

Oracle Business Intelligence PeopleSoft General Ledger Analytic Application Using 8.8 Adapters

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EXECUTIVE SUMMARY

With the many challenges clients face today, selecting and implementing business intelligence (BI) solutions can be overwhelming. As an Oracle/PeopleSoft Certified Partner for over 12 years, The Revere Group also understands the intrinsic business value of PeopleSoft applications for our customers. With vast industry experience in PeopleSoft and Oracle technology, we provide expertise in transaction processing, reporting and analytics best practices; with a goal of providing successful end-to-end business intelligence solutions.

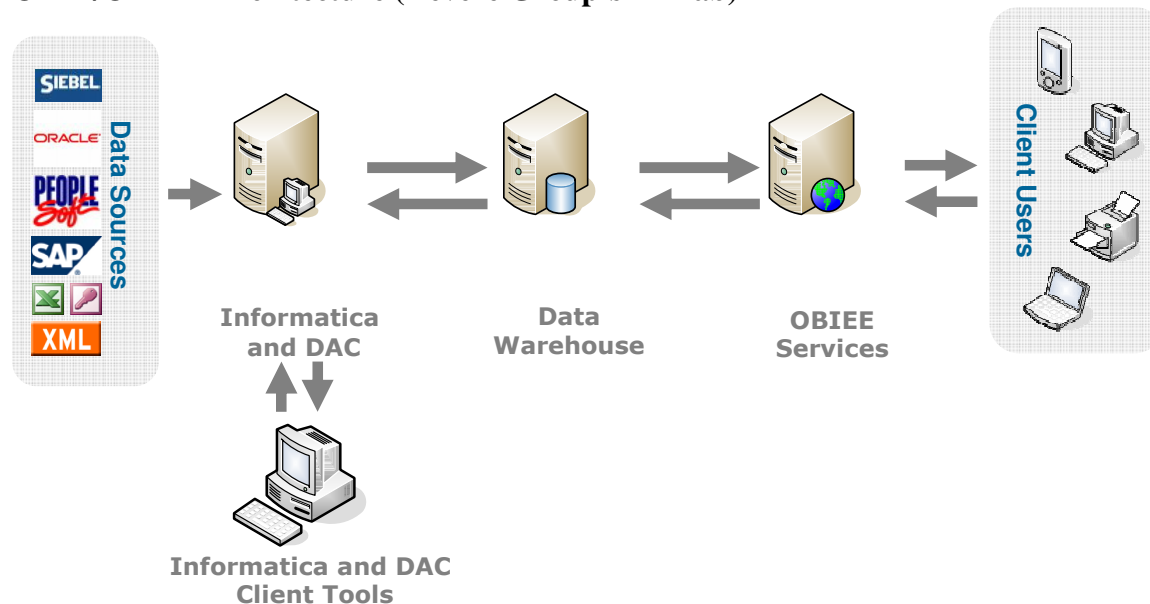
This guide provides a consolidated and simplistic method to implementing Oracle Business Intelligence Analytic Applications using PeopleSoft source data. Here, we also provide tips and techniques for implementing Oracle Business Intelligence General Ledger Analytic Applications using PeopleSoft delivered 8.8 adapters, warehouse, reports and dashboards.

SECTION 1. PREREQUISITES

Server Requirements/Preinstalled Software

Before installing and configuring the various components of Oracle Business Intelligence Applications, review the *Oracle Business Intelligence Application Installation and Configuration Guide* to determine if your system requirements meet general guidelines. This guide lists operating systems, driver and connectivity software requirements for each server. In some cases, an infrastructure/architecture review may be required if system requirements cannot be met. Below is the architecture that was setup in The Revere Group BI Lab.

OBIA/OBIEE Architecture (Revere Group's BI Lab)



Create Databases Instances

Setup databases instance to store the following:

- Data Administration Console (DAC) Metadata Repository – stores information used to manage and batch-process the ETLs
- Oracle Business Analytics Warehouse – stores extracted data from source system
- Informatica Repository – stores all of the Informatica object definitions for the ETL mappings that populate the Oracle Business Analytics Warehouse

SECTION 2. INSTALL AND CONFIGURE INFRASTRUCTURE

Before installing the Oracle Business Intelligence Applications, you will need to install the Oracle Business Intelligence Infrastructure and Java, as well as copy the Hibernate Libraries to run the DAC Server and DAC Client. Please refer to the *Oracle Business Intelligence Applications Installation and Configuration Guide* for details. To install and configure the infrastructure, complete the following steps:

1. Configure Informatica – Once Informatica is installed, configure the Informatica Server and Repository.
2. Configure Data Administration Console – In the DAC client, configure the DAC System Properties, Informatica Servers Properties and Physical Data Sources.

SECTION 3. BUSINESS REQUIREMENTS and GAP FIT ANALYSIS

Define the following:

- Business, Data, Reporting and Analytic requirements
- Key Performance Indicators and Metrics
- Security matrix

Perform a GAP Fit Analysis – compare requirements against the extracted data from delivered ETL's and delivered reporting and analytics.

SECTION 4. ANALYSIS AND DESIGN

Our approach to implementing General Ledger Analytics includes completing an analysis of the General Ledger objects, Account Dimensions and Balance Aggregate. These analyses as well as explanations for Group Account Configuration, Hierarchy Configuration and Extraction, and Security are listed below.

GL Account Dimensions

GL Account Dimensions is a combination of chart fields provided by PeopleSoft Financials with names such as Account, Alternate Account, Operating Unit, Fund Code, Department, Budget Reference, etc. These chart fields are extracted from PeopleSoft and stored in generic columns called segments in the GL Account Dimension table. The file used to map charts fields is file_glacct_segment_config_psft.csv. A snapshot of the file is shown below.

ROW_ID	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
1	Account	Alternate Account	Operating Unit	Fund Code	Department	Program Code
AGGREGATION	Y	Y	Y		Y	

The above example uses six chart fields to analyze data. The first row in the file is the file header. The second row is designated for indicating which accounts to map to a segment. Depending on your source system setup, you may have more or less chart fields specified in your .CSV file.

GL Balance Aggregate

Aggregation of GL Balance is based on the GL Accounts specified. For example, in the diagram above, the third row determines which account will be aggregated. Under each column you would like to have aggregated, a 'Y' should be marked. Based on that notation, only four segments will be aggregated. The results are placed in the GL Balance Aggregate table. You can only have up to six 'Ys' marked in the file. In order to bring aggregate balances over, customizations were needed.

Group Account Configuration

PeopleSoft General Ledger Accounts are mapped to Group Account Number values. Mapping these values allows you to categorize your general ledger accounts into specific group account numbers. The file used to map group accounts is file_group_acct_codes_psft.csv. A snapshot of the file is shown below.

BUSINESS_UNIT	FROM ACCT	TO ACCT	GROUP_ACCT_NUM
US001	100000	110000	AP
US001	120000	120000	AR
US001	270000	270000	PPAID EXP
US001	540000	540000	REVENUE
US001	621000	621000	CASH

The first row in the file is the file header. The second row shows the first mapped account. Here, accounts that range from 100000 to 110000, and that are associated with the business unit US001, are assigned to AP. In the third row, accounts that have a range of 120000 are assigned to AR. You can also assign new group account numbers.

Hierarchy Configuration and Extraction

Oracle Business Intelligence Applications support the following PeopleSoft tree structure types and level types:

Structure Type	Support	Level Type	Support
Winter Tree	Y	Strict-level Tree	Y
Detail Tree	Y		
Summary Tree	Y	Loose-level Tree	Y

The above functionality is supported by extracting the tree-related data from the source system followed by loading the flattened data into the hierarchy table. In order for these tasks to execute and load data in the hierarchy table, they will need to be activated. You can activate the tasks using the Data Administration Console (DAC). This will be explained in detail in Section 5.

If multiple trees need to be extracted and loaded into the data warehouse, a new mapping will need to be created for each tree. You will need to adjust the settings in Informatica Designer and add corresponding Sessions and Workflows in Informatica Workflow Manager. Refer to *Technical Note 680: Configuring and Customizing Financial Analytics for Oracle's PeopleSoft Enterprise Applications Versions 8.4 and 8.8 in Oracle Business Intelligence Applications Version 7.9.3*.

Security

It is beneficial to perform a security analysis to determine which levels of security would best fit business needs. Below are the key components to analyze:

1. User Security (Authentication of Users)
2. Authorization
 - Object Level Security
 - Data Level Security

User Security can be implemented in the following ways:

- Users in the OBIEE Administration Tool
- Authentication of users against an external database table
- Authentication of users against an LDAP server.

Authorization can be implemented by creating security groups in the OBIEE Administration Tool. Depending upon the users' role, Authorization at the Object Level controls the visibility to business logical objects (Subject Areas) and web objects like Dashboards, Answers, Reports, etc. The Data Level Security controls the user's visibility to the data at record level, based upon the association to data in the PeopleSoft Financial system. Data Level Security can be implemented in the following ways:

- Operating Unit-based Security Against PeopleSoft Financials
- Company Org-based Security Against PeopleSoft Financials
- Payables Org-based security Against PeopleSoft Financials
- Receivables Org-based Security Against PeopleSoft Financials
- SET ID-based Security Against PeopleSoft Financials

For more information on security implementation, refer to *The Technical Note 682: Implementing Security for Oracle's PeopleSoft Enterprise Applications in Oracle Business Intelligence Applications 7.9.3* and the *Oracle Business Intelligence Server Administration Guide*.

SECTION 5. BUILD AND RUN DAC EXECUTION PLAN

As mentioned above, in order to execute the hierarchy tasks, they must be activated within the DAC. To activate these tasks, click the Design tab on the tool bar. Click on the Financials General Ledger Subject Area to activate these tasks for this subject area only. Next, click the Configuration tab on the bottom pane tab. Uncheck the Inactive box for the types of hierarchies you would like to bring into the warehouse. Lastly, save all changes.

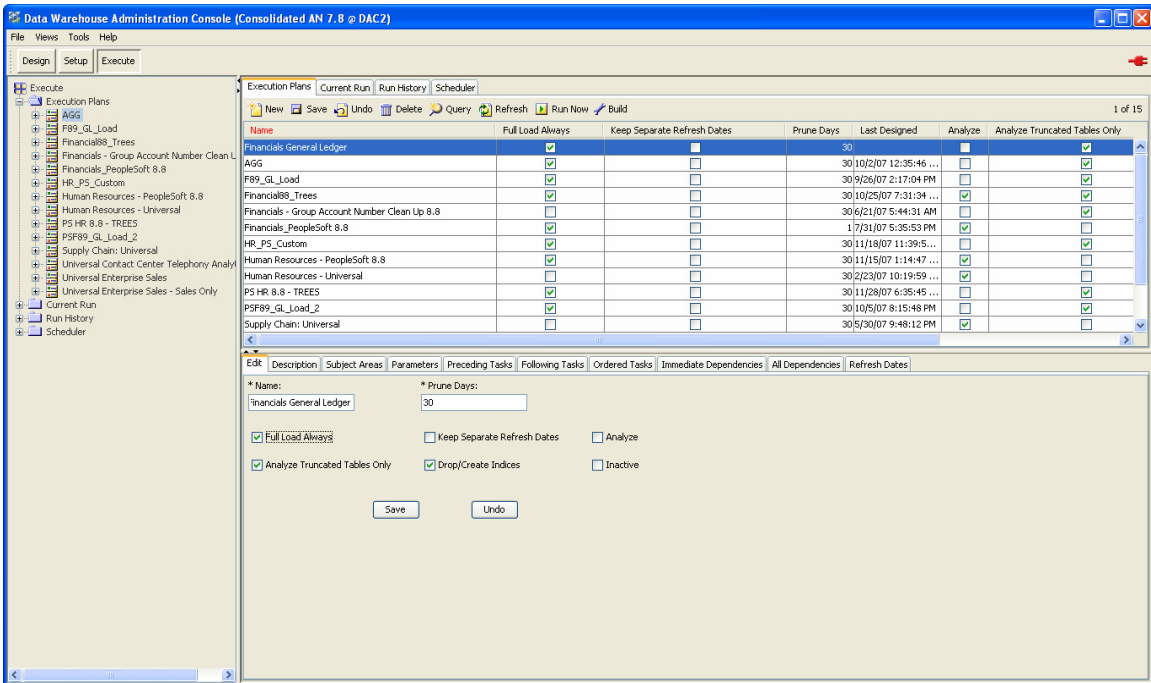
The screenshot shows the Data Warehouse Administration Console (DAC) interface. The left pane displays a tree view of subject areas, with 'Financials - General Ledger' selected. The main pane shows the 'Configuration Tags' tab for 'Configuration Tag Tasks Only'. Below this, there is a table with columns: Name, Configuration Tag Tasks Only, Last Designed, Inactive, and Owner. The table lists various tasks, with 'Financials - General Ledger' and 'Financials - Group Account Number Clean Up' highlighted in blue. The 'Inactive' column for these tasks has checkboxes that are currently unchecked.

Name	Configuration Tag Tasks Only	Last Designed	Inactive	Owner
Financials - Cost of Goods Sold	<input type="checkbox"/>	7/31/07 5:20:14 PM	<input type="checkbox"/>	PeopleSoft 8.8
Financials - General Ledger	<input type="checkbox"/>	07/31/07 5:13:36 PM	<input type="checkbox"/>	New PSFT 8.8
Financials - Group Account Number Clean Up	<input checked="" type="checkbox"/>	7/31/07 5:20:25 PM	<input type="checkbox"/>	PeopleSoft 8.8
Financials - Payables	<input type="checkbox"/>	7/31/07 5:20:30 PM	<input type="checkbox"/>	PeopleSoft 8.8
Financials - Receivables	<input type="checkbox"/>	7/31/07 5:20:35 PM	<input type="checkbox"/>	PeopleSoft 8.8
Financials - Revenue	<input type="checkbox"/>	7/31/07 5:20:40 PM	<input type="checkbox"/>	PeopleSoft 8.8
HR - Event Information	<input type="checkbox"/>	7/31/07 5:20:44 PM	<input type="checkbox"/>	PeopleSoft 8.8
HR - Operation	<input type="checkbox"/>	7/31/07 5:20:48 PM	<input type="checkbox"/>	PeopleSoft 8.8
HR - Payroll	<input type="checkbox"/>	7/31/07 5:20:53 PM	<input type="checkbox"/>	PeopleSoft 8.8

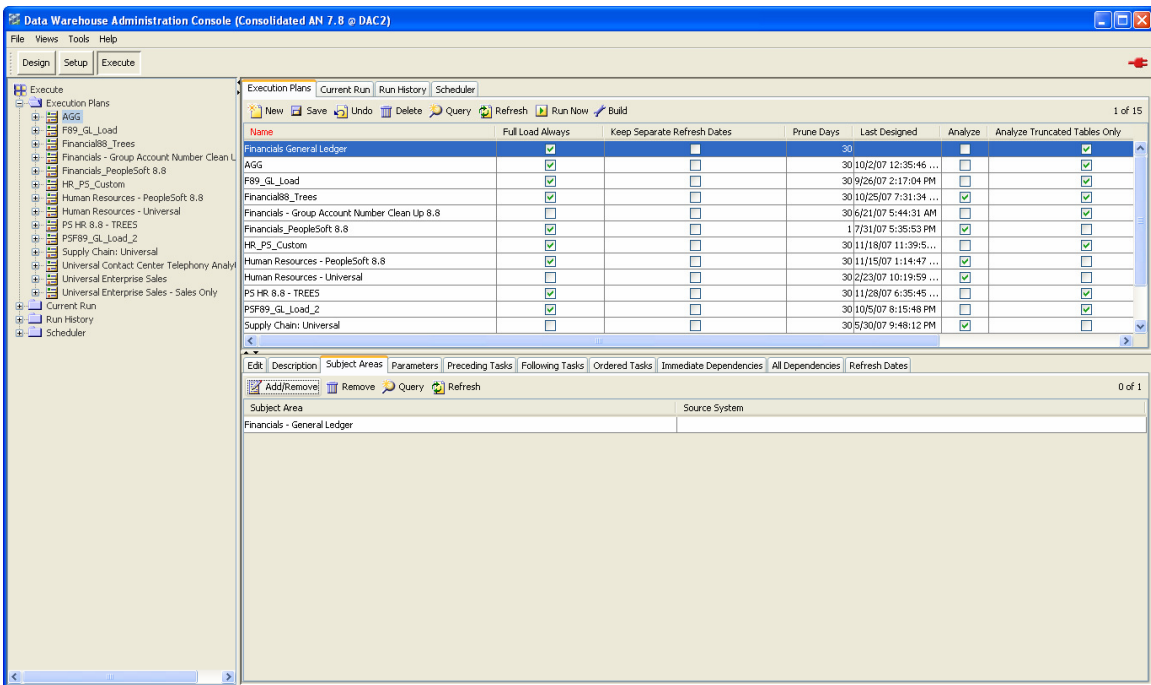
Below the first table, there is another table for 'Task Source Tables (RO)' and 'Task Target Tables (RO)'. The 'Task Source Tables (RO)' table has columns: Name, Include Tasks, Inactive, Context Disabled, and Owner. It lists tasks like 'ETL Run Tasks', 'Financials - Calculate GL Balance', 'PeopleSoft - Populate Business Unit Related Hierarchies', and 'PeopleSoft - Populate New Business Unit Related Hierarchies'. The 'Include Tasks' column for these tasks has checkboxes that are currently checked.

Name	Include Tasks	Inactive	Context Disabled	Owner
ETL Run Tasks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PeopleSoft 8.8
Financials - Calculate GL Balance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PeopleSoft 8.8
PeopleSoft - Populate Business Unit Related Hierarchies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PeopleSoft 8.8
PeopleSoft - Populate New Business Unit Related Hierarchies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PeopleSoft 8.8

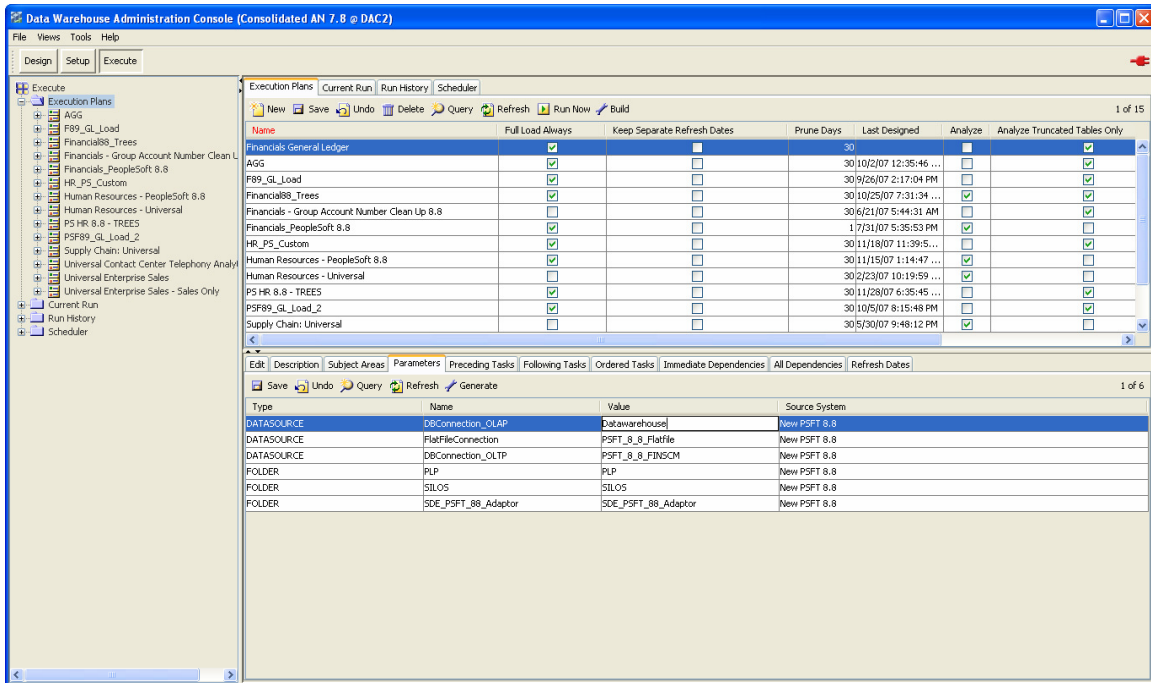
Since changes have been made to the subject area, you have to reassemble it. To do this, click Assemble. Once the subject area has been rebuilt, you can now build the execution plan. Click on the Execute tab. Click New and type the name for the execution plan.



Click the Subject Area Tab. Add the General Ledger Subject Area to the Execution Plan. Click Save.



Click the Parameters Tab. Click Generate to generate runtime parameters. For each data source type, enter the appropriate name in the value field. Click Save.



Before building the execution plan, verify that you have selected the correct plan and click build. Once your execution plan is built, click Run Now to run the execution plan. Refer to *Oracle Business Intelligence Data Warehouse Administration Console Guide* for more information on creating and building execution plans.

Depending on data volumes, database and ETL tuning may be required.

SECTION 6. CONFIGURATION OF THE OBIEE METADATA

After the Data Warehouse has been populated with the PeopleSoft financial data, connectivity must be established. The Physical Layer of the OBIEE Administration Tool requires that the Data Source Name, User and Password of the Data Warehouse be setup.

The following Static Variables have to be reset to the current timestamps:

1. CURR_YEAR_F
2. CURR_QTR_F
3. CURR_MONTH_F
4. CURR_WEEK_F
5. CURR_DATE_F
6. NEXT_QUARTER_F
7. NEXT_QUARTER

Additionally, OLAPTBO needs to be defined as the schema name of the data warehouse.

SECTION 7. GENERATE REPORTS AND DASHBOARDS

Execute requested dashboard(s) and reports, and validate the data.

CONCLUSION

The true business value of implementing this pre-packaged BI solution not only results in faster delivery of solutions to the business and but also lowers the total cost of ownership.

Through the implementation of this solution, there were a few lessons learned.

- Training and Change Management are an important component in implementing solutions where the users are happy and comfortable with their existing BI reporting tools.
- The prompt feature does not allow the OR clause to be used for different filtering conditions on the same column. As a workaround, create duplicate columns in the OBIEE Metadata.
- The out-of-the-box scheduler service does not deliver reports to a network drive or a common folder. These services can only be delivered to handhelds or email accounts. A workaround is used to create complex Java scripts.

ABOUT THE REVERE GROUP

In operation since 1992, The Revere Group is a North American business unit of NTT DATA. Revere is a leading business and IT solutions firm dedicated to accelerating growth, improving profitability and driving performance for its clients. Revere's services focus on three core business areas of Business Consulting, IT Solutions and Managed Technology Services. As a trusted advisor to its clients, Revere's service approach of Think, Build and Source develops cost-effective solutions while achieving business results that deliver high value and return. Based in Chicago, IL, The Revere Group delivers its solutions throughout the United States, India and Asia. For more information, visit www.reveregroup.com.