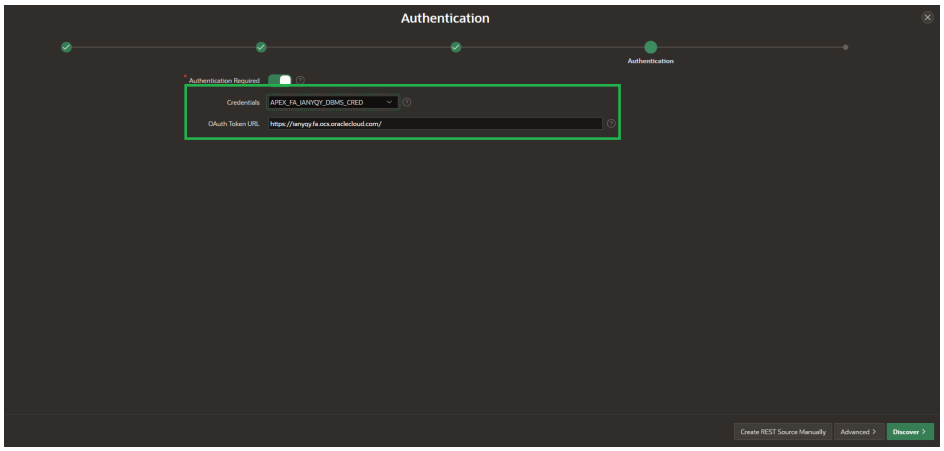


- Select desired values for Discover References, Use Bulk DML, Use Total Results, Use Pagination

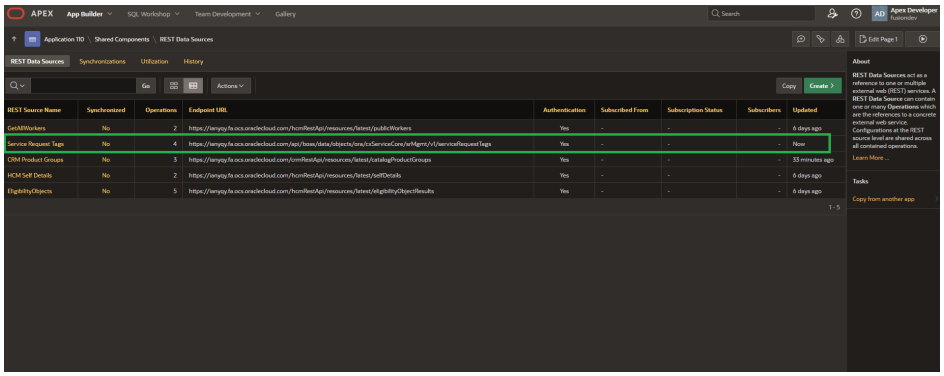


- Enter the credentials created for integration with Fusion instance in Fusion Starter App

Copyright © 2025, Oracle and/or its affiliates / Public



- The REST Data Source is created with success.



Caveats

If you create a REST Data Source Catalog using Fusion Open API end points and then try to create a REST Data Source from the catalog the REST Data source will be created with type "Simple HTTP" instead of type “Oracle Cloud Applications (SaaS) REST Service". Oracle recommends you create a REST Data Source using the “Oracle Cloud Applications (SaaS) REST Service" REST Data Source so that you can take advantage of the enhanced functionality provided by this type of data source.

REST Source Operation Caching

You can cache the data you retrieve from your Fusion Instance using REST Source Operation Caching. Following types of caching preferences are available:

- Disabled: This is the default mode and no data is cached.
- For all Users: In this mode data is retrieved once and cached for all users
- By User: This this mode, data is retrieved once per user and subsequent API invocations for that user across sessions use the cached data
- By Session: In this mode, data is retrieved once per user session and cached.

Copyright © 2025, Oracle and/or its affiliates / Public

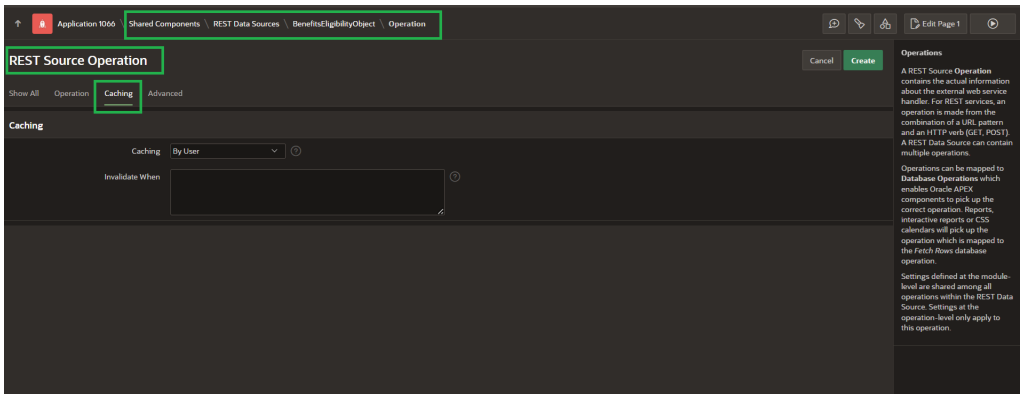
Invalidating Cached Data

You can configure cache invalidation criteria to invalidate your cache. Once the cache is invalidated data will be refreshed from the source when the Rest API is invoked. Cache invalidation criteria can be specified in many ways.

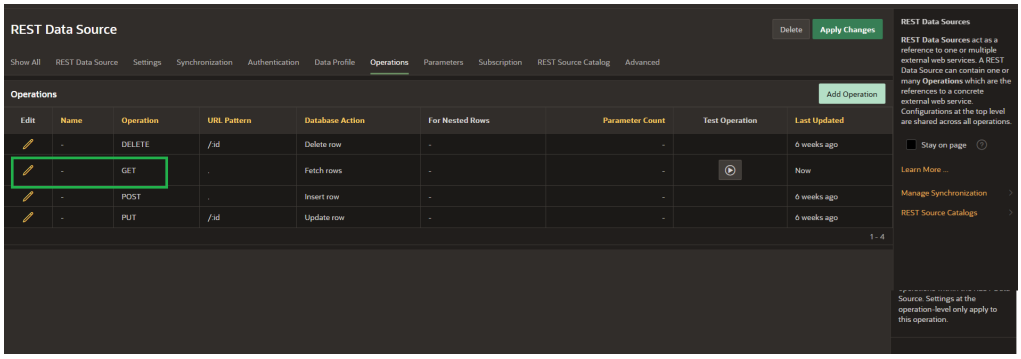
- Using “DBMS_SCHEDULER Calendaring Expression": Cached content can be invalidated using flexible intervals, for instance at the top of the hour, at midnight, or another specific recurring point in time.
- 0: The content will be cached only in memory, for the current page processing.
- 15: The content will expire 15 minutes after it has been cached.

You can configure REST Source Operation as follows

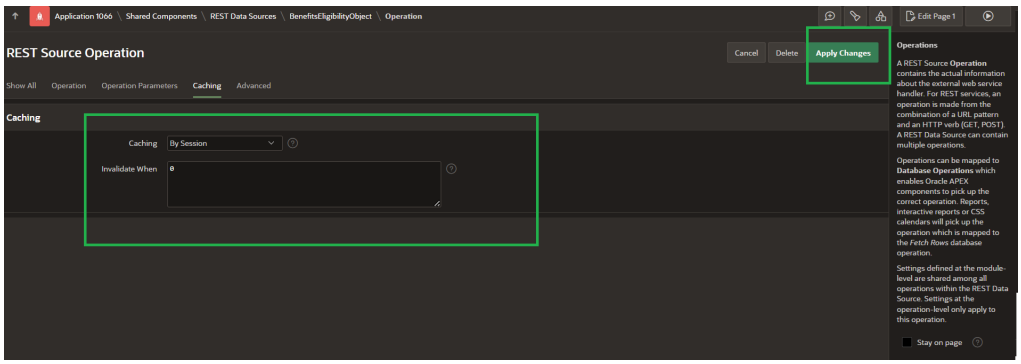
- Navigate to Application->Shared Components-> REST Data Sources->Your REST Data Source->Operations



- Edit the GET operation on your Rest Data Source



- Configure your caching preference and cache invalidation criteria

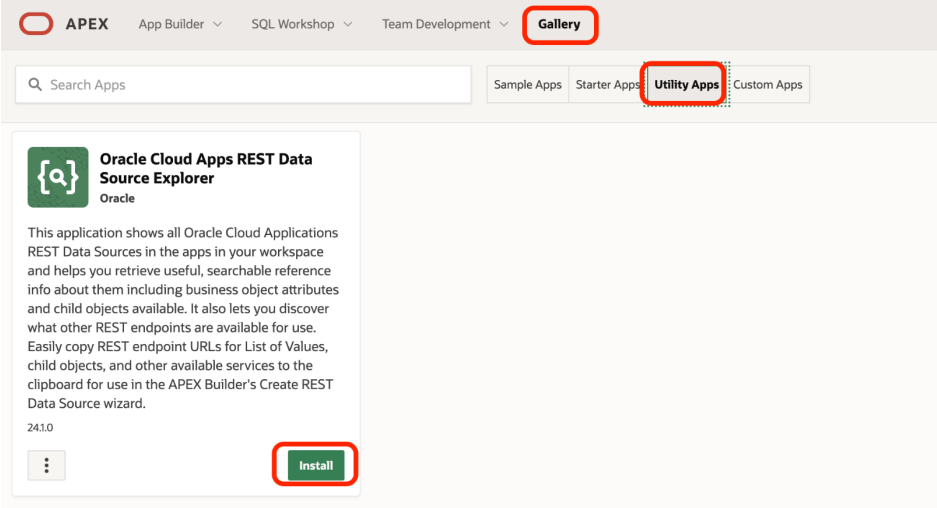


Copyright © 2025, Oracle and/or its affiliates / Public

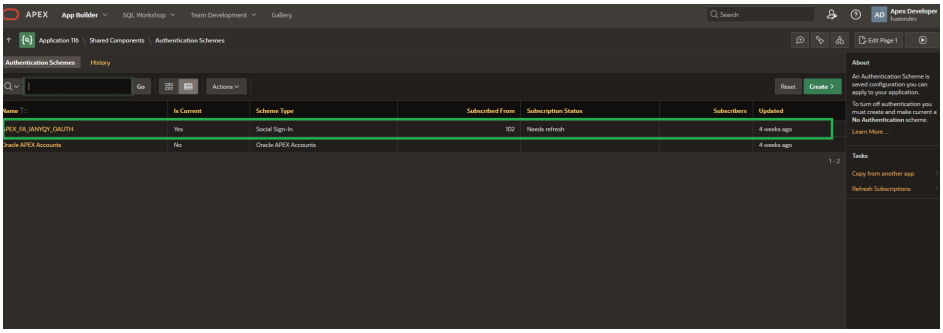
Exploring Service Metadata with Oracle Cloud Apps Data Source Explorer

You can install the Oracle Cloud Apps Data Source Explorer app as follows:

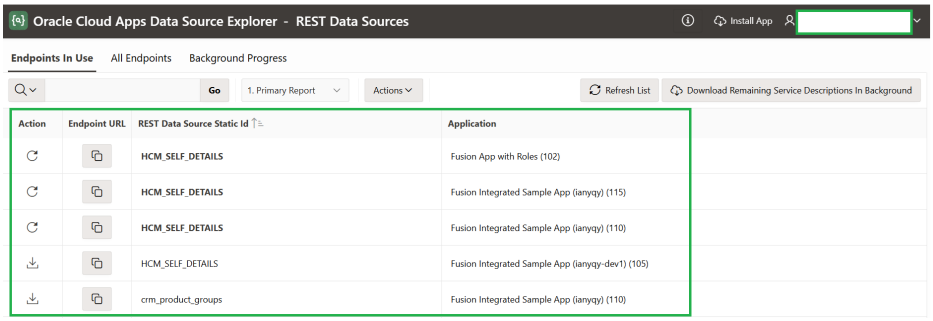
- Navigate to Gallery→Utility Apps and Install Oracle Cloud Apps Data Source Explorer



- Configure the authentication scheme for your Oracle Cloud Apps Data Source Explorer with Fusion authentication scheme

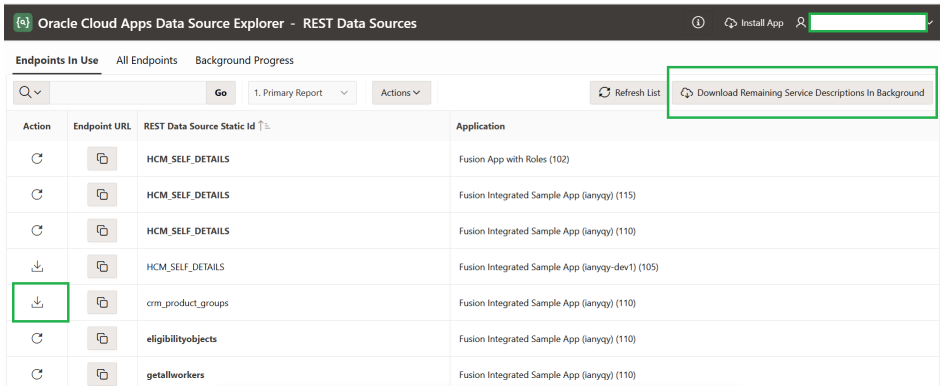


- Open the application and run it to see a view of REST Data Sources available across applications in your workspace.

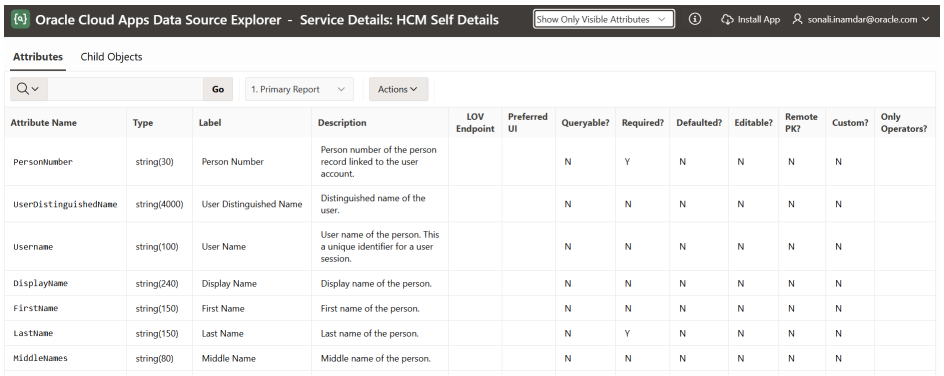


Copyright © 2025, Oracle and/or its affiliates / Public

- Download service metadata by clicking on the download icon for the service or download in background option for all remaining services.



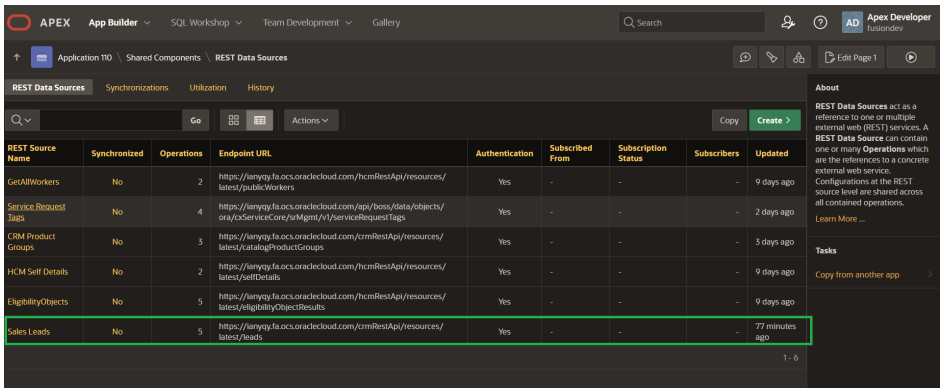
- For a detailed service metadata view navigate to Service details by clicking on the REST Data Source name in the REST Data Source Static Id column



Creating a UI Page with Fusion Data

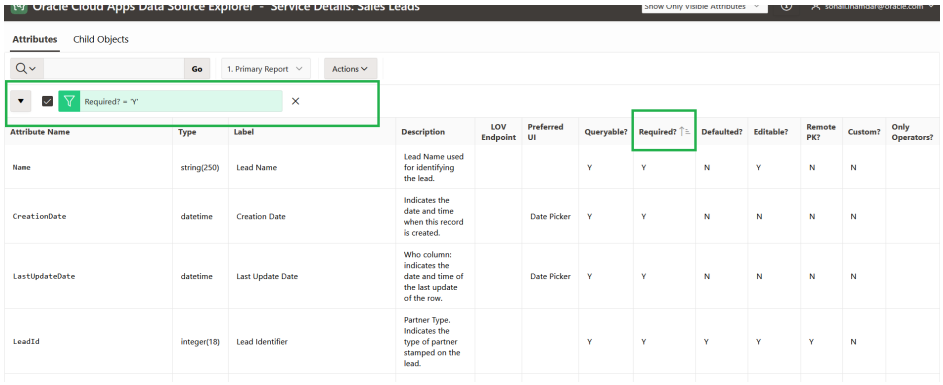
You are now acquainted with the tools provided to build a UI page with Fusion data. We will next show the steps for creating a form page with Fusion LOVs (List of Values). We will use the Sales Lead as an example Fusion data source.

- Create a REST Data Source for Sales Lead

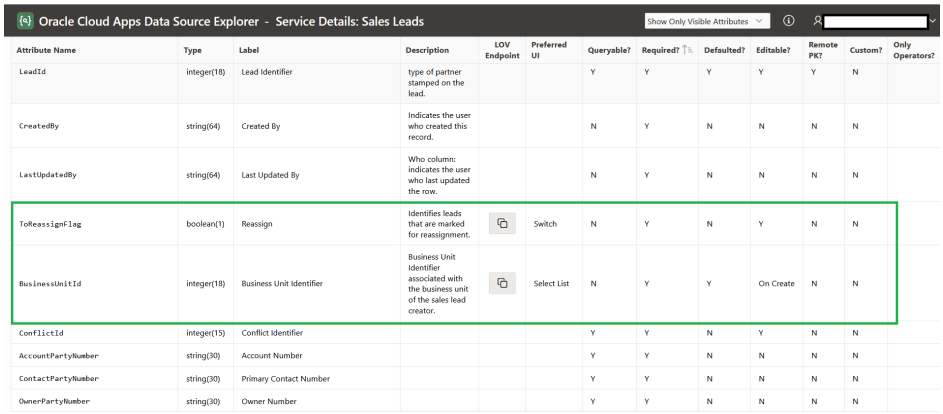


- Review API Metadata in API Explorer and apply filter to review list of Required fields for creating a Sales Lead

Copyright © 2025, Oracle and/or its affiliates / Public



- Review API Metadata in API Explorer to identify LOV fields and copy the provided LOV enpoint URLs.



- Edit the copied URLs to remove special characters, if any.

Table 1: Replacement of special characters

Special char	Replacement Value
%3B	;
%3D	=
%2C	,

Table 2: Sample LOV URLs

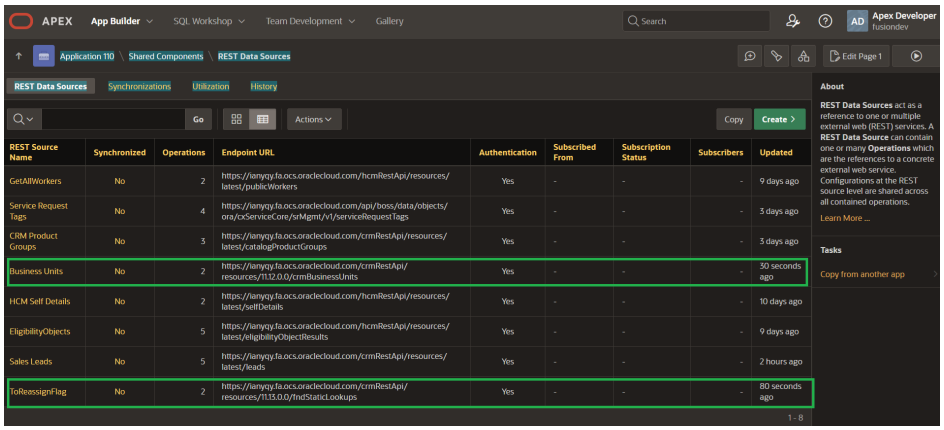
Field	URLs

Copyright © 2025, Oracle and/or its affiliates / Public

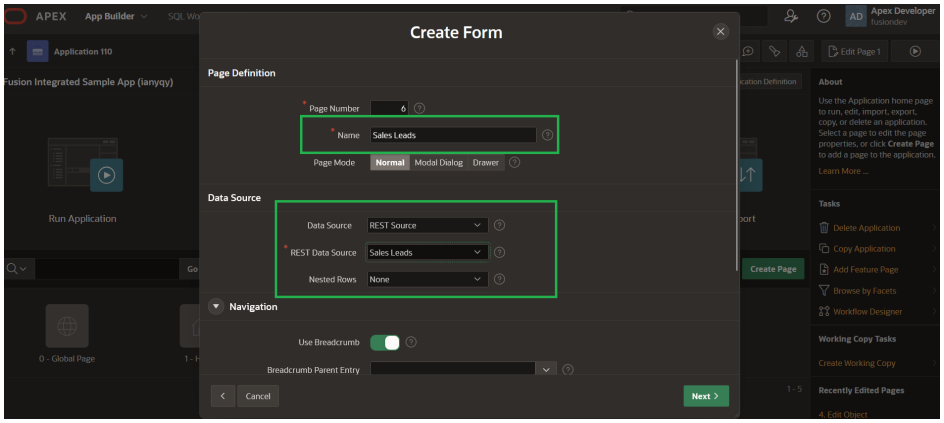
ToReassignFlag	• Copied URL
	  • https://ianyqy.fa.ocs.oraclecloud.com/crmRESTApi/resources/11.13.0.0/fndStaticLookups?finder=LookupTypeActiveEnabledOrBindCodeFinder%3BBindLookupType%3DYES_NO
	• Replacement URL
	  • https://ianyqy.fa.ocs.oraclecloud.com/crmRESTApi/resources/11.13.0.0/fndStaticLookups?finder=LookupTypeActiveEnabledOrBindCodeFinder;BindLookupType=YES_NO

Business Unit	• https://ianyqy.fa.ocs.oraclecloud.com/crmRESTApi/resources/11.12.0.0/crmBusinessUnits

- Create REST Data Sources from the LOV endpoint URLs

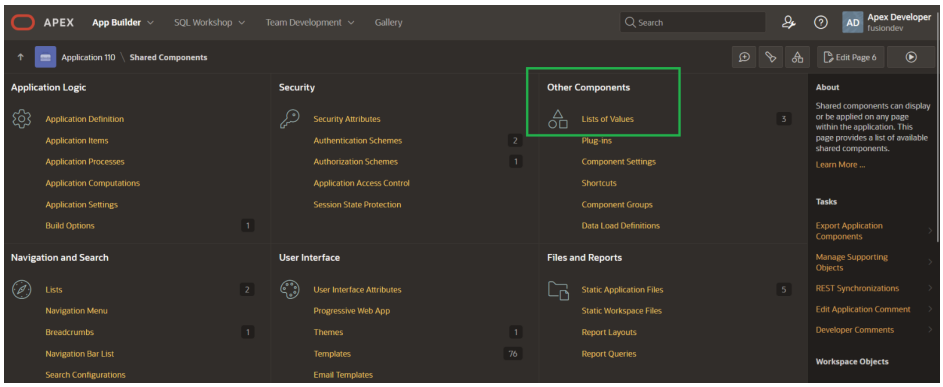


- Create a form with Required fields.

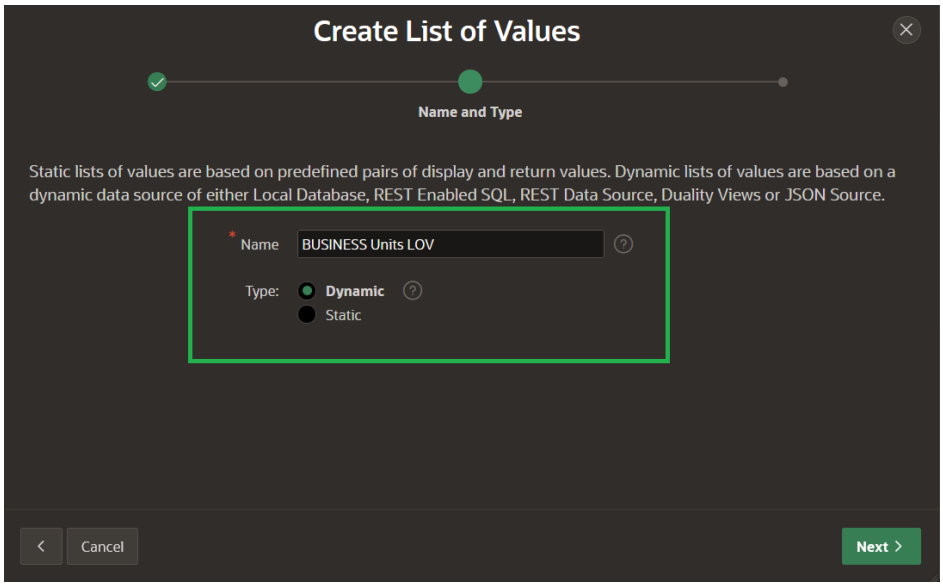


- Create List of Values for the LOV fields from REST Data Sources

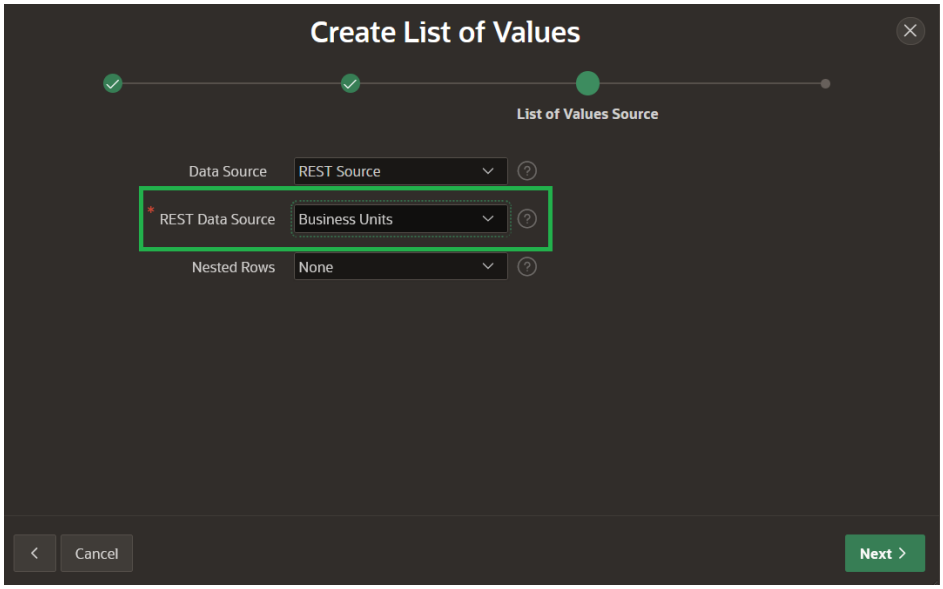
Copyright © 2025, Oracle and/or its affiliates / Public



- Enter a name for the List of Values

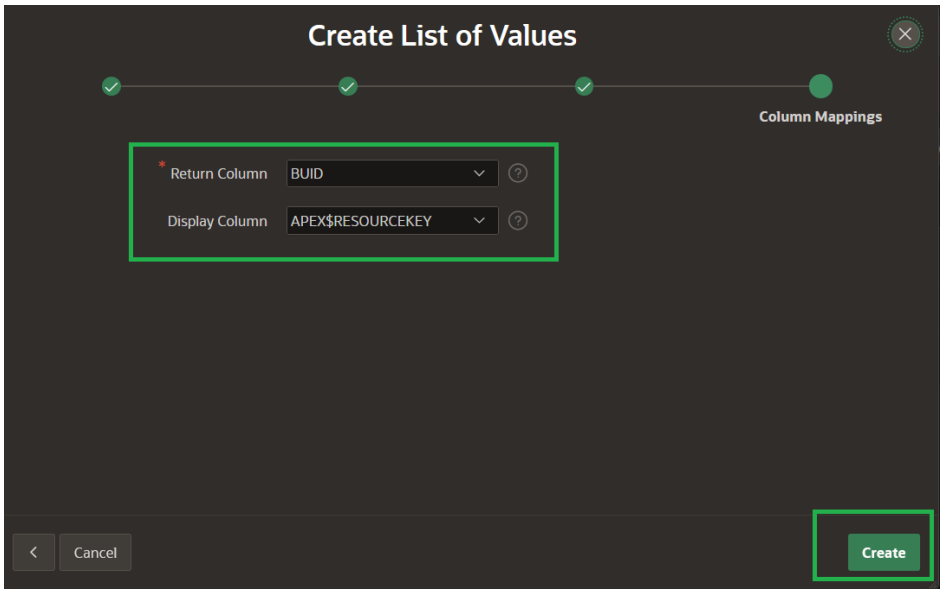


- Associate the List of Values with the REST Data Source

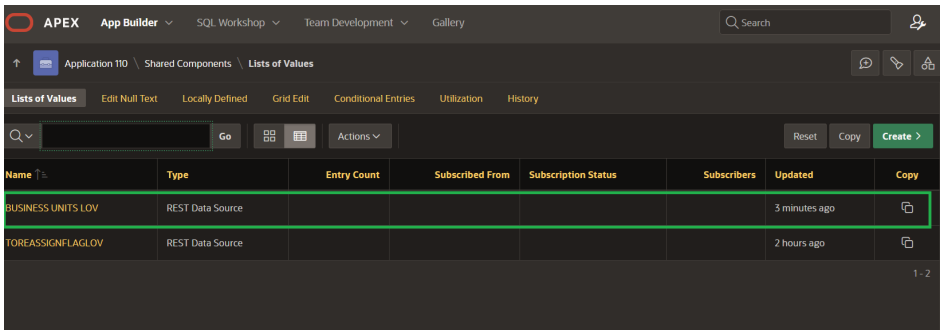


- Select the return column for the List of Values

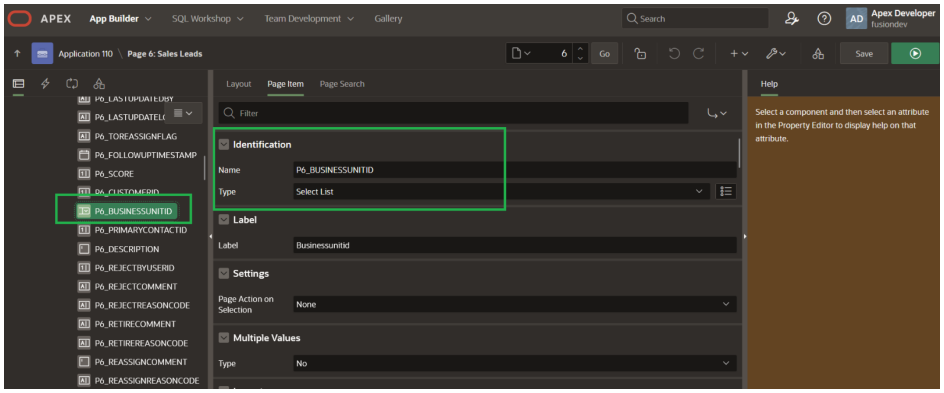
Copyright © 2025, Oracle and/or its affiliates / Public



- The List of Values is created with success

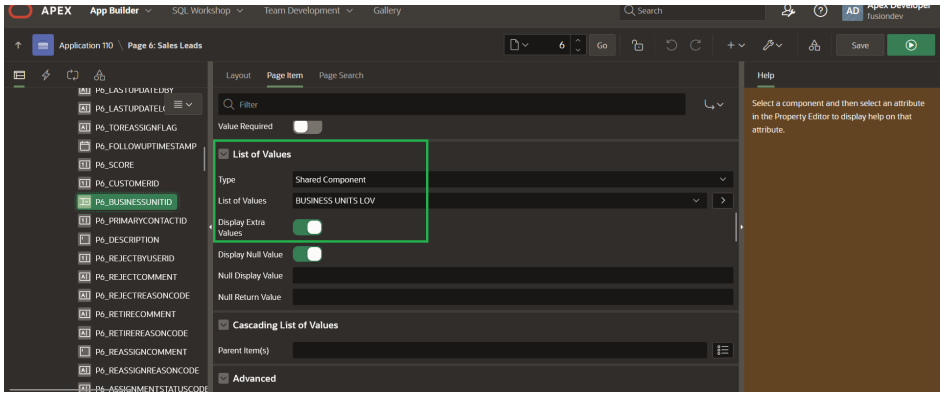


- Associate the List of values with the corresponding Page Item in the Form Page

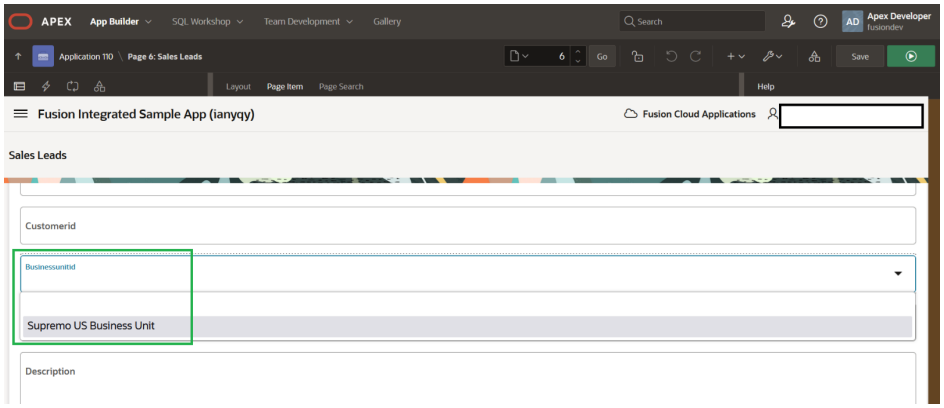


- Associate the List of Values created with the corresponding page item on the Form page

Copyright © 2025, Oracle and/or its affiliates / Public



- When you run the application you will see the LOV values retrieved from Fusion



Improving performance of a page with Fusion LOVs

Rest Data Sources configured for Fusion Rest APIs retrieve data from your configured Fusion instance. LOV data is configuration data that is a very good candidate for caching in your APEX application. Depending on the specifics of the Fusion LOV used in your APEX application you can configure the appropriate caching preference. A subset of Fusion LOVs are configured with Fusion security policies. When you are working with a Fusion LOV configured with Fusion security policies you can configure Rest Data Source caching. It is recommended you configure your Fusion LOV REST Data Source with REST Source Operation Caching "By Session" with cache invalidation criteria at "0" so that the content is cached in memory for the current page processing.

Integration APEX Extension application UI and Fusion UI

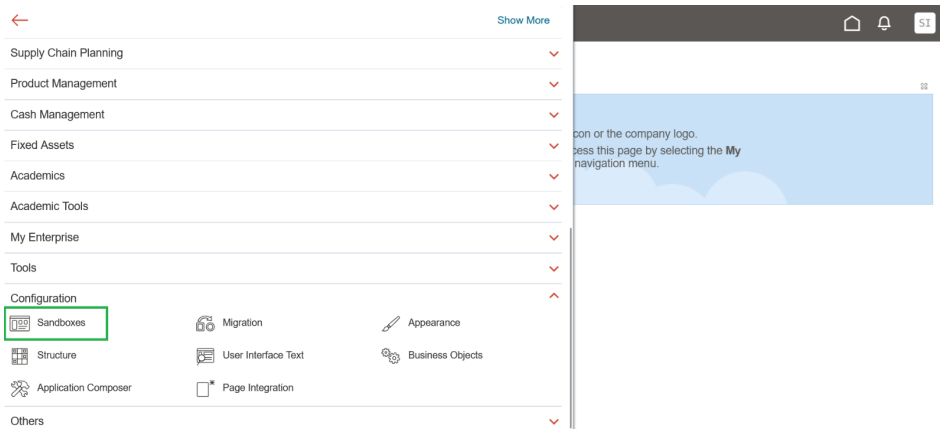
Launching APEX application from Fusion

The Fusion Navigation menu can be easily extended to support launch of the APEX Extension application. The following steps demonstrate configuring a sample APEX application link in the Fusion navigator menu. Refer to the latest Fusion documentation for the most current information on configuring the Fusion navigation menu.

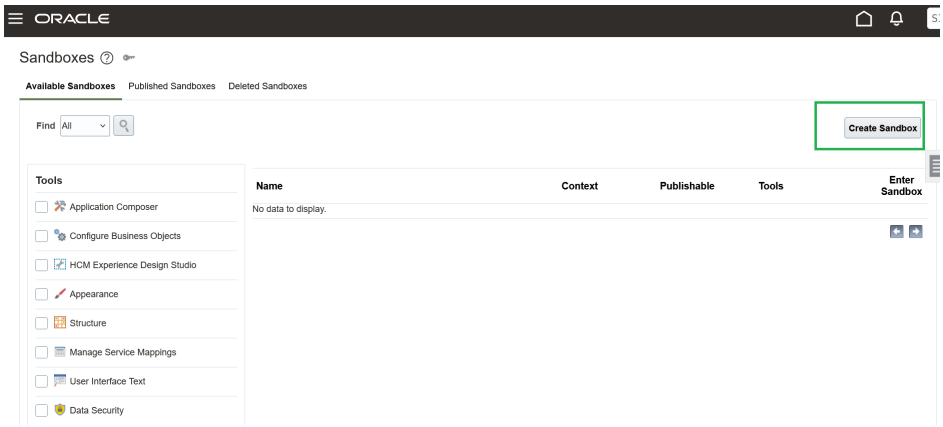
Steps to be performed by the Fusion System Administrator

- Login to Fusion UI and navigate to Configuration → Sandboxes

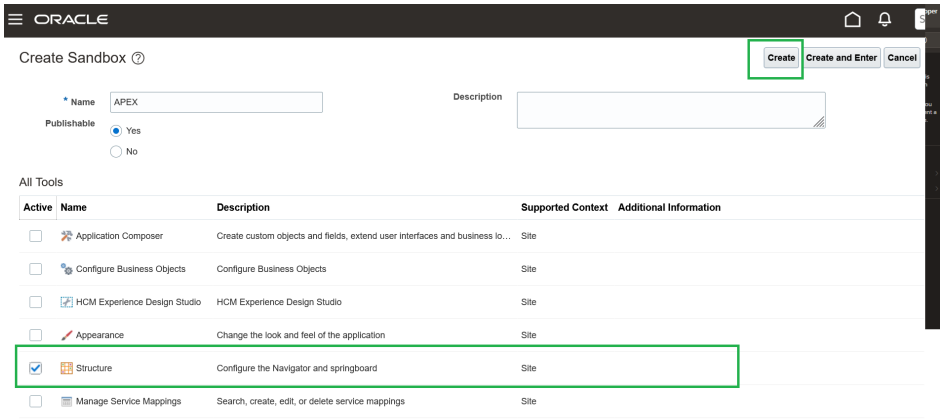
Copyright © 2025, Oracle and/or its affiliates / Public



- Create new Sandbox

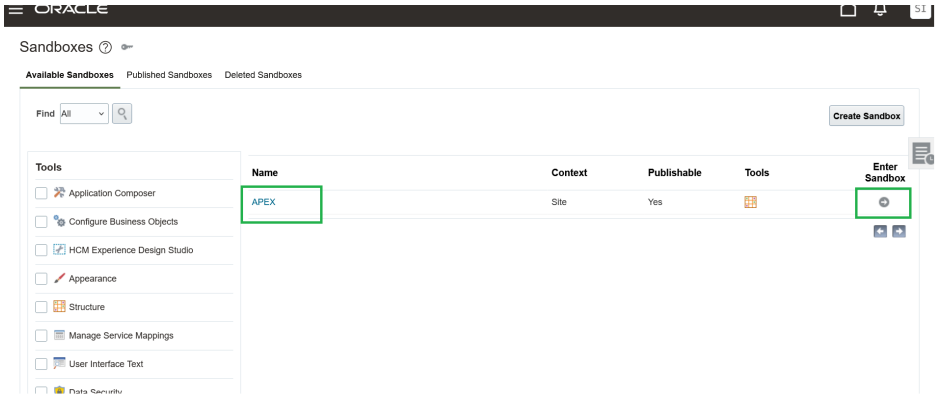


- Enter a name for the new Sandbox and ensure that the "Structure" tool is activated for the Sandbox.

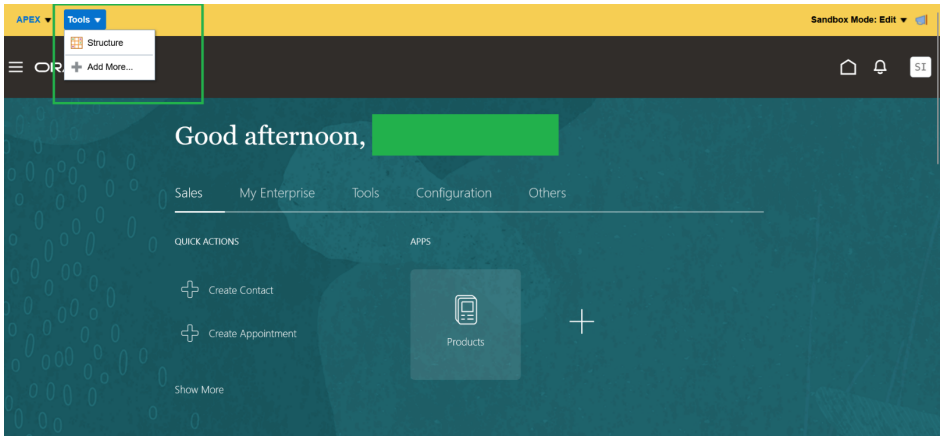


- The newly created Sandbox is now visible. You can enter the sandbox.

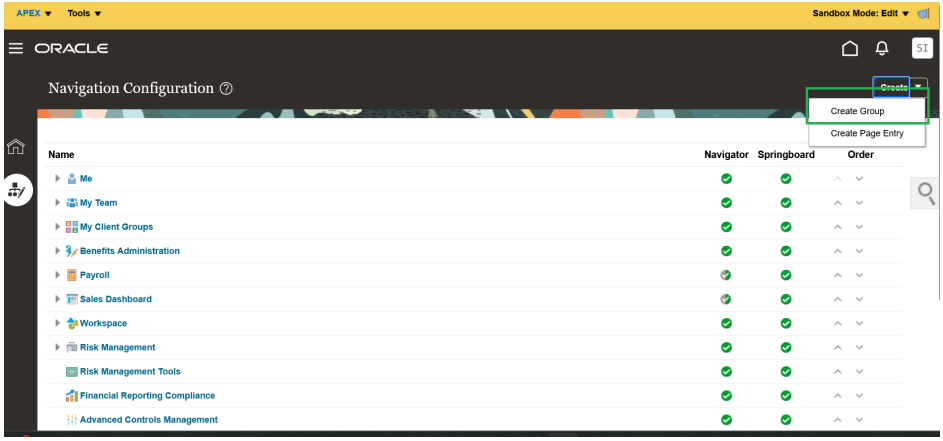
Copyright © 2025, Oracle and/or its affiliates / Public



- Whilst in the Sandbox, navigate to Tools→Structure

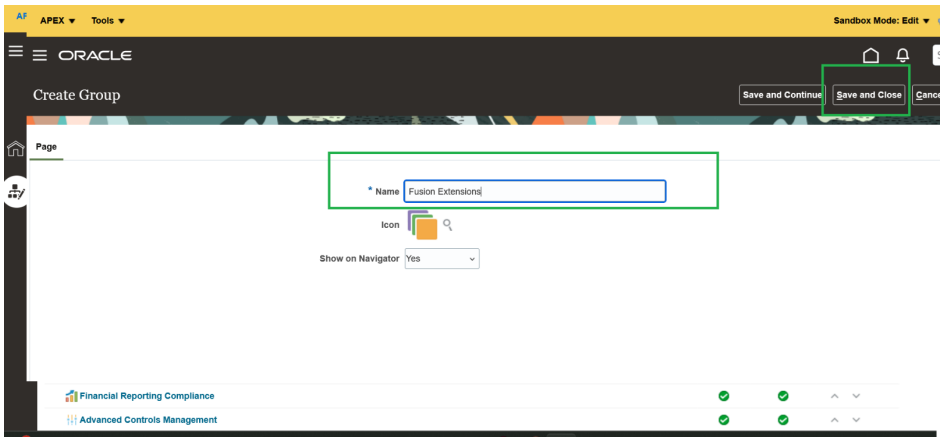


- Create a new Group by navigating to "Create Group"

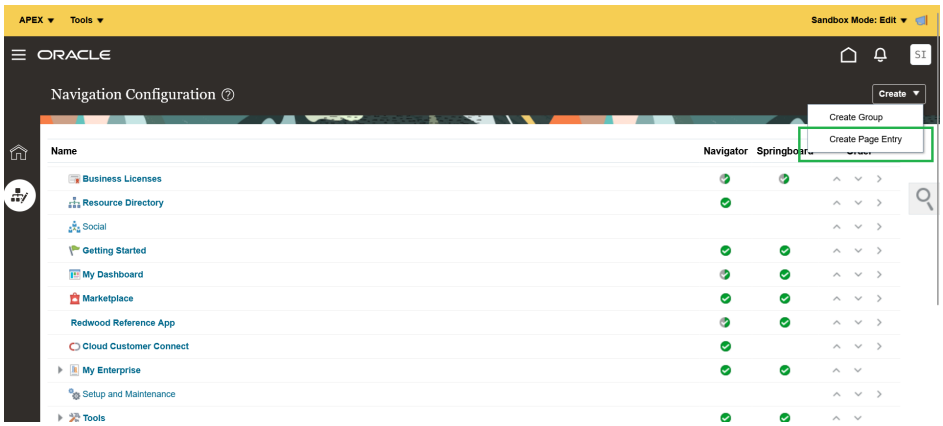


- Provide a name for your Group and select "Yes" for Show on Navigator

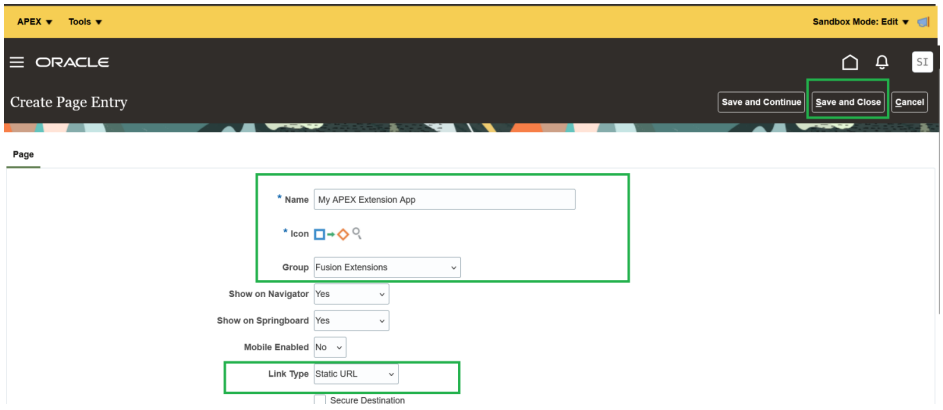
Copyright © 2025, Oracle and/or its affiliates / Public



- Create a new Page Entry

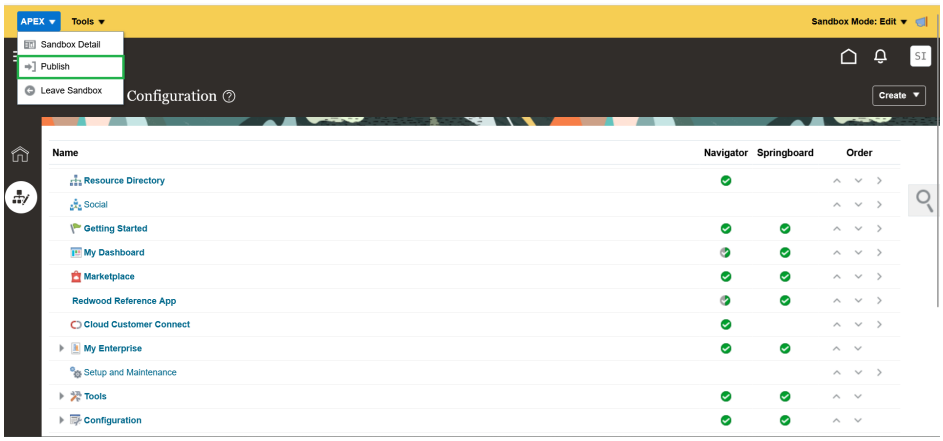


- Provide a name for your new Page Entry for example "My APEX Extension App" and select Icon. Also select group as the previously created group for example "Fusion Extensions" and select LinkType as "Static URL".

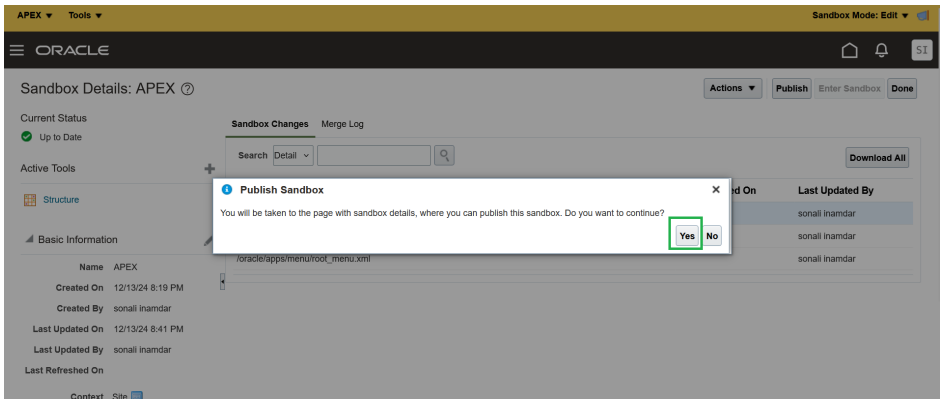


- Publish your Sandbox by navigating to Sandbox → Publish

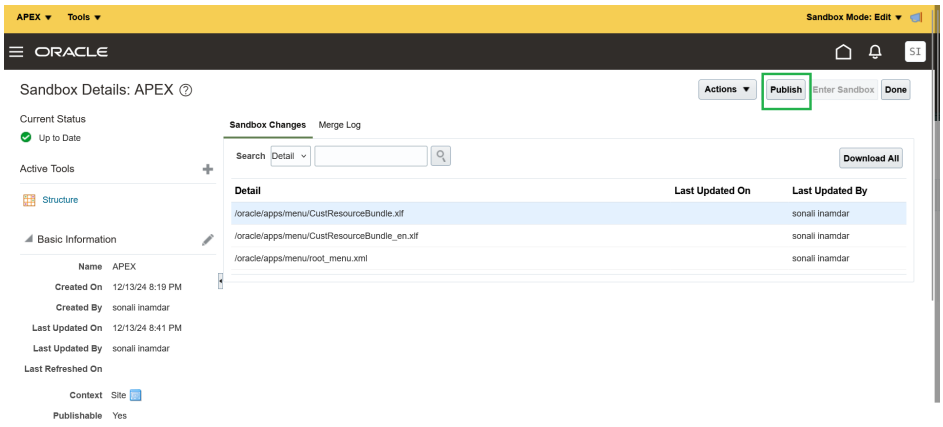
Copyright © 2025, Oracle and/or its affiliates / Public



- Confirm Sandbox Publish when you are shown the confirmation message for sandbox publish.

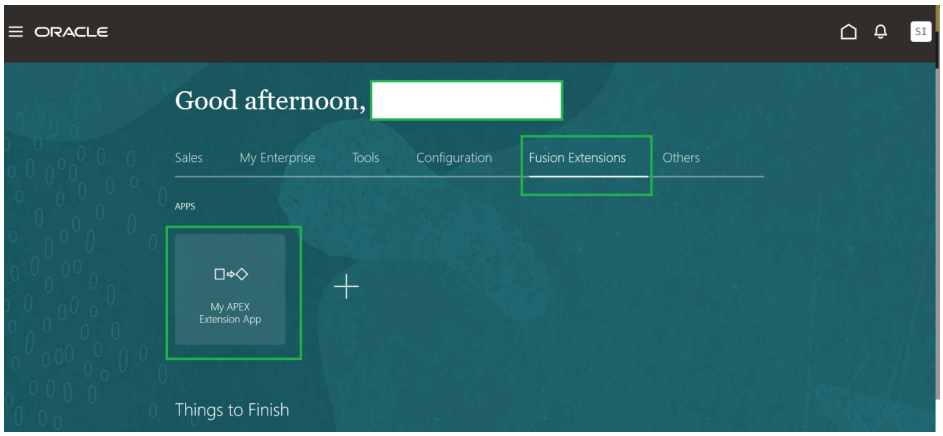


- Publishing your Sandbox ensures that the changes made in your Sandbox are available to all users of your Fusion instance



- When your Sandbox is published with success your users will see the newly created group with a link to the APEX extension application.

Copyright © 2025, Oracle and/or its affiliates / Public



Conclusion

Oracle APEX is an excellent platform for building application extensions to Oracle Fusion Cloud Applications Suite. Oracle APEX has native support for Fusion integrations. You can take advantage of Oracle APEX to allow cross-functional teams to easily collaborate and quickly deliver custom extensions to Oracle Fusion Cloud Applications Suite. Oracle APEX has powerful low-code techniques so you can build your extension UIs rapidly usings forms, reports and also develop your backend application workflows. With the proper deployment architecture, and using techniques outlined in this paper, you can use Oracle APEX to extend the capabilities of your Oracle Fusion Cloud Applications Suite. You can share user authentication and develop seamless flows across components between your extension APEX application and Fusion Cloud Applications.

Copyright © 2025, Oracle and/or its affiliates / Public

Copyright © 2025, Oracle and/or its affiliates / Public

ORACLE

Connect with us

Call +**1.800.ORACLE1** or visit **oracle.com**. Outside North America, find your local office at: **oracle.com/contact**.

blogs.oracle.com facebook.com/oracle twitter.com/oracle

Copyright © 2025, Oracle and/or its affiliates. This document is provided for information purposes only, and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document, and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.