



HCM EXTRACTS

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Extracts in Oracle Fusion HCM

In Oracle Fusion, **HCM Extracts** (Human Capital Management Extracts) are tools used to **extract data from the HCM (Human Capital Management) module**. They allow you to **retrieve and format employee-related data** for various purposes like reporting, integration with third-party systems, payroll processing, benefits administration, and more.

HCM Extracts

- A data extraction tool provided within Oracle Fusion HCM.
- Used to define and generate outbound data files.
- Highly customizable allowing you to **define what data to pull**, how to format it, and where to send it (e.g., SFTP, email, etc.).

Key Components of HCM Extracts

- 1. Extract Definition
 - Where you define the **scope**, **data group**, and **attributes** (fields) to extract.
- 2. Data Groups
 - Logical groupings of data (e.g., Person, Assignment, Payroll).
- 3. Attributes
 - Specific data fields within a data group (e.g., Employee Name, National ID).
- 4. Records & Hierarchies
 - Support for parent-child relationships in data, like person \rightarrow assignment \rightarrow salary.
- 5. Extract Delivery Options
 - Defines where and how the extract file should be delivered (e.g., file location, email, FTP).
- 6. Fast Formulas (Optional)
 - Used for calculations, data filtering, or transformations during the extract process.
- 7. Output Format
 - Can be generated in **XML**, **CSV**, **TXT**, or custom layouts (like PDF via BI Publisher).

Types of Extract-

1. Full Profile Extract

Purpose:

- To extract complete, detailed data about workers or entities across all relevant data groups.
- Typically used for initial data loads, data migration, or integration with third-party systems.

Key Uses:

- Full HR records for payroll or benefits vendors.
- Data backup or audit requirements.
- Sending full employee profiles to external systems.



2. HR Archive Extract

Purpose:

- To archive and store employee data for legal or compliance requirements (e.g., after termination or exit).
- Acts as a **historical snapshot** of HR data at a specific point in time.

Key Uses:

- Compliance with statutory/legal data retention policies.
- Keep data available after employee exit or data deactivation.
- · Historical HR audits or legal references.

3. Changes Only (Incremental) Extract

Purpose:

- To extract only the data that has changed since the last extract run.
- Improves performance and reduces data size for frequent syncing.

Key Uses:

- Daily/weekly data sync with payroll or downstream systems.
- Avoid sending redundant unchanged data.
- · Optimize performance of interfaces.

4. Global Reports Extract

Purpose:

- To generate global-level workforce reports, often with standardized attributes across geographies.
- Combines data from multiple business units or countries.

Key Uses:

- Executive dashboards.
- Global headcount or compensation reporting.
- Regional or country-level compliance.

5. Benefits Extract

Purpose:

- To pull benefits-related data, including plan enrollments, beneficiaries, and coverage levels.
- Tailored for integrations with external benefits providers.

Key Uses:

· Sending enrollment data to insurance vendors.



- Verifying employee coverage and deductions.
- Managing open enrollment changes.

6. Payroll Interface Extract

Purpose:

 To extract payroll-relevant data for integration with external payroll systems (if not using Oracle Payroll).

Key Uses:

- Sending work schedules, earnings, deductions, and bank details to 3rd-party payroll vendors.
- Non-Oracle payroll integrations (e.g., ADP, SAP, etc.).

7. Custom Extract

Purpose:

 User-defined extracts to serve specific business or integration requirements not covered by delivered ones.

Key Uses:

- Tailored data extracts for niche use cases.
- Interface with external tools like Time & Attendance, LMS, CRM.
- Ad hoc reporting for HR or Finance.

Step 1: Log in to

Oracle Fusion Applications.



Fig 1



Step 2: Select My Client Group and click on Data Exchange to create a new Extracts

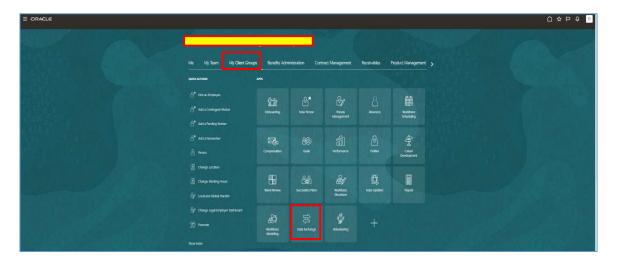


Fig 2

Step 3: Select Extract Definitions and click on it.

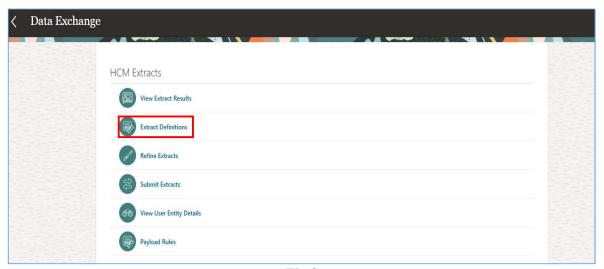


Fig 3



Step 4: Click on '+ 'button and Select - Create New - Click on it

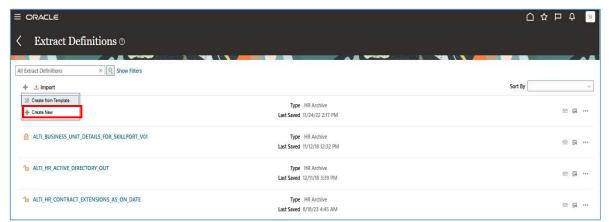


Fig 4

Step 5: Select the Type of Extract -Full Profile and click on it.

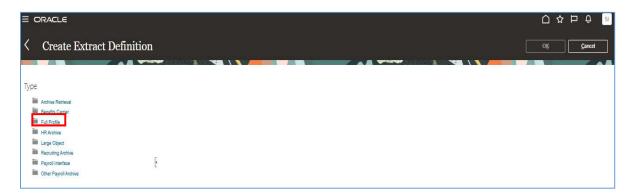
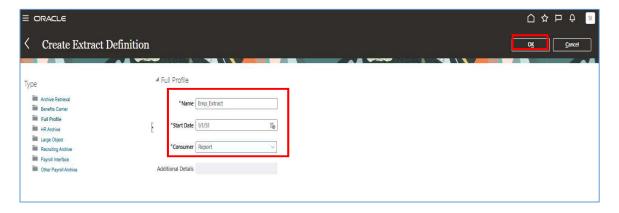


Fig 5

Step 6: Enter the Name of the Extract, Start Date and Consumer. Then Click on 'OK' button.





Step 7: Click on **Design**, then select **Create Root Data Group**. Enter the **Name** and **Tag Name**, and either choose the **User Entity** through the **Advanced** option or input it directly. Provide the **Threading Database Item name**, and select **Object Action** as the **Threading Action Type**. Optionally, add a **Description** for additional context or clarification.

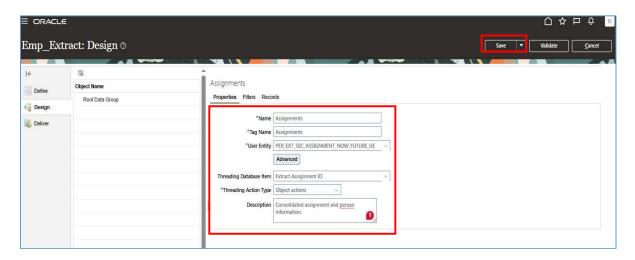


Fig 7

Basics Concept and Purpose using components for Extract-

Component	Definition	Purpose	Example
Root Data Group	Parent group in extract	Starting point (e.g., Person)	PER_EXT_SEC_PERSON_UE
User Entity (UE)	Predefined data view	Provides data to extract	PER_EXT_SEC_ASSIGNMENT_UE
Threading DBI	Unique identifier per record	Grouping & looping	PERSON_ID, ASSIGNMENT_ID
Sequence Number	Processing order value	Maintains logical flow	10, 20, 30
DBI Group	Group of DB items	Simplifies formula creation	PER_PERSON_DG
Next Data Group	Next node in extract tree	Builds hierarchy	Person → Assignment



Step 8: Right Click on Data Group and Click on Add Record.

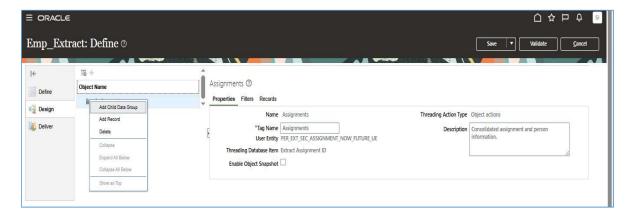


Fig 8

Step 9: Write the name of Child Record and give sequence number then Click on Save button.

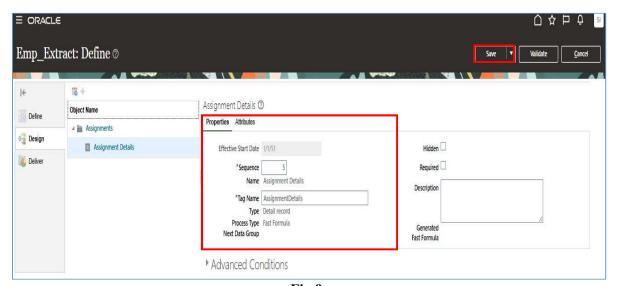


Fig 9



Step 10: Click on Attributes and '+' Add button and Select on Database Items.

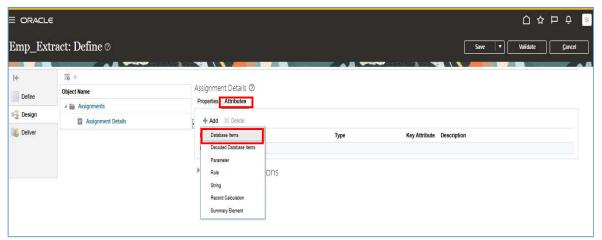


Fig 10

Step 10.1: Select **Quick Create** and fill in the **Basic Information** section. Enter the **Name** of the record, then click on the **Tag Name** field—this will automatically populate the **Tag Name** and **Short Name** based on the entered Name. Choose "**Text**" as the **Data Type**, and enter the appropriate number in the **Output Column** field based on the record sequence.

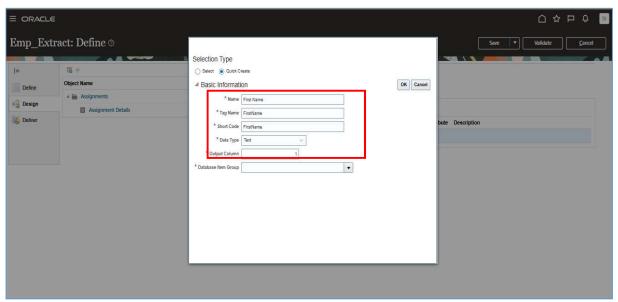


Fig 11



Step 10.2: Click the **arrow button** next to **Data Item Group**, then click the **Search** button to locate and select the desired Data Item Group.

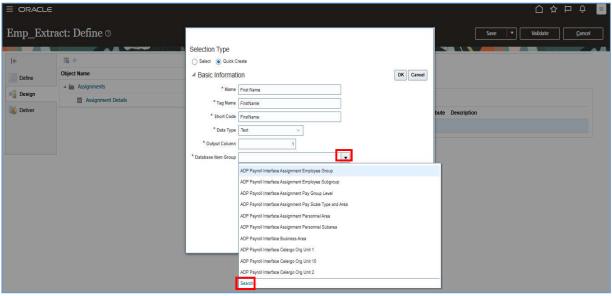


Fig 12

Step10.3: Enter the **Database Item Group Name** using the "%" wildcard as needed, then click the **Search** button. Select the appropriate **Database Item Name** from the results and click **OK** to confirm.

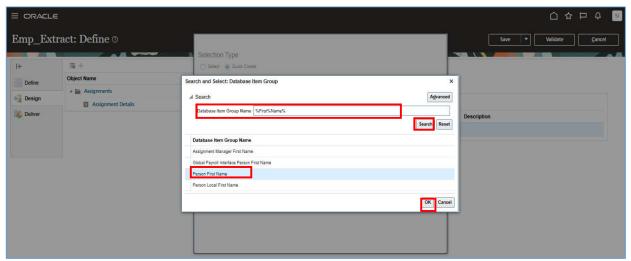


Fig 13



Step 10.4: Click on "OK" button.

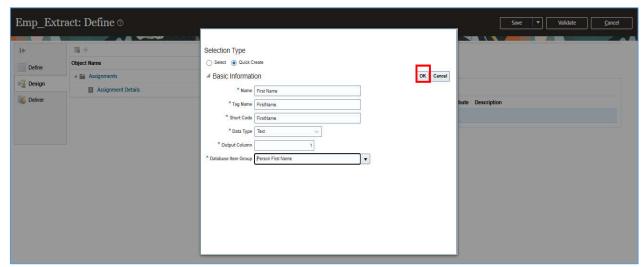


Fig 14

Step 10.5: Multiple Database Group and Attributes can be added by repeating the same steps.

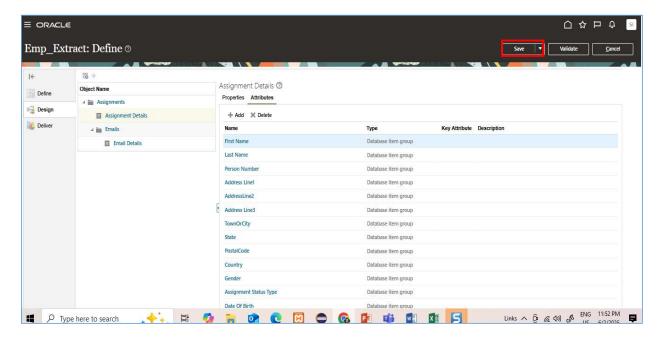


Fig 15



Exclusion Rules

Exclusion Rules are logic conditions applied at the **data group level** to **prevent certain records** from being extracted.

They work like a filter: "If this condition is true, then do not include this record in the extract."

Purpose of Exclusion Rules

- Avoid extracting terminated or ineligible employees.
- Exclude records based on business-specific logic (e.g., salary < threshold).
- Prevent sensitive or unnecessary data from being sent to downstream systems.
- Improve performance by reducing unwanted data volume.

Step 11: Click on **Filter**, then click the "+" button to add a new filter. Next, click the **pencil icon** under **Filter Criteria** to define the filter conditions for the **Root Data Group (Assignment)**. Specify the filter parameters such as **Employee Type**, **Primary Flag**, **Effective Date**, etc., to retrieve records based on your query

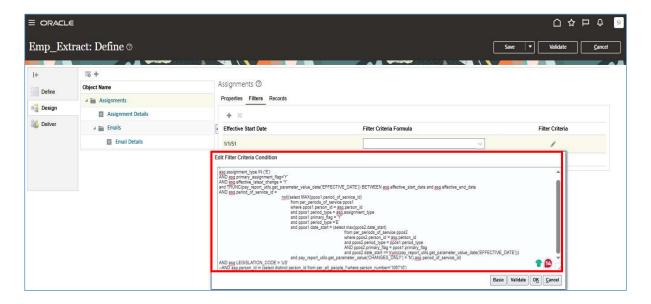


Fig 16



Step 12: Click the **Validate** button, then click **OK**.

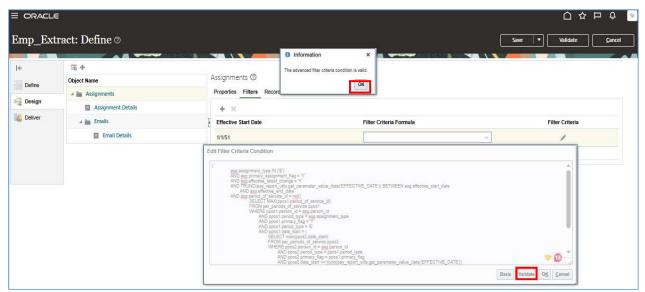


Fig 17

Step 13: The Delivery Option defines:

- Format: The file format of the extract output (e.g., XML, CSV, PDF).
- Delivery type: Where or how the output should be delivered (e.g., FTP, Email, WebDAV, UCM).
- Destination details: Specifics like email address, FTP server info, or UCM folder.

Delivery Type	Description	
Email	Sends the output to a specified email address.	
FTP	Sends the output to an external FTP/SFTP server.	
WebDAV	Posts the file to a WebDAV server.	
UСM	Uploads the output to Oracle's Universal Content Management (UCM) repository (used for storing and sharing documents within Fusion).	
Local	Keeps the file in Fusion's local directory (mostly for testing or further processing).	

Basic Concept of GlobalReportsDataModel

GlobalReportsDataModel is a **delivered Oracle BI Publisher data model** that is commonly used in **HCM Extracts** to support the generation of **global-level reports** — especially for data being sent to downstream systems or used in dashboards.

Purpose of GlobalReportsDataModel in Extracts

- To standardize and streamline the report layout for HCM Extracts.
- To generate formatted output (PDF, Excel, etc.) from extract XML data.



- To act as a bridge between the HCM Extract output and BI Publisher template.
- Useful for global HR reporting, payroll summary reports, or government/statutory submission

Benefits of Using GlobalReportsDataModel

Benefit	Description
	Supports consistent formatting across global reports
≪ Reusability	One data model can be used with many extracts
	Designed to work smoothly with BI Publisher templates
	Reduces effort in layout design for common reports

Notes

- You do not modify the GlobalReportsDataModel directly.
- You map your extract output XML to this data model.
- Always test the **BI layout with sample XML** to ensure formatting.

Click on the **Deliver** option, enter the **Delivery Option Name** as **XML Output**, and choose the **Delivery Type** based on the requirement — in this case, select **None**. Then, click the **OK** button.

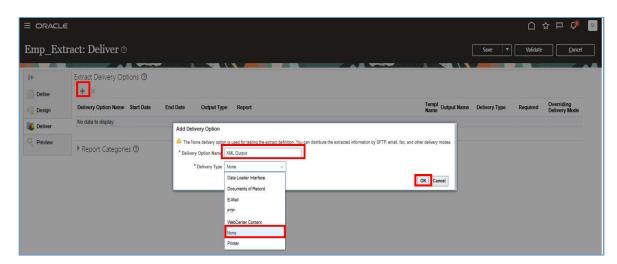


Fig 18



Step 13.1: Click on Save button and Click on Validate button.

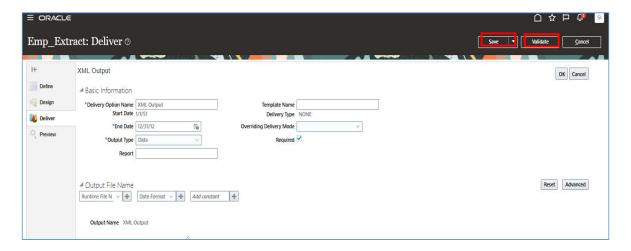


Fig 19

Step 14: Click the **Validate** button, then click the **Refresh** button repeatedly until the Fast Formula is successfully validated.

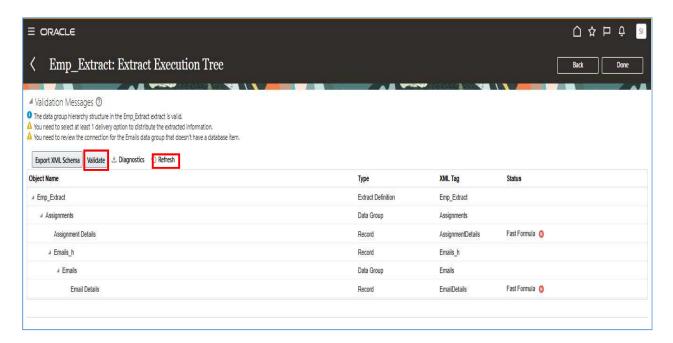


Fig 20



Step 14.1: Click the **OK** button. A green checkmark next to the Fast Formula indicates it has run successfully. Then, click the **Done** button to complete the process.

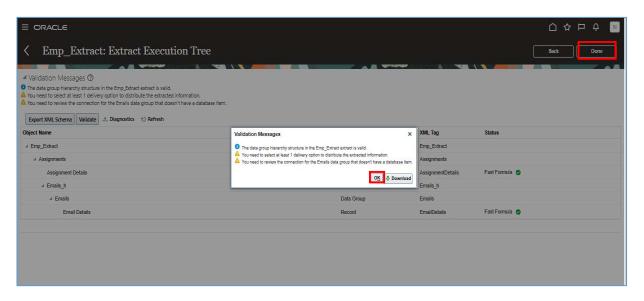


Fig 21

Export Extract For Back up-

Step 15: Click on the three dots (...), then select **Export Extract** to create a backup of the Extract file, or choose **Import Extract** to add the **Legislative Data Group** and set **Change Only** to **Yes**.



Fig 22



Step 15.1: Write the name of Export Extract File and choose the desire location to Save it and Click on Save button.

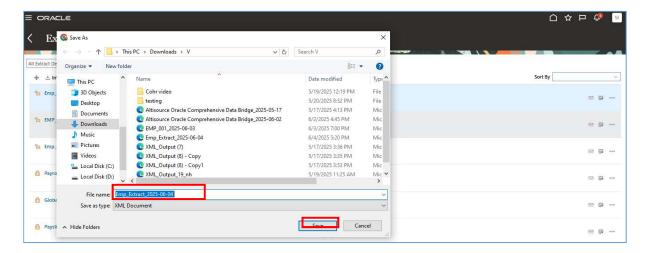


Fig 23

Import or create a copy of extract using Export File along with change only 'Yes' and Legislative Data Group

Step 15.2: Click on Import down arrow and write the Extract name and Choose the Legislative Data Group through arrow button then click on search or direct type then select the Change only 'Yes' – Choose Export file of Extract and click on OK button.

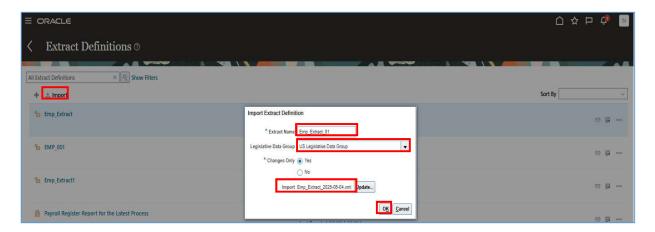


Fig 24



Step15.3: Showing the progress of Import Extract.

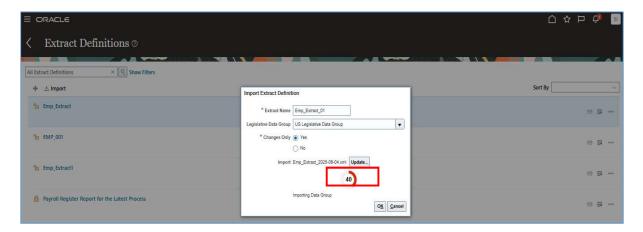


Fig 25

Step15.4: The message **"Extract Imported Successfully"** will appear on the screen. You can either **download the import log** or click the **OK** button to proceed.

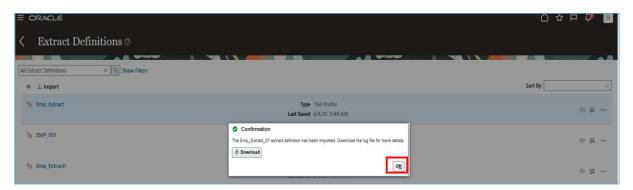


Fig 26

Step16: Click the middle button on the right-hand side to submit the extract.



Fig 2



Purpose of Change Only for Run the Extract

Feature	<u>Description</u>	
Delta Processing	Extracts only modified records	
Performance Boost	Faster, smaller, and efficient	
HR Archive Supported	Ideal for maintaining historical change snapshots	
Incremental Sync	Enables frequent, lightweight updates to external systems	
Change Detection	Automatically compares with last successful run	
Reduced Risk	Less chance of data duplication or failure	

Run Mode Parameters in HCM Extracts

Run Mode Parameters are settings that control how the extract selects and processes records:

- Whether to include all records, or
- Only records that have changed, or
- Records that have specific attribute changes

These are critical for **performance optimization** and for use cases like **incremental data sync**, **data integration**, or **auditing**.

Types of Run Modes and Their Meaning

1. Full

Definition: Extracts **all records** regardless of whether they have changed.

Purpose:

- Used for initial data loads, audits, or complete backups.
- Sends a full snapshot of the data.

When to Use:

- For first-time integrations.
- When the downstream system needs complete employee data each time.

2. Changes Only

Definition: Extracts only those records that have changed since the last successful extract run.

Purpose:

- Reduces data volume and improves performance.
- Used in incremental or delta-based integrations (e.g., daily sync).



How it Works:

- Oracle automatically tracks when a record was last changed.
- Compares it with the last run date.

When to Use:

• For frequent syncs (daily/weekly) where only updated records are required.

3. Changed with Marked Attribute

Definition: Extracts only the records where specific attributes have changed since the last run.

Purpose:

- Allows fine-grained control over what counts as a change.
- More precise than Changes Only.

Setup Steps:

- 1. In the **User Entity**, you must **mark specific attributes** as "trackable."
- 2. The system will compare values of **marked attributes** only.
- 3. If at least one marked attribute changed \rightarrow record is extracted.

When to Use:

- When the business needs to know exactly what has changed (e.g., Job or Salary only).
- To avoid unnecessary downstream updates for irrelevant changes.

Step16.1: Enter the **Extract Instance Name**, select the **Effective Date**, and set the **Change Only** option to **All Attributes** to run the full extract. The **Change Only** option provides various choices for running the extract based on changes. For example, if you select **Change and Marked Attributes**, only the modified attributes will be included in the output. Click on Submit button.

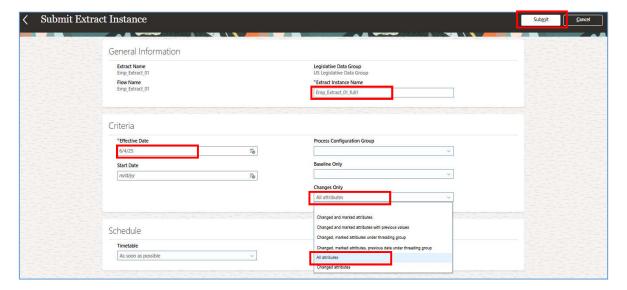




Fig 28

Step16.2: Click the **Refresh** button repeatedly until the status shows **Success**, or wait until the process completes successfully.

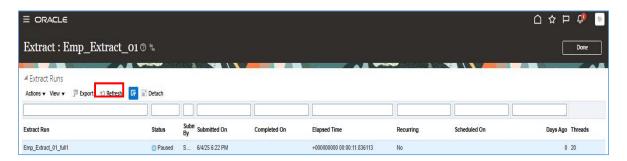


Fig 29

Step16.3: Click on the **Extract Delivery Option** where the XML file is listed under **Output Files**, then click on the file to **download** and **view the data output in XML format**.

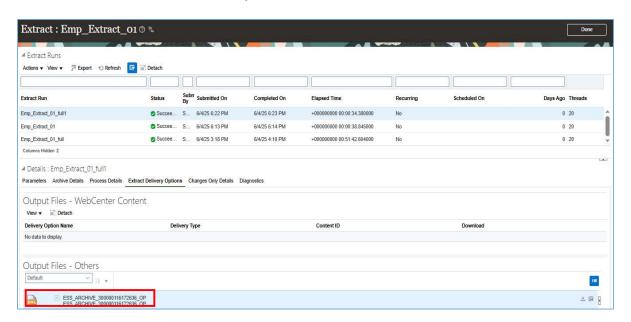


Fig 30



Data Output in XML file-

```
▼ <DATA DS>
    ▼<G_1>
<PAYROLL_ACTION_ID>1190295</PAYROLL_ACTION_ID>
       ▼ <G 2>
              <FILE_FRAGMENT>
              ▼<Emp Extract:</p>
                     <REP_CATEGORY_NAME>Emp_Extract_01
                  <FLOW_NAME>Emp_Extract_01/FLOW_NAME>
<legislative_data_group_id>300000002390061</legislative_data_group_id>
<effective_date>2025-06-04</effective_date>
                        <start_date/>
<report_category_id>300000116172393</report_category_id>
<action_parameter_group_id/>
<changes_only>N</changes_only>
                    </parameters>
r<Assignments>
                         <OBJECT_ACTION_ID>204337865</OBJECT_ACTION_ID>
                      <\li>\limin Straine>\( \text{RestName} \) \
<lastName>\( \text{Griffin</lastName} \) \
</pre>

<pr
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<State>MA</State>
                            <PostalCode>02066</PostalCode>
<Country>US</Country>
<Gender>Male</Gender>
                             <Assignment_Status_Type>INACTIVE</Assignment_Status_Type>
<Date_Of_Birth>1971-02-08T00:00:00.000Z</Date_Of_Birth>
                             <HomeAddressLine1>85 Hollett St./HomeAddressLine1>
                      </AssignmentDetails>

<
                                 <EmailDetails/>
                           w < Emails >
                                <EmailDetails/>
                            </Emails>
                          </Emails_h>
                  </Assignments>

<Assignments>
```

Fig 31

Fast Formula in Extract

We create **Fast Formulas** in **HCM Extracts** to add **custom logic**, **calculations**, **and data filtering** that standard extract configurations cannot handle on their own.

Reasons to Use Fast Formula in HCM Extracts:

1. Custom Filtering

To include or exclude records based on specific business rules.

Example: Include only employees in a particular department or location.

2. Data Transformation

To calculate or reformat data before it's output.

Example: Convert date formats, calculate tenure, or create full names from first/last name fields.

3. Derived Values

Generate new values that aren't directly stored in the database.

Example: Calculate eligibility, gross earnings, or age from date of birth.

4. Conditional Logic

Handle complex if-else conditions within the extract.

Example: If employee type is contractor, use different logic for pay group.

5. Reusability

Once created, formulas can be reused across multiple extracts or extract components.



Before creating the **Fast Formula**, you need to first create a **Manage Set Value**. After that, create the **Fast Formula** and reference the **Manage Set Value** within it to retrieve the required values.

Step17: Click on Settings and Actions located at the top right corner, then select Setup and Maintenance.

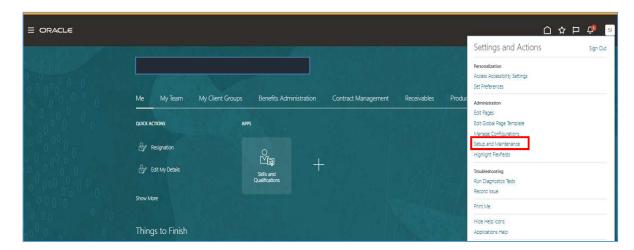


Fig 32

Step17.1: Click on **Tasks** and select the Search option and Click on it.

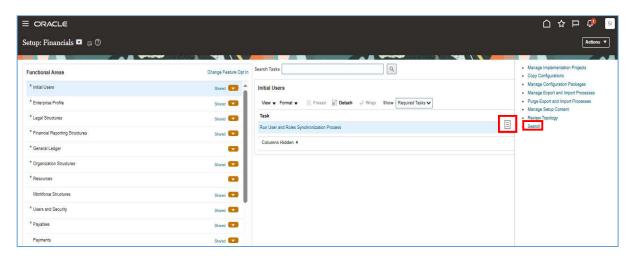


Fig 33



Step17.2: Click on the **search box**, type **Manage Value Set**, then click the **Search** button and select **Manage Value Set** from the results.

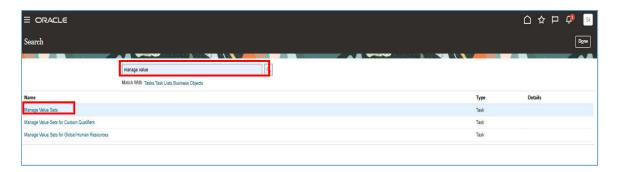


Fig 34

Step17.3: Click the "+" (Add) button beneath the search results to create a new Manage Value Set.

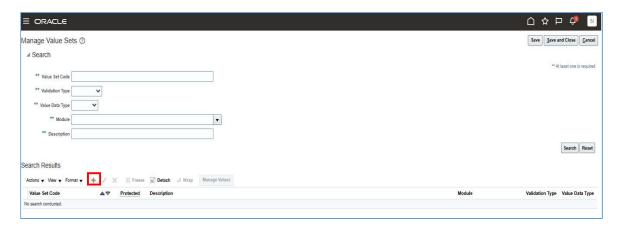


Fig 35

Step17.4: Enter the **Manage Set Code** and **Description**. Select the **Module** as **"Global Human Resources"**. Set the **Validation Type** to **"Table"** and the **Value Data Type** to **"Character"**. In the **From Clause**, enter the table names used in the query to fetch the data.

Specify the Value Column Name, and for the ID Column Name, use the same value as the Value Column Name. In the Where Clause box, enter the condition as written in the query. Click the Save button. If there is an error, it will be displayed automatically. If no error occurs, click Save and Close to complete the setup.



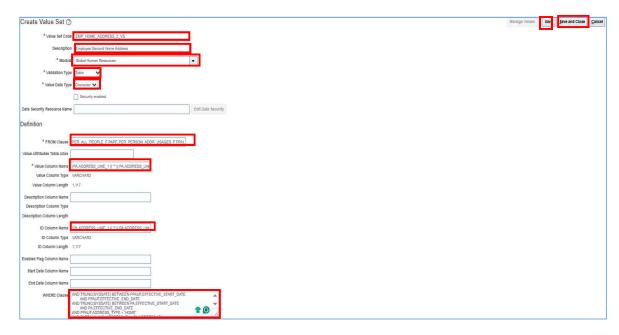


Fig 36

Step18: Follow the previous step search like Manage Value Set for Fast Formula. Click on Fast Formula.

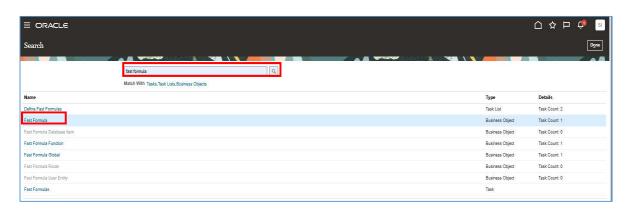


Fig 37

Step18.1: Following these Steps-

- 1. Click on the "+" (Add) button.
- 2. The Create Fast Formula popup will appear on the screen.
- 3. Enter the following details:
 - o Formula Name
 - Type: Select "Extract Rule"
 - Description
 - o Legislative Data Group
 - o Effective Start Date: The year should be 1951 (this is the default value).
- 4. Click the **Continue** button to proceed.



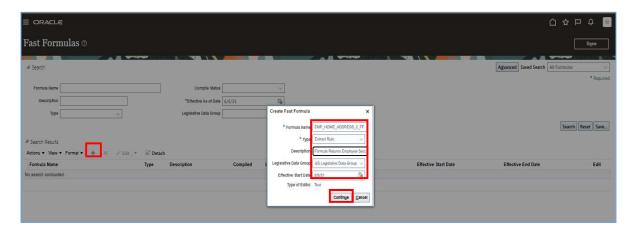


Fig 38

Step18.2: • Click inside the **Formula Text** area.

- Enter the complete **Fast Formula**, including the parameter values and logic to fetch the required data.
- Click the Save button, then click Submit.
- Click the **Compile** button to run the Fast Formula.
- If there are any errors, they will be displayed during the compilation process.



Fig 39



Step18.3: Click on Compile Pop Ok button and Click on Refresh Button.

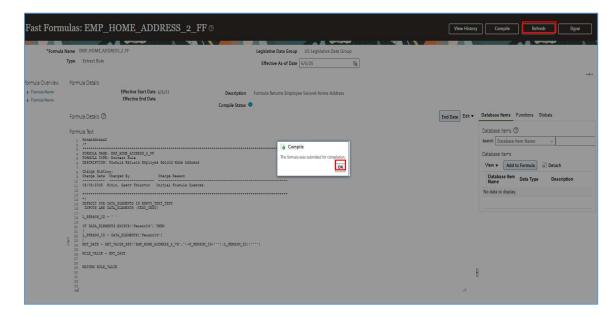


Fig 40

Step18.4: After Compile and Refresh if there is no error then showing Green Tick Status and Click on Done Button.

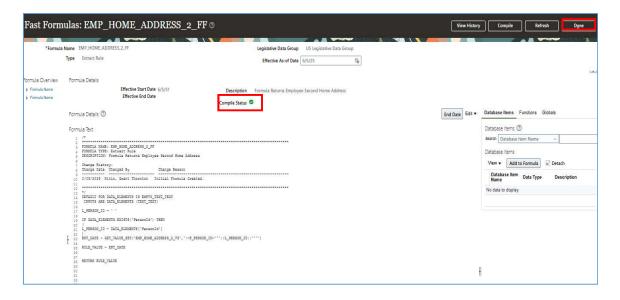


Fig 41



Step19: Search the Fast Formula and then can edit or check it.

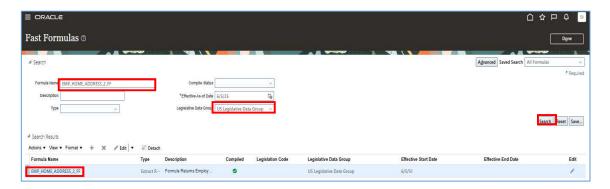


Fig 42

Step20: Open the Extract by following steps 1 to 3 from the previous instructions. Then, click on **Show Filters**, enter the **Extract Name**, and select the appropriate **Legislative Data Group** and Click the **Search** button. Once the Extract Name appears on the screen, click on it to open the extract

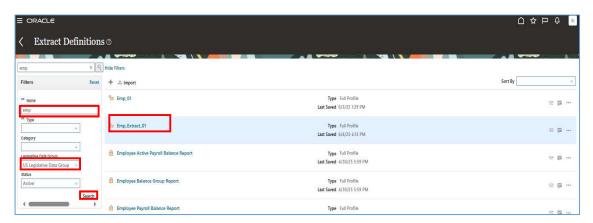


Fig 43

Step20.1: Select the Assignment Details and Click on Attributes and Click on Add "+" button and Select Rule.

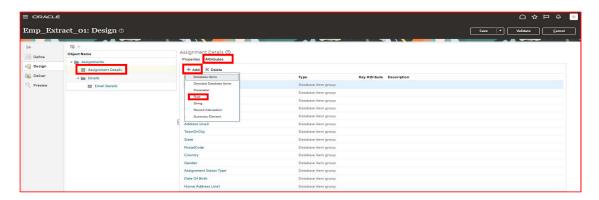


Fig 44



Step20.2: Enter the **Attribute Name**, then click on **Tag Name** and **Short Code**. Select the **Data Type** as **"Text"**, and in the **Rule** box, either select or manually enter the **Fast Formula_Name**. Click the **Save** button, then click **Validate**. Repeat the previous steps to **Run** and **Submit the extract**.

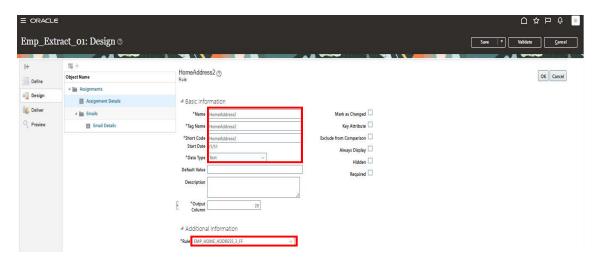


Fig 45

Step21: Follow the previous steps for submit and run the extract and Get the Output in XML File.

```
vOBTA_DS>
v<Br/>
v<APAYROLL_ACTION_ID>1190295
v<Apayroll_ACTION_ID>1190295
vAFILE_FRAGMENT>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract>
v<Emp_Extract_01</pre>
v/Encul NAME>Emp_Extract_01
v/ELOW_NAME>Emp_Extract_01
v/Elow_NAME>Extract_01
v/Elow_NAME
v/Elow_N
```

Fig 46

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