Import Data through Import Management

Data Import Options & Flows in Oracle CX Sales and B2B Cloud:

1. **Import Management** – Login to Fusion Instance. Navigate to Navigator > Tools > Import Management to import data. It uses same Oracle ESS processes for import.

2. **REST API/ SOAP Web Services** – In order for External applications to import data into application, Fusion Application provides REST APIs and SOAP Web Services. REST APIs create import activity and uses the same mapping as it is done when data imported through Import Management in application. The status can be monitored in the same way as done in the application.

3. **External Data Loader Client (EDLC)** – It's a utility tool that uses REST Web Services to import data through Import Management.

4. **Quick Import Macros** – Quick Import Excel macros uses REST Web Services to import data through Import Management.

5. **File Import** – Uses SOA Architecture to import data into the application

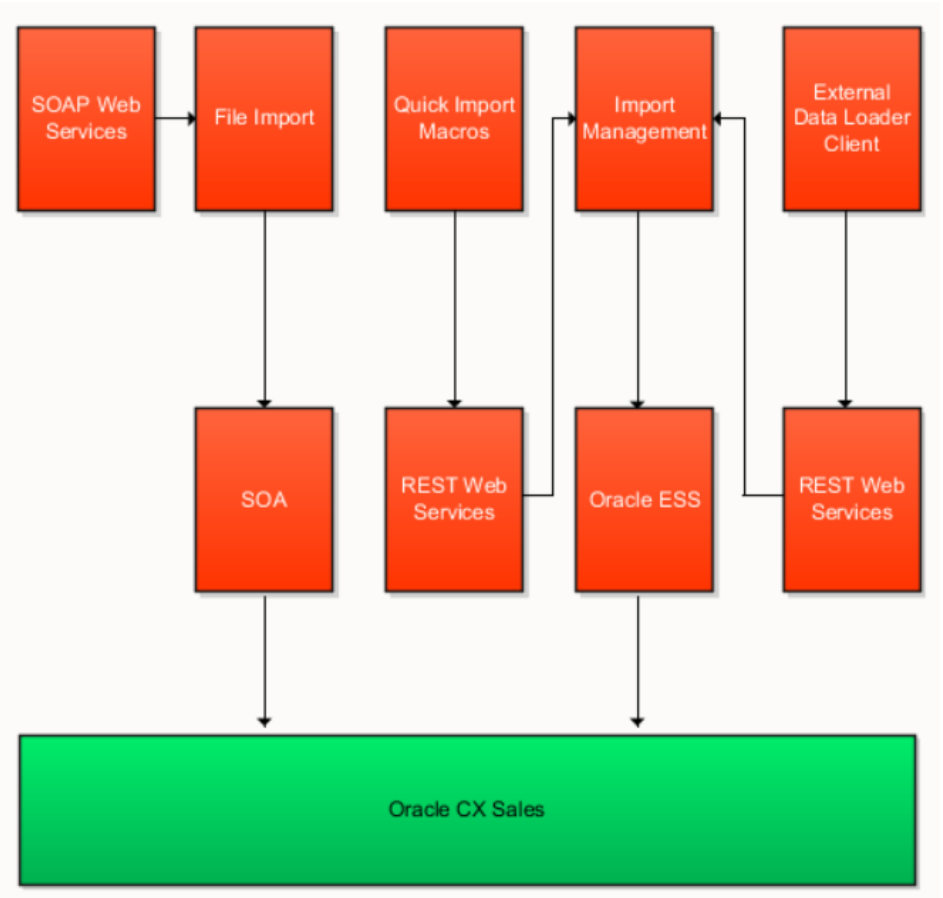

Image Source: docs.oracle.com

Advantages of using Import Management :

- **Ease of use** - streamlined UIs, drag and drop mapping, and pre-execution validations
- **Integrated** - REST and command-line APIs for job definition, invocation, and monitoring
- **Consistency** - object definitions that are same throughout the application (import, REST, UI, App Composer), including parent-child structures
- **Configuration** - supports custom business logic and events
- **Improved debugging** - easier issue diagnosis, analyzes up to the first 10 rows of your source file for validation of data type constraints, and required fields
- **Performance** -improved performance with much less import time for high-volume data. Data migrations can be configured to process millions of records per hour
- **Flexibility** - can support jobs of all sizes and high-volume onboarding and initial data loads

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Import Data through Import Management

Import Process Flow:

1. Evaluate the source data to be imported.
2. Identify the relevant Import Objects
3. Map source data to the Import Objects
4. Create and Submit an Import Activity
5. Check for the Import Status
6. If successful, verify the data imported
7. If fails, download and review the log files

ACTION PLAN:

- ✓ We will perform the entire process manually through UI first.
- ✓ Next, we will perform the same process using REST APIs and SOAP Web Services.

Note:

- The entire process of Import Management can be automated with an external scheduler, run recurring import jobs, define and execute import/export activities, manage maps, and introspect object metadata.
- Oracle provides EDLC and WebCenter Content Document Transfer Utility to automate the process. Moreover, the same automation can be developed in any programming language like PLSQL, Python etc. any Middleware like OIC, Mulesoft, Dell Boomi etc.

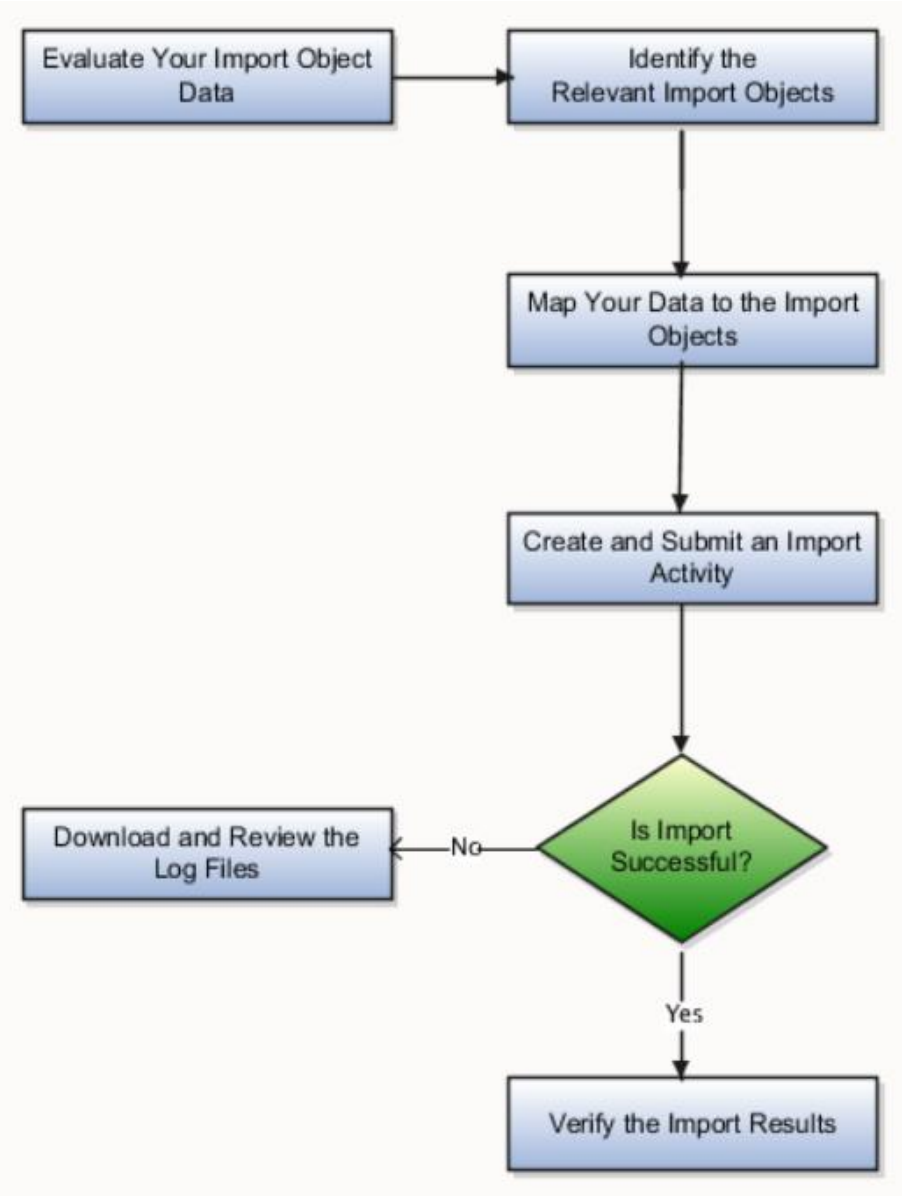

Image Source: docs.oracle.com

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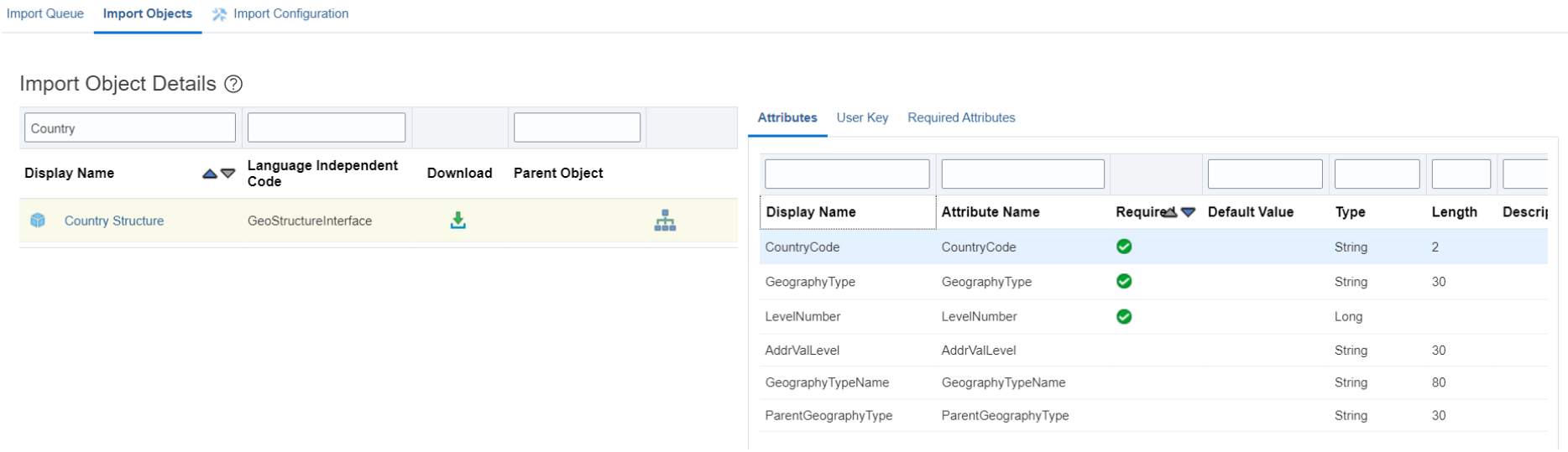
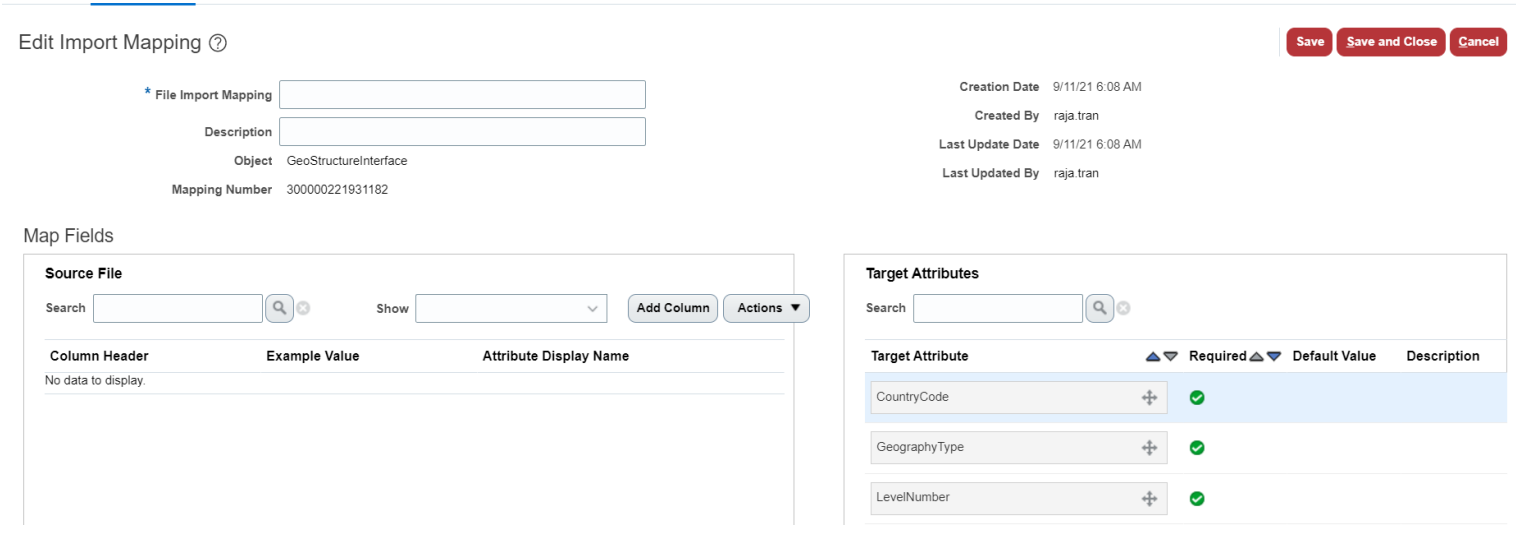
Import Management Framework:

Import Objects – **Import Object Details Page** enlists all the Objects that can be imported through Import Management. Further more, the details of attributes, whether required or not, User Keys, Default Values, Data Types. Data Length can be found.

Click on Download icon to download the template, which is used to feed into the csv file and upload.



Click on Display Name hyperlink for the object to navigate to **Manage Mapping Page**, This page is used to create a new import mapping , upload a map and manage existing mapping.



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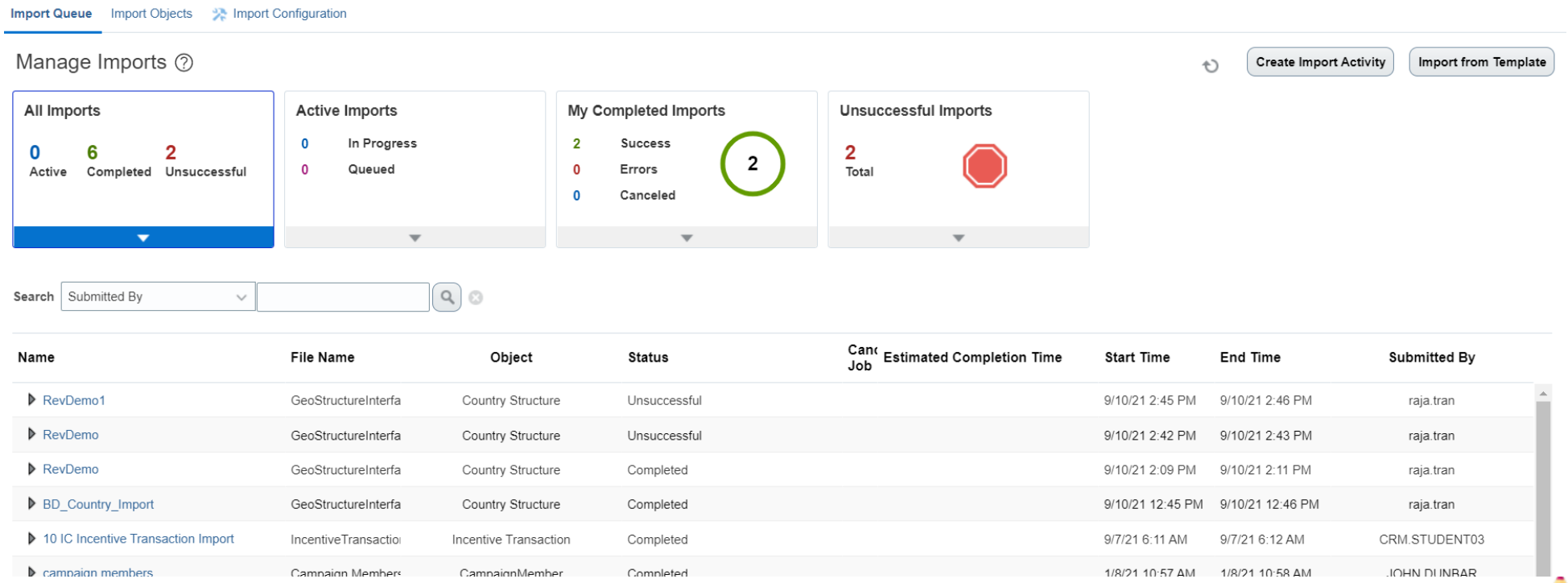
Import Data through Import Management

Import Management Framework:

Import Queue – **Manage Imports** page of the Import Queue shows following infotiles:

- All Imports: This infotile displays the count of active, completed, and unsuccessful imports submitted by all users. Click on this infotile to see a list of all import jobs.
- Active Imports: This infotile displays the count of all import jobs submitted that are either in progress or in queued status. Click on this infotile to see a list of active import jobs.
- My Completed Imports: This infotile displays the count of imports submitted by the current user that are completed (either successful or failed with warnings or errors). Click on this infotile to see a list of completed import jobs created by the current user.
- Unsuccessful Imports: This infotile displays the count of unsuccessful imports submitted by all users. Click on this infotile to see a list of unsuccessful import jobs. These are the imports which couldn't complete because of application error in the import flow.



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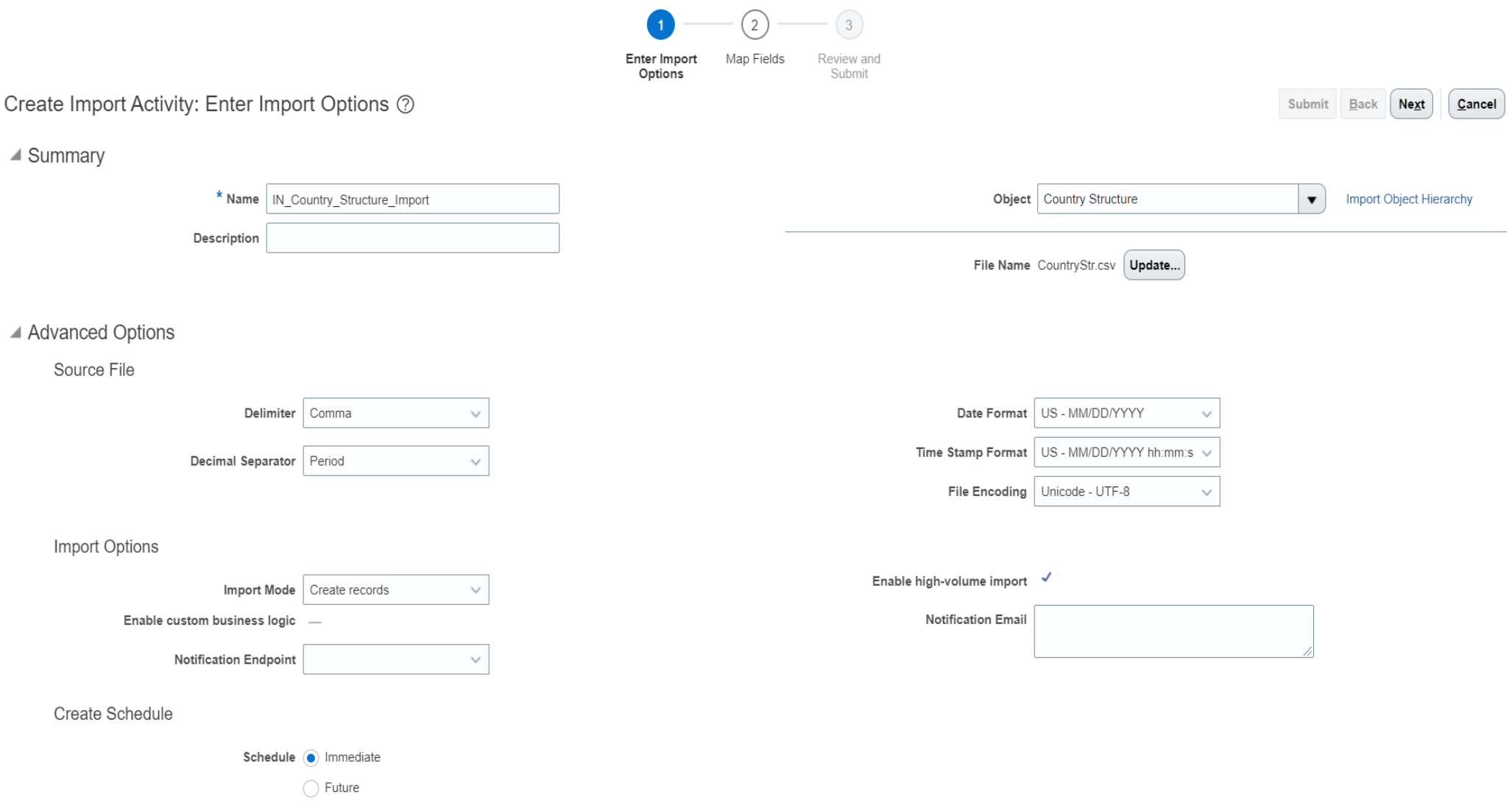
Import Management Framework:

Import Queue – **Create Import Activity: Enter Import Options** page is used to create an import activity basically initiate the data import process. Provide Name of the Import, Select the Object, Browse the Data File, Select Source File related attributes, Import Options, Create appropriate schedule. Once all details are provided, click Next.



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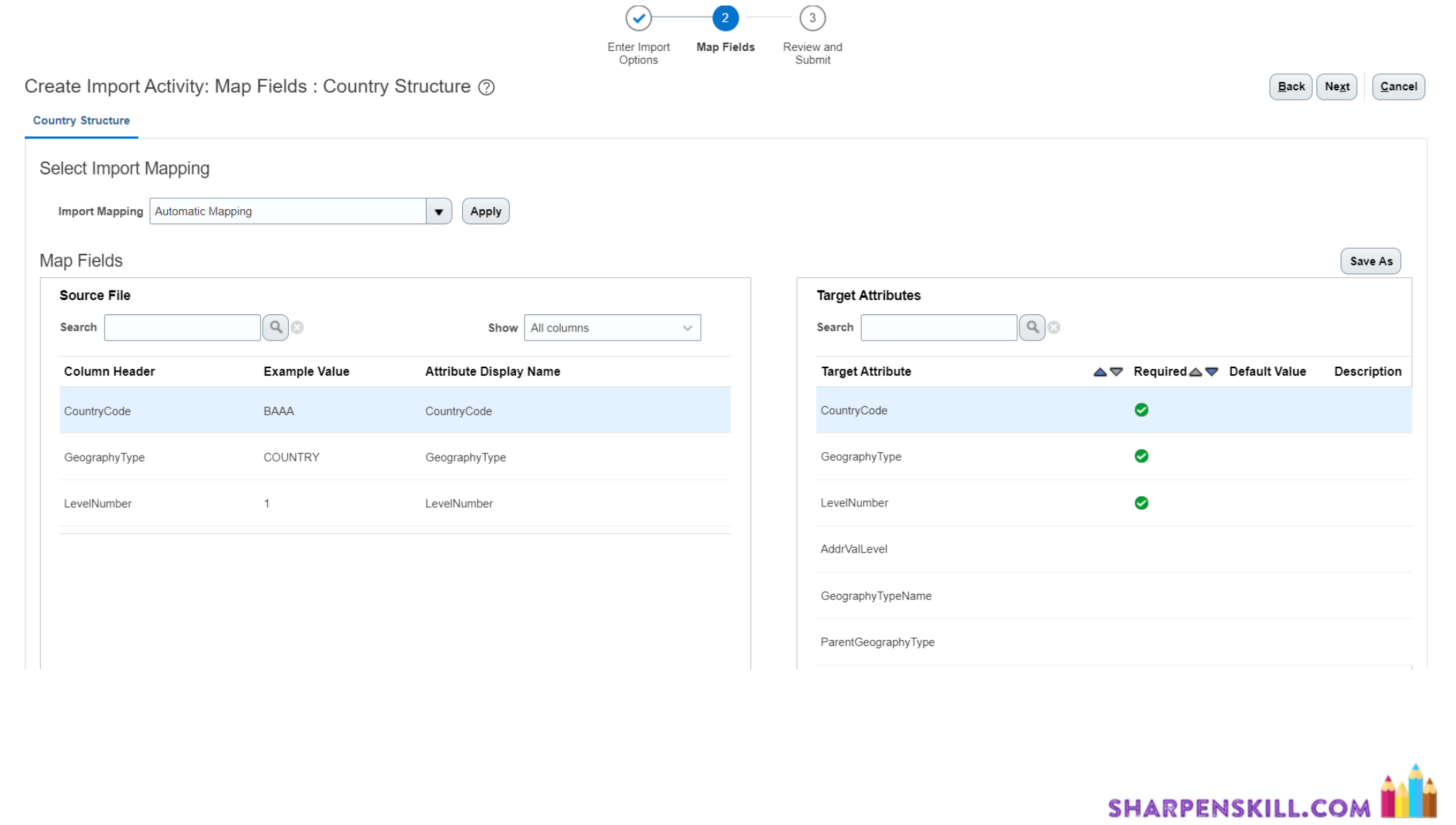
Import Data through Import Management

Import Management Framework:

Import Queue – **Create Import Activity: Map Fields** page is used to map source field to Import Object field. This is done dynamically if not done in Manage Import Mapping page. If source data is fed into the standard template as defined in Import Objects for the object concerned then, Automatic mapping would work and not further mapping required.



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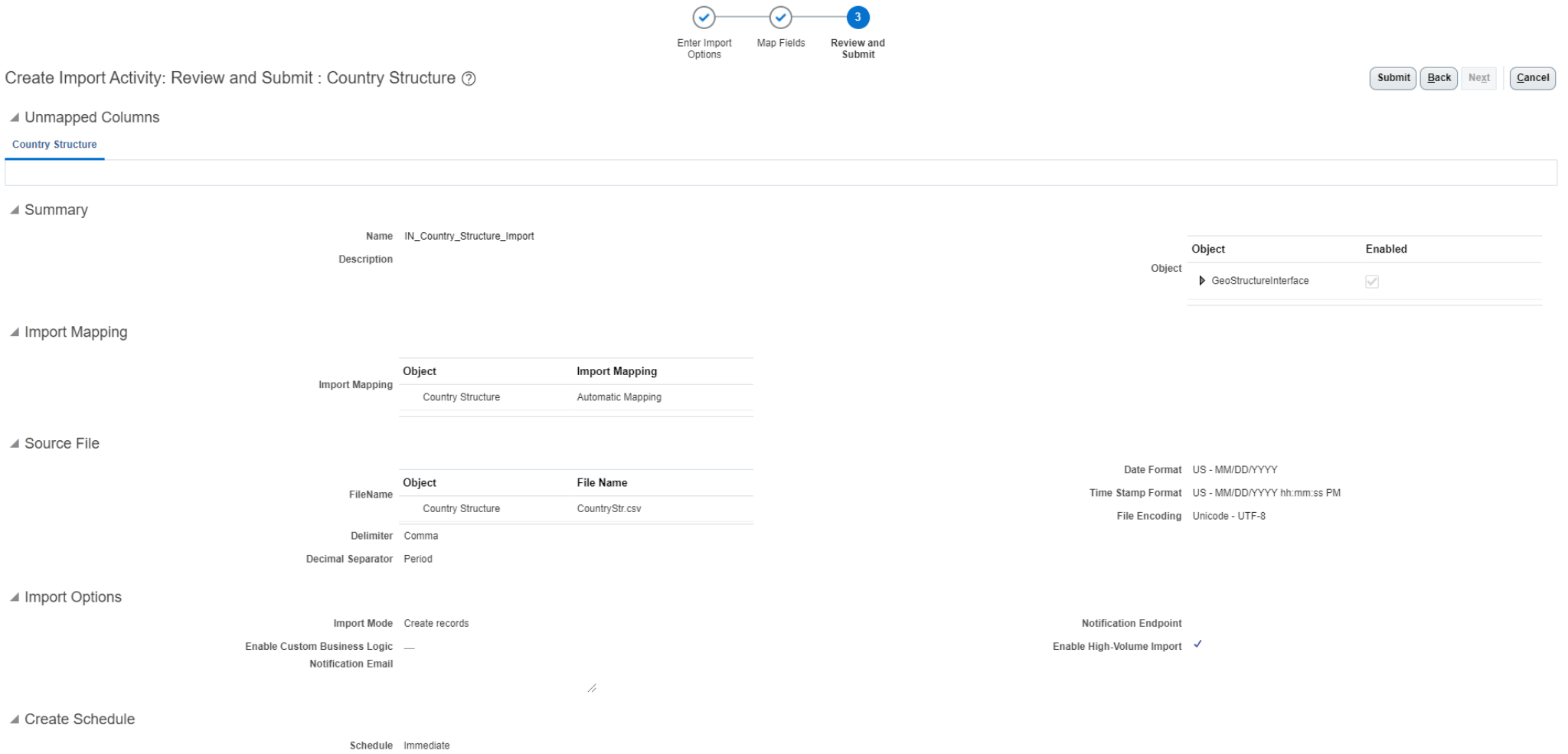
Import Management Framework:

Import Queue – **Create Import Activity: Review and Submit** is used to review the all attributes for Import Activity for the final time and this is the last chance to make any correction and then Submit is clicked to submit the activity.



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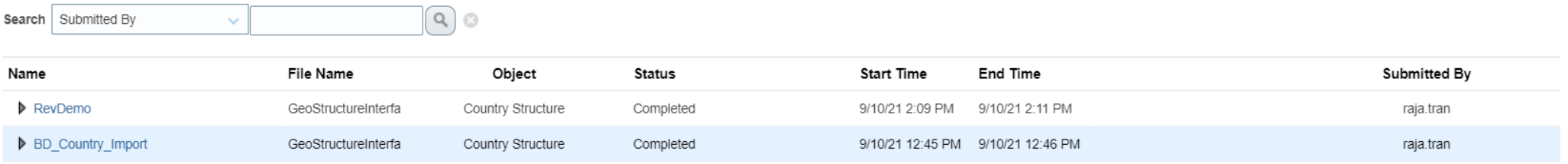
Import Data through Import Management

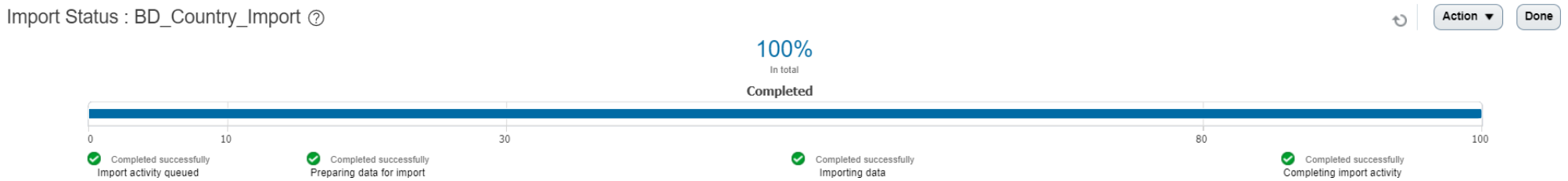
Import Management Framework:

Import Queue – Under **Manage Import** page, Active Imports infotile enlists the active imports. Click on Import Activity Name(hyperlink)



Name	File Name	Object	Status	Start Time	End Time	Submitted By
RevDemo	GeoStructureInterfa	Country Structure	Completed	9/10/21 2:09 PM	9/10/21 2:11 PM	raja.tran
BD_Country_Import	GeoStructureInterfa	Country Structure	Completed	9/10/21 12:45 PM	9/10/21 12:46 PM	raja.tran

Check the status – Activity Details, Date and Time Details to measure performance, Record Details (success and exception), Click on Action to download log and diagnostics.



Details

Activity Details

Name	BD_Country_Import
Import Activity Identifier	300000221921110
Object	Country Structure
Submitted By	raja.tran
Description	

Date and Time Details

Start Time	9/10/21 12:45 PM
End Time	9/10/21 12:46 PM
Estimated Completion Time	9/10/21 12:47 PM (00:02:12)
Execution Time	00:01:26
Queued Time	--

Record Details

Read from File	5
Loaded Successfully	5
Errors Reported	0
Warnings	0
Unprocessed	0

Advanced Options

Import Attachments

Title	Size	Description	Actions
Import activity map file	391 B	Mapping details used for import activity	
GeoStructureInterface.csv	102 B	User provided input data file	

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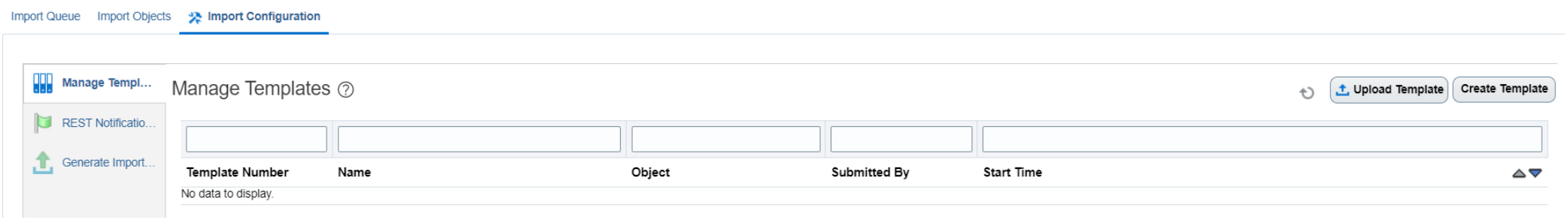
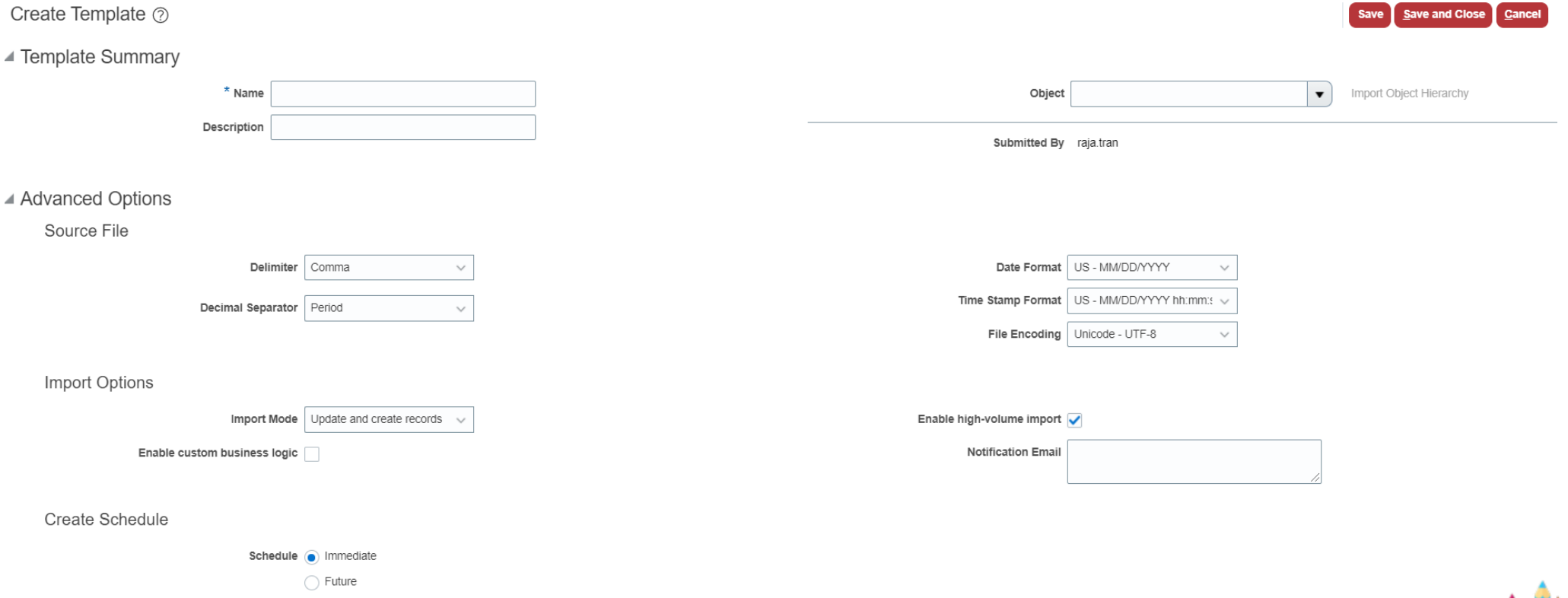
Import Data through Import Management

Import Management Framework:

Import Configuration – **Manage Templates** page enlists all Custom and Customized Templates and allows Creating/ Uploading custom Templates.





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Import Data through Import Management

File Size Limits for Import:

Import Option and Mode	Max. no. of Files per Job Submission	Max. no. of records processed per Job Submission
User Interface (Low Volume)	1 File (50K Records)	50K records
REST Service (Low Volume)	1 File (50K Records)	Unlimited (Must be manually split by the user into 50K record files)
EDLC (Low Volume)	1 File (50K Records)	Unlimited (EDLC splits the file into multiple files of 50K records and submits in a single REST API Call)
User Interface (High Volume)	1 File (500K Records)	Unlimited (Must be manually split by the user into 500k record files)
REST Service (High Volume)	1 File (500K Records)	Unlimited (Must be manually split by the user into 500k record files)
EDLC (High Volume)	1 File (500K Records)	Unlimited (EDLC splits the file into multiple files of 200K records and submits in a single REST API Call)

Note:

- Oracle recommends that developers should use EDLC (High Volume) for import for the supported objects and limit 2 Millions of records with 20 files of 100K records per CSV. On the other hand, developer can choose to submit parallel batches and submit 10 parallel batches as per Oracle's recommendation.
- Performance of the import process may vary based on the data and configuration. To kick start developer can submit 10 parallel batches of 100K records per batch. Explore further to identify the best setup based on the data and configuration
- REST API – importActivities can contain up to 20 CSV files (50K records per CSV) in one request payload and 10 Jobs in parallel can lead to import 1 Million records at a time. Caution: File size shouldn't exceed 250 MB.
- Ensure Import and Purge are not running in parallel for the same object at the same time

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Import Data through Import Management

Tools to fecilitate automation of Import Management:

Oracle provides couple of tools to facilitate the data import process through Import Management. Here are those:

1. The **External Data Loader Client** is a command-line tool that does followings:
    - breaks a large data file into smaller importable data files.
    - improves the performance of large-volume imports.
    - queues the multiple file import activities required to import a large data set, in a single action instead of manually or programmatically triggering multiple import activities
    - gets the status of each activities along with downloading the logs.

Doc Id to download: 2325249.1

2. The **WebCenter Content Document Transfer Utility** is a set of command line interface tools that provide capabilities to import and export content from a local system to the Oracle WebCenter Content Server.
    - The DownloadTool is used to retrieve a content item from Oracle WebCenter Content Server and save its contents to a local file.
    - The UploadTool is used to create a new content item in Oracle WebCenter Content Server based on contents streamed from a local file.
    - The SearchTool is used to locate content items within Oracle WebCenter Content Server matching specific query criteria.
    - The StorageTool is used for migrating applicable Oracle WebCenter Content Server documents from the server's file system to secure file storage within the Oracle Database.

Doc Id to download: 1624063.1

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Import Data through Import Management

Roles Required for Import and Export Management:

- Certain roles and duties are required to perform activities related to import and export management
- The table below lists set of roles for importing or exporting top level objects. Child level objects can be imported/ exported if the roles are provisioned for the top level objects.

Object Name	Recommended Role for Import & Export	Administrative Level Roles
Country Structure/ Geography/ Territory Geography	Geography Administration (ORA_GEO_ADMIN_DUTY)	Geography Administration (ORA_GEO_ADMIN_DUTY)
Organization/ Account/ Consumer/ Person/ Hierarchy/ Hierarchy Member	Trading Community Import Batch Management (ORA_MANAGE_TRADING_COMMUNITY_IMPORT_BATCH_DUTY)	Sales Administrator (ORA_ZBS_SALES_ADMINISTRATOR_JOB)

- Roles for other objects are provided in this documentation.

  Roles for Import and Export

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