Oracle HCM Cloud
Using Reports and Analytics
This guide also applies to on-premise implementations

Release 8

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CONTENTS

Part 1: Using the Supplied Reports and Analytics for Oracle Fusion HCM
   Overview of Oracle Fusion HCM Reports and Analytics
   Reports and Analytics for HR Specialists and HR Managers
   Reports and Analytics for Line Managers
   Reports and Analytics for Compensation Managers and Analysts
   Reports and Analytics for Benefits Administrators
   Reports and Analytics for Payroll Managers and Payroll Administrators
   Dashboards for HCM

Part 2: Creating and Customizing Oracle Fusion HCM Reports and Analytics
   Creating and Customizing Reports and Analytics
   Creating and Customizing Real-Time Analyses for HCM
   Creating and Customizing Dashboards
   Creating and Customizing Oracle Business Intelligence Publisher Reports for HCM
   Creating and Customizing Payroll Reports Using HCM Extracts and Oracle Business Intelligence Publisher
   Delivering Reports and Analytics
   Using Data Validation Reports
   Integrating with Microsoft Office
   Migrating Reports
   Understanding Security for Oracle Fusion HCM Reporting
Preface
This Preface introduces the guides, online help, and other information sources available to help you more effectively use Oracle Fusion Applications.

Oracle Fusion Applications Help
You can access Oracle Fusion Applications Help for the current page, section, activity, or task by clicking the help icon. The following figure depicts the help icon.

Note: If you don't see any help icons on your page, then click the Show Help icon button in the global area. However, not all pages have help icons. You can add custom help files to replace or supplement the provided content. Each release update includes new help content to ensure you have access to the latest information. Patching does not affect your custom help content.

Oracle Fusion Applications Guides
Oracle Fusion Applications guides are a structured collection of the help topics, examples, and FAQs from the help system packaged for easy download and offline reference, and sequenced to facilitate learning. To access the guides, go to any page in Oracle Fusion Applications Help and select Documentation Library from the Navigator menu.
Guides are designed for specific audiences:

- **User Guides** address the tasks in one or more business processes. They are intended for users who perform these tasks, and managers looking for an overview of the business processes. They are organized by the business process activities and tasks.
- **Implementation Guides** address the tasks required to set up an offering, or selected features of an offering. They are intended for implementors. They are organized to follow the task list sequence of the offerings, as displayed within the Setup and Maintenance work area provided by Oracle Fusion Functional Setup Manager.
- **Concept Guides** explain the key concepts and decisions for a specific area of functionality. They are intended for decision makers, such as chief financial officers, financial analysts, and implementation consultants. They are organized by the logical flow of features and functions.
- **Security Reference Manuals** describe the predefined data that is included in the security reference implementation for one offering. They are intended for implementors, security administrators, and auditors. They are organized by role.

These guides cover specific business processes and offerings. Common areas are addressed in the guides listed in the following table.

<table>
<thead>
<tr>
<th>Guide</th>
<th>Intended Audience</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide</td>
<td>Audience</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Common User Guide</td>
<td>All users</td>
<td>Explains tasks performed by most users.</td>
</tr>
<tr>
<td>Common Implementation Guide</td>
<td>Implementors</td>
<td>Explains tasks within the Define Common Applications Configuration task list, which is included in all offerings.</td>
</tr>
<tr>
<td>Functional Setup Manager User Guide</td>
<td>Implementors</td>
<td>Explains how to use Oracle Fusion Functional Setup Manager to plan, manage, and track your implementation projects, migrate setup data, and validate implementations.</td>
</tr>
</tbody>
</table>
| Technical Guides             | System administrators, application developers, and technical members of implementation teams | Explain how to install, patch, administer, and customize Oracle Fusion Applications.  
**Note:** Limited content applicable to Oracle Cloud implementations. |


**Other Information Sources**

**My Oracle Support**


Use the My Oracle Support Knowledge Browser to find documents for a product area. You can search for release-specific information, such as patches, alerts, white papers, and troubleshooting tips. Other services include health checks, guided lifecycle advice, and direct contact with industry experts through the My Oracle Support Community.

**Oracle Enterprise Repository for Oracle Fusion Applications**

Oracle Enterprise Repository for Oracle Fusion Applications provides details on service-oriented architecture assets to help you manage the lifecycle of your software from planning through implementation, testing, production, and changes.

In Oracle Fusion Applications, you can use Oracle Enterprise Repository at [http://fusionappsoer.oracle.com](http://fusionappsoer.oracle.com) for:

- Technical information about integrating with other applications, including services, operations, composites, events, and integration tables. The classification scheme shows the scenarios in which you use the assets, and includes diagrams, schematics, and links to other technical documentation.
Other technical information such as reusable components, policies, architecture diagrams, and topology diagrams.

**Documentation Accessibility**


**Comments and Suggestions**

Your comments are important to us. We encourage you to send us feedback about Oracle Fusion Applications Help and guides. Please send your suggestions to oracle_fusion_applications_help_ww_grp@oracle.com. You can use **Send Feedback to Oracle** from the Settings and Actions menu in Oracle Fusion Applications Help.
Part 1: Using the Supplied Reports and Analytics for Oracle Fusion HCM
Chapter 1: Overview of Oracle Fusion HCM Reports and Analytics

Oracle Fusion HCM Reports and Analytics: Overview

You can use predefined reports and analytics throughout your application to support your business needs, including:

- Reports and analytics embedded in your dashboards and work area pages
- Additional reports and analytics available from the Reports and Analytics pane or work area
- Operational reports accessed from the Submit a Process or Report task in some work areas, for example for payroll reporting

Using Reports in the Reports and Analytics Pane: Highlights

The Reports and Analytics pane provides a central place for you to quickly view or run operational or analytical report relevant to your work. The pane is available in many work areas across Oracle Fusion Applications, and contains links to reports specific to the work area. You can also select Navigator - Tools - Reports and Analytics to go to the Reports and Analytics work area, which contains links to all reports that you have access to.

The Reports and Analytics pane contains a Shared Folders area and may also contain a My Folders area if you have saved any personal reports. Each area contains a hierarchy of folders that may contain items of three types:

- Analysis: Graph or table that displays specific sets of data
- Dashboard: One or more pages containing multiple analyses
- Report: Data in a predefined, printable format, often registered as a scheduled process so you can submit and monitor the report as you would any process
# Chapter 2: Reports and Analytics for HR Specialists and HR Managers

## Reports and Analytics for HR Specialists and HR Managers

This table lists reports and analytics for HR Specialists and HR Managers.

<table>
<thead>
<tr>
<th>Type of Report or Analysis</th>
<th>Description</th>
<th>Role</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talent Summary Report</td>
<td>Prints a summary of the person profile.</td>
<td>HR Specialist, HR Manager</td>
<td>Person Details page - Actions - Print Profile</td>
</tr>
<tr>
<td>Goal Plan Development Goals Report</td>
<td>Prints a development goal plan in a report format.</td>
<td>HR Manager, HR Specialist Employee</td>
<td>My Goals page - Select a tab - View - Select a goal or goal plan</td>
</tr>
<tr>
<td>Goal Plan Performance Goals Report</td>
<td>Prints a performance goal plan in a report format.</td>
<td>HR Manager, HR Specialist Employee</td>
<td>My Goals page - Select a tab - View - Select a goal or goal plan</td>
</tr>
<tr>
<td>Selected Development Goals Report</td>
<td>Prints a report of selected development goals.</td>
<td>HR Manager, HR Specialist Employee</td>
<td>My Goals page - Select a tab - View - Select a goal or goal plan</td>
</tr>
<tr>
<td>Selected Performance Goals Report</td>
<td>Prints a report of selected performance goals.</td>
<td>HR Manager, HR Specialist Employee</td>
<td>My Goals page - Select a tab - View - Select a goal or goal plan</td>
</tr>
<tr>
<td>Selected Personal Goals Report</td>
<td>Prints a report of selected personal goals.</td>
<td>HR Manager, HR Specialist Employee</td>
<td>My Goals page - Select a tab - View - Select a goal or goal plan</td>
</tr>
<tr>
<td>Talent Review Meeting Data</td>
<td>Exports all meeting data for a talent review meeting to Microsoft Excel</td>
<td>HR Manager, HR Specialist Employee</td>
<td>Talent Review dashboard – View - View Table - Export to Excel</td>
</tr>
<tr>
<td>Real-Time Analyses for Performance Management</td>
<td>Includes these two analytics: Identify Risk of Loss Reasons Identify Top Talent (using Performance and Potential)</td>
<td>HR Manager, HR Specialist Employee</td>
<td>Reports and Analytics - Shared Folders – Career – Performance - Transactional Analysis Samples</td>
</tr>
</tbody>
</table>
Talent Profile Summary: Explained

The Talent Profile Summary is a consolidated report of talent-related information that you can print for a worker. Depending on the options that you select when printing, the report can consolidate talent review, performance, and goal information. For each worker, the report prints person details such as length of service date and hire date, and also job information such as job name, business unit, location, and time in job. You print the talent summary either from the Actions menu on the Person Details page, or by selecting one or more workers from the Talent Review dashboard.

Report Sections

Four report sections are available to print, and each section includes additional options for information to print.

In the Talent Overview section, you can print performance evaluation information for up to the past three years, including evaluation period, overall rating, overall comments, and a bar graph comparing the performance ratings. You can also include talent ratings in this section.

In the Education and Qualifications section, you can print competency ratings and evaluation types, and license and certification, language, and degree information.

In the Career Options and Interests section, you can print career preference and advancement readiness information for your workers, such as their willingness to travel or relocate for a job, or consider part-time employment and flexible work schedules. You can also print information about workers' preferred next career moves, and any jobs that are in their interest list.

In the Goals section, you can print both development and performance goal information, such as goal names, completion dates, statuses, and descriptions. This section also includes a graph of goal achievement for the worker.

Print Formats

You can print the Talent Profile Summary in the following formats: PDF, RTF, Microsoft Excel, and HTML. When you print in PDF and RTF format, the report includes a photograph of the worker and all selected graphs. The Excel format prints all selected workers in an Excel workbook, with one profile per worksheet in the workbook and the worker's name as the tab label. This format does not include the photograph or the performance history and goals graphs. The HTML format prints in HTML, and includes the selected graphs, but does not include the photograph.
Chapter 3: Reports and Analytics for Line Managers

Compensation Reports for Line Managers: Overview
This table lists compensation reports for line managers.

<table>
<thead>
<tr>
<th>Type of Report</th>
<th>Examples of Reports</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Overview</td>
<td>Allocation Statistics, Workers Compensated, and Worker Count by Allocation</td>
<td>Compensation - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td>Pay for Performance</td>
<td>Compensation versus Rating Distribution, Average Allocation, Compa-Ratio by Performance Rating</td>
<td>Compensation - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td>Salary Analysis</td>
<td>Salary Average, Salary Totals, Compa-Ratio Averages</td>
<td>Compensation - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td>Target Analysis</td>
<td>Workers on Target, Actual Versus Target, Deviation from Target</td>
<td>Compensation - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td>Distribution Analysis</td>
<td>Allocations by Manager</td>
<td>Compensation - Select a plan. (Not all reports are enabled by default)</td>
</tr>
</tbody>
</table>
Absences Reports and Analytics for Line Managers
This table lists absence reports for line managers.

<table>
<thead>
<tr>
<th>Type of Report or Analysis</th>
<th>Description</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence Trends</td>
<td>Analytic that enables you to compare, over a period of time, the number of instances when workers planned for absent time and the number of instances when workers actually completed the absence. You can generate this analytic for your direct reports or for your organization.</td>
<td>Manager Resources dashboard - Absence Trends section.</td>
</tr>
<tr>
<td>Total Absences</td>
<td>Analytic that enables you to compare, over a period of time, the total planned absence duration and the actual absence duration.</td>
<td>Manager Resources dashboard - Total Absences section.</td>
</tr>
<tr>
<td>Real-Time Analyses</td>
<td>Absence Breakdown – Detailed Report</td>
<td>Reports and Analytics - Shared Folders - HCM – Workforce Management - Transactional Analysis Samples</td>
</tr>
<tr>
<td></td>
<td>Absence Breakdown by Type – Current Fiscal Year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Absence Year over Year Trend</td>
<td></td>
</tr>
</tbody>
</table>
Human Resources Reports and Analytics for Line Managers: Overview

This table lists human resources (HR) reports and analytics for line managers.

<table>
<thead>
<tr>
<th>Type of Report or Analysis</th>
<th>Description</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embedded Analytic</td>
<td>Shows the trend of the salary of the worker for the selected assignment from the date when the assignment was created until the promotion date.</td>
<td>Promotion&lt;br&gt;Search Person - Portrait</td>
</tr>
<tr>
<td>Real-Time Analyses</td>
<td>Real-time analyses such as: Absence Details, Assignment Details, Assignment Headcount by Department, Department Details, and Grade Details</td>
<td>Reports and Analytics - Shared Folders - Human Resource Management - Workforce - Transactional Analysis Samples</td>
</tr>
</tbody>
</table>
# Chapter 4: Reports and Analytics for Compensation Managers and Analysts

## Compensation Management Reports and Analytics: Overview

This table lists compensation management reports and analytics.

<table>
<thead>
<tr>
<th>Type of Report or Analysis</th>
<th>Description</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative Reports</strong></td>
<td>Compensation and budget analysis reports, promotions and performance information, status and monitoring, and status of data processed</td>
<td>Compensation - View Administrative Reports. Select a plan and then click links to view the different reports</td>
</tr>
<tr>
<td><strong>Line Manager Reports: Cycle Overview</strong></td>
<td>Allocation Statistics, Workers Compensated, and Worker Count by Allocation</td>
<td>Compensation - Act as Proxy - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td><strong>Line Manager Reports: Pay for Performance</strong></td>
<td>Compensation versus Rating Distribution, Average Allocation, Compa-Ratio by Performance Rating</td>
<td>Compensation - Act as Proxy - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td><strong>Line Manager Reports: Salary Analysis</strong></td>
<td>Salary Average, Salary Totals, Compa-Ratio Averages</td>
<td>Compensation - Act as Proxy - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td><strong>Line Manager Reports: Target Analysis</strong></td>
<td>Workers on Target, Actual Versus Target, Deviation from Target</td>
<td>Compensation - Act as Proxy - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td><strong>Line Manager Reports: Distribution Analysis</strong></td>
<td>Allocations by Manager</td>
<td>Compensation - Act as Proxy - Select a plan. (Not all reports are enabled by default)</td>
</tr>
<tr>
<td><strong>Real-Time Compensation Analyses</strong></td>
<td>Salary Basis, Salary Details, Salary Components, Stock Details</td>
<td>Reports and Analytics - Shared Folders - Compensation - Transactional Analysis Samples</td>
</tr>
</tbody>
</table>
## Benefits Reports and Analytics: Overview

This table lists reports and analytics for benefits administrators.

<table>
<thead>
<tr>
<th>Name or Type of Report or Analytic</th>
<th>Description</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Event Summary</td>
<td>Analytic that provides details of life events in different statuses in your enterprise. You can also view details by legal employer, benefit group, location, and payroll.</td>
<td>Benefits - Evaluation and Reporting The Summary section on the Overview page contains the life event summary. The Life Events tab in this section enables you to view details by legal employer, benefit group, location, and payroll.</td>
</tr>
<tr>
<td>Close Action Items</td>
<td>A process that generates details of participant enrollments that contain pending action items.</td>
<td>Benefits - Evaluation and Reporting On the Overview page Summary section, select the Processes tab. Expand Election Processes, and click Submit for the Close Action Items row.</td>
</tr>
<tr>
<td>Real-Time Analyses</td>
<td>Real-time analytics such as Participant Enrollment Results - Weekly Report and Totals by Life Event - Weekly Report</td>
<td>Reports and Analytics - Shared Folders - Benefits - Transactional Analysis Samples</td>
</tr>
</tbody>
</table>
## Payroll Reports and Analytics: Overview

This table lists reports and analytics for payroll managers and payroll administrators.

<table>
<thead>
<tr>
<th>Type of Report or Analytic</th>
<th>Description</th>
<th>Role</th>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment Distribution Reports</td>
<td>Review information to verify payment calculations and payment distribution.</td>
<td>Payroll Manager, Payroll Administrator</td>
<td>Payment Distribution work area, Payroll Checklist work area</td>
</tr>
<tr>
<td>Payroll Calculation Reports</td>
<td>Review information to verify payroll calculations and payroll run results.</td>
<td>Payroll Manager, Payroll Administrator</td>
<td>Payroll Checklist work area, Payroll Calculation work area</td>
</tr>
<tr>
<td>Real-Time Analyses</td>
<td>Review costing information in detail or summary format, and view a register of elements.</td>
<td>Payroll Manager, Payroll Administrator</td>
<td>Reports and Analytics - Shared Folders - Payroll - Transactional Analysis Samples, Payroll Checklist work area</td>
</tr>
<tr>
<td>Regulatory and Tax Reports</td>
<td>View legislative information such as statutory deductions or employees with negative balances.</td>
<td>Payroll Manager, Payroll Administrator</td>
<td>Regulatory and Tax Reporting work area, Payroll Checklist work area</td>
</tr>
</tbody>
</table>

## Payroll Calculation Reports: Overview

Payroll managers and payroll administrators can use a number of reports to verify payroll calculations and payroll run results. Run these reports from the Payroll Checklist and Payroll Calculation work areas. Additional reports may be available in these work areas for your legislation.
## Report Task

<table>
<thead>
<tr>
<th>Report Task</th>
<th>Purpose</th>
<th>When to Run</th>
<th>Example of Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Balance Exception Report</td>
<td>Identify values that vary compared to other values for the same balance dimension that could indicate potential overpayments or underpayments.</td>
<td>Run after calculating the payroll run or QuickPay run.</td>
<td>View to identify potentially incorrect payments or amounts withheld.</td>
</tr>
<tr>
<td>Run Gross-to-Net Report</td>
<td>View summary or detail listings for the total results calculated in the payroll run, such as the total earnings, deductions, and employer charges.</td>
<td>Run after each payroll run or, at a minimum, on a quarterly basis.</td>
<td>Obtain totals for the results calculated from payroll runs, QuickPay runs, and payroll reversals by earnings, deductions, and other elements of pay. These balances are used by the prepayments process.</td>
</tr>
<tr>
<td>Run Payroll Balance Report</td>
<td>View balance results of the payroll run. Extracts the run balance results for a specific period. Supplies detailed balance information for a specific employee over a defined period of time.</td>
<td>Run as needed for diagnostic purposes.</td>
<td>Verify the values of other reports. You can use this report to pinpoint a problem discovered by another diagnostic report.</td>
</tr>
</tbody>
</table>
## Report Task

<table>
<thead>
<tr>
<th>Report Task</th>
<th>Purpose</th>
<th>When to Run</th>
<th>Example of Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Run Payroll Activity Report</strong></td>
<td>View details of the payroll run, QuickPay, such as balance adjustments, reversals, and balance initializations, taxes withheld, earnings, deductions, payment information, employer liability, and quarter and year-to-date details.</td>
<td>You can run this report independently of other processes, such as prepayments. Run the report before processing prepayments.</td>
<td>Verify, validate, and audit run results before processing payments.</td>
</tr>
</tbody>
</table>

| **Run Element Result Register** | View a listing of the elements and pay values processed for each payroll relationship action. | Usually run every pay period after running the Payroll Activity Report. | Use for diagnostic purposes with the Balance Results and Statement of Earnings on the Person Process Results page and the Payroll Activity Report. |

| **Run Deduction Report** | View details of payroll deductions processed for the specified period. | Run every pay period | Validate the deduction amounts being processed. |

## Payment Distribution Reports: Overview

Oracle Fusion Global Payroll provides a set of reports to help you verify payment calculations and payment distributions.

The payroll manager and payroll administrator can run these reports from the Payroll Checklist and Payment Distribution work areas.
<table>
<thead>
<tr>
<th>Report</th>
<th>Purpose</th>
<th>When to Run</th>
<th>Example of Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll Register</td>
<td>Verification, validation, and audit of payroll calculations</td>
<td>After calculating payroll and archiving periodic payroll results</td>
<td>Use the summary report to verify total payment amounts per balance category for a payroll period for a payroll statutory unit or a tax reporting unit. Use the detail report to review the complete payroll run details for each employee for payroll balancing and reconciliation purposes and to compare the payment values to previous periods.</td>
</tr>
<tr>
<td>Payment Register</td>
<td>Verification and audit of payment distributions</td>
<td>After calculating prepayments, running the payment process, and generating payslips</td>
<td>Use the summary report to verify the total amounts paid by payment category, type, and method. Use the detail report to validate payments for each employee, including the payment amount, bank, and check information.</td>
</tr>
<tr>
<td>Payslips</td>
<td>Provides a record of individual payroll payments received, including pay amounts, deductions taken, and accruals</td>
<td>After generating payments and archiving periodic payroll results</td>
<td>Generate payslips for all employees as a record of payments made. Employees can view or print their payslips from the Portrait page.</td>
</tr>
</tbody>
</table>
Chapter 7: Dashboards for HCM

Using Oracle Fusion HCM Dashboards: Explained

Oracle Fusion HCM dashboards provide a central place for you to access reports and analytics that are central to your role. Examples are:

- Manager Resources dashboard: View an organization chart of your direct reports, and analytics such as worker availability, promotion potential, predicted performance, and voluntary termination.
- Human Resources dashboard: View analytics such as visa and work permit expiration, service anniversaries, onboarding bottlenecks, and assignments with no manager.
- Payroll dashboard (payroll manager, payroll administrator): View payroll flows that are in progress, including their activity and process status, and items requiring your attention.

If your role has access to them, these dashboards are available as links on the Navigator menu or as tabs when you access the Welcome Dashboard.

Using the Set Preferences action on the Personalization menu, you can make the following customizations to your view of Fusion HCM dashboards:

- Change the layout or style of the analytics
- Remove analytics from the page
- Add analytics to the page
- Customize the analytics on the by changing the display options and content style

You cannot add Oracle Business Intelligence Publisher reports to these dashboards.
Part 2: Creating and Customizing Oracle Fusion HCM Reports and Analytics
Chapter 8: Creating and Customizing Reports and Analytics

Creating and Customizing Reports and Analytics: Overview

While predefined Oracle Fusion HCM reports and analytics answer typical business questions, you might want to create your own, or customize the predefined ones to suit your business needs.

Use the following Oracle reporting tools to create and customize reports and analytics:

- Oracle Business Intelligence Enterprise Edition
- Oracle Fusion Transactional Business Intelligence
- Oracle Business Intelligence Publisher
- Oracle Business Intelligence Applications

Oracle Business Intelligence Enterprise Edition

Oracle Business Intelligence Enterprise Edition is a comprehensive set of enterprise business intelligence tools and infrastructure that includes:

- Scalable and efficient query and analysis server
- Ad hoc query and analysis tool
- Tools to allow users to create and manage interactive dashboards
- Tools to allow users to create and manage proactive intelligence and alerts
- Enterprise reporting engine (integration with BI Publisher)

Oracle Fusion Transactional Business Intelligence

Transactional Business Intelligence is:

- A business intelligence semantic layer that is built using Oracle Business Intelligence Enterprise Edition.
- Based on Fusion data structures.
- Allows users to run sample reports and to create their own reporting solutions using Oracle Business Intelligence Enterprise Edition or BI Composer.

Constructed analyses are executed in real time against the transactional schema, which is supported by a layer of view objects.

Oracle Business Intelligence Publisher
Oracle BI Publisher is an enterprise reporting solution for authoring, managing, and delivering reports from multiple data sources in multiple formats through multiple channels.

Oracle BI Publisher can be used as an alternative reporting solution to Transactional Business Intelligence.

**Oracle Business Intelligence Applications**
Oracle BI Applications is a complete, prebuilt solution that delivers role-based intelligence. Oracle BI Applications can analyze the history and trends of transactional data.

Oracle BI Applications reporting uses Oracle Business Analytics Warehouse, a unified data repository for all customer-centric data, used to support the analytical requirements of Oracle BI Applications. Oracle BI Applications supplies the warehouse database schema and the logic that extracts data from the Oracle Fusion Applications transactional database and loads it to the warehouse. Oracle Fusion Applications end users interact with the information in Oracle Business Analytics Warehouse using Oracle BI Enterprise Edition components (such as Answers and Dashboards).

Oracle BI Applications is an additional license, and is available to on-premises customers only.

**Catalog Security and the Types of Analytics Customizations Allowed: Points to Consider**
Before you customize analyses or dashboards, ensure that you have proper permissions for editing and creating objects in the Oracle Business Intelligence (BI) Presentation Catalog.

**Custom Folder**
The Oracle BI Presentation catalog includes a Custom folder under Shared Folders. The Custom folder contains a subfolder for each product family, similar to the product family subfolder structure under Shared Folders.

When you edit a predefined analysis or dashboard, you should save the updated version in the Custom folder and leave the original as is. Keeping all custom objects in the Custom folder has the following benefits:

- While patches can update predefined analyses and dashboards outside the Custom folder, you ensure that customized versions of those objects are not affected. You might lose customizations saved outside the Custom folder during upgrades.
- Customized objects are easily located and identified.
• Default security facilitates the editing of objects in the Custom folder without compromising security on the original objects.

Note: When you copy an object into the Custom folder, the copied object inherits the permission settings of the Custom folder. You must manually reset the permissions on the analysis or dashboard and product subfolder structure that you create under the Custom folder to reestablish the security settings of the original object.

**BI Author**

Users with the BI Author role have full control permissions to the Custom folder located under Shared Folders in the catalog.

This table summarizes the actions allowed for users with the BI Author role.

<table>
<thead>
<tr>
<th>Customization</th>
<th>Action Allowed for BI Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit analysis</td>
<td>Can edit analysis but cannot save to original folder. Must save the edited version to the Custom folder or My Folders.</td>
</tr>
<tr>
<td>Copy analysis</td>
<td>Can copy analysis and save to the Custom folder or My Folders. Cannot save the copy to original folder.</td>
</tr>
<tr>
<td>Create new analysis</td>
<td>Can create a new analysis and save to the Custom folder or My Folders.</td>
</tr>
<tr>
<td>Edit dashboard</td>
<td>Not allowed for predefined dashboards; must first make a copy of predefined dashboards.</td>
</tr>
<tr>
<td>Copy dashboard</td>
<td>Can copy dashboard and save to the Custom folder or My Folders. In the Custom folder the copy can be edited. Cannot save the copy to original folder.</td>
</tr>
<tr>
<td>Create new dashboard</td>
<td>Not allowed</td>
</tr>
</tbody>
</table>

**BI Platform Administrator**

By default, the BI Platform Administrator role (not available in Oracle Cloud implementations) is granted full control permissions to the Custom folder and product family subfolders under Shared Folders. Users with this role can, for example:

• Edit and delete the objects that are copied to or created in the Custom folder.
• Set permissions on objects in the Custom folder.
• Create new dashboards.
• Directly edit predefined objects in the catalog.
Customizing Analytics: Examples

There are many ways to customize predefined analyses and dashboards, as well as many options available to you to create custom analyses and dashboards to suit your needs. The following examples illustrate only a few possible types of customizations.

Create an Analysis

Your team needs to print a simple list of the number of assignments, sorted by department. From the Reports and Analytics pane, you click Create to create a new analysis. You include department name and assignment count in the analysis, and add a sort on the department attribute, or column.

When users view this analysis, they can sort the results as needed and create a printable PDF file.

Create a View

A predefined analysis shows the number of hires per year in a bar graph. You want the results in a table format view as well. From the Reports and Analytics pane, you click Edit for the analysis and then Select Views. Add a table view and specify for the analysis layout that the table should be displayed below the graph. Save this customized version of a predefined analysis in the Custom folder of the Oracle Business Intelligence Presentation Catalog.

Create a View Selector

For the customized analysis that you added a table to, you later decide that you want to be able to toggle between the table and the graph and not display both at the same time. In the Reports and Analytics pane, find your custom analysis, and click More.

Edit the analysis. Select View Selector as a new view to add, and include the table and graph views in the selector.

Edit a Dashboard Prompt

A dashboard can contain many objects including analyses and prompts, which are parameters that determine what is displayed. The predefined Human Resources dashboard has an analysis of service anniversaries. This analysis has prompts such as Anniversary and View By. You want to add a prompt to select the Region.

First you copy the dashboard and its components (analysis and prompt) into the Custom folder. In the Reports and Analytics pane, you click the Browse Catalog icon and then find the copied prompt. You edit that prompt and also the copied analysis so that both components work together.
Chapter 9: Creating and Customizing Real-Time Analyses for HCM

Real-Time Reporting for HCM: Overview
Oracle Fusion Transactional Business Intelligence is a real-time, self-service reporting solution offered to all Oracle® Fusion application users with valid roles to create ad-hoc analyses and analyze them for daily decision-making. With Oracle Business Intelligence Enterprise Edition as the standard Oracle query and reporting tool, Oracle Business Intelligence Answers, and Oracle BI Dashboard end-user tools, business users can perform current state analysis of their business applications.

Constructed queries are executed in real-time against the transactional schema supported by a layer of view objects. View objects are critical in transactional business intelligence. View objects represent facts and dimensions, implement applications data security, and handle multilanguage support.

HCM Subject Areas, Folders, and Attributes: Explained
To create real-time analyses, you should be familiar with the following concepts:

- Subject areas
- Folders
- Attributes

Subject Areas
To create an analysis, you begin by selecting a subject area from which you select columns of information to include in the analysis. For example, to create an analysis of salary information, you begin by selecting a Compensation subject area. Subject areas are based around a business object or fact. Fusion HCM has a total of 39 subject areas:

- Benefits: 5
- Compensation: 4
- Payroll: 6
- Goals: 4
- Workforce Management: 9
- Performance: 4
- Profiles: 3
- Succession: 3
- Talent Review: 1

Note: OTBI subject areas always have a suffix of Real Time.
Folders
Each subject area has one fact folder and a number of dimension folders. Fusion HCM has 181 distinct folders. Fact folders contain attributes that can be measured, meaning that they are numeric values like head count and salary. A special folder, called a Degenerate Dimension, is also associated with the fact folder. Each dimension folder is joined to the fact folder within a subject area.

Some folders appear in more than one subject area, such as Grade, Department, and Job. These are referred to as common folders or common dimensions. Fact folders are usually at the bottom of the list of folders and are usually named after the subject area.

Each fact has a different level of granularity. For example:

- Worker Assignment has one row for every assignment.
- Worker Assignment Event has one row for each assignment event, such as hire and transfer, which means there are multiple rows for each assignment.
- Absence has one row for each absence.

Attributes
Finally, each dimension folder contains attributes, such as job name, worker gender, and so on.

Example
This figure illustrates the structure of subject areas, folders, and facts.
In the preceding figure, the following Transactional Business Intelligence components are shown:

1. Subject area: Compensation - Salary Details Real Time
2. Dimension - Presentation Folder: HR Action Reason
3. Dimension - Attributes: Action Reason Code, Action Reason, End Date, Start Date
4. Fact - Presentation Folder: Salary
5. Fact - Measures: New Salary, Annualized Salary

**Folders and Flattened Hierarchies: Explained**

Some folders contain flattened hierarchies. For example, the manager and department hierarchies are flattened, which means that the transactional system contains:

- One record that indicates that John is Claire's manager.
- Another record that indicates that Claire is James's manager.

The hierarchy has both a record containing John>Claire>James, and another one with Claire>James. If John signs in, he will use the former, if Claire signs in, she will use the latter record.

**Saving Reports from the Reports and Analytics Pane: Points to Consider**

From the Reports and Analytics pane, you can create business intelligence (BI) analyses, dashboards, and reports if you have appropriate roles. For the Reports and Analytics pane, these BI objects are generically referred to as reports.

The availability of the new report in the Reports and Analytics pane depends on where you save it in the Oracle Business Intelligence Presentation Catalog and how administrators map the report to the pane.

**My Folders**

When you create a report, saving it in the My Folders area within the Oracle BI Presentation Catalog means that only you have access to it. If the report was created in Oracle Business Intelligence Enterprise Edition, then the report is available in the Reports and Analytics work area, but not the Reports and Analytics pane in any other work area.

**Custom Folder**

If you have access to the Shared Folders area in the catalog and save the report in the Custom folder, then the report is available in the Reports and Analytics work area to anyone with access to the folder. Administrators with such access can then map the report to specific work areas to make the report available in the Reports and Analytics pane.
Note: Access to the report in the Reports and Analytics pane depends on security. Even if a report is mapped and available in a work area, only users with permissions to access that work area and the report itself can see the report in the Reports and Analytics pane.

Creating an Absence by Department Analysis: Worked Example

This example demonstrates how to create an analysis that shows the types of absences in each department, as well as the number of each type.

The following table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which subject area to use?</td>
<td>Workforce Management – Absence Real Time</td>
</tr>
<tr>
<td>What columns to include?</td>
<td>Department Name, Absence Reason, #of Absences</td>
</tr>
<tr>
<td>Which layout to use?</td>
<td>Bar graph above table</td>
</tr>
<tr>
<td>Does the report need sections?</td>
<td>Separate section for each absence type</td>
</tr>
<tr>
<td>Does the report need highlighting?</td>
<td>Highlight absences above 30 in red, and below 10 in green</td>
</tr>
</tbody>
</table>

1. Navigate to the Reports and Analytics work area.
2. Click Create and select Analysis.
3. In the Select Subject Area window, select the Workforce Management - Absence Real Time subject area.
5. Expand the Department folder.
6. Select Name and click the Add button to move the column to the Selected Columns area.
7. Expand the Absence Reason folder.
8. Select **Absence Reason Name** and click the **Add** button to move the column to the Selected Columns area.

9. Expand the Assignment Absences folder.

10. Select **# Of Absences** and click the **Add** button to move the column to the Selected Columns area.

11. Click **Next**.

12. On the Create Analysis: Select Views page, enter **Absence by Department** in the Title field.

13. Next to the Table field, click **None** to open the Table menu.

14. Select **Table (recommended)**.

15. Next to the Graph field, click **None** to open the Graph menu.

16. Select **Bar (recommended)**.

17. Use the default layout value of **Table above Graph**.

18. Select the **Preview** option.

19. After viewing the results, click **Next**.

20. On the Create Analysis: Edit Table page, click **Absence Reason Name** in the Columns region.

21. Click the **Move To** menu and select **Section By**.

22. Click **Next**.

23. On the Create Analysis: Edit Graph page, click **Next**.

24. On the Create Analysis: Sort and Filter page, click **Next**.

25. On the Create Analysis: Highlight page, click **Add Column Format** in the Formatting region.

26. Select **# Of Absences**.

27. In the first Threshold field, enter **10**, and click the **down arrow** in the first Color field. Select the color **Green**. If you hover over the colors, hover text will
show the name of the color.

28. In the second Threshold field, enter 30, and click the down arrow in the third Color field. Select the color Red (leave the second color yellow). The Formatting Region should look like this:

![Create Analysis: Highlight](image)

29. Click Next.

30. On the Create Analysis: Save page, Save In region, enter **Absence by Department** in the Analysis Name field, enter a description, and then select My Folders.

31. Click Submit.

32. In the Confirmation window, click OK.

33. Expand My Folders to locate your analysis.

34. Select your report and click View.

35. Review your analysis.

**HCM Flexfields and Oracle Fusion Transactional Business Intelligence: Explained**
If you have defined flexfields for Oracle Fusion objects, you can add them to Oracle Fusion Transactional Business Intelligence analyses.

The following figure illustrates the process for using flexfields in Transactional Business Intelligence analyses.

To use flexfields with Transactional Business Intelligence analyses, you complete the following steps:

1. Define flex segments in Fusion by navigating to Setup and Maintenance and opening the Manage Descriptive Flexfields task. Alternatively, if you know which object you want to create a flex segment against, you can open the relevant task, for example Manage Person Descriptive Flexfields.
2. Search and select the Flexfield code you are interested in and edit it. You can define global segments, segments for localization and segments that only appear based on context. You can define the data type for a segment (text, number, etc). If your segment is based on a lookup, you must also set up the lookup.
3. Select the **Bi Enabled** option.
4. After saving the flexfield, deploy it.
5. Add data to the flexfield using a task within Oracle Fusion HCM.
6. Schedule the Import Oracle Fusion Data Extensions for Transactional Business Intelligence process to run, or run it on an ad hoc basis.
7. Access Reports and Analytics and add the flexfield to an analysis.

**Descriptive and Extensible Flexfields and Oracle Transactional Business Intelligence Locations**

The following table lists the descriptive flexfields for Oracle Fusion HCM that are enabled for Transactional Business Intelligence, their locations in the user interface, and in Transactional Business Intelligence.

<table>
<thead>
<tr>
<th>Descriptive Flexfield Code and Name</th>
<th>Location of Descriptive Flexfield in Fusion</th>
<th>Location of Descriptive Flexfield in Transactional Business Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER_ABSENCE_DFF - Absence Attributes</td>
<td>Record Absence</td>
<td>Dim - Assignment Absences Details</td>
</tr>
<tr>
<td>PER_ACT_DFF - Additional Action Attributes</td>
<td>Not exposed in UI</td>
<td>Dim - HR Action</td>
</tr>
<tr>
<td>PER_ACT_LEG_DFF - Legislative Action Attributes</td>
<td>Manage Actions</td>
<td>Dim - HR Action</td>
</tr>
<tr>
<td>PER_ACT_LEG_DFF - Additional Action Reason Attributes</td>
<td>Not exposed in UI</td>
<td>Dim - HR Action Reason</td>
</tr>
<tr>
<td>PER_ACT_REASON_USG - Additional Action Reason Usage Attributes</td>
<td>Not exposed in UI</td>
<td>Dim - HR Action Reason</td>
</tr>
<tr>
<td>PER_ASG_DF - Assignment Attributes</td>
<td>Employment Assignment</td>
<td>Dim - Worker Assignment Details</td>
</tr>
<tr>
<td>Descriptive Flexfield Code and Name</td>
<td>Location of Descriptive Flexfield in Fusion</td>
<td>Location of Descriptive Flexfield in Transactional Business Intelligence</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>PER_ASG_LEG_DFF Legislative Assignment Attributes</td>
<td>Hire an Employee - Employment Information Page - Assignment Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add CWK - Employment Information Page - Assignment Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Non Worker - Employment Information Page - Assignment Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Pending Worker - Employment Information Page - Assignment Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create Work Relationship - Employment Information Page - Assignment Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management Employment - Assignment Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSS - Promote (LM) - Job Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSS – Transfer (LM) - Job Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSS – Change Working Hours (LM) - Job Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Assignment - Employment Information Page - Assignment Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Employment Terms - Employment Information Page - Terms Tab and Assignment Tab</td>
<td></td>
</tr>
<tr>
<td>PER_CITIZENSHIPS_DFF Citizenship Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Citizenship</td>
</tr>
<tr>
<td>PER_CONTACT_RELSHIPS_DFF Contact Relationships Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Contact Relationship</td>
</tr>
<tr>
<td>PER_CONTRACT_DF Contract Attributes</td>
<td>Manage Employment - Employment Term</td>
<td>Dim - Employment Contract Details</td>
</tr>
<tr>
<td>Descriptive Flexfield Code and Name</td>
<td>Location of Descriptive Flexfield in Fusion</td>
<td>Location of Descriptive Flexfield in Transactional Business Intelligence</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>PER_CONTRACT_LEG_DDF</td>
<td>Hire an Employee (Line Manager/HR Specialist) / Employment Information Page / Terms Tab and Contracts Region (SCSA)</td>
<td>Dim - Employment Contract Details</td>
</tr>
<tr>
<td>Contract Legislative Information</td>
<td>Add Non Worker (Line Manager/HR Specialist) / Employment Information Page / Terms Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Pending Worker (Line Manager/HR Specialist) / Employment Information Page / Terms Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create Work Relationship (Line Manager/HR Specialist) / Employment Information Page / Terms Tab and Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manage Employment (HR Specialist) / Terms Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Assignment / Employment Information Page / Assignment Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Employment Terms / Employment Information Page / Terms Tab</td>
<td></td>
</tr>
<tr>
<td>PER_DOC_OF_RECORD_LEG_DFF</td>
<td>Manage Documents of Record</td>
<td>Dim - Document of Record Details</td>
</tr>
<tr>
<td>Documents of Record Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Driver License</td>
</tr>
<tr>
<td>PER_DRIVERS_LICENSE_TYPES_DFF</td>
<td>Manage Person</td>
<td>Dim - Person Email Addresses</td>
</tr>
<tr>
<td>Drivers License Types Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Email Addresses</td>
</tr>
<tr>
<td>PER_ETHNICITIES_DFF</td>
<td>Manage Person</td>
<td>Dim - Person Ethnicity</td>
</tr>
<tr>
<td>Ethnicity Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Ethnicity</td>
</tr>
<tr>
<td>PER_EVALUATION_CRITERIA_DFF</td>
<td>Performance Evaluation</td>
<td>Dim – Job</td>
</tr>
<tr>
<td>Evaluation Criteria Attributes</td>
<td>Manage Grades</td>
<td>Dim - HR Grade</td>
</tr>
<tr>
<td>PER_GRADES_DF</td>
<td>Manage Grades</td>
<td>Dim - HR Grade</td>
</tr>
<tr>
<td>Descriptive Flexfield Code and Name</td>
<td>Location of Descriptive Flexfield in Fusion</td>
<td>Location of Descriptive Flexfield in Transactional Business Intelligence</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>PER_JOBS_DFF Job Attributes</td>
<td>Manage Jobs</td>
<td>Dim - Job</td>
</tr>
<tr>
<td>PER_JOB_FAMILY_DFF Job Family Attributes</td>
<td>Manage Job Family</td>
<td>Dim - Job</td>
</tr>
<tr>
<td>PER_LOCATIONS_DF Location Attributes</td>
<td>Manage Location</td>
<td>Dim - Worker Location</td>
</tr>
<tr>
<td>PER_NATIONAL_IDENTIFIERS_DFF National Identifiers Attributes</td>
<td>Manage Person</td>
<td>Dim - Person National Identifiers</td>
</tr>
<tr>
<td>PER_ORGANIZATION_UNIT_DFF Organization Attributes</td>
<td>Manage Department</td>
<td>Dim – Department</td>
</tr>
<tr>
<td>PER_PERSON_ADDR_USG_DFF Person Address Usage Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Address</td>
</tr>
<tr>
<td>PER_PERSON_DLVRY_METHODS_DFF Delivery Methods Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Delivery Methods</td>
</tr>
<tr>
<td>PER_PERSONDRIVERS_LICENSE_LEG_DDF Person Drivers License Legislative Information</td>
<td>Manage Person</td>
<td>Dim - Person Driver License</td>
</tr>
<tr>
<td>PER_PERSON_LEGISLATIVE_DATA_LEG_DFF Person Legislative Information</td>
<td>Manage Person and New Hire</td>
<td>Dim - Person Legislative Information</td>
</tr>
<tr>
<td>PER_PERSON_LEGISLATIVE_DFF Person Legislative Attributes</td>
<td>Legislative section of Manage Person</td>
<td>Dim - Person Legislative Information</td>
</tr>
<tr>
<td>PER_PERSON_NAME_LEG_DDF Person Name Legislative Information</td>
<td>Not implemented in UI</td>
<td>Dim - Person Names</td>
</tr>
<tr>
<td>PER_PERSON_PASSPORT_LEG_DDF Person Passport Legislative Information</td>
<td>Manage Person and New Hire</td>
<td>Dim - Person Passport Details</td>
</tr>
<tr>
<td>PER_PERSON_VISA_LEG_DDF Person Visa Legislative Information</td>
<td>Manage Person and New Hire</td>
<td>Dim - Person Work Permit</td>
</tr>
<tr>
<td>PER_PERSONS_DFF Persons Attributes</td>
<td>New Hire</td>
<td>Fact - Person</td>
</tr>
<tr>
<td>PER_PHONES_DFF Phones Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Phones</td>
</tr>
<tr>
<td>PER_POSITIONS_DFF Position Attributes</td>
<td>Manage Position</td>
<td>Dim - HR Position</td>
</tr>
<tr>
<td>Descriptive Flexfield Code and Name</td>
<td>Location of Descriptive Flexfield in Fusion</td>
<td>Location of Descriptive Flexfield in Transactional Business Intelligence</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PER_PPS_LEG_DDF Work Relationship Legislative Information</td>
<td>Hire an Employee (Line Manager/HR Specialist) / Employment Information Page / Work Relationship Details</td>
<td>Dim - Work Relationship Details</td>
</tr>
<tr>
<td></td>
<td>Add CWK (Line Manager/HR Specialist) / Employment Information Page / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Non Worker (Line Manager/HR Specialist) / Employment Information Page / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Pending Worker (Line Manager/HR Specialist) / Employment Information Page / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create Work Relationship (Line Manager/HR Specialist) / Employment Information Page / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSS - Terminate (Line Manager/HR Specialist) / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manage Work Relationship (HR Specialist) / Work Relationship Details</td>
<td></td>
</tr>
<tr>
<td>PER_PPS_DF Work Relationship Attributes</td>
<td>Manage Work Relationship, Termination, Add Person, Create Work Relationship</td>
<td>Dim - Work Relationship Details</td>
</tr>
<tr>
<td>PER_RELIGIONS_DFF Religions Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Religion</td>
</tr>
<tr>
<td>PER_VISA_PERMIT Visa Permit Attributes</td>
<td>Manage Person</td>
<td>Dim - Person Work Permit</td>
</tr>
</tbody>
</table>
The following table lists the extensible flexfields for Oracle Fusion HCM and their locations in the user interface and in Oracle Transactional Business Intelligence:

<table>
<thead>
<tr>
<th>Extensible Flexfield Name</th>
<th>Location of Extensible Flexfield in Fusion</th>
<th>Location of Extensible Flexfield in Oracle Transactional Business Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER_ASSIGNMENT_EIT_EFF</td>
<td>Hire an Employee (Line Manager/HR Specialist) / Employment Information Page / Assignment Tab</td>
<td>Dim - Worker Assignment Details</td>
</tr>
<tr>
<td></td>
<td>Hire an Employee (Line Manager/HR Specialist) / Employment Information Page / Contracts Region (SCSA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manage Employment (HR Specialist) / Assignment Tab</td>
<td></td>
</tr>
<tr>
<td>PER_JOBS_EIT_EFF</td>
<td>Manage Jobs</td>
<td>Dim – Job</td>
</tr>
<tr>
<td>PER_JOBS_LEG_EFF</td>
<td>Manage Jobs</td>
<td>Dim – Job</td>
</tr>
<tr>
<td>PER_LOCATION_INFORMATION_EFF</td>
<td>Manage Locations</td>
<td>Dim - Worker Location</td>
</tr>
<tr>
<td>PER_LOCATION_LEG_EFF</td>
<td>Manage Locations</td>
<td>Dim - Worker Location</td>
</tr>
<tr>
<td>PER_ORGANIZATION_INFORMATION_EFF</td>
<td>Manage Departments</td>
<td>Dim - Department</td>
</tr>
<tr>
<td>PER_PERSON_EIT_EFF</td>
<td>Manage Person</td>
<td>Fact - Person</td>
</tr>
<tr>
<td>PER_POSITIONS_EIT_EFF</td>
<td>Manage Positions</td>
<td>Dim - HR Position</td>
</tr>
<tr>
<td>PER_POSITIONS_LEG_EFF</td>
<td>Manage Positions</td>
<td>Dim - HR Position</td>
</tr>
</tbody>
</table>
Adding an HCM Flexfield to Oracle Fusion Transactional Business Intelligence: Worked Example

This example demonstrates how to add a flexfield that has been enabled for Business Intelligence to Oracle Fusion Transactional Business Intelligence so you can create an analysis that includes the data in the flexfield.

The following table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which flexfield to use?</td>
<td>Person flexfield</td>
</tr>
</tbody>
</table>

What type of information should the flexfield capture?

The flexfield needs to capture text, so set up the flexfield as follows:

- Data Type: Character
- Value Set: 30 characters
- Display Type: Text Box

Summary of the Tasks

To add a flexfield to Transactional Business Intelligence, perform the following tasks:

1. Add a flexfield segment to the Person descriptive flex field
2. Verify flexfield deployment
3. Run the Import Oracle Fusion Data Extensions for Transactional Business Intelligence
4. View your flexfield in Transactional Business Intelligence

Adding a Flexfield Segment to the Person Descriptive Flexfield

1. In the Navigator menu under Tools, select Setup and Maintenance.
2. In the Search Tasks field in the Setup and Maintenance work area, enter Manage Person Descriptive Flexfields.
3. In the Manage Person Descriptive Flexfields row of the Search Results region, click Go to Task.
4. On the Overview tab of the Manage Person Descriptive Flexfields page, locate the PER_PERSONS_DFF row, and select the PER_PERSONS_DFF link.
5. On the Manage Person Descriptive Flexfields page, click Edit.
6. In the Global Segments region of the Manage Person Descriptive Flexfields page, click Create.

7. On the Create Segment page, enter Passport in the Name field.

8. Replace the default value in the Code field with PER_PSSPRT.

9. Enter Indicates whether employee's passport is current in the Description field.

10. In the Data Type field, select Character.

11. Accept the default value in the Table Column field.

12. In the Value Set field, select 30 Characters.

13. In the Display Type field, select Text Box.

14. Scroll down to the Business Intelligence region and select BI Enabled.

15. Click Save and Close.

16. On the Manage Person Descriptive Flexfields page, click Save and Close.

17. On the Manage Person Descriptive Flexfields page, click Deploy Flex field.

18. In the PER_PERSONS_DFF: Confirmation window, click OK.

19. Click Done.

Verify Flexfield Deployment

1. In the Navigator menu select Person Management.

2. On the Search Person page, enter the name of an employee in the Name field and click Search.

3. Click the link for the employee.

4. In the Biographical Information region on the Information tab of the Manage Person page, click Edit.

5. Verify that the flexfield appears.

6. Click OK.
Running the Import Oracle Fusion Data Extensions for Transactional Business Intelligence

1. In the Navigator menu under Tools, select **Scheduled Processes**.

2. In the Search Results region of the Overview page, click **Schedule New Process**.

3. In the Schedule New Process window, click the Search: Name arrow in the Name field, and click the **Search** link at the bottom of the list.

4. In the Search and Select: Name window, enter **Import Oracle Fusion Data Extensions for Transactional Business Intelligence** in the Name field.

5. Select the row for **Import Oracle Fusion Data Extensions for Transactional Business Intelligence**, and click **OK**.

6. In the Schedule New Process window, click **OK**.

7. In the Process Details window, click **Submit**.

8. In the Confirmation window, click **OK**.

9. In the Process Details window, click **Close**.

10. On the Scheduled Processes, Overview page, enter **Import Oracle Fusion Data Extensions for Transactional Business Intelligence** in the Name field.

11. Click **Search** to see the status of the job. The job may take several minutes, depending on your system.

Locate Flexfield in Transactional Business Intelligence

1. In the Navigator menu under Tools, select **Reports and Analytics**.

2. In the Reports and Analytics work area, click **Create** and select **Analysis**.

3. In the Select Subject Area window, find and select the **Workforce Management - Person Real Time** subject area.

4. On the Create Analysis: Select Columns page, expand the **Workforce Management - Person Real Time** folder.

5. Expand the **Person** folder to view the flexfield that you created. You can now create an analysis that contains the flexfield.
Cross-Subject Area Queries: Explained

You can create analyses that combine data from more than one subject area. This type of query is referred to as a cross-subject area query. Cross-subject area queries can be classified into three broad categories:

- Using common dimensions
- Using common and local dimensions
- Combining more than one result set from different subject areas using set operators such as union, union all, intersection and difference.

A common dimension is a dimension that exists in all subject areas that are being joined in the report. For example, both the Workforce Management - Worker Assignment Real Time and the Workforce Management - Worker Assignment Event Real Time subject areas have Worker, Job, and Department available for use in the respective subject areas. These are considered common dimensions between these two subject areas and they can be used to build a cross subject area report.

On the other hand Worker Assignment Details dimension in the Workforce Management - Worker Assignment Real Time subject area is not available in the Workforce Management - Worker Assignment Event Real Time subject area; therefore it is a local dimension for the purposes of a cross subject area query between these two subject areas.

For more information, see Oracle Fusion Human Capital Management: Reporting Across OTBI Subject Areas (1486948.1) on My Oracle Support at https://support.oracle.com.
Creating a Cross-Subject Area Analysis: Worked Example

This example demonstrates how to create an analysis of headcount by department, with the annualized salary in local currency. This analysis uses two subject areas: the Workforce Management – Worker Assignment Real Time and the Compensation – Salary Details Real Time subject areas.

This table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Which subject areas are needed?</strong></td>
<td>For headcount by department, select Workforce Management – Worker Assignment Real Time.</td>
</tr>
<tr>
<td></td>
<td>For salary, select Compensation – Salary Details Real Time.</td>
</tr>
<tr>
<td><strong>Which tool should be used to create the analysis?</strong></td>
<td>Oracle Business Intelligence Answers enables you to include SQL statements, and a SQL statement is needed to join the two subject areas.</td>
</tr>
</tbody>
</table>

1. Navigate to the Reports and Analytics pane.
2. In the Reports and Analytics work area, click **Browse Catalog**.
3. Click **New** and select **Analysis**.
4. In the Select Subject Area window, select the **Workforce Management - Worker Assignment Real Time** subject area.
5. In the Subject Area region of the Criteria tab, expand the **Department** folder.
6. Click **Name** and drag it to the Selected Columns area.
7. Expand the **Worker Assignment** folder.
8. Click **Head Count** and drag it to the Selected Columns area to the right of the Department Name column.
9. In the upper-right corner of the Subject Areas region, click **Add/Remove Subject Areas**.
10. In the Add/Remove Subject Areas window, select **Compensation - Salary Details Real Time**.

11. Click **OK**.

12. In the Subject Areas region of the Criteria tab, expand the **Compensation - Salary Details Real Time** folder.

13. Expand the **Salary** folder.

14. Click **Annualized Salary** and drag it to the Selected Columns area to the right of the Head Count column.

15. Click the **Results** tab to see the results of the analysis.

16. Click the **Criteria** tab again to return to the analysis definition.

17. In the Subject Areas region on the Criteria tab, expand the **Salary Details** folder in the Compensation - Salary Details Real Time folder.

18. Click **Apps Local Currency Code** and drag it to the Selected Columns area to the right of the Annualized Salary column.

19. Click the **Results** tab to view the report again. The Head Count column is now blank.

20. To correct the blank head count, click the **Advanced** tab.

21. On the Advanced tab, scroll down to the **Advanced SQL Clauses** region.

22. In the Prefix field, enter **SET VARIABLE ENABLE_DIMENSIONALITY=1, NO_FORCE_TO_DETAIL_BIN=1**;

23. Click **Apply SQL**.

24. In the Message from Web page window, click **OK**.

25. Click the Results tab again to see that the **Head Count** column now has numbers.

26. Click **Save Analysis**.

27. Save to My Folders, and enter **Head Count by Department** in the Name field, and enter a description for your analysis.
Effective-Date Reporting for HCM: Explained

Oracle Fusion Transactional Business Intelligence is designed to report on non-event measures, such as head count and salary, as of the current date. Event-type measures such as assignment events, absences, and performance are included in subject areas that include a time dimension, so that you can query as of a specific date on these types of events.

Note: Using Transactional Business Intelligence, you can produce trend reports for any subject area that has the time dimension. The subject areas that have the time dimension are those that are event-type measures.

Effective-Date Reporting for Non-Event Measures: Worked Example

This example demonstrates how to create a report with effective-date reporting capability for a non-event measure. The non-event measure in this example is head count. You want an analysis to review headcount by department, but head count is not a specific event. Using the Workforce Management – Worker Assignment Real Time subject area, you add a prompt for the effective date so that you can review the data as of a specific date.

This table summarizes key decisions for this scenario.

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which subject areas are needed?</td>
<td>Workforce Management – Worker Assignment Real Time</td>
</tr>
<tr>
<td>Which tool should be used to create the analysis?</td>
<td>Oracle Business Intelligence Answers enables you to include SQL statements, and a SQL statement is needed for the as-of date capability.</td>
</tr>
</tbody>
</table>

1. Navigate to the Reports and Analytics pane.
2. Click Browse Catalog.
3. Click the New menu, and select Analysis.
4. In the Select Subject Area window, select the Workforce Management - Worker Assignment Real Time subject area.
5. In the Subject Areas region of the Criteria tab, expand the **Worker Assignment** folder.

6. Select **Head Count** and drag it to the Selected Columns region.

7. Expand the **Department** folder, select **Name**, and drag it to the Selected Columns region.

8. Select the Prompts tab.

9. On the right-hand side of the page on the Prompts tab, click **New** and select **Variable prompt**.

10. In the New Prompt window, leave the value of **Presentation Variable** in the Prompt for field, and enter **AsOfDate**.

11. In the Label field, enter **Workers as of (mm/dd/yyyy)**.

12. Expand the Options region.

13. In the Variable Data Type menu, select **Date**.

14. Select the **Require user input** option.

15. Select **Dynamic** for the Text Field Width.

16. Click **OK**.

17. Select the Advanced tab.

18. On the Advanced tab, scroll down to the Advanced SQL Clauses region.

19. In the Prefix field, enter `SET VARIABLE PARAM_EFFECTIVE_DATE='@{AsOfDate}';`

20. Click **Apply SQL**.

21. Click **OK** to clear the message.

22. Click **Save Analysis**.

23. In the Save As window, select **My Folders** and enter **Date-Effective Head count** in the Name field.

24. Click **OK**.
25. At the top of the page, click the **Home** link to return to the OBI EE home page.

26. Locate your report in the Recent region.

27. Click **Open**.

28. In the Workers as of mm/dd/yyyy field, enter an effective date in the proper format.

29. Click **OK**.

30. Review the results in the Head Count field.

**Oracle Fusion Transactional Business Intelligence for HCM: Points to Consider**

When creating analyses using Oracle Fusion Transactional Business Intelligence, consider the following:

- **Joins to the Person Subject Area**: The Person subject area is not designed to be joined to any other subject area.

- **Manager Hierarchy (Additional Security)**: When the Assignment Manager hierarchy is included in an analysis, the query is subject to the additional security of the line manager hierarchy (Fusion security is still applied). The analysis will additionally be secured based on the user’s login, and will display only workers in the line manager hierarchy below the logged in user. This means that an HR Specialist with no direct reports will receive no output. If you remove the manager hierarchy, then Fusion security remains in place. If you leave the manager hierarchy in the query, Fusion data security and manager hierarchy security are both applied.

- **Row Limits**: The default download limit is 25,000 rows. Depending on the number of columns in a report, this limit will go down proportionally with reports containing more than 20 columns. The formula for downloads is based on the total of 500,000 cells of data, which equals 25,000 rows multiplied by 20 columns. If a report has 19 columns, then 25,000 rows will be downloaded. If a report has 21 columns, then the total number of rows will equal 500,000 cells divided by 21 columns, which equals 23,810. (Note that on-premises customers can increase this limit, but Oracle HCM Cloud Service customers must request the increase from Oracle.)
Chapter 10: Creating and Customizing Dashboards

Customizing Dashboards: Explained
You can customize Oracle Fusion HCM dashboards by:

- Changing the layout or style of the analytics
- Removing analytics from the page
- Customizing the analytics on the dashboard by changing the display options and content style
- Adding content to dashboards

You can add the following content to dashboards:

- Dashboard objects, including objects that let you lay out the content, such as columns and sections, as well as objects such as text, folders, action links, and so on.
- Objects that you or someone else has saved to the Oracle BI Presentation Catalog and for which you have the appropriate permissions, such as analyses, prompts, and so on.

Creating Dashboards: Explained
You can create new dashboards, but to be able to see them, you must add them to existing Fusion dashboards. If you open a new dashboard from an existing one, Oracle Business Intelligence Enterprise Edition is launched.

Creating a new dashboard includes these steps:
1. Create the dashboard name, description, and location. You can either add content when you perform this step, or later.
2. Edit the dashboard by adding pages or other content to the dashboard.
3. Use the options available on the Tools toolbar button of the Dashboard builder to:
   a. Specify settings for printing a dashboard page.
   b. Set the report links for a dashboard page.
   c. Specify whether to allow users to create personal saved customizations on the page.
   d. Publish the page to a shared dashboard location so that you can share the page with others

Note: To create dashboards, you must have the following role:

Role Name: BIPDataModelDeveloper
Display name: BI Publisher Data Model Developer
This role is assigned to the Application Developer role by default, and the Application Developer role is inherited by the Application Implementation Consultant role.

**Adding Content to a Dashboard: Worked Example**

This example demonstrates how to add an analysis that you have created to the Human Resources dashboard. You have created an analysis that lists absences by department, and it contains a table with a bar graph below it. After you add the analysis to the dashboard, you decide to move the graph above the table, and you want to use a pie chart instead of the bar graph.

**Summary of Tasks**

1. Add an analysis to the Human Resources dashboard.
2. Edit the analysis.

**Add an Analysis to the Human Resources Dashboard**

1. Navigate to the Human Resources tab.
2. Click Personalization.
4. In the empty region above the Visa and Work Permit Expiration analytic, click Add Content.
5. In the Add Content window, click Reports and Analytics.
6. Click BIP Presentation Server.
7. Click My Folders.
8. Click an analysis that you have created.
9. Next to compoundview1, click Add.
10. In the Add Content window, click Close.
11. In the upper right corner of the new compoundview1 region, click the Edit button.
12. In the Component Properties: compoundView!1 window, click the Display Options tab.
13. In the Display Options tab, enter a name in the Text field.
14. Click **Apply**.

15. Click **OK**.

**Edit the Analysis**

1. Navigate to the **Reports and Analytics** work area.

2. In the Reports and Analytics work area, expand the folder where you have saved the analysis that you added to the dashboard.

3. Click your analysis and click the **Edit** button.

4. On the **Edit <your analysis>: Select Columns** page, click **Next**.

5. On the **Edit Analysis <your analysis>: Select Views** page, change the graph to a pie chart, and change the layout to Table below Graph.

6. Click **Save**.

7. Click **Submit**.

8. Click **Yes** in the Confirmation window to confirm that you want to overwrite the existing analysis.

9. Click **OK**.

10. Click the **Navigator** menu, and select **Welcome Dashboard**.

11. On the **Welcome Dashboard**, click the **Human Resources** tab.

12. Your new analysis appears, and the graph is now a pie chart and is above the table.
Chapter 11: Creating and Customizing Oracle Business Intelligence Publisher Reports for HCM

Oracle Business Intelligence Publisher: Overview
Oracle Business Intelligence Publisher is a set of tools that allows you to create highly formatted reports based on data models. With Oracle BI Publisher, you can:

- Author, manage and deliver documents.
- Create interactive management reports.
- Create highly formatted, customer facing documents.
- Create government forms.
- Create EFT documents.

Some reporting tools combine the data model, layout, and translation into one report file, requiring Business Intelligence (BI) administrators to maintain multiple copies of the same report to support minor changes.

Oracle BI Publisher separates the data model, layout, and translation, which means that BI reports can be:

- Generated and consumed in many output formats, such as PDF, and Microsoft Office Excel.
- Scheduled for delivery to e-mail, printers, and so on.
- Printed in different languages by adding translation files.
- Burst and scheduled to be delivered to many recipients.

The following figure illustrates how Oracle BI Publisher separates the data model, layout, and translation.
Customizing Reports: Explained

Reports extract data from your applications and present it in the formats required for your enterprise. The output is optimized for high-fidelity printing. Reports provide the information you need for internal operations and statutory compliance; reports also provide the business documents for communicating with your customers.

Many product-specific reports are provided with Oracle Fusion Applications; for example, the payroll summary. To meet the specific needs of your enterprise, you may need to customize the reports provided or create new reports to capture and present different data.

Report Components

Reports are built with Oracle Business Intelligence (BI) Publisher. A report in Oracle BI Publisher consists of components which can be customized, as described in this table:

<table>
<thead>
<tr>
<th>Report Component</th>
<th>Description</th>
<th>Tools for Customizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Model</td>
<td>Defines the data source, data structure, and parameters for the report. A data model can be used by multiple reports. Each report has one data model.</td>
<td>Data model editor in Oracle BI Publisher</td>
</tr>
</tbody>
</table>
| Layout           | Defines the presentation, formatting, and visualizations of the data. A report may have multiple layouts of the data model, and there are different types of layout templates, for example Excel and RTF. Style templates and subtemplates can also be created and applied to layout templates. | • RTF: Microsoft Word (Template Builder for Word)  
• XPT (BI Publisher Template): Layout editor in BI Publisher  
• PDF: Adobe Acrobat Professional  
• Excel: Microsoft Excel (Template Builder for Excel)  
• eText: Microsoft Word |
| Properties       | Specifies run time and formatting options. | Report editor in BI Publisher |

What You Can Customize

Common report customization scenarios include:
• Editing the layout of a report provided with an application.
• Adding a new layout to a report provided with an application.
• Editing a predefined data model.
• Creating a new report based on a new data model.

Additional Report Customization Tasks

Depending on how a report is implemented in Oracle Fusion Applications and the type of customization you make, you may also have to perform additional tasks to implement your custom report in the system.

• **Scheduled processes:** When you create a new report and you want users to be able to run this report as a scheduled process, you must create an Oracle Enterprise Scheduler job definition for the report.

• **Translation:** If you create a custom layout and you require translations of the layout, you must also provide the translations. Oracle BI Publisher provides a tool for extracting the translation file for some layout types. The translation file can be translated into the required languages then uploaded to the report.

• **Security:** You must ensure that the proper security settings are applied to the report and data model to enable the intended report consumers to run the report.

Accessing Report Components to Customize: Points to Consider

To create or edit reports, you need to access the Oracle Business Intelligence (BI) Presentation Catalog. In the catalog, objects of type Report represent the report definition, including report properties and layouts. Data models are separate objects in the catalog, usually stored in subfolders called Data Models. Style templates and subtemplates are also stored in the catalog.

Accessing the Catalog

To access the catalog, you have the following options:

• In the Reports and Analytics pane, click Browse Catalog to open the Oracle BI Presentation Catalog, and find the report in the catalog.

• In the Reports and Analytics pane, find the report and select More to go to the report directly in the catalog. The data model associated with the report should be in the Data Models subfolder within the same folder as the report.

• Sign in to the business intelligence application directly (for example: http://host:port/analytics/saw.dll) to open the catalog.
• Sign in to the BI Publisher server directly (for example: http://hostname.com:7001/xmlpserver) to open the catalog.
  o Alternatively, once you are in the catalog using another method, for example through the Reports and Analytics pane, change the final node of the URL (http://host:port/analytics/saw.dll) to xmlpserver. So the URL you use would be: http://host:port/xmlpserver.

Important!
Save all custom report components in Shared Folders - Custom within the catalog. Objects outside the Custom folder are susceptible to patches.

Therefore, Oracle recommends that you do not directly edit predefined report components. If you change a predefined object and a subsequent patch includes a new version of it, then the patch overwrites any customizations.

For predefined report objects only (not data models, style templates, or subtemplates), use the Customize option if possible.

Predefined Reports
The Customize option for predefined report objects is only available through direct access to the BI Publisher server using the /xmlpserver URL. When you find your report in the Oracle BI Presentation Catalog, select the Customize option from the More menu.

The Customize option automatically creates a custom copy of a predefined report and stores it in the Shared Folders - Custom folder within the catalog. The new report is linked to the original, so that when users open or schedule the original, they are actually using the custom version.

If you do not have the Customize option or do not want the original version linked to the new report, then make a copy of the predefined report and save it in the Custom folder.

Predefined Data Models
Don’t customize predefined data models. Instead, copy the data model into the Custom folder and edit the copy.

Using the Customize Option for Predefined Reports: Points to Consider

When you select the Customize option for a report, Oracle Business Intelligence (BI) Publisher creates a copy of the report in Shared Folders - Custom within the Oracle BI Presentation Catalog. The report, folder structure, and original report permissions are copied. For example, if the predefined report is in the Payroll folder, the custom report is automatically created and saved in the Payroll folder within Custom.
This custom copy is linked internally to the original report. You can customize the
custom copy of the report, leaving the original report intact. When users initiate a
request to run the original report, whether as a scheduled process, from the BI catalog,
or through an application process, BI Publisher detects the customized version and runs
your custom version instead.

Benefits of the Customize Option

Aside from the convenience of automatically copying a report to the Custom folder, the
Customize option:

- Removes the requirement to edit calling processes or applications to execute the
custom report. BI Publisher automatically sends all requests to run the original
report to the custom copy. Therefore Oracle Enterprise Scheduler job definitions
that point to the original report or applications that call the original report will
automatically run your custom report with no additional configuration required.

- Automatically copies the security settings of the original report.

- Removes the risk of patches overwriting your customizations of predefined
reports. When a patch is applied that updates the original report, the custom
report is not updated in any way.

Note: The custom report still references the original data model. The data model is not
copied. A patch that updates the data model may impact the running of your custom
report if the data structure is changed.

Accessing the Customize Option

To access the Customize option:

1. Sign in to the BI Publisher server (for example, http://hostname.com:7001/xmlpserver).
2. Go to the predefined report in the catalog.
3. Select Customize from the More menu for the report.
4. The copied report in the Custom folder opens, so proceed to customize this
   report.

To apply further edits to the report in the Custom folder, perform one of the following:

- Select the Customize or Edit option for the original report to open the existing
customized report.
- Go to the custom report in the Custom folder and select Edit.
Links Between Original and Custom Reports: Points to Consider

The Customize option for predefined reports creates a custom copy of the report that is linked to the original. Consider the following points when you work with both the original and custom versions.

Maintaining the Link Between Reports

The link between the predefined report and the custom report is based on the name of the custom report in the same folder under Custom.

- If you manually create the identical folder path to a report under the Custom folder and create a report with the same name, Oracle Business Intelligence Publisher treats the identically named report as a customized report and will run this report instead of the original report, as if you had used the Customize option to create it.

- The link to the original report is broken if you rename the custom report.

You can edit the custom report so that it uses a different data model. However, if the original data model is updated later, for example due to a patch, then your custom report does not benefit from the change.

Tasks Performed on Original Reports

When a custom version of a report exists, performing tasks on the original report have the results shown in this table.

<table>
<thead>
<tr>
<th>Tasks Performed on the Original Report</th>
<th>Behavior When a Custom Report Is Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Opens the custom report.</td>
</tr>
<tr>
<td>Schedule</td>
<td>Creates a report job for the custom report.</td>
</tr>
<tr>
<td>Edit</td>
<td>Edits the custom report.</td>
</tr>
<tr>
<td>Delete</td>
<td>Deletes the original report only. If you delete the custom report, the original report is not deleted.</td>
</tr>
<tr>
<td>Copy</td>
<td>Copies the original report.</td>
</tr>
<tr>
<td>Cut and Paste</td>
<td>Cuts and pastes the original report.</td>
</tr>
<tr>
<td>Rename</td>
<td>Renames the original report. The custom report name is not changed.</td>
</tr>
<tr>
<td>Download</td>
<td>Downloads the custom report.</td>
</tr>
</tbody>
</table>
Tasks Performed on the Original Report | Behavior When a Custom Report Is Present
--- | ---
Customize | Edits the custom report.
History | Opens the job history of the custom report.

Roles You Need to Customize Reports: Explained

To view and perform actions on report components in the Oracle Business Intelligence (BI) Presentation catalog, your role must be granted the appropriate combination of functional permissions to enable the actions and access permissions to the object in the catalog. The functional permissions are granted in the definition of the role; the access permissions are granted in the catalog.

Customizing Reports, Style Templates, and Subtemplates
To edit, create, or copy reports, style templates, and subtemplates, you must have the BI Author role.

The following security settings are configured by default in the BI Presentation catalog:

- All roles are granted the Traverse permission on all reports.
- The BI Author role is granted Full Control on the Custom folder and product family subfolders, and along with the Read permission, you can:
  - Make a copy of predefined objects and save the copy in the Custom folder.
  - Edit and delete objects copied to the Custom folder for customization.
  - Create new reports, style templates, and subtemplates in the Custom folder.

Using the Customize Option
To access to the Customize option for predefined reports, you must have:

- The BI Author role (or a role that includes the permission oracle.bi.publisher.developReport).

- These permissions on the predefined report in the catalog:
  - Read
  - Run Publisher Report

- These permissions on the Custom folder in the catalog:
  - Read
  - Write
To view a report in the Custom folder that is linked to the predefined report, you must have:

- The BI Consumer role
- These permissions on the predefined report in the catalog:
  - Read
  - Run Publisher Report
- These permissions on the Custom folder in the catalog:
  - Read
  - Run Publisher Report
- These permissions on the data model of the predefined report:
  - Read
  - Traverse

**Customizing Data Models**
To create and edit data models, you must be granted the Application Developer role. This role gives you the BI Publisher Data Model Developer role, which allows you to customize data models.

**Important!**
- Because the BI Publisher Data Model Developer enables the ability to write and execute SQL, it carries substantial access privileges and should, therefore, only be assigned when needed to the right users.
- This access should be granted only in test environments, not production environments.

**Customizing Report Layouts: Overview**
The layout defines the presentation of the report data. All predefined reports include at least one predefined layout template file that defines the presentation components (such as tables and labeled fields) and maps the elements from the data model to these components. The layout also defines font sizes, styles, borders, shading, and can also include images, such as a company logo. To customize a layout, you edit the layout template.

**Layout Template Types**
Several types of templates support different report layout requirements.

- Most of the predefined templates are rich text format (RTF) templates created using Microsoft Word.
- Some predefined templates are Oracle Business Intelligence (BI) Publisher layout templates created using Oracle BI Publisher's layout editor. These are for interactive and more visually appealing layouts.
A third type is the eText template, which is used specifically for electronic data interchange (EDI) and electronic funds transfer (EFT).

Oracle BI Publisher templates can also be created using Adobe PDF, Microsoft Excel, Adobe Flash, and XSL-FO.

**Style Templates and Subtemplates**
You can create style templates and subtemplates to apply to your custom layout templates. For more information on creating style templates and subtemplates, see the Oracle Fusion Middleware Report Designer's Guide for Oracle Business Intelligence Publisher.

**Customizing Report Layouts: Examples**
If the output of predefined reports doesn't completely meet your requirements, you can customize the layout templates. The following examples illustrate reasons to customize layout.

**Style Changes Only, No Changes to Data Mapping**
This is the simplest type of customization. Examples are removing the predefined logo from the report and inserting your own or simply modifying colors and font styles. For these changes you can download the predefined template and edit it.

Because there are no changes to the data mapping, style changes do not require sample data from your report; however, having sample data available will enable testing of the template from your desktop.

**Changes to Mapped Data Elements Within the Existing Layout**
An example of this type of customization is adding or removing a table column or data field from the report layout. For these changes you must have sample data to load to the layout editing tool.

You can download the predefined template, load your sample data, insert the required elements, preview your template, then upload your customized template back to the report definition.

**New Presentation of the Data**
For example, you want to present a different set of fields in a completely different way. Instead of editing an existing layout, it's more efficient to just create one. To create a new layout, start by opening the layout editing tool and loading the sample data to begin designing your custom layout.

**Customizing Report Layouts: Procedures**
Editing or creating a layout template using Microsoft Word or the layout editor involves making the actual changes to the template. However, that task is just one part of the entire process for customizing layouts.

1. Create a custom copy of the original report.
2. Review report settings for online viewing.
3. Generate sample data from the report.
4. Edit or create the layout.
5. Upload the template file to the report definition.
6. Add translations.
7. Configure the layout settings.

1. Create a Custom Copy of the Original Report

Make a copy of the original report using the Customize option, or by manually duplicating a report and placing the copy within Shared Folders - Custom in the Oracle Business Intelligence (BI) Presentation Catalog.

2. Review Report Settings for Online Viewing

Some reports are configured to view only through an external application or through Oracle Enterprise Scheduler. To view your report online while you are customizing it, ensure that the following properties are set as shown in this section. When finished customizing your report, ensure that you reset these properties appropriately for production.

- **Report Properties Settings**
  1. Navigate to your report copy in the catalog and click Edit.
  2. In the report editor, click the Properties link at the top of the page.

- **Layout Setting**
  1. In the report editor, click the View a list link.
  2. Ensure that the View Online check box is selected.

3. Generate Sample Data from the Report

Depending on the type of layout customization you are doing, sample data can be mandatory or helpful. Sample data to enables the mapping of data fields to layout components in the report.

You can generate sample data from the:

- Report data model
- Report viewer
• Scheduler

4. Edit or Create the Layout

To design an RTF layout using Template Builder for Word, or design a layout using the Oracle BI Publisher layout editor.

To design one of the other supported layout types, see the corresponding chapter in the Oracle Fusion Middleware Report Designer's Guide for Oracle Business Intelligence Publisher:

- PDF templates
- Excel templates
- eText templates

5. Upload the Template File to the Report Definition

If you created a layout using the layout editor, the layout is automatically saved to the report definition and you can skip this step. For all other layout types, upload the template file to the report definition.

1. Navigate to your custom report under the Custom folder in the catalog and click Edit.
2. On the report definition page, click View a list.
3. On the table that lists the layouts, click Create.
4. Under Upload or Generate Layout, click Upload.
5. In the Upload Template dialog box:
   1. Enter a layout name.
   2. Browse for and select the template file.
   3. Select the template file type.
   4. Select the locale, which is not editable once the template file is saved to the report definition.
   5. Click Upload.
6. Save the report definition.

6. Add Translations

Template translation enables the extraction of translatable strings from a single RTF-based template or a single BI Publisher layout template. Use this option if you want the report to have output in different languages based on the preferred language of the user; for example, you need to generate invoices for both German and French customers.

For information on translating individual templates, see the Oracle Fusion Middleware Report Designer's Guide for Oracle Business Intelligence Publisher.
7. Configure the Layout Settings

To edit the layout settings, click View a list in the report editor.

Note: From here, you can also delete any layout templates by selecting the corresponding row and clicking the Delete icon button.

This table describes the properties to set for your custom layout.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output Formats</strong></td>
<td>Output formats are the file formats available for the generated report, such as PDF, HTML, RTF, Excel. Depending on the requirements of a report, you may want to limit the output formats available to users. The output formats available vary according to the template file type.</td>
</tr>
<tr>
<td><strong>Default Format</strong></td>
<td>When multiple output formats are available for the report, the default output format is generated by default when the report is run in the report viewer.</td>
</tr>
<tr>
<td><strong>Default Layout</strong></td>
<td>When multiple layouts are available for the report, the default layout is presented first in the report viewer. Select this check box for your custom layout when you want it displayed first. One layout must be selected as the default layout.</td>
</tr>
<tr>
<td><strong>Apply Style Template</strong></td>
<td>If a style template is assigned to this report, use this field to apply the style template to the layout.</td>
</tr>
<tr>
<td><strong>Active</strong></td>
<td>Active layouts are displayed to report consumers.</td>
</tr>
<tr>
<td></td>
<td>Tip: To hide the original layout from users, inactivate it.</td>
</tr>
<tr>
<td><strong>View Online</strong></td>
<td>Layouts that can be viewed online are available to report consumers from the report viewer. If this check box is not selected, the layout is available only for scheduled jobs.</td>
</tr>
</tbody>
</table>
Customizing RTF Templates: Procedures

Most predefined layout templates are RTF templates. An RTF template is a rich text format file that contains the layout instructions to use when generating the report. RTF templates are created using Microsoft Word. The add-in to Microsoft Word, Template Builder for Word, facilitates the coding of layout instructions.

**Tip:** If you are designing a new layout for the report, consider using the BI Publisher layout editor. The layout editor is an online layout editing tool launched from the report editor.

**Using Template Builder for Word**

To customize an RTF template:

1. Ensure that you have a supported version of Microsoft Word.

2. From the Oracle Business Intelligence home page, under the Get Started pane, click Download BI Desktop Tools. Select Oracle BI for MS Office and install the client.

3. If you are modifying a predefined layout, navigate to the copy of the report under Custom in the catalog and click Edit. In the report editor, click the Edit link of the layout to download the RTF file to your local client.

   If you are creating a new layout, skip this step.

4. Open the downloaded RTF template file in Microsoft Word; or, if you are creating a new template, open Microsoft Word.

5. Load the sample data to the Template Builder for Word add-in.

6. Edit or create the layout following the guidelines in the Template Builder for Word help.

7. Save the file as Rich Text Format (RTF).

**Customizing BI Publisher Templates: Procedures**

Oracle Business Intelligence (BI) Publisher templates are created using the BI Publisher layout editor, a design tool that provides an intuitive, drag-and-drop interface for creating pixel perfect reports in PDF, RTF, Excel, PowerPoint, and HTML. It also provides dynamic HTML output that supports lightweight interaction through a browser.
BI Publisher layouts are best suited for reports of simple to medium complexity. The interactive view is only available for BI Publisher layouts, therefore choose this layout type when you want your report consumers to interact with the report (change sorting, apply filters, and so on).

**Using the Layout Editor**

To customize BI Publisher templates:

1. Make sure that sample data is generated from the data model that the report is using.
2. Navigate to the report within the catalog and click Edit.
3. Under the Create Layout section, click a template to launch the layout editor.
4. Create the layout using the guidelines in the help for the layout editor.
5. Click Save to save the layout to the report definition.

**Customizing Data Models: Points to Consider**

A data model defines the source and structure of the data for a report. At run time, Oracle Business Intelligence (BI) Publisher executes the data model to supply the XML data for a report.

Create a custom data model when the predefined data models do not provide the data required in your report.

If you need to customize the data that is captured by the report data model, you can either copy and edit an existing data model or create a new data model.

For more details on customizing data models, see the help on the pages you use to work with data models.

**Predefined Data Models**

In the Oracle BI Presentation Catalog, copy the predefined data model and paste in the corresponding folder within Shared Folders - Custom so that both versions have similar file path. Edit only the new copy in the Custom folder.

**Data Tables**

In BI Publisher the Oracle Fusion Applications tables are provisioned as follows: ApplicationDB_HCM - includes the Oracle Fusion Human Capital Management applications data
Typically, you create data sets from SQL queries against your Oracle Fusion application data tables.

**Parameters**
The order of parameters is important if there are Oracle Enterprise Scheduler job definitions defined for reports that use your data model. If you change the order in the data model, the job definitions must also be updated.

**Creating Custom Reports: Procedures**
Create a custom report when the predefined reports do not provide the data you need, or if you want to use a predefined data model but change other properties of the report.

Save your custom report to Shared Folders - Custom in the Oracle Business Intelligence Presentation Catalog.

**Report Creation Process**

To create a custom report:

1. From the toolbar of the catalog, select New - Report, then select the data model to use as the data source for this report.

2. Continue with the wizard to create the report layout, or select to use the report editor and close the wizard.

3. Define the layout for the report, and add translations for the layouts if needed.

4. Configure a variety of properties to set specific formatting, caching, and processing options for your report.

5. To access the Report Properties dialog box, click the Properties button in the report editor. For more information on configuring report properties, see the Oracle Fusion Middleware Report Designer's Guide for Oracle Business Intelligence Publisher.

6. Optionally create an Oracle Enterprise Scheduler job definition so that users can run the custom report as a scheduled process.

7. Optionally enable access to the report through the Reports and Analytics pane.

8. Secure your report.

**Creating a BI Publisher Report Using an Analysis: Worked Example**
This example illustrates creating a BI Publisher report that is based on a data model that you create using an Oracle Fusion Transactional Business Intelligence analysis. In
this example, you have created an analysis of absences by department that includes department name, absence reason, and number of absences.

Summary of Tasks
1. Create a data model based on a Transactional Business Intelligence Analysis.
2. Create a BI Publisher report based on your data model.
3. Add additional details to the report.

Prerequisites
1. Create a new analysis using the Workforce Management - Absence Real Time subject area.
2. Include Department Name, Reason Name, and Total Number of Absences.
3. Select table, and specify that you want the table to appear above the graph.
4. Section your report by Absence reason.
5. Save your analysis in My Folders, and enter a name for the analysis.

Create a Data model Based on a Transactional Business Intelligence Analysis

1. Navigate to the Reports and Analytics work area and click the *Browse Catalog* button to open the BI Catalog.

2. On the OBI EE home page under Create, Published Reporting, click *More* and select Data Model.

3. On the Diagram tab, click the *New Data Set* button and select Oracle BI Analysis.

4. In the *New Data Set - Oracle BI Analysis* window enter a name for your data model.

5. In the Oracle BI Analysis field, click the *Search* button.

6. In the Oracle BI Catalog window, click the Users link.

7. Click the link for the name of the person who created the analysis.

8. Locate and select the absence by department analysis that you have previously created.

9. In the Time Out field, enter **120**.

10. Click **OK**.

11. Click the *Structure* tab.
12. In the XML Tag Name field for the Department Name, replace the default value with \texttt{DEPT\_NAME}, and replace the default value in the Display Name with \texttt{Department}.

13. In the XML Tag Name field for the Absence Reason, replace the default value with \texttt{ABSENCE\_REASON}, and replace the default value in the Display Name with \texttt{Reason for Absence}.

14. In the XML Tag Name field for the Assignment Absences, replace the default value with \texttt{NUMBER\_ABSENCES}, and replace the default value in the Display Name with \texttt{Number of Absences}.

15. Click the \texttt{Data} tab.

16. On the Data tab, click \texttt{View}.

17. View the report structure and click \texttt{Save As Sample Data}.

18. Click \texttt{OK}.

19. In the upper-right corner, click \texttt{Save}.

20. In the Save As window, select \texttt{My Folders}, and enter \texttt{Absence by Department Data Model}.

\textbf{Create a BI Publisher Report Using Your Data Model}

1. Click the \texttt{Browse Catalog} button to open the BI Catalog.

2. On the OBI EE home page, under Published Reporting, click \texttt{Report} In the Create region.

3. In the Create Report window, verify that \texttt{Use Data Model} is selected.

4. Click the \texttt{Search} button in the Data Model field.

5. In the Select Data Model window, select the absence by department data model that you created.

6. Click \texttt{OK}.

7. On the Create Report page, verify that the Guide Me option is selected, and click \texttt{Next}. 


10. Select the Chart and Pivot Table option.

11. Click Next.

12. On the Create Report, Create Chart page, drag Number of Absences and drop it onto the Drop Value Here box.

13. Drag Reason for Absence and drop it onto the Drop Series Here box.

14. Drag Department and drop it onto the Drop Label Here box.

15. Click Next.

16. On the Create Report, Create Table page, review the location of each element in the table to make sure it is formatted correctly.

17. Click Next.

18. Select View Report, and then click Finish.

19. In the Save As window, save your report in My Folders, and name it Absence by Department Report.

20. Click OK.

21. The report appears.
Add Additional Details to the Report

1. In the upper right corner of the Absence by Department Report tab, click Actions to view the options you have for exporting, editing, and so on. This is the Actions button:

2. Click Edit Report.

3. Click Edit.

4. On the Insert tab, select Chart. This is the Insert tab:
5. Drag the **Chart** component down to the report area, and drop it directly below the report title. When you drag the chart component down to the report area, a blue bar appears that you can use as a guide to decide where to drop the chart. Drop the chart when the blue bar is directly below the report title. The page should look like this:

6. In the Data Source region, click on **Number of Absences**, and drag it and drop it onto the Drop Value Here box.

7. Click on **Reason for Absence** and drag and drop it onto the Drop Label Here box.

8. Click on the new graph. A yellow border appears.

9. Click in the bottom right corner of the yellow border, and drag the corner out to the right so that the graph occupies the entire page. The graph should now look like this:
10. In the Filter options on the Chart tab, click **Filter**. This is the Chart tab:

11. In the Filter window, select **Reason for Absence** from the Data Field menu.

12. In the Operator field, select **is greater than or equal to** from the drop down list.

13. In the Value field, enter 0.

14. Click **OK**.

15. Toggle 3D Effect on and off and choose one of the settings, based on your preference.

16. Repeat steps 9 through 14 for the second graph.
17. Click on the pivot table to refocus the page on the pivot table. The yellow border appears.

18. In the Filter options on the Table tab, click Filter.

19. In the Filter window, select **Reason for Absence** from the Data Field drop down list.

20. In the Operator field, select **is greater than or equal to** from the drop down list.

21. In the Value field, enter 0.

22. Click **OK**.

23. Click on the cells in the Number of Absences column.

24. In the Conditional Formatting region of the Pivot Table Data tab, click **Highlight**.

25. In the Operator field, select **is greater than or equal to** from the drop down list.

26. In the Value field, enter 20.

27. Click in the **Background Color** field.

28. In the Color Picker window, select **Red** (ff0000).

29. Click **OK**.

30. In the Highlight window, click **OK**.

31. Click **Save** to save the changes to your report.

32. Click **Return**.

33. Click **View Report**.

34. In the top graph, click on the different bars to see how the bottom graph filters the results.

**Creating a Data Model with SQL: Worked Example**

This example demonstrates how to create a data model for jobs and assignments using SQL.
1. From the OBI EE home page under Create, click More and select Data Model.

2. On the Diagram tab, click the New Data Set menu and review the available data sources.

3. Select SQL Query.

4. In the New Data Set - SQL Query window enter Assignment Data Set in the Name field.

5. In the Data Source field, select ApplicationDB_HCM.

6. In the SQL Query field, enter the following: Select ASSIGNMENT_NAME, ASSIGNMENT_STATUS_TYPE, ASSIGNMENT_TYPE, EFFECTIVE_START_DATE, EMPLOYEE_CATEGORY, EMPLOYMENT_CATEGORY, JOB_ID, PERSON_ID From PER_ALL_ASSIGNMENTS_F

7. Click OK.

8. Click the New Data Set menu again.

9. Select SQL Query.

10. Enter Job Data Set in the Name field.

11. In the Data Source field, select ApplicationDB_HCM.

12. In the SQL Query field, enter the following: select JOB_ID, NAME from PER_JOBS_X

13. Click OK.

14. Click the Menu button for the Assignment data set and select Properties.

15. In the Edit Properties – G_1 window, enter Assignment In the Group Name and Display fields

16. Click OK.

17. Click the Menu button for the Job data set and select Properties.

18. In the Edit Properties - G_1 window, enter Job in the Group Name and Display fields.
19. Click OK.

20. Join the SQL data sets together by dragging **job_id** from the Job data set to the Assignment one.

21. Click the **Data** tab.

22. Click **View**.

23. Click **Save as Sample Data**.

24. Click **OK**.

25. Click **Save**.

26. Select **My Folders** and enter a name and description for your data model.

27. Click **Home**.
Chapter 12: Creating and Customizing Payroll Reports Using HCM Extracts and Oracle Business Intelligence Publisher

HCM Extracts: Overview
HCM Extracts is an HCM-specific tool for extracting large amounts of complex data into an output file, typically, an XML file. Many of the payroll and human resources (HR) legislative reports are based on extracts.

You might want to change the data that is included in these reports. To do this, you must understand extracts. You might also want to change the output formats for these reports, for which you must understand the integration between extracts and Oracle BI Publisher.

HCM Extracts and Integration with Oracle BI Publisher
The process to create an Oracle BI Publisher report based on an HCM Extract includes these steps:

1. Create the extract definition.
   Navigation: Data Exchange work area - Manage Extract Definitions

2. Compile formulas, generate the XML schema definition (XSD) file, save the extract, and then export the XSD File to your local machine.
   Navigation: Data Exchange - Manage Extract Definitions.

3. Create the report template for Oracle BI Publisher in Word (optional).
   BI Publisher Desktop Template Builder for Word

4. Create the Oracle BI Publisher report template by importing the Word template.
   Navigation: Reports and Analytics work area

5. Add the Oracle BI Publisher report template to your extract definition delivery options.
   Navigation: Data Exchange work area - Manage Extract Definitions.

6. Run the extract process and view the results.
   Navigation: Data Exchange work area - Submit a Process or Report
For more information, see Oracle Fusion HCM Extracts Guide (1559127.1) on My Oracle Support at https://support.oracle.com.

Defining an Extract Using the Simplified User Interface: Worked Example

This example topic demonstrates how to create a HCM extract including creating data groups, records, and attributes using the simplified interface. You create an extract definition to capture the details of what you want to extract, the structure in which the data must be extracted and how you want to deliver this data. FAST Bank is a global organization with subsidiaries all over the world. As part of an external reporting requirement, FAST Bank must obtain the department and employee details across the entire company. This information must be sent to a third party in an XML file and to the HR manager with employee details grouped by department as a Headcount Report.

The following table summarizes the key decisions in this scenario:

<table>
<thead>
<tr>
<th>Decisions to Consider</th>
<th>In This Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many extracts do I need to create to produce this type of report?</td>
<td>You create one extract definition to define a headcount report.</td>
</tr>
<tr>
<td>What type of extract do I create?</td>
<td>You create a HR Archive extract.</td>
</tr>
<tr>
<td>How many data groups do I need to create?</td>
<td>In this example there are 2 functional groups of information, therefore you create two data groups, one for department and one for employees.</td>
</tr>
<tr>
<td>How many records do I need to create?</td>
<td>You decide the number of records based on the sub-group of attributes within a data group. In this example, you create two records for the department data group:</td>
</tr>
<tr>
<td></td>
<td>• Department Details</td>
</tr>
<tr>
<td></td>
<td>• Department Summary</td>
</tr>
<tr>
<td></td>
<td>You create one record for the employees data group: Employee Details.</td>
</tr>
</tbody>
</table>
Decisions to Consider | In This Example
---|---
**How many attributes do I need to create?** | You decide the number of attributes based on the specific information required for that report. In this example, create the following attributes for the Department Details record:
  - Department Name
  - Department Location
  
  For the Department Summary record, create the following attributes:
  - Record Code
  - Report Date
  - Employee Count
  
  For the Employees Details record, create the following attributes:
  - Full Name
  - Gender
  - Date of Birth
  - Salary
  - Bonus
  - Tax Rate

**Do I need to create any fast formulas?** | You can use fast formulas at the following levels:
  - Extract Criteria level to determine certain conditions.
  - Extract Rule level to derive attribute values.
  - Extract Advanced Condition level to specify complex conditions.
  - Extract Record level to automatically generate formulas when you use the Generate Formula option.

**Creating an Extract Definition**

1. On the Manage Extract Definitions page click on the Create icon to create a new extract.

   Use the Switch Layout button to open the extract in the Professional interface. Use the Professional interface to create and define HCM extracts without using a drag and drop system. You can perform most of the tasks for defining the extract in the Simplified interface, however to enter an effective date for the extract, you
must switch to the Professional interface.

2. Enter **FAST Bank Extract** as the name and select **HR Archive** as the type. The application automatically creates the tag name based on the extract name and uses this name to generate the XML output file.

3. Click **Save** and the application saves the extract definition and automatically generates the parameters based on the type of extract. The parameters control the output of an extract. In this example, the application creates the following parameters:

   - Effective Date
   - Legislative Data Group
   - Parameter Group
   - Report Category
   - Request ID
   - Start Date

**Creating Extract Data Groups**

1. Select the **Design** icon to create the data groups.

2. Select the **Create** icon or use the HCM Data Objects tree to drag and drop a data group into the local area. A data group represents data that belongs to one or more logical data entities.

3. Using the drag and drop action, the application automatically creates the following information:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Departments</td>
</tr>
<tr>
<td>User Entity</td>
<td>PER_EXT_SEC_ORGANIZATION_UE</td>
</tr>
<tr>
<td>Root Data Group</td>
<td>Yes (By selecting this checkbox you select this data group as the starting point for the extract execution.)</td>
</tr>
</tbody>
</table>

4. Select **Save** and create another data group with the following information:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Employees</td>
</tr>
<tr>
<td>User Entity</td>
<td>PER_EXT_SEC_ASSIGNMENT_UE</td>
</tr>
</tbody>
</table>
Creating Extract Data Group Connections

1. Ensure you enter the following details to create the extract data group connections. Data group connections enable you to define the master-detail of parent-child relationship between the entities. For example the Department and Employees data groups are linked with Department ID.

2. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Data Group</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Data Group</td>
<td>Departments</td>
</tr>
<tr>
<td>Parent Data Group Database Item</td>
<td>PER_EXT_ORG_ORGANIZATION_ID</td>
</tr>
<tr>
<td>Data Group Database Item</td>
<td>PER_EXT_ASG_ORG_ID</td>
</tr>
</tbody>
</table>

3. Define the data group criteria for each data group. Data group criteria enables you to specify the filter conditions of what data you want to archive. You can specify the filter conditions as an expression or fast formula.

Creating Extract Records

1. Select the **Department Data Group** and ensure it includes the following extract record details. Extract records represent a physical collection of all required fields. If a data group has 3 records, then you can specify the sequence in which the application processes the records using the sequence field. You can also select the Next Data Group to identify which data group the application processes next.

2. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Department Summary</th>
<th>Department Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Start Date</td>
<td>1/1/00</td>
<td>1/1/00</td>
</tr>
<tr>
<td>Sequence</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Type</td>
<td>Trailer Record</td>
<td>Header Record</td>
</tr>
<tr>
<td>Process Type</td>
<td>Fast Formula</td>
<td>Fast Formula</td>
</tr>
</tbody>
</table>
3. Save the records and then select the Employees Data Group. Ensure this data group includes the following extract record details.

4. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Employee Details</td>
</tr>
<tr>
<td>Effective Start Date</td>
<td>1/1/00</td>
</tr>
<tr>
<td>Sequence</td>
<td>10</td>
</tr>
<tr>
<td>Type</td>
<td>Detail Record</td>
</tr>
<tr>
<td>Process Type</td>
<td>Fast Formula</td>
</tr>
</tbody>
</table>

Creating Attributes

1. Select the Departments Details record within the Department Data Group and ensure it includes the following extract attribute details.

2. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Department Name</td>
<td>Department Location</td>
</tr>
<tr>
<td>Type</td>
<td>Database Item Group</td>
<td>Database Item Group</td>
</tr>
<tr>
<td>Database Item Group</td>
<td>Organization Name</td>
<td>Organization Location Country</td>
</tr>
</tbody>
</table>

3. Select the Department Summary record and ensure it includes the following extract attribute details.

4. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Record Code</td>
<td>Report Date</td>
<td>Employee Count</td>
</tr>
<tr>
<td>Field Name</td>
<td>Attribute Entry</td>
<td>Attribute Entry</td>
<td>Attribute Entry</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Data Type</td>
<td>Text</td>
<td>Date</td>
<td>Number</td>
</tr>
<tr>
<td>Type</td>
<td>String</td>
<td>Parameter Element</td>
<td>String Element</td>
</tr>
<tr>
<td>String Value</td>
<td>999</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Parameter</td>
<td>Effective Date</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Aggregate Function</td>
<td>NA</td>
<td>NA</td>
<td>Count</td>
</tr>
<tr>
<td>Aggregate Record Name</td>
<td>NA</td>
<td>NA</td>
<td>Employees Employee Details</td>
</tr>
</tbody>
</table>

5. Select the **Employee Details** record within the Employees Data Group and ensure it includes the following extract attribute details.

6. Complete the general fields, as shown in this table.

### General Fields

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Full Name</td>
<td>Gender</td>
<td>Date of Birth</td>
</tr>
<tr>
<td>Start Date</td>
<td>1/1/00</td>
<td>1/1/00</td>
<td>1/1/00</td>
</tr>
<tr>
<td>Data Type</td>
<td>Text</td>
<td>Text</td>
<td>Date</td>
</tr>
<tr>
<td>Type</td>
<td>Database Item Group</td>
<td>Decoded database item group</td>
<td>Database item group</td>
</tr>
<tr>
<td>Database Item Group</td>
<td>Person Full Name</td>
<td>Person Gender</td>
<td>Person Date of Birth</td>
</tr>
</tbody>
</table>

### Salary Information

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
<th>Attribute Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Salary</td>
<td>Bonus</td>
<td>Tax Rate</td>
</tr>
<tr>
<td>Start Date</td>
<td>01/01/00</td>
<td>01/01/00</td>
<td>01/01/00</td>
</tr>
<tr>
<td>Data Type</td>
<td>Number</td>
<td>Number</td>
<td>Text</td>
</tr>
<tr>
<td>Type</td>
<td>Database item group</td>
<td>Record Calculation</td>
<td>Rule</td>
</tr>
<tr>
<td>Database Item Group</td>
<td>Assignment Salary Amount</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Calculation Expression

<table>
<thead>
<tr>
<th>Calculation Expression</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary * 0.5</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Rule

<table>
<thead>
<tr>
<th>Rule</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAST Bank Tax Rule</td>
<td>NA</td>
</tr>
</tbody>
</table>

Defining the Delivery Options

1. Select the Deliver icon to define the delivery options.

2. Select Export XSD to download the XML Schema Definition (.xsd) file for this extract setup. This exported file contains the structure of the extract definition: the data groups, records, and attributes.

3. Use the delivery options page to define the formatting and layout options for the extract definition.

You can define delivery options for an extract using a BI publisher template, with the following delivery file output types: PDF, XLS, XML, DOC, and the following delivery modes FTP, email, fax. You can also choose Documents of Record as the delivery mode. This delivery mode enables you to store the output in the database and allows employees to view output from documents of record online, such as payslips. If the XML output is split and burst as separate files, then you can select the bursting node. For example, if you want all employees to be sent an email with their payslip, then set the bursting node to Employee_ID.

4. Complete the general fields, as shown in this table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date</td>
<td>01/01/00</td>
<td>01/01/00</td>
</tr>
<tr>
<td>End Date</td>
<td>12/31/12</td>
<td>12/31/12</td>
</tr>
<tr>
<td>BI Publisher Template</td>
<td>ReportLayout</td>
<td>EFTLayout</td>
</tr>
<tr>
<td>Output Type</td>
<td>PDF</td>
<td>EFT</td>
</tr>
<tr>
<td>Delivery Type</td>
<td>Email</td>
<td>FTP</td>
</tr>
<tr>
<td>Delivery Option Name</td>
<td>Email to HR</td>
<td>FTP to 3rd Party</td>
</tr>
<tr>
<td>Output Name</td>
<td>HeadcountReport</td>
<td>EFTReport</td>
</tr>
</tbody>
</table>

5. Ensure you enter the additional information such as, the server, username, and password for the FTP delivery type.

6. Enter FAST Bank Extract as the reporting category and click Submit.
Submitting an Extract

An extract definition automatically creates an extract process (payroll flow) with the same name as the extract. The extract process enables you to define an execution sequence of multiple tasks, including pre and post tasks. You can use the Refine HCM Extracts task to view and modify the extract process submission parameters, if required.

1. Select the **Submit an HCM Process** task and select the **FAST Bank Extract** process.

2. Enter **FAST Bank Extract - Jan 2012** as the Payroll Flow (extract process).

3. Enter **1/1/12** as the Effective Date.

4. Select **Next**. You can specify interaction details if the task is dependent on other tasks with different extract processes. For example, this task must wait because another task is running.

5. Select **Next** and review the extract. You can schedule the extract, or run it immediately.

6. Select **Submit**.

7. Select **OK** and **View Checklist** to view the status of the process.

8. Select the **View an HCM Process** task to review the results of the extract run. Search for the FAST Bank Extract process.

9. Select **Go to Task** for FAST Bank Extract - Jan 2012, click the eyeglasses, and view the report output by selecting the report name.

How do I create a BI Publisher template for an HCM Extract?

You create a BI Publisher template using the Export XSD option in the extract execution tree and saving the file to your local machine. You can then load the downloaded XSD file to the BI Publisher word plug-in using the XML Schema option. If you require a report in a specific format, then you can create a template and save it by arranging the fields in the required format. Otherwise, you can create a default RTF template using the All Fields option.
Chapter 13: Delivering Reports and Analytics

Briefing Books: Explained

A briefing book is a collection of static or updatable snapshots of dashboard pages, individual analyses, and BI Publisher reports. You can:

- Add the content of dashboard pages (including pages that contain BI Publisher reports) or individual analyses to new or existing briefing books.
- Edit briefing books to reorder content, delete content, and change the content type, navigation link properties, and content description.
- Download briefing books in PDF or MHTML format for printing and viewing. The PDF version of a briefing book contains an automatically generated table of contents.
- Add a list of briefing books to a dashboard page.
- Update, schedule, and deliver briefing books using agents, if your organization licensed Oracle Business Intelligence Delivers.

Adding Content to New or Existing Briefing Books

You can add the content of dashboard pages (including pages that contain BI Publisher reports) or individual analyses to briefing books. You can add the content to existing briefing books or to new briefing books that you create.

To add the contents of the dashboard page to a briefing book, click the Page Options toolbar button on the dashboard page and select Add To Briefing Book.

Note: The Add to Briefing Book option is not available on an empty dashboard page or if the Show Add to Briefing Book box in the "Dashboard Properties dialog" has not been selected for the page.

To add the results of an individual analysis to a briefing book, locate the analysis on the dashboard and click the Add to Briefing Book link.

Note: This link is displayed only if the Add to Briefing Book option was selected in the Report Links dialog when the analysis was added to the dashboard.

You can also add analyses and dashboards to briefing books from the BI Catalog page.

Downloading Briefing Books

You can:

- Download briefing books to your computer in MHTML format and then share them for offline viewing.
- Download briefing books in PDF format and print them.
When downloading briefing books, consider the following:

- The PDF version of a briefing book contains an automatically generated table of contents.
- The Adobe Reader application is required to view or print a briefing book PDF file.
- BI Publisher reports that are contained in the briefing book are only included in the PDF file if the reports themselves are enabled for PDF output.

To download the briefing book in MHTML format, click Web Archive (.mht) and then open or save the file. Downloaded briefing books are saved with an .mht file extension and can be opened in a browser. You can then e-mail or share the briefing book.

**Adding a List of Briefing Books to a Dashboard Page**

You can add a list of briefing books to a dashboard page.

To add a list of briefing books to a dashboard page:

1. Edit the dashboard.
2. Navigate to the page to which you want to add a list of briefing books.
3. From the Dashboard Objects pane, drag and drop a folder object into a section.
4. Hover the mouse pointer over the folder object in the Page Layout area to display the object's toolbar and click the Properties button. The "Folder Properties dialog" is displayed.
5. In the Folder field, enter the folder that contains the briefing books to list.
6. In the Expand box, specify whether to show an expanded view of the folder.
7. In the Show RSS Link box, specify whether to add an RSS feed option to the folder.
8. Click OK and then click Save to save the dashboard.

**Agents: Explained**

Using OBIEE, you can deliver personalized and actionable content to users using agents.

**Agents**

Agents enable you to automate your business processes. You can use them to provide event-driven alerting, scheduled content publishing, and conditional event-driven action execution.

In the simplest format, an agent automatically performs a specified catalog analysis based on a defined schedule, and examines the results for a specific problem or opportunity. If the specific problem or opportunity is detected in the results, then an alert is generated and delivered to specified recipients and to subscribers to the agent, using the delivery options that are specified for each person.
You can choose:

- A schedule that the Agent runs on
- A data condition that determines what the Agent does
- An analysis that can be distributed
- Actions that can be automatically executed depending on whether the data condition is met

To handle more complex requirements, agents can invoke actions that trigger other agents, scripts, Java programs, or applications. Results can be passed between agents, and to other applications or services through XML, HTML, or plain text. For example, an agent might run an analysis to identify all current product orders over a specified dollar amount that cannot be filled from a regional warehouse. The results can be passed to another agent that runs an analysis to locate alternative sources for these products. A final agent might be triggered to feed information into a corporate CRM system and to notify the appropriate account representatives of the alternative sourcing.

Use the Agent Editor to create agents to deliver personalized and actionable content to users. The Agent Editor also enables you view a summary of the current settings of agents.

**Using an Agent to deliver a Briefing Book**

To use an agent to deliver a briefing book:

1. Create or edit the agent to be used to deliver the briefing book.
2. In the "Agent editor: Delivery Content tab", click Browse to select the briefing book.

When the agent runs, the briefing book is delivered.

**Alerts: Explained**

An alert is a notification generated by an agent that delivers personalized and actionable content to specified recipients and to subscribers to the agent. You can see the alerts that have been delivered to you throughout Oracle BI Enterprise Edition, for example:

- In the Alerts section of the Home page.
- On the first page of My Dashboard. (An Alerts section is automatically added to the first page of My Dashboard, if you do not manually place one there.)
- On a dashboard page, if the content designer adds an Alerts section to the page.
- In the Alerts dialog displayed from the Alerts! button in the global header.
- In specified delivery devices, such as a phone.
Creating a Briefing Book and Delivering It Using an Agent: Worked Example

This example demonstrates how to create a briefing book for a report that you have created that lists headcount and salary information by department, and then deliver it to senior management using an agent.

Summary of Tasks

1. Create the briefing book.
2. Create the agent to deliver the briefing book.

Create the Briefing Book

1. Navigate to the Reports and Analytics work area.

2. On the Reports and Analytics page, click the Browse Catalog button.

3. On the Catalog page, locate the analysis that you want to use to create a briefing book.

4. Click Open under the analysis name.

5. At the bottom of the analysis, click the Add to Briefing Book link.

6. In the Save Briefing Book Content window, use default values for all fields, but enter a description in the Description field for the report.

7. Click the Browse button under the Location field.

8. In the Save As window, select My Folders, and enter Briefing Book in the Name field.

9. Click OK.

10. On the Save Briefing Book Content page, click OK.

11. Click OK in the confirmation window.

12. Click the Catalog link at the top of the page to return to the Catalog.


14. Click PDF for your briefing book.

15. Review the PDF containing your analysis.
Creating an Agent to Deliver the Briefing Book

1. Navigate to the Reports and Analytics work area.
2. Click the **Browse Catalog** button.
3. On the Catalog page, click **New**.
4. Under Actionable Intelligence, select **Agent**.
5. On the Overview page, select the **Schedule** tab.
6. In the Frequency field, select **Monthly**.
7. Select the **Day** option, and select **1**.
8. Select all months.
9. Click the **Delivery Content** tab.
10. In the Subject field on the Delivery Content tab, enter **Head Count and Salary**.
11. In the **Content** field, select **Briefing Book**.
12. Click the **Browse** button.
13. In the Choose Delivery Content window, locate and select the briefing book that you created.
14. Click **OK**.
15. Click the **Recipients** tab.
16. On the Recipients tab, select the name of the manager you want to send the briefing book to.
17. Click the **Destination** tab.
18. Clear the **Home Page and Dashboard** option.
19. Clear the **Active Delivery Profile** option.
20. Select only the **Email** option.
21. In the upper-right corner, click **Save this Agent**.

22. Select **My Folders** and enter **Briefing Book Agent** for the **Name**.

23. Click **OK**.

24. Click **Catalog** to return to the **Catalog** page.

25. In the **Type** field, select **Agent** to verify that your agent was saved.
Chapter 14: Using Data Validation Reports

How can I diagnose any issues with Oracle Fusion Profile Management data?

After populating the Oracle Fusion Profile Management data tables, you can run the Profile Management Integrity Validations test by selecting Run Diagnostic Tests from the Settings and Actions menu in the global area. The validations test generates a report that contains details of any rows that are invalid, which you can repair or remove.

For Profile Management, the test validates four categories of data integrity:

- Business Group Validation: The test checks to ensure that the business group is valid and exists in the Oracle Fusion Global Human Resources business group table.
- Foreign Key Validation: Foreign key attributes must not be null.
- Field Level Validation: Field level attributes must match the business rules set up in Profile Management.
- Row Count Validation: The row count on the setup tables must be greater than 0.

How can I diagnose any issues with Oracle Fusion Performance Management data?

After populating the Oracle Fusion Performance Management data tables, you can run the Performance Management Integrity Validations test from the Settings and Actions menu. The validations test generates a report that contains details of any rows that are invalid, which you can repair or remove.

For Performance Management, the test validates six categories of data integrity:

- Business Group Validation: Business group is valid and exists in the Oracle Fusion Global Human Resources business group table.
- Foreign Key Validation: Foreign key attributes must not be null.
- Field Level Validation: Field level attributes must match the business rules set up in Performance Management.
- Row Count Validation: The row count on the setup tables must be greater than 0.
- Setup Data Validation: Data in the setup tables must match the business rules set up in Performance Management.
- Process Data Validation: Data in the document tables must match the business rules set up for evaluations in performance documents.
How can I diagnose any issues with Oracle Fusion Talent Review data?

After populating the Oracle Fusion Talent Review data tables, you can run the Talent Review Integrity Validations test. The validations test generates a report that contains details of any rows that are invalid, which you can repair or remove.

For Talent Review, the test validates three categories of data integrity:

- Business Group Validation: Business group is valid and exists in the Oracle Fusion Global Human Resources business group table.
- Foreign Key Validation: Foreign key attributes must not be null.
- Row Count Validation: The row count on the setup tables must be greater than 0.

How can I diagnose any issues with Oracle Fusion Goal Management data?

After populating the Oracle Fusion Goal Management data tables, you can run the Goal Management Integrity Validations test by selecting Run Diagnostic Tests from the Settings and Actions menu in the global area. The validations test generates a report that contains details of any rows that are invalid, which you can repair or remove.

For Goal Management, the test validates four categories of data integrity:

- Business Group Validation: Business group is valid and exists in the Oracle Fusion Global Human Resources business group table.
- Foreign Key Validation: Foreign key attributes must not be null.
- Field Level Validation: Field level attributes must match the business rules set up in Goal Management.
- Row Count Validation: The row count on the setup tables must be greater than 0.

How can I diagnose any issues with delivered data needed for benefits plan configuration?

To verify existing predefined data and formula compilation, you can run the Benefits Setup Diagnostic Test if you have access to the Diagnostic Dashboard. Select Run Diagnostic Tests from the Settings and Actions menu in the global area.

How can I diagnose any issues with Oracle Fusion Global Human Resources person setup data?

After populating the Oracle Fusion Global Human Resources data tables, you can run the Person Setup Validations tests by selecting Run Diagnostic Tests from the Settings
and Actions menu in the global area. The validation tests generate a report that contains details of any rows that are invalid, which you can repair or remove.

For Global Human Resources, the test validates the following:

- Name styles are defined correctly, to enable the application to render the correct regions for entering persons' names
- Name formats are defined correctly, to enable the application to display persons' names in a read-only format (in LOVs and search results for example)
- Person types are defined correctly
- Indexes on the keywords tables are working correctly
- Flexfields are deployed correctly

How can I diagnose any issues with Oracle Fusion Global Human Resources address data?

After populating the Oracle Fusion Global Human Resources data tables, you can run the Address Validations test by selecting Run Diagnostic Tests from the Settings and Actions menu in the global area. The validation test generates a report that contains details of any rows that are invalid, which you can repair or remove.

For Global Human Resources, the test validates the following categories of data integrity:

- Address Row Count Validation: The test checks that each address has either a person address usage or a location address usage, but not both, and such records are recorded for the same location or person.
- Address Usage Row Count Validation: The test checks that each person address usage is for a valid person and a valid address in the application.
- Integrity of date-effective records: The test checks for gaps and overlaps in time.
- The test checks for invalid address types.
Chapter 15: Integrating with Microsoft Office

Integrating with Microsoft Office: Overview

The following Microsoft Office integration tools are available for download from the Oracle Business Intelligence Enterprise Edition home page:

Template Builder: An add-in to Microsoft Word that simplifies the development of RTF templates. While the Template Builder is not required to create RTF templates, it provides many functions that increase productivity. The Template Builder is tightly integrated with Microsoft Word and enables you to perform the following functions:

- Insert data fields
- Insert tables
- Insert forms
- Insert charts
- Preview the template with sample XML data
- Browse and update the content of form fields
- Extract boilerplate text into an XLIFF translation file and test translations

The Template Builder automates insertion of the most frequently used components of an RTF template. RTF templates also support much more complex formatting and processing.

Template Builder for Excel: An Excel template is a report layout designed in Microsoft Excel for retrieving and formatting enterprise reporting data in Excel. Excel templates provide a set of special features for mapping data to worksheets and for performing additional processing to control how the data is output to Excel workbooks. The Template Builder for Excel is installed automatically when you install the Template Builder for Word.

Oracle Business Intelligence Add-in for Microsoft Office: (Oracle BI for MS Office)

Oracle BI for Microsoft Office provides useful features for working with analyses in Microsoft Excel and Power Point. Some examples of features include:

- Office access: When installed on Excel or Power Point 2007 or later, the Oracle BI Add-in for Microsoft Office functionality is made available through a native Office ribbon interface. When installed on Excel or Power Point 2003, the Oracle BI Add-in for Microsoft Office-in’s functionality is made available through a menu and a toolbar. In both cases, an Office pane is available for browsing the Oracle BI Presentation Catalog and for selecting views to insert inside Office documents.
- Ability to secure BI data in BI views inserted inside Excel spreadsheets or Power Point presentations: This feature enables you to secure inserted BI tables and graphs so that users must present credentials to view the Oracle BI data. When
you secure the data, the BI data is removed from the document. Only the view definitions are retained, which allows the Oracle BI Add-in for Microsoft Office to refresh the data within these BI views.

- Graph customization: When you work with native graph objects in Excel and Power Point, you can customize the look and feel of the inserted views by editing the objects and changing the graph type and changing the formatting of various graph components (such as the axes, legend, and title). These customizations are retained when the views are refreshed.

**Analyzer for Excel:** The Analyzer for Excel enables you to:

- Export the results of the report query to an Excel spreadsheet.
- Log in to BI Publisher Enterprise from Excel to refresh your data, apply new parameter values, and apply layouts to the report data.
- Create Excel Analyzer layouts and upload them to the BI Publisher server.
- Access and run your reports from an Excel session.

**Smart View:** On-premises customers can integrate with Microsoft Office using Oracle Hyperion Smart View for Office (Smart View). Smart View enables you to access and run Oracle BI EE analyses directly within your Microsoft Office applications. Smart View is not currently available for Oracle HCM Cloud Service customers.
Chapter 16: Migrating Reports

Migrating HCM Reports: Overview

Two methods of migrating reports from one environment to another are available:

- Using the Archive and Unarchive options
- Copying and pasting XML

Using the Archive and Unarchive Options

The first method uses the Archive and Unarchive options. Using this method, you can copy entire folder structures in the BI Catalog, enabling you to copy many reports. This is a more efficient method for delivering many reports.

For more information, see Guidance for Managing Customizations in Oracle Cloud Application Services: Business Intelligence Migration (1510577.1) on My Oracle Support at https://support.oracle.com.

Note: You must have the BI Admin role to use the Archive and Unarchive options, but the BI Administrator can add archive and unarchive privileges to a user or group of users for a given catalog.

For more information, see How to assign archive/unarchive privileges to a user or a group of user for a given catalog (1524805.1) on My Oracle Support at https://support.oracle.com.

Copying and Pasting XML

The second method involves copying and pasting the XML in the Advanced tab of an analysis. This method is useful for copying analyses from one environment to another (or to Oracle Support) in an ad-hoc manner.

The following figure illustrates the XML in the source environment:
In the target environment, perform the following steps to migrate the analysis to a new environment:

1. Create a new analysis using any subject area.
2. Open the Advanced tab.
3. Paste the XML, replacing whatever is there.
4. Click Apply XML.
Chapter 17: Understanding Security for Oracle Fusion HCM Reporting

Oracle Fusion Transactional Business Intelligence Security

Subject areas are functionally secured using Fusion duty roles. The duty roles that grant access to subject areas use the nomenclature of: \textit{xx Transaction Analysis Duty}, where \textit{xx} is a group of similar objects. For example, Workforce Transaction Analysis Duty.

They can be found under the obi application in Authorization Policy Manager (APM). The following screenshot shows the duty roles in APM:

![Duty Roles in APM](image)

Predefined HCM roles can access subject areas as follows:

- **Benefit Manager**: Can access all Benefits subject areas
- **Compensation Manager**: Can access all Compensation subject areas
- **HR Analyst**: Can access Goals, Workforce Management, Workforce Performance, Workforce Profiles, and Talent Review subject areas
- **Line Manager**: Can access all Workforce Management subject areas
- **Payroll Manager**: Can access all Payroll subject areas

Analyses will not work if the user does not have access to all the subject areas in the report.

BI Catalog folders are functionally secured using Fusion duty roles. The duty roles that secure access to the BI catalog folders are the same duty roles that secure access to the subject areas. So, if a user has a role that inherits Workforce Transaction Analysis Duty, then he can access the Workforce Management folder in the BI catalog and the Workforce Management subject areas

Predefined HCM roles can access folders in Transactional Business Intelligence folders as follows:

- **Benefit Manager**: Can access Transactional Business Intelligence Benefits folders
- **Compensation Analyst**: Can access Transactional Business Intelligence Compensation folders
- **Compensation Manager**: can access Transactional Business Intelligence Compensation folders
- **HR Analyst**: Can access these Business Intelligence Publisher folders: Goals, Performance, and Profiles. Can access these Transactional Business Intelligence folders: Career and Workforce Management.
- **Line Manager**: Can access the Transactional Business Intelligence Compensation and Workforce Management folders, the Workforce Management for Business Intelligence Publisher folder, many Oracle Business Intelligence Application folders
- **Payroll Manager**: Can access Transactional Business Intelligence and Oracle Business Intelligence Application Payroll folders

Analyses are secured based on the folders in which they are stored.

If you have not secured Oracle BI reports using the report privileges, then by default they are secured at the folder level. You can set permissions against folders and reports in OBI for Application Roles, Catalog Groups or Users. You can set permissions to Read, Execute, Write, Delete, Change Permissions, Set Ownership, Run Publisher Report, Schedule Publisher Report and View Publisher Output.

**Data Security**
The data that is returned in Oracle Fusion Transactional Business Intelligence reports is secured in a similar way to how data is returned in Fusion HCM pages, meaning that access is granted by the roles that are linked to security profiles.

Each of the (xx) Transaction Analysis Duty roles that grants access to subject areas and BI Catalog folders inherits one or more (xx) Reporting Data Duty role. These are the duty roles that grant access to the data. The reporting data duty roles are found under the hcm application in APM.

If you create custom job roles that have access to Transactional Business Intelligence reports, you must give your job roles both the obi version of the transaction analysis duty roles and the hcm version of the transaction analysis duty role so that your job role has both the function and data security access needed to run the reports.
Oracle Business Intelligence Enterprise Edition

Security

Oracle Business Intelligence Enterprise Edition roles apply to both Oracle Business Intelligence Publisher and Oracle Fusion Transactional Business Intelligence. They grant access to functionality within business intelligence, for example, the ability to run or author reports. Users need one or more of these roles in addition to the roles that grant access to reports, subject areas, BI catalog folders, and Fusion HCM data.

Business Intelligence roles include:

- BI Consumer: enables you to run reports
- BI Author: enables you to create and edit reports
- BI Administrator: enables you to perform administrative tasks such as creating and editing dashboards and modifying security permissions for reports, folders, and so on

**Note:** The BI Administrator role is a super-user role. While Oracle HCM Cloud Service customers can add this role to a user, Oracle recommends that this is done only in a test environment. None of the predefined HCM roles has BI Administrator access.

The BI Administrator role inherits the BI Author role, which inherits the BI Consumer role, so users who can author reports can also run them. You can configure custom roles that have the ability to run reports, (via BI Consumer) but not author them. The Transaction Analysis duty roles for Transactional Business Intelligence that are delivered with Fusion HCM inherit the BI Author role. Therefore, any users with these roles are authorized to create and edit Transactional Business Intelligence reports, as well as run reports.
Oracle Business Intelligence Publisher Security

In conceptual terms, BI catalog folders that contain Oracle BI Publisher reports are secured using duty roles. These duty roles are not the same as those that secure Oracle Fusion Transactional Business Intelligence subject areas and folders. Individual Oracle BI Publisher reports are secured using function security privileges that are granted to these duty roles.

For example, the Payroll Register Report is in the Payroll Calculations folder. The report is secured using a privilege called Run Payroll Register Report, and this privilege is granted to Payroll Distribution Calculation Management Duty. The Payroll Calculations folder is secured using this duty role.

The way this is actually implemented in reality is slightly different because Oracle Business Intelligence security works slightly differently than regular Fusion Applications security. The key difference is that BI security supports application roles, but it does not support privileges. Therefore, the privileges that secure Oracle BI Publisher reports are implemented as application roles.

In the preceding example, the privilege Run Payroll Register Report is implemented as an application role called Run Payroll Register Report (OBI), which is inherited by another application role called Payroll Distribution Calculation Management Duty OBI.

You can view this role inheritance under the obi application in Authorization Policy Manager:
Fusion Applications duty roles are implemented in Fusion Middleware as application roles. Function security privileges are implemented as Entitlements in APM.

In BI, the function security privileges are also implemented as application roles, and the privilege to duty role grant is implemented as a parent-child relationship in the application role hierarchy, meaning that the duty role is the parent application role and the privilege is the child application role.

You can distinguish between application roles that implement duty roles and application roles that implement privileges by looking at the role names. Application roles that implement duty roles have names ending with _DUTY_OBI and application roles that implement privileges have names ending with _PRIV_OBI.

If you have access to the Permissions link in the BI Catalog, these application roles are visible there. You must have the BI Administrator role to view permissions for the predefined folders and reports.
Secured List Views

When you access data using an Oracle Business Intelligence Publisher data model that uses an SQL Query as the data source, you have the option of either selecting directly from a database table, in which case the data you return is not subject to data security restrictions (although there are some exceptions) or you can join to a secured list view, in which case data security restrictions are enforced.

This table shows, for each table, the secured list view, the data security privilege that is needed to report on data in the table (if accessed using the secured list view) and the duty role that has the security privilege.

<table>
<thead>
<tr>
<th>Table</th>
<th>View</th>
<th>Data Security Privilege</th>
<th>Duty Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER_ALL_PEOPLE_F</td>
<td>PER_PERSON_SECURED_LIST_V</td>
<td>PER_REPORT_PERSON_DATA</td>
<td>Person Reporting Duty</td>
</tr>
<tr>
<td>PER_PERSONS</td>
<td>PER_PUB_PERS_SECURED_LIST_V</td>
<td>PER_REPORT_PERSON_DEFERRED_DATA</td>
<td>Public Person Reporting Duty</td>
</tr>
<tr>
<td>PER_ALL_ASSIGNMENTS_M</td>
<td>PER_ASSIGNMENT_SECURED_LIST_V</td>
<td>PER_REPORT_ASSIGNMENT_DATA</td>
<td>Assignment Reporting Duty</td>
</tr>
<tr>
<td>HR_ALL_ORGANIZATION_UNITS_F</td>
<td>PER_DEPARTMENT_SECURED_LIST_V</td>
<td>PER_REPORT_DEPARTMENT_DATA</td>
<td>Workforce Structures Reporting Data Duty</td>
</tr>
<tr>
<td>HR_ALL_ORGANIZATION_UNITS_F</td>
<td>PERLEGAL_EMPL_SECURED_LIST_V</td>
<td>PER_REPORTLEGAL_EMPLOYER_DATA</td>
<td>Legal Employer Reporting Duty</td>
</tr>
<tr>
<td>HR_ALLPOSITIONS_F</td>
<td>PERPOSITION_SECURED_LIST_V</td>
<td>PER_REPORTPOSITION_DATA</td>
<td>Workforce Structures Reporting Data Duty</td>
</tr>
<tr>
<td>PER_JOBS_F</td>
<td>PER_JOB_SECURED_LIST_V</td>
<td>PER_REPORTHR_JOB_DATA</td>
<td>Workforce Structures Reporting Data Duty</td>
</tr>
<tr>
<td>Table</td>
<td>View</td>
<td>Data Security Privilege</td>
<td>Duty Role</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PER_LOCATIONS</td>
<td>PER_LOCATION_SECURED_LIST_V</td>
<td>PER_REPORT_LOCATION_DATA</td>
<td>Workforce Structures Reporting Data Duty, Human Resources Location Reporting Duty</td>
</tr>
<tr>
<td>PER_GRADES_F</td>
<td>PER_GRADE_SECURED_LIST_V</td>
<td>PER_REPORT_ASSIGNMENT_GRADE_DATA</td>
<td>Workforce Structures Reporting Data Duty</td>
</tr>
<tr>
<td>PER_LEGISLATIVE_DATA_GROUPS</td>
<td>PER_LDG_SECURED_LIST_V</td>
<td>PER_REPORT_LEGISLATIVE_DATA_GROUP_DATA</td>
<td>Legislative Data Reporting Duty</td>
</tr>
<tr>
<td>PAY_ALL_PAYROLLS_F</td>
<td>PAY_PAYROLL_SECURED_LIST_V</td>
<td>PAY_REPORT_PAYROLL_DEFINITION_DATA</td>
<td>Payroll Reporting Data Duty</td>
</tr>
<tr>
<td>CMP_SALARY</td>
<td>CMP_SALARY_SECURED_LIST_V</td>
<td>CMP_REPORT_SALARY_DATA</td>
<td>Compensation Reporting Data Duty</td>
</tr>
</tbody>
</table>

PER_JOBS_F, PER_LOCATIONS and PER_GRADES_F are not currently secured. The secured list views and privileges for these three tables are not currently used.
Oracle Business Intelligence Publisher Data Security

Oracle BI Publisher allows you to create data models on unsecured data. Therefore, you should minimize the number of users who have access to create data models. When creating custom Oracle BI Publisher reports, locate the secured views in Oracle Enterprise Repository (OER) (type=View; Logical Business Area=HCM), and use them when creating the reports. The secured views are:

- PER_POSITION_SECURED_LIST_V
- PER_PUB_PERS_SECURED_LIST_V
- CMP_SALARY_SECURED_LIST_V
- PER_ASSIGNMENT_SECURED_LIST_V
- PER_DEPARTMENT_SECURED_LIST_V
- PER_JOB_SECURED_LIST_V
- PER_LDG_SECURED_LIST_V
- PER_LEGAL_EMPL_SECURED_LIST_V
- PER_LOCATION_SECURED_LIST_V
- PAY_PAYROLL_SECURED_LIST_V
- PER_PERSON_SECURED_LIST_V
- PER_GRADE_SECURED_LIST_V

To access HCM tables with data security restrictions, join to these secured list views in your select statements. The data returned will be determined by the security profiles that are assigned to the roles of the user who is running the report.

Note: You can access OER using the following URL: https://fusionappsoer.oracle.com/oer/ and sign in with your Oracle ID.
Oracle Business Intelligence Publisher and PII Data

Personally identifiable information (PII) tables are secured at the database level using virtual private database (VPD) policies. Only authorized users can report on data in PII tables, and this restriction also applies to Oracle BI Publisher reports. The Fusion HCM tables that are protected in this way are:

- PER_ADDRESSES_F
- PER_DRIVERS_LICENSES
- PER_EMAIL_ADDRESSES (work e-mail not protected)
- PER_NATIONAL_IDENTIFIERS
- PER_PASSPORTS
- PER_PHONES (work phone not protected)
- PER_VISAS_PERMITS_F

The data in these tables is protected using data security privileges that are granted via duty roles in the usual way.

This table lists the protected PII tables and the associated privileges that should be used to report on data in these PII tables.

<table>
<thead>
<tr>
<th>Table</th>
<th>Privilege Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER_ADDRESSES_F</td>
<td>PER_REPORT_PERSON_ADDRESS_DATA</td>
</tr>
<tr>
<td>PER_DRIVERS_LICENSES</td>
<td>PER_REPORT_DRIVER_LICENSE_DATA</td>
</tr>
<tr>
<td>PER_EMAIL_ADDRESSES</td>
<td>PER_REPORT_PERSON_EMAIL_DATA</td>
</tr>
<tr>
<td>PER_NATIONAL_IDENTIFIERS</td>
<td>PER_REPORT_PERSON_NATIONAL_IDENTIFIER_DATA</td>
</tr>
<tr>
<td>PER_PASSPORTS</td>
<td>PER_REPORT_PERSON_PASSPORT_DATA</td>
</tr>
<tr>
<td>PER_PHONES</td>
<td>PER_REPORT_PERSON_PHONE_DATA</td>
</tr>
<tr>
<td>PER_VISAS_PERMITS_F</td>
<td>PER_REPORT_PERSON_VISA_DATA</td>
</tr>
</tbody>
</table>
All of the above privileges are accessible using the Workforce Reporting Data Duty duty role.